STATE OF OHIO

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER



# THE GROUND-WATER RESOURCES OF SUMMIT COUNTY, OHIO



BULLETIN 27

November, 1953

STATE OF OHIO
FRANK J. LAUSCHE, *Governor*

DEPARTMENT OF NATURAL RESOURCES
A. W. MARION, *Director*

DIVISION OF WATER
C. V. YOUNGQUIST, *Chief*

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# THE GROUND-WATER RESOURCES OF SUMMIT COUNTY, OHIO

By

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With a section on Glacial Geology

By

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Prepared in cooperation with the
UNITED STATES GEOLOGICAL SURVEY

Bulletin 27
Columbus, Ohio
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The geologic classification and nomenclature of this report follow the usage of Ohio, which in some respects differs from that of the U. S. Geological Survey.

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1500 Dublin Road

April 29, 1954

Mr. A. W. Marion, Director
Ohio Department of Natural Resources
State Office Building
Columbus 15, Ohio

Dear Director Marion:

Herewith is a report on the investigation of the ground-water resources of Summit County, the field work for which was conducted during the period, 1947 to 1950.

During the summer months more than 35 million gallons of water are pumped from the ground each day by towns and industries. There is potentially available in Summit County a much larger quantity of ground water, but the geology is complex and additional ground water is sometimes difficult and costly to locate. This report will be an invaluable guide in the wise use of present ground-water supplies and in the safe development of new ones.

Very truly yours,

C. V. Youngquist, Chief
Division of Water

CVY/ar

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# THE GROUND-WATER RESOURCES OF SUMMIT COUNTY, OHIO

## ABSTRACT


This report describes the ground-water resources of Summit County in northeastern Ohio, in which Akron is the principal city and the county seat. Summarizing the results of an investigation begun in April 1947, it is presented as a guide for the future development of farm, home, municipal, and industrial supplies. It is one of a series of county reports being prepared or planned that will ultimately cover the entire State. Summit County was chosen for investigation because it is one of the most highly industrialized and heavily populated counties in the State.

The report contains a detailed map of Summit County showing the existing ground water conditions, the topography of the bedrock surface (beneath glacial drift), and the topography of the land surface of the county. It includes tabulated data for more than 2,000 wells in the county, graphic logs for more than 1,500 wells, a table of the chemical analysis of water from selected wells in the county, and a description of the ground-water conditions that exist in each township. It includes also a description of the geology and the geologic history of the area, a general map showing the geology of the consolidated rocks, and a detailed map showing the geology of the glacial deposits.

Summit County is an area of shale, sandstone, limestone, and coal overlain by glacial deposits of clayey till and sand and gravel. The consolidated rocks were eroded and dissected by preglacial streams. The valleys of these preglacial streams have been partly or completely filled by glacial deposits. The best sources of ground water in Summit County are in the southern part and are in areas where the buried valleys are filled with permeable glacial-outwash sand and gravel exposed at the surface to recharge from rainfall or a surface stream. Two such areas, one along the Tuscarawas River in Springfield and Coventry Townships and one along the Cuyahoga River just east of the city of Cuyahoga Falls, are potentially the best ground-water areas in Summit County.

The southern half of Summit County also contains many areas in which buried valleys are filled with sand and gravel but are not traversed by a surface stream. Such areas are capable of yielding large supplies of ground water, but not quite so large as the two areas mentioned above. Yields are in proportion to the amount of recharge available. The most important such areas are the valley of Wolf Creek north of Barberton, a valley parallel to the Ohio Canal in south-central Akron, the area of the Portage Lakes, and a valley in east Akron.

The poorest ground-water conditions occur in the upland area bordering the Cuyahoga River in the western two-thirds of Boston and Northampton Townships. There thick deposits of impermeable clayey till overlie impermeable shale, and ground water is almost nonexistent.

In two areas, namely, south-central Akron and east Barberton, there is contamination of the ground water by salt. In both areas there are large and important industrial well fields. Further detailed investigation would be necessary before a solution to the problem could be found, but unless the problem is solved the two well fields and an important supply of ground water will be rendered valueless.

With the exception of the unfavorable area in Boston and Northampton Townships, small to moderate supplies of ground water adequate for farm and domestic needs can be obtained almost everywhere in Summit County. Large quantities of water—that is, 5 to 10 million gallons a day—are generally available only in the southern half of the county. There is potentially available, in areas not now heavily pumped, far more ground water than is now being used.

# INTRODUCTION

The Ohio Division of Water, Department of Natural Resources, and the United States Geological Survey cooperate in the systematic investigation of Ohio's ground-water resources. Reports on several counties have already been published and other investigations are in progress. The latest county to be described is that covered in the present report. Field work was done in Summit County from April 1947 to September 1949, and the data that were collected during the investigation are presented herein as a guide for the future development of farm, home, public, and industrial ground-water supplies in Summit County.

The collection and interpretation of most of the basic data of this report were by the author. Field investigations of the glacial deposits were made by George W. White. Dr. White wrote the section of this report entitled "The character and distribution of the glacial and alluvial deposits" and he also prepared the maps of the glacial deposits, plates 6 and 8. Chemical analyses of 15 samples of ground water from wells in Summit County were made by the U. S. Geological Survey.

The investigation and the preparation of the report were under the immediate supervision of Edward J. Schaefer, Columbus, Ohio, District Engineer of the Ground Water Branch, and under the general supervision of A. N. Sayre, Chief of the Ground Water Branch, U. S. Geological Survey. The Ohio Department of Natural Resources was represented in the investigation by C. V. Youngquist, Chief, Division of Water. R. J. Bernhagen, Geologist, Division of Water, gave valuable advice in the course of the investigation. Water analyses were made under the immediate supervision of W. L. Lamar, District Chemist, and the general supervision of S. K. Love, Chief, Washington, D. C.

In March 1947, Mr. Youngquist and the author met with the Industrial Water Development Committee of the Akron Chamber of Commerce and described plans for an investigation of the ground-water resources of Summit County. The Committee was asked to cooperate by contributing data relative to the ground-water supplies of the industries in Akron. Members of the committee were T. F. Doyle, chairman, and H. E. Cook, W. H. Tyson, James Shaw, W. K. Gilkey, and Harry Schrank. Through their services and those of H. G. McGee of the Akron Chamber of Commerce, Secretary to the Committee, many well and pumpage data, and measurements of water levels in wells were obtained from the large industrial users of ground water in the county.

More than 2,000 well records are listed in this report. Many of them were obtained from the files of the Division of Water in Columbus. The rest were collected in the field from well owners and drillers. Some wells were measured to determine depth and water level, and the well drillers were asked to verify as much as possible of the information given by the well owners. Only data from field measurements or from the drillers' records were used in making the maps in this report. The character of the deeply buried consolidated formations was learned in large part from the oil and gas well records on file at the Ohio Division of Mines. The discussion of the geology of the consolidated rocks in Summit County is based on field studies, well records, and published geological reports. A bibliography of references is contained at the end of this report. Specific data on municipal ground-water supplies were obtained chiefly from city authorities.

Periodic measurements of ground-water levels in Summit County were begun in 1941 and have continued to date. Records of water levels in observation wells have been published annually since 1944 by the U. S. Geological Survey in a series of water-supply papers entitled "Water levels and artesian pressures in observation wells in the United States," and they appear also in publications of the Division of Water. Hydrographs of the records of the observation wells are also shown in this report. The identifying numbers and the names of the owners of the observation wells and the year that automatic recording gages were installed or tape measurements begun are as follows: Su-1, Hudson (municipal well field) 1946; Su-2, Firestone Tire & Rubber Co., 1947; Su-3, Goodyear Tire and Rubber Co., 1944; Su-4, Firestone Tire & Rubber Co., 1947; and Su-6, Goodyear Tire & Rubber Co., 1941.

The cooperation of the many residents and well drillers of Summit County who readily supplied helpful well data is gratefully acknowledged. Special thanks are extended to the members of the Industrial Water Development Committee of the Akron Chamber of Commerce. Appreciation is extended also to W. K. Gilkey, Colonial Salt Co., Sidney Forbes, Columbia Southern Chemical Corp., John E. Kallgren, Seiberling Rubber Co., C. L. Williams, Firestone Tire & Rubber Co., C. H. Nagel, Sun Rubber Co., E. Brownsword, Goodyear Tire & Rubber Co., T. T. Thompson, Seiberling Latex Co., R. C. Johnson, Minnesota Mining & Manufacturing Co., C. J. Collins, General Tire & Rubber Co., and C. T. Carmichael, Jaite Paper Co. These men answered many queries and supplied many data regarding their companys' use of ground water. The authors also thank W. R. Ladue, Superintendent of the Akron Municipal Water Supply, and H. G. McGee, who supplied helpful background information on the area, together with lists of industrial users of ground water in the area. Thanks are extended also to the Firestone Tire & Rubber Co. and to the Goodyear Tire & Rubber Co. for permission to maintain observation wells in their well fields, and especially to the employees of those companies who measured the wells.

The authors appreciate and acknowledge the excellent services of John C. Krolczyk and Mrs. Evelyn Wheaton of the Division of Water who prepared the maps and illustrations in this report.

# GEOGRAPHY

## LOCATION AND SIZE OF AREA

Summit County (pl. 3) is in northeastern Ohio not far from Lake Erie. Akron, its largest city and the county seat, is about 120 miles northeast of Columbus, about 35 miles south of Cleveland, and about 23 miles north of Canton. Summit County has an area of 413 square miles. It is 61st in size of the 88 counties in the State, being about 30 miles in extent north and south and about 15 miles in extent east and west. It occupies parts of six topographic quadrangle maps of the U. S. Geological Survey, namely, the Akron, Canton, Chagrin Falls, Cleveland, Kent, and Massillon quadrangles.

## TOPOGRAPHY AND DRAINAGE

As shown on plate 3, most of Ohio includes portions of two of the major physiographic provinces defined by Fenneman (1938).[1] These are the Appalachian Plateau province and the Central Lowlands, each of which occupies about half the State. The boundary of the Appalachian Plateau in Ohio is marked by an escarpment, prominent in places and indistinct elsewhere, which extends from Cleveland eastward towards Albany, N. Y., and southwestward through Chillicothe, passing between Columbus and Newark. Summit County lies wholly within the glaciated section of the Appalachian Plateau province, the edge of the plateau lying just a few miles to the north and northeast.

The northwestern third of the county is deeply dissected, into high, narrow hills and steep-sided deep valleys. The Cuyahoga River has cut a deep gorge into the unconsolidated glacial deposits, north of Akron, and several picturesque waterfalls occur in the tributary valleys east of the main gorge. The remainder of the county consists mostly of gently rolling uplands, broad flat valleys, and gentle hills with a few steep sided hills in Franklin Township. The highest elevation in the county, near West Richfield, is 1,320 feet above sea level. The lowest area, only 8 miles away, in the extreme northeast corner of Northfield Township, is slightly more than 600 feet above sea level and about 130 feet above the level of Lake Erie. In the northwestern third of the county the valley floors range in elevation from 600 to 800 feet, the hilltops range from 1,100 to 1,200 feet above sea level. Local relief exceeds 200 feet. Elsewhere in the county the valley floors are, on the average, about 1,000 feet above sea level and the hilltops range from 1,100 to 1,200 feet above sea level.

Summit County is drained by two major streams separated by a drainage divide that extends northwest-southeast through the southern part of Akron. North of Akron the drainage is into Lake Erie by the Cuyahoga River, which enters the county from the east near Cuyahoga Falls. South of Akron the drainage is by the Tuscarawas River, which rises in southern Springfield Township and western Green Township and flows into the Ohio River by way of the Muskingum.

[1] See list of references at the end of this report.

## CLIMATE

The climate of Summit County, based on records from two weather stations, is near the average for the State. The average annual precipitation at Akron, based on a 40 year period of record, is 35.44 inches. The average length of the growing season during that period was 170 days, the average first and last days being April 29 and October 16 respectively. The average annual temperature, according to the U. S. Weather Bureau, is 49.8° F, based on 65 years of record from three stations. The average January temperature is 28.5° F, and the average July temperature, was 72.6° F. During a 23-year period of record at Hudson the average temperature and precipitation were about the same as the average at Akron.

## ECONOMIC DEVELOPMENT

### Population

The population of Summit County, according to the 1950 census, was 410,032, which is an increase of 23 percent over the 1940 total. In 1950 the urban population was 337,441, and the rural population was 72,591. The population of the principal towns in 1950 was as follows: Akron, 274,605, Cuyahoga Falls, 29,195, and Barberton, 27,820.

### Agriculture

In 1945, according to the census of agriculture, there were 2,881 farms in Summit County aggregating 127,707 acres, or 48.3 percent of the total land area. Of the farm land, 56,269 acres were used for crops, 33,184 acres were in pasture, and 16,534 acres were in woodland. The total value of all farms, including lands and buildings, was


Plate 3. Map of Ohio, showing location of the area included in this report and the physiographic provinces (after Fenneman)

$22,827,372, an average of $178.75 per acre. Gross farm income in 1949 was $4,698,000, of which almost one-half represented sale of livestock.

The principal crops in Summit County are corn, wheat, oats, and soybeans. In 1945 corn production amounted to 375,957 bushels and wheat, 220,428 bushels. Also in Summit County are several fruit farms. In 1945, 176,057 bushels of apples were produced.

### Industrial Development

Summit County is more important industrially than as an agricultural region. In 1947, according to the Ohio Department of Industrial Relations, there were 451 manufacturing establishments in the county, employing 91,774 persons. Rubber manufacturing and processing, particularly the making of tires and tubes, is the largest single industry. The Firestone Tire & Rubber Co., the General Tire & Rubber Co., the B. F. Goodrich Co., and the Goodyear Tire & Rubber Co. in Akron and the Seiberling Rubber Co. in Barberton together employ more than 56,000 persons. The manufacturing of chemicals ranks second in industrial importance within the county. The Columbia Southern Chemical Corp. in Barberton and the Colonial Salt Division of the General Foods Corp. in Akron, together employ more than 2,000 persons. Other large manufacturing concerns in Summit County include the Babcock & Wilcox Co. in Barberton, which fabricates structural metal products and employs about 5,000 persons, the Quaker Oats Co. in Akron, a grain mill employing about 1,000 persons, and the Diamond Match Co. in Barberton, which employs about 800 persons. There are in addition many smaller plants in Summit County, manufacturing a wide variety of other products. The total value of products manufactured in Summit County in 1947 was $460,327,000.

### Mineral Resources

Limestone, salt, sand and gravel, and clay and shale, are important mineral resources of Summit County. The limestone is mined in an area west of Barberton, from a depth of about 2,500 feet, by the Columbia Chemical Division of the Pittsburgh Plate Glass Co. Salt is obtained in Akron and in Barberton by the Colonial Salt Division of General Foods Corp. and the Columbia Southern Chemical Corp. from brine wells about 2,800 feet deep. Sand and gravel pits are located in the valley-train or kame deposits shown on plate 6. Shale and clay are quarried at several places in southern and southwestern Summit County for use in the manufacture of clay products. The shale and clay quarries are located in rocks of Pennsylvanian age, shown on plate 5.

Near Copley the Sharon conglomerate member of the Pottsville formation is quarried for quartz. Coal also has been mined in Summit County at various times, but little or none is mined at present.

### Transportation and Public Utilities

Summit County is served by an excellent system of roads. U. S. Highways 224 and 21, and State Highways 5, 18, 8, 14, and 176 form the principal lines of road transportation. Nearly all of the county and township roads are hard surfaced or well maintained gravel roads. All but a very few roads are passable for automobile traffic the year round.

Four railroads cross Summit County: the New York to Chicago line of the Erie Railroad; a branch of the Pennsylvania Railroad; a branch of the Baltimore & Ohio Railroad; and the Akron, Canton, & Youngstown Railroad.

# GROUND-WATER HYDROLOGY

## PRINCIPLES OF OCCURRENCE, SOURCE, AND MOVEMENT OF GROUND WATER

A complete discussion of the principles of ground-water hydrology is beyond the scope of this report. However, brief summary of some of the basic concepts is pertinent, and the following is adapted from Meinzer (1923).

The rocks that form the crust of the earth generally are not solid throughout. They contain numerous open spaces which range in size from microscopic openings to large caverns. There are many kinds of rocks, and there are many variations in the number, character, and arrangement of the open spaces or voids. Usually the voids are interconnected, so that water can circulate through the rocks; but in some rocks the voids are scattered, and there is little opportunity for water to circulate. The occurrence of ground water in any region, therefore, is determined by the character, distribution, and structure of the rocks.

The porosity of a rock is its property of containing voids. The porosity of a sedimentary deposit depends chiefly on (1) the shape and arrangement of its constituent particles, (2) the degree of assortment of those particles, (3) the cementation and compaction that have occurred since deposition, (4) the removal of mineral matter by percolating waters, and (5) any fracturing to which the rocks have been subjected. The specific yield of a water-bearing rock is a measure of its ability to yield water by drainage. The specific yield would be the same as the porosity were it not for the fact that part of the contained water is retained against the force of gravity by mutual attraction between the water and the rock particles. The permeability of a water-bearing material is a measure of the capacity of the material to transmit water under hydraulic head. A rock may be very porous but if the interstices are very small water can move through it only with difficulty. Such a rock will have a high porosity but a low permeability, and hence also a low specific yield. A coarser grained rock may have fewer openings and therefore lower porosity, but because the openings are larger its permeability and specific yield will be greater. For example, there are deposits of glacial outwash material in Summit County that in some places consist of fairly coarse sand and gravel, and in other places of fine sand and silt. The sand and gravel deposits are very permeable, have a high specific yield, and are the source of large quantities of ground water. The fine sand and silt, though they have a high porosity, have a low permeability and a low specific yield. Therefore they yield only small supplies of water.

The water table may be defined as the upper surface of the saturated portion of a water-bearing formation, except in areas where that surface is formed by an impermeable body. Where that occurs the water table is absent, and confined or artesian conditions are said to exist. In such areas where water is confined at a lower level than its recharge area, it is said to be under artesian pressure. Water under artesian pressure will rise in a well above the point at which it is first encountered. Wherever the top of an artesian well is sufficiently below the level of the recharge area the well will flow. The level to which water will rise in an artesian well is known as the piezometric surface. Neither the water table nor the piezometric surface maintains a constant level in an area. Nor is the water table necessarily a plane surface; rather, its shape generally follows the shape of the land surface, though in more subdued profile. Both the water table and the piezometric surface rise and fall in response to variations in recharge and discharge. Thus, changes of the water levels in wells record the fluctuations of either the water table or the piezometric surface and indicate whether the ground-water reservoir is being depleted or replenished. Plate 4 shows a typical installation of an automatic water-stage recorder on an observation well in Ohio which is used to record the fluctuations of ground-water levels.

The ultimate source of all recharge—that is, the addition of ground water to the water-bearing formation, or aquifer—in any area is rain or snow. Not all the precipitation, however, percolates down into the rock. Some part of it is carried away in surface streams, some evaporates, and some of it is taken up by the vegetation and evaporated (transpired) directly to the atmosphere. The amount of precipitation that recharges the water-bearing formations depends upon many factors, such as the permeability of the soil covering the

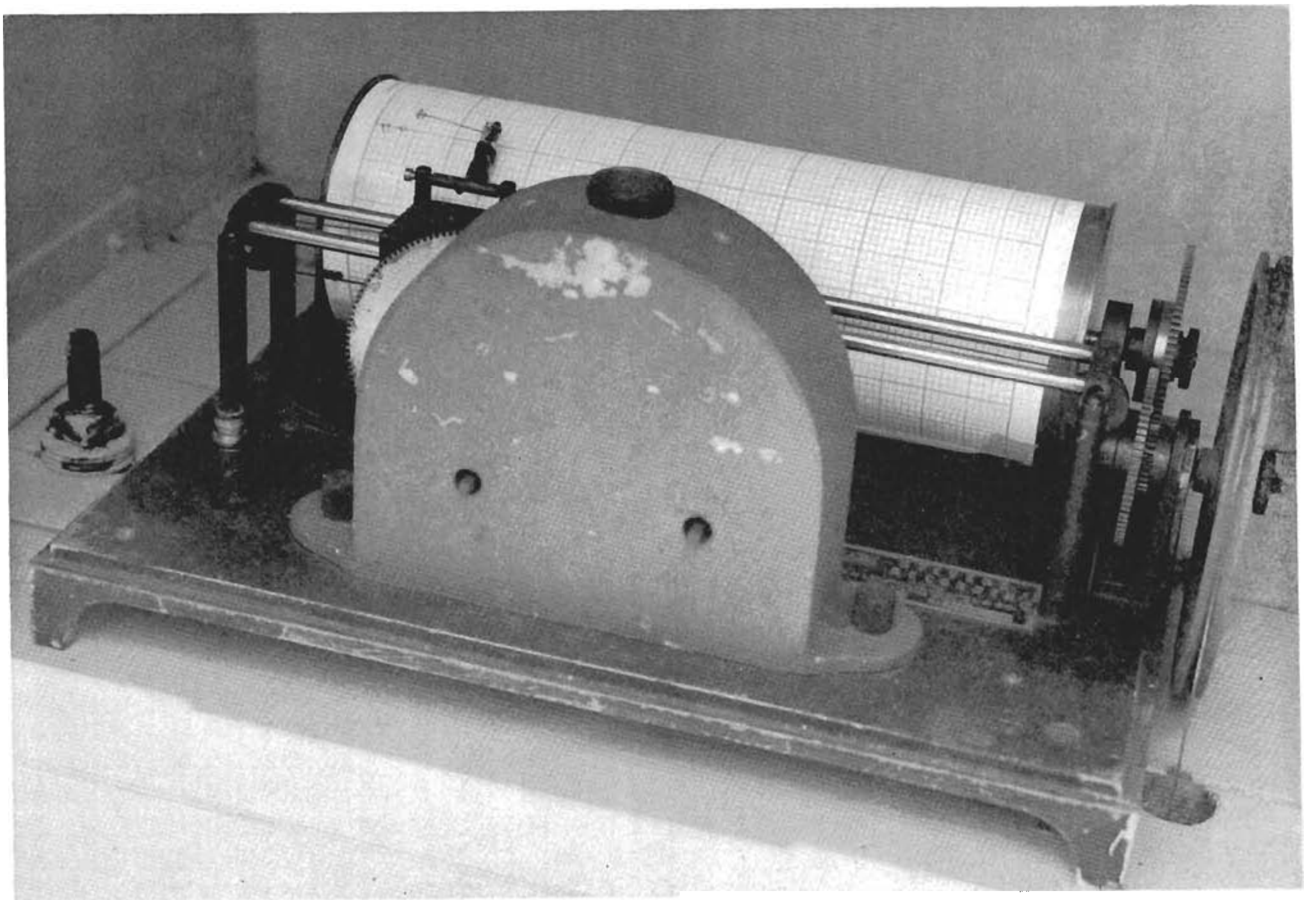


**Plate 4. Photograph of recording gage mounted on an observation well.**

area, duration and intensity of rainfall, slope of the land, type and amount of vegetation, previous soil-moisture content, the air temperature and humidity during the period immediately following the rainfall, and amount of storage space available in the aquifer. Under pumping conditions recharge may be induced from surface streams where they flow across water-bearing formations. Such recharge is generally termed induced infiltration.

The normal flow of ground water is from the area of recharge to some lower area of discharge. Under water-table conditions the discharge is usually into rivers or streams. Under artesian conditions, the flow is commonly down the dip of the rock from the area of outcrop toward some lower outcrop, and the discharge may occur as springs or seeps that flow into surface streams.

Whenever the discharge from an aquifer is greater than its recharge, water levels in the aquifer decline. Thus, the long-term sustained yield of wells in any one area is limited to the average amount of recharge received. Depending on the amount of storage space available in an aquifer, water can be withdrawn from storage in quantities in excess of the recharge, provided that the water is replaced during a later period when the recharge exceeds the withdrawal and before the storage is exhausted.

The pattern of normal ground-water flow in an aquifer is altered by pumping. When a well is pumped, water enters the well from all sides. At first water is withdrawn only from storage in the immediate vicinity of the well. The water level declines in the form of an inverted cone, called the cone of depression. The distance that the water level is lowered in the well is called the drawdown. As pumping continues, more water flows to the well from progressively greater distances, the water level continues to decline, and the cone of depression expands until it intercepts enough natural recharge to balance the pumping. The size and shape of the cone of depression are controlled, for the most part, by the permeability, the thickness, and storage properties of the aquifer. If the available drawdown (the amount of lowering that is possible before the pump fails) is reached before the cone is stabilized, the yield of the well will decrease until a condition of equilibrium is attained. The size of the cone of depression is an important factor in determining the location of wells in a well field because it determines the amount of drawdown available at other wells located within its area. It is entirely possible for two or more closely spaced wells in the same aquifer to have a combined yield only slightly larger than the yield from one of the wells alone.

Wherever large withdrawals of ground water for industrial or public supplies are contemplated, it is essential that some estimate be made of the quantity available from the proposed well field before its development. In addition to those hydrologic factors already mentioned, the quantity of water available depends on the areal extent of the aquifer, the amount of recharge available, and the distance from the proposed well site to the sources of recharge. If all these factors can be determined with reasonable accuracy an estimate can be made of the available yield from one well or from a group of wells within a given area. Controlled pumping tests can be used to evaluate the hydraulic characteristics of the aquifer, and under certain conditions the extent or the hydraulic boundaries of the aquifer can be determined.

The principal hydraulic characteristics of an aquifer are the coefficient of permeability, the coefficient of transmissibility, and the coefficient of storage. The coefficient of permeability in Meinzer's units (Stearns, 1928, p. 148) is expressed as the rate of flow of water, in gallons a day, through a cross-sectional area of 1 square foot under a hydraulic gradient of 100 percent at a temperature of 60° F. The field coefficient of permeability is the same except that it is measured at the prevailing ground-water temperature, not connected to 60° F. The coefficient of transmissibility is the field coefficient of permeability multiplied by the thickness of the aquifer in feet, that is, it is the number of gallons of water a day transmitted through a vertical strip of the aquifer 1 foot wide extending the height of the aquifer. The coefficient of storage (Wenzel, 1942, p. 87) is the amount of water, expressed as a fraction of a cubic foot discharged from each vertical column of the aquifer with a base of 1 square foot when the water level falls 1 foot. Under artesian conditions the coefficient of storage is a small quantity, generally 0.00001 to 0.001 representing both the water squeezed from fine grained materials and that derived by slight expansion of the water itself as the head falls. Under water-table conditions the coefficient of storage includes this small quantity but includes also the much larger quantity, generally 0.01 to 0.3 or 0.4, representing water that drains by gravity out of the top foot of the aquifer unwatered by the 1-foot lowering in head.

Controlled pumping tests may be made under a wide variety of conditions. The most useful method is that which employs one pumped well together with several observation wells located in various directions and at various distances from the pumped well. Pumping is at a constant rate, or in steps in each of which the rate is held steady and the magnitude of the drawdown produced by the pumping is measured in the observation wells at frequent intervals. The methods of collecting and analyzing the data are described by Wenzel (1942, pp. 75-117). The nonequilibrium method developed by Theis (Wenzel, 1942, pp. 87-91) is the one used most widely. The image well method described by Ferris (1948) is used with the nonequilibrium formula to analyze boundary conditions. The theory of inducing infiltration from a surface stream and the application of pumping test procedures to make an analysis of the possibilities of induced infiltration are described in detail by Rorabaugh (1948).

## METHODS OF RECOVERY OF GROUND WATER

Although some dug or driven wells are used, drilled wells furnish most of the ground-water supplies in Summit County. Springs supply part of the water used for rural domestic and stock needs. In a few areas, one of which is the valley of Wolf Creek north of Barberton, driven wells are common. The method of recovery used at any particular site depends upon the economics involved as well as on the character of the aquifer, the availability of water, and the quantities desired.

Dug wells are excavated by hand, usually with pick and shovel. In Summit County they are generally more than 2 feet in diameter and about 25 feet in average depth. Most are lined with concrete, rock, tile, or brick. Most dug wells penetrate only a few feet of material below the water table and as a result they go dry periodically when the seasonal fluctuations cause the water level to fall below the bottom of the well. As a rule, dug wells are poorly sealed and are subject to contamination from the surface. In Summit County, however, dug wells are the best means for obtaining water from the relatively impermeable glacial till. The large diameter of a dug well provides large storage capacity and a large surface area through which water can seep into the well.

A driven well is constructed by driving a pipe 1 to 3 inches in diameter, with a screen and point at the end, into the water-bearing formation. Driven wells are suitable only in areas underlain by loose, unconsolidated, highly permeable material in which the water table is fairly shallow, usually less than 25 feet below the land surface. In such areas moderate supplies of water for farm and domestic uses can generally be obtained.

Drilled wells are those drilled into the unconsolidated or consolidated rock by either the percussion method or the hydraulic-rotary method. Drilled wells generally can penetrate to a greater depth than the first two types of wells mentioned. So far as is known, only the percussion method has been used to drill water wells in Summit County. This method uses a heavy bit which is alternately lifted and dropped from a portable cable tool drilling rig to break up the material at the bottom of the hole. The crushed material mixed with water is removed by a bailer. When drilling by this method in unconsolidated material, a length of casing or pipe is first driven into the ground for a few feet, then the loose material inside the casing is removed by the bailer. The hole is deepened by successively driving the casing and bailing out the inside of the casing, using the drill only when necessary to break up tough material. The largest quantities of ground water obtained in the county are from drilled wells.

Drilled wells may be finished in various ways. Galvanized iron casing is generally used in the unconsolidated material above the bedrock. Wells that are drilled into the consolidated rock formations are cased only to the top of the bedrock, and the hole is continued into the rock until it intercepts sufficient water-bearing voids to supply the needed amount of water. Wells that are drilled only into the unconsolidated material may be left open at the ends, or they may be screened to provide a greater area of opening for water to enter the well. Generally, in unconsolidated material, screened wells last longer and yield more water than open-end wells, chiefly because the latter may become filled with fine material after a period of use. Most of the domestic and farm wells in the county range from 4¼ to 6 inches in diameter and from 50 to 200 feet in depth. Only a few are screened.

Most of the industrial and municipal wells in the county are 12 inches or more in diameter. Some of them are gravel walled (gravel packed), which means, as implied, that carefully sorted gravel has been introduced around the screen. A gravel-walled well is generally constructed by drilling a hole of large diameter, inserting casing of smaller diameter with a screen at its lower end into the larger casing, and then pouring gravel between the two casings as the outer one is pulled back to the level of the top of the screen.

In recent years, another type of well has been used successfully in places for very large withdrawals. It is called a horizontal well or collector and is constructed by sinking a large diameter concrete caisson, 10 to 15 feet in diameter, to the bottom of the water-bearing formation. Near the bottom of the caisson, slotted pipes are forced out horizontally in several directions, for distances of as much as 200 feet. A number of collectors of this type are in use in Ohio, but at present none are in use in Summit County.

Several types of well pumps are used in Summit County, most of them powered by electricity, but a few by gasoline. Many of the dug wells are equipped with hand pumps. Most of the domestic and stock wells are equipped with lift or jet pumps which generally are capable of delivering 4 to 8 gallons a minute. The large industrial and municipal wells are equipped with deep-well turbine pumps, some of which are capable of delivering 1,000 gallons a minute or more.

A few terms used in this report, relative to quantities withdrawn from wells, should be defined. In several places, particularly in the section describing the ground-water resources of specific areas, the reported yield of a well or group of wells is given. In most cases this refers either to the rated capacity of the pump on the well or to the drillers estimate of the yield of the well based on a bailer test. It is not necessarily the maximum yield of the well. The maximum yield or total capacity of a well may be defined as the rate at which it will yield water without excessive drawdown (to the top of the screen or to the bottom of the well, whichever may be the governing factor). Both the reported yield and the total capacity are expressed in gallons a minute. The specific capacity of a well is its rate of yield per foot of drawdown. It is determined by dividing the yield by the drawdown that results from that yield, and it is expressed in gallons a minute per foot of drawdown.

Most of the springs used for water supply in Summit County result from percolation of water downward by gravity through a permeable rock to an impermeable rock, and then by lateral movement along the top of the impervious bed to the outcrop where it discharges as a spring. Most of the springs in the county are located at the base of an outcropping rock that has formed an abrupt cliff or ledge. Some have been developed for domestic or stock use by constructing a springhouse or collecting basin around the outlet. The water is then pumped from the basin or bed, or allowed to flow by gravity, through pipes to its point of use. Unless properly sealed, springs are subject to contamination from a surface source.

## UTILIZATION OF GROUND WATER IN SUMMIT COUNTY

As of the date of writing this report (1950) an average of 25 million gallons of water a day was pumped from wells by industries and municipalities in Summit County. During the summer months, pumpage is more than 35 million gallons a day. The total yearly withdrawal of ground water by the industries and municipalities amounts to somewhat more than 9 billion gallons. Use of ground water in rural areas for domestic and farm purposes is estimated to be slightly less than 1 million gallons a day.

Data on the principal ground-water developments in Summit County are listed in table 1. Records of approximately 1,800 farm and domestic wells, and 400 industrial and municipal wells and test borings gathered during the investigation, are listed in table 6 in the appendix of this report. Table 6, together with plate 22, which shows graphically the logs of more than 1,600 of the wells, contains nearly all of the data on which this report and several of the accompanying maps are based. The locations of the wells are shown on the map in plate 2.

### Use By Industries

Ground water is used by the many industries in the county for a wide variety of purposes. Pumpage by individual companies ranges from a few thousand gallons a day to as much as 8 or 9 million gallons a day. By far the largest use of ground water in the county results from its nearly constant temperature, which approximates the mean annual air temperature and thus is lower than that of surface water in the summer. In general the temperature of water from wells 30 to 60 feet deep averages 52° to 53° F or about 2° to 3° F above the mean annual air temperature of 49.8° F in the area. According to Collins (1925, p. 98) it generally increases about 1° F for each additional 50 to 75 feet of depth. Companies such as Firestone, Goodyear, Goodrich, and Columbia Chemical begin pumping ground water in the late spring of each year. As the temperature of their surface water supply increases during the summer, their rate of pumping ground water increases proportionally to reach a maximum usually in July or August. The rate of withdrawal declines during the fall, and pumping ceases usually in October or November. The Columbia Chemical Co. uses ground water also to recover salt from brine wells. One industry, the Jaite Paper Co., uses ground water as a raw material in the manufacture of paper products. All the large industrial ground-water supplies are obtained from the glacial outwash, as are most of the small supplies. A few industries, requiring smaller quantities, use water from the bedrock.

### Use by municipalities

Of the 12 incorporated municipalities in the county, 8 have municipal water supplies, and of the 8, only Cuyahoga Falls, Hudson, and Lakemore use ground water. Akron and Barberton have surface reservoirs, and Mogadore and part of Tallmadge obtain water from Akron. Silver Lake uses water from the Cuyahoga Falls supply. Twinsburg, which is unincorporated, is served ground water by a private water company. Homes in the other communities are supplied by private wells. The municipal ground-water supplies are discussed in some detail in the section of this report describing the ground-water conditions in specific areas.

### Use for domestic, stock, and irrigation purposes

The greatest number of wells in Summit County are rural wells supplying water for household use. A large number of the suburban residences, which are not served by a municipal supply, use wells to obtain their water supplies. Nearly all of these are small-diameter drilled wells. A few householders in rural areas obtain water from drive-point wells, and a few use dug wells. Cisterns are used in a few places, particularly in parts of Boston and Northampton townships. It is generally estimated that household water requirements are 100 to 150 gallons a day per person. Except in Boston and Northampton Townships along the Cuyahoga River valley north of Akron, sufficient water for household use is generally available. Consequently, most wells drilled for home use can be located wherever convenient. The wells are

## TABLE I

Data on principal ground-water supplies in Summit County.

| Name | Township | Use [1] | Average pumpage (gal. per day)[2] | Number of active wells | Average depth of wells (ft.) | Average static water levels[3] | Well references | Aquifers |
|---|---|---|---|---|---|---|---|---|
| Firestone Tire and Rubber Co.[4] | Coventry (Akron) | Ind | 6,300,000[a] | 10 | 204 | H | 2001, 2002, 2003, 2005, 2191, 2197, 2198, 2104, 2111, 2114 | Glacial outwash |
| Goodyear Tire and Rubber Co.[4] | Springfield (Akron) | Ind | 4,500,000[a] | 11 | 104 | H | 2409, 2627, 2628, 2630, 2631 2634-2639 (incl.) | Do. |
| Goodrich Tire and Rubber Co. | Coventry (Akron) | Ind | 4,320,000[a] | 3 | 218 | 3 | 2118-2120 (incl.) | Do. |
| Columbia Chemical Division Pittsburgh Plate Glass Co.[4] | Norton (Barberton) | Ind | 3,500,000[b] | 5 | 118 | 16 | 1749-1752 (incl.) | Do. |
| Seiberling Rubber Co.[4] | Norton (Barberton) | Ind | 3,000,000 | 4 | 101 | 36 | 1700, 1712, 1875, 1880 | Do. |
| Colonial Salt Co. | Coventry (Akron) | Ind | 2,000,000 | 3 | 95 | 28 | 2122-2124 (incl.) | Do. |
| Jaite Paper Co.[4] | Northfield | Ind | 2,000,000 | 2 | 450 | Flowing | 90 | Do. |
| Columbia Chemical Division Pittsburgh Plate Glass Co. | Franklin | Ind | 1,700,000 | 8 | 99 | | 2716-2720 (incl.), 2768, 2773, 2774 | Glacial outwash and sandstone |
| Miller Rubber Co. | Coventry (Akron) | Ind | 1,500,000 | 1 | 62 | 29 | 2146 | Glacial outwash |
| Sun Rubber Co. | Coventry (Barberton) | Ind | 1,296,000 | 2 | 54 | | 2186 | Do. |
| Midwest Rubber Reclaiming Co. | Norton (Barberton) | Ind | 1,000,000 | 2 | 100 | 24 | 1753, 1754 | Do. |
| Seiberling Latex Co. | Norton (Barberton) | Ind | 500,000 | 2 | 96 | 54 | 1837, 1838 | Do. |
| American Hard Rubber Co. | Springfield (Akron) | Ind | 432,000[c] | 1 | 120 | | 2472 | Do. |
| Galat Packing Co. | Coventry | Ind | 432,000 | 1 | 40 | 2 | 2311 | Do. |
| General Tire and Rubber Co. | Springfield (Akron) | Ind | 250,000[d] | 1 | 74 | | | Do. |
| Electromelt Casting Co. | Coventry (Barberton) | Ind | 150,000 | 1 | | | 2310 | Not known |
| X-Cel Dairy Co. | Coventry (Barberton) | Ind | 108,000 | 1 | 130 | | 2189 | Glacial outwash |
| Minnesota Mining & Mfg. Co. | Copley | Ind | 86,400 | 2 | 110 | 41 | 1249, 1250 | Shale |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Cuyahoga Falls [4] | Stow | PS | 1,500,000 | 6 | 130 | 19 | 1153-1157 (incl.), 1159 | Glacial outwash |
| Hudson [4] | Hudson | PS | 150,000 | 3 | 125 | H | 674, 675, 676 | Sandstone |
| Lakemore [4] | Springfield | PS | 30,000 | 2 | 266 | 53 | 2565, 2566 | Sandstone and shale |
| Twinsburg [4] | Twinsburg | PS | 17,280 | 4 (also use a spring) | 111 | | 308, 309, 310 | Sandstone |

[1] Ind, industrial use; PS, public supply
[2] Average length of seasonal pumpage indicated by: a, 7 months; b, 4 months; c, 6months; d, 5 months.
[3] Depth in feet below land surface; H, hydrograph shown in discussion of respective townships.
[4] Supplies discussed in text under respective townships.

generally located as close to the area where the water will be used as local sanitary conditions permit.

Most of the farm acreage in the county is woodland or cropland. Farm animals, which are raised mostly in small numbers, are generally watered from farm ponds. Only a few wells are used for this purpose and these are generally used also to supply domestic needs.

Irrigation in the usual sense is not practiced in the county. There are a few greenhouses in the rural sections and they all use ground water, but only in small amounts. Two apple orchards, the Babb Orchard in the Richfield Township and the Dannemiller Fruit Farm in Franklin Township, use ground water when spraying the trees with insecticides. At times the Babb Orchard pumps ground water at 300 gallons a minute for very short periods. A small truck farm north of Barberton uses water from 6 drive-point wells to irrigate vegetables. The total ground water used for such various types of irrigation is very small compared to that used for other purposes.

# GEOLOGY IN RELATION TO GROUND-WATER CONDITIONS

## SUMMARY OF STRATIGRAPHY AND STRUCTURE

The rocks of Summit County comprise two major units: (1) consolidated sedimentary layers of Late Devonian, Mississippian, and Pennsylvanian age, which form the bedrock, and (2) unconsolidated surficial deposits of Pleistocene age. The unconsolidated Pleistocene glacial deposits cover nearly all the county and are the more important of the two major rock divisions with respect to the availability of ground-water supplies. The consolidated rocks underlie the Pleistocene deposits and crop out in the beds and on the steep sides of some streams, and in a few other places where erosion or excavation has removed the surficial deposits. The areal distribution of the consolidated rocks is shown on the geologic map, plate 5, and the distribution of the Pleistocene deposits on the glacial map, plate 6. Geologic sections of the rocks in the county are shown on plate 7.

Underlying the exposed bedrock strata of Summit County is a great thickness of Devonian, Silurian, and Ordovician strata whose character is known locally from records of wells that have been drilled in search of salt, oil, or gas. Beneath the Ordovician strata are Cambrian rocks which rest on a base of pre-Cambrian crystalline rocks. The general character and ground-water supply of the geologic formations that crop out in Summit County are described briefly in the generalized section (table 2) and are discussed in detail in portions of the report dealing with the geology and water-bearing properties of the consolidated rocks and of the glacial deposits.

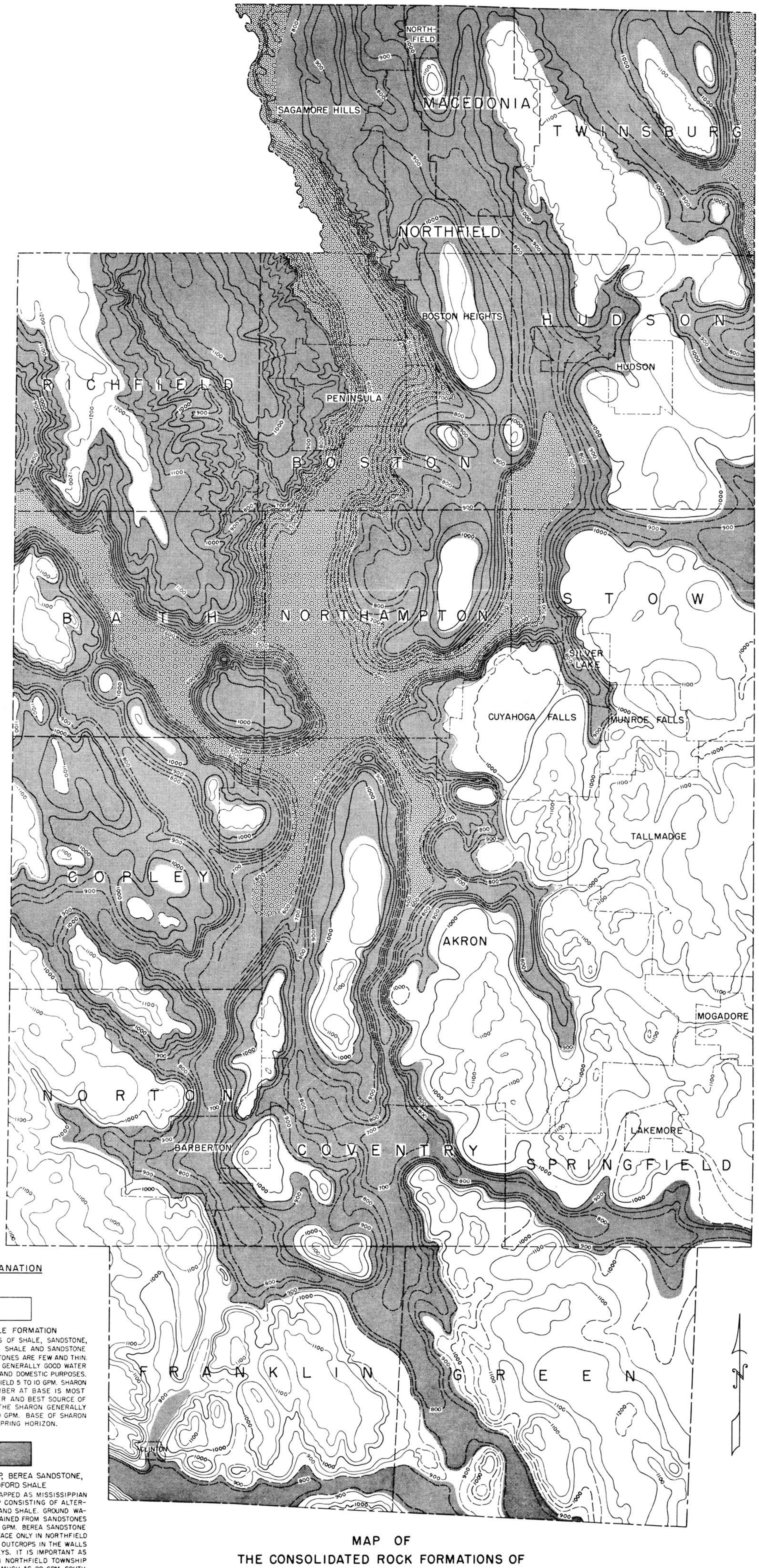
The rocks of Paleozoic age have been little disturbed by folding; they dip generally southeast. In the northeastern part of the county the dip is southward, which is the same as the regional dip of the rocks in northeastern Ohio, western New York, and Pennsylvania—that is, away from the upland area of pre-Cambrian rocks north of Lake Ontario, and toward the central part of the Appalachian trough in West Virginia. In the northwestern part of the county the southward dip gradually changes to an eastward dip. As a result, successively younger formations crop out to the southwest, in roughly concentric belts. The structure of the rocks of Paleozoic age in the county might be likened to one-quarter of the rim of a bowl whose center, the Appalachian trough, is in West Virginia.

Because of variations in the thickness of some of the underlying formations, and the presence of erosional unconformities at the base of the Cleveland member of the Ohio shale, the Bedford shale, the Berea sandstone, and the Sharon conglomerate member of the Pottsville formation, the dip of the surface rocks does not everywhere agree with the regional dip, but may differ locally, in both degree and direction. It is not within the scope of this report, nor is it pertinent to a discussion of the water-bearing properties of the rocks, to show accurately these local differences in dip. It is sufficient to note that the general dip is to the southeast. Lockett (1924) has estimated the average degree of dip in northeastern Ohio to be 35 feet to the mile. Cushing (Cushing, Leverett and Van Horn, 1931, p. 82) reports that the southerly component of the dip in eastern Ohio is 15 to 20 feet to the mile. In Summit County the degree of dip is about 20 feet to the mile.

## TABLE 2

### Stratigraphic sequence of the unconsolidated and consolidated rocks that crop out in Summit County

| System | Series | Group or Formation | Thickness (feet) | Character of material | Water-bearing properties |
|---|---|---|---|---|---|
| Quaternary | Recent | | 1 to 40 | Clay, silt, and alluvium on flood-plains of major streams, and in kettleholes. Includes silts deposited by post-glacial lakes in Cuyahoga River valley. | Generally not water bearing or contains water that cannot be recovered because of the fineness of the material. In uplands along the Cuyahoga River, north of Akron, lacustrine clays on top of till with a combined thickness of as much as 200 feet make it very difficult or impossible to obtain ground water. |
| | Pleistocene | Wisconsin | Up to 250 | glacial meltwater, generally in gravels and coarse sands deposited as kames and valley trains by the glacial melt water, generally in buried valleys. Includes patches of clay. | Quantity of ground water available depends upon the thickness of the material and the source of recharge. Where conditions are good may yield more than 1000 gpm to properly constructed wells. Source of greatest amount of ground water pumped in county. |
| | | | Up to 180 | Clay, silt, and fine sand in glacial lakes. | Generally not a source of ground water. Fine sand, called quicksand by well drillers, contains a great deal of water that is usually not recoverable because of the extreme fineness. |
| | | | 1 to 200 | Till, a heterogeneous mixture of clay, sand, gravel and boulders, with predominence of clay. | Generally a poor source of ground water although in places gravel lenses within the till yield small supplies for farm and domestic uses. |
| | | Illinoian | Unknown | The deep sands and gravels in some of the buried valleys may be outwash from Illinoian. | May yield up to 500 gpm. |
| Pennsylvanian | | Pottsville | | Alternating layers of shale, clay, sandstone, limestone and coal. Locally sandstone may attain thickness of 20 or more feet. | Yields sufficient ground water for most domestic and farm needs. Wells ordinarily yield from 5 to 10 gpm. In Franklin and Green Townships the Massillon is the most persistent thick sandstone present. It may yield up to 50 gpm in places. |
| | | | | Medium grained, loosely cemented, conglomeratic sandstone containing zones of white quartz pebbles. (Sharon conglomerate member.) | Most important consolidated rock aquifer in the county. Adequate ground water available for most domestic and farm uses. Generally yields from 5 to 50 gpm. Some wells yield as much as 200 gpm for relatively short periods of pumping. Where it outcrops to form ledges, springs occur at base. |
| Mississippian | | Cuyahoga group: Meadville shale; Sharpsville sandstone; Orangeville shale | Up to 300 | Alternating layers of sandstone and shale. Sandstones may be massive or they may be thin bedded and contain thin layers of shale. They vary from 5 to 50 feet in thickness. The shales generally contain thin, platey layers of sandstone, although in places they may be massive and attain a thickness of more than 100 feet. Include Sunbury shale of earlier reports. | Ground water generally obtained from sandstones which usually yield from 5 to 10 gpm. Adequate supplies available for farm and domestic requirements, except from the Bedford shale which is not a reliable source of ground water. Berea and Sharpsville sandstones may yield as much as 20 gpm to wells in Northfield Township. Wherever thick shales predominate, ground water is difficult to obtain. Berea may contain salt water southeast of Richfield, Northfield and Macedonia Townships. |
| | | Berea sandstone | Up to 58 | Massive to thick bedded, fine grained sandstone. May be cross bedded and in places contains pebbles. | |
| | | Bedford shale | Up to 85 | Light gray, silty shale, containing, in a few places, thin platey sandstones. | |
| Devonian | | Ohio shale | 50+ | Primarily shale. Cleveland shales of earlier reports. | Not dependable sources of ground water in county. |
| | | Chagrin shale | 450+ | Predominately shale, but includes some thin sandstones. Included in Ohio shale of earlier reports. | |




## EXPLANATION

**PENNSYLVANIAN**

POTTSVILLE FORMATION

ALTERNATING LAYERS OF SHALE, SANDSTONE, LIMESTONE AND COAL. SHALE AND SANDSTONE PREDOMINATE. LIMESTONES ARE FEW AND THIN. COALS ARE PATCHY. GENERALLY GOOD WATER SUPPLIES FOR FARM AND DOMESTIC PURPOSES. WELLS ORDINARILY YIELD 5 TO 10 GPM. SHARON CONGLOMERATE MEMBER AT BASE IS MOST PERSISTENT MEMBER AND BEST SOURCE OF WATER. WELLS IN THE SHARON GENERALLY YIELD FROM 5 TO 50 GPM. BASE OF SHARON IS AN IMPORTANT SPRING HORIZON.

**MISSISSIPPIAN**

CUYAHOGA GROUP, BEREA SANDSTONE, AND BEDFORD SHALE

MOST OF SURFACE MAPPED AS MISSISSIPPIAN IS CUYAHOGA GROUP CONSISTING OF ALTERNATING SANDSTONE AND SHALE. GROUND WATER GENERALLY OBTAINED FROM SANDSTONES WHICH YIELD 5 TO 10 GPM. BEREA SANDSTONE IS THE BEDROCK SURFACE ONLY IN NORTHFIELD TOWNSHIP. IT ALSO OUTCROPS IN THE WALLS OF THE DEEP VALLEYS. IT IS IMPORTANT AS AN AQUIFER ONLY IN NORTHFIELD TOWNSHIP WHERE IT YIELDS AS MUCH AS 20 GPM. SOUTHEAST OF NORTHFIELD AND RICHFIELD TOWNSHIPS IT MAY CONTAIN SALINE WATER. BEDFORD SHALE, WHICH IS AT THE SURFACE ONLY IN EXTREME WESTERN NORTHFIELD TOWNSHIP, IS A POOR SOURCE OF GROUND WATER.

**DEVONIAN**

OHIO SHALE AND CHAGRIN SHALE NOT A SOURCE OF GROUND WATER IN SUMMIT COUNTY.

MAP OF
THE CONSOLIDATED ROCK FORMATIONS OF

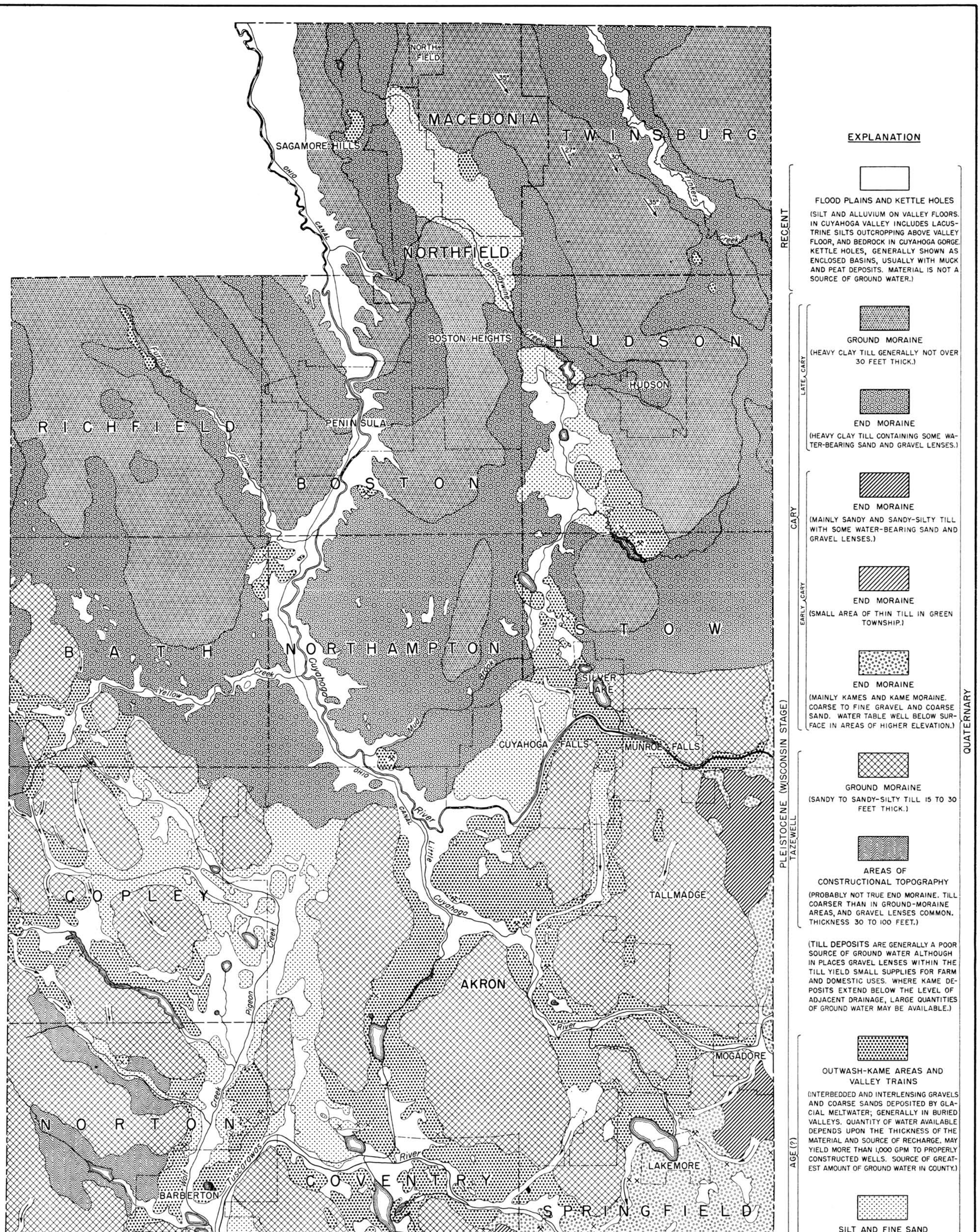
# SUMMIT COUNTY, OHIO

WITH DESCRIPTION OF THEIR WATER-BEARING PROPERTIES
AND SHOWING CONTOURS ON THE BEDROCK SURFACE

ELEVATIONS IN FEET ABOVE SEA LEVEL
CONTOUR INTERVAL 50 FEET

SCALE IN MILES
0 1 2 3 4 5

Plate 5.




MAP OF
THE ALLUVIAL AND GLACIAL DEPOSITS OF
# SUMMIT COUNTY, OHIO
WITH DESCRIPTION OF THEIR WATER-BEARING PROPERTIES

GEOLOGY BY GEORGE W. WHITE

SCALE IN MILES
0 1 2 3 4 5

Plate 6.

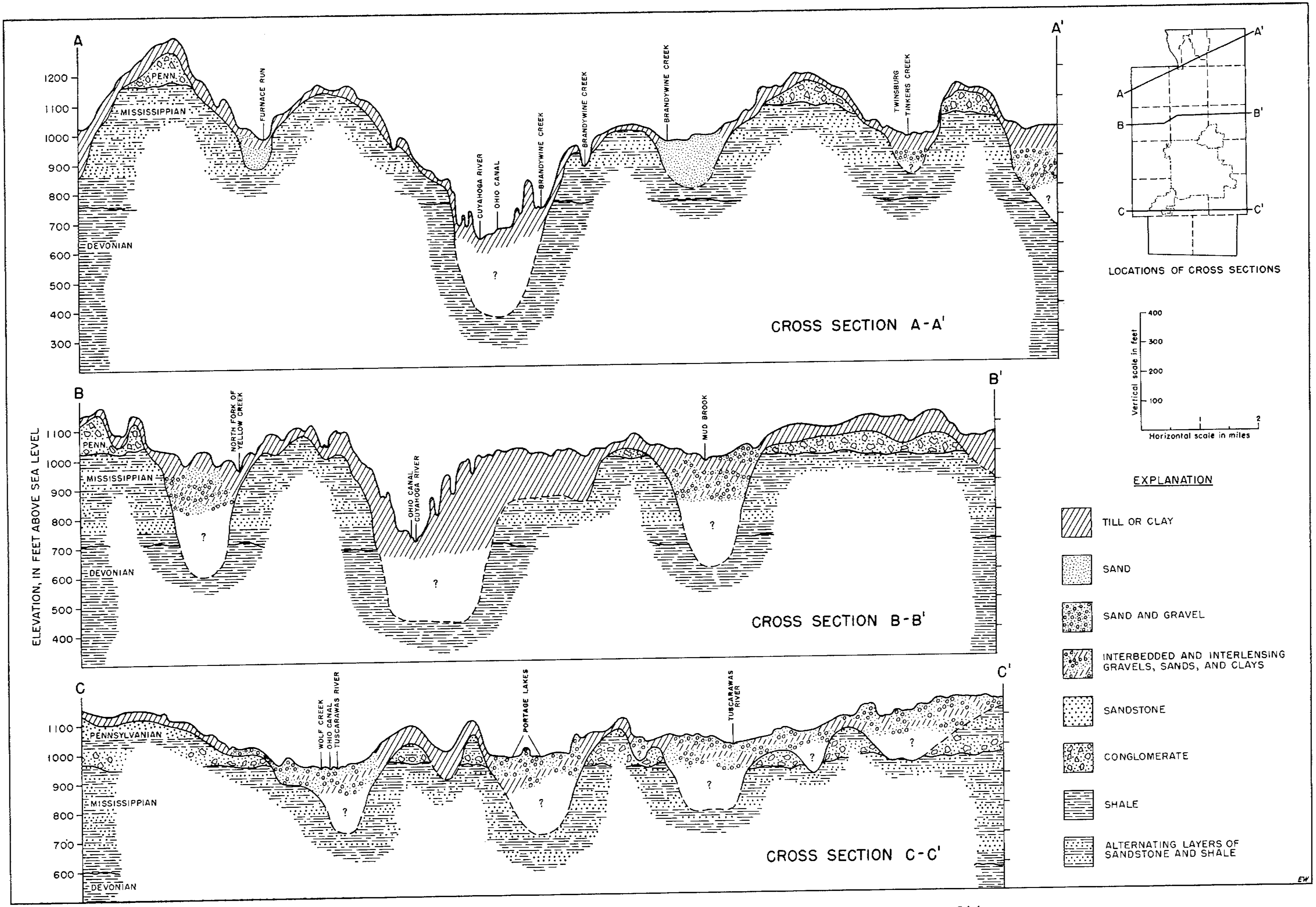



Plate 7. Generalized cross sections showing geology of Summit County, Ohio.

# GEOLOGY AND WATER-BEARING PROPERTIES OF THE UNCONSOLIDATED DEPOSITS

## The Character and Distribution of the Glacial and Alluvial Deposits

By George W. White

The mantle of unconsolidated material that overlies the bedrock in Summit County is of glacial origin, except for postglacial alluvial deposits along major streams and organic deposits in marshes. It is known that four times in the Pleistocene epoch ice sheets invaded the northern United States. Evidence that one or both of the first two ice sheets invaded Ohio is indirect and is based on changes in the pattern of ancient drainage lines. Evidence that Summit County must have been invaded by ice in the third-glacial stage, the Illinoian, is found in deposits south of Summit County that were not overridden by the last ice sheet and are not concealed by later deposits. The fourth glacial stage, the Wisconsin, covered all of Summit County and advanced into Stark County to the south.

The map on plate 6 shows the areal distribution of the glacial deposits in Summit County. The map, and the following discussion, are based principally on field studies and well records. Also utilized were aerial photographs of the U. S. Department of Agriculture, taken in 1938 over the entire county.

### Deposits of Pre-Wisconsin age

It is certain that the Illinoian ice sheet covered Summit County and it is possible that the pre-Illinoian ice sheets also invaded the county. Illinoian drift is recognized south of Summit County beyond the Wisconsin border at Canton (White, 1951a; Schaefer, White, and Van Tuyl 1946) and also is recognized beneath the Wisconsin drift in Cuyahoga, Portage and Mahoning Counties (White, 1951b). Illinoian drift has not been positively identified beneath the Wisconsin drift in Summit County. It is probable, however, that the lower part of the thick glacial deposits in some of the buried valleys is Illinoian. Pre-Illinoian glaciation has been (White 1934) postulated from the pattern of drainage changes in northern Ohio, although no known pre-Illinoian drift has been found.

### Deposits of Wisconsin age

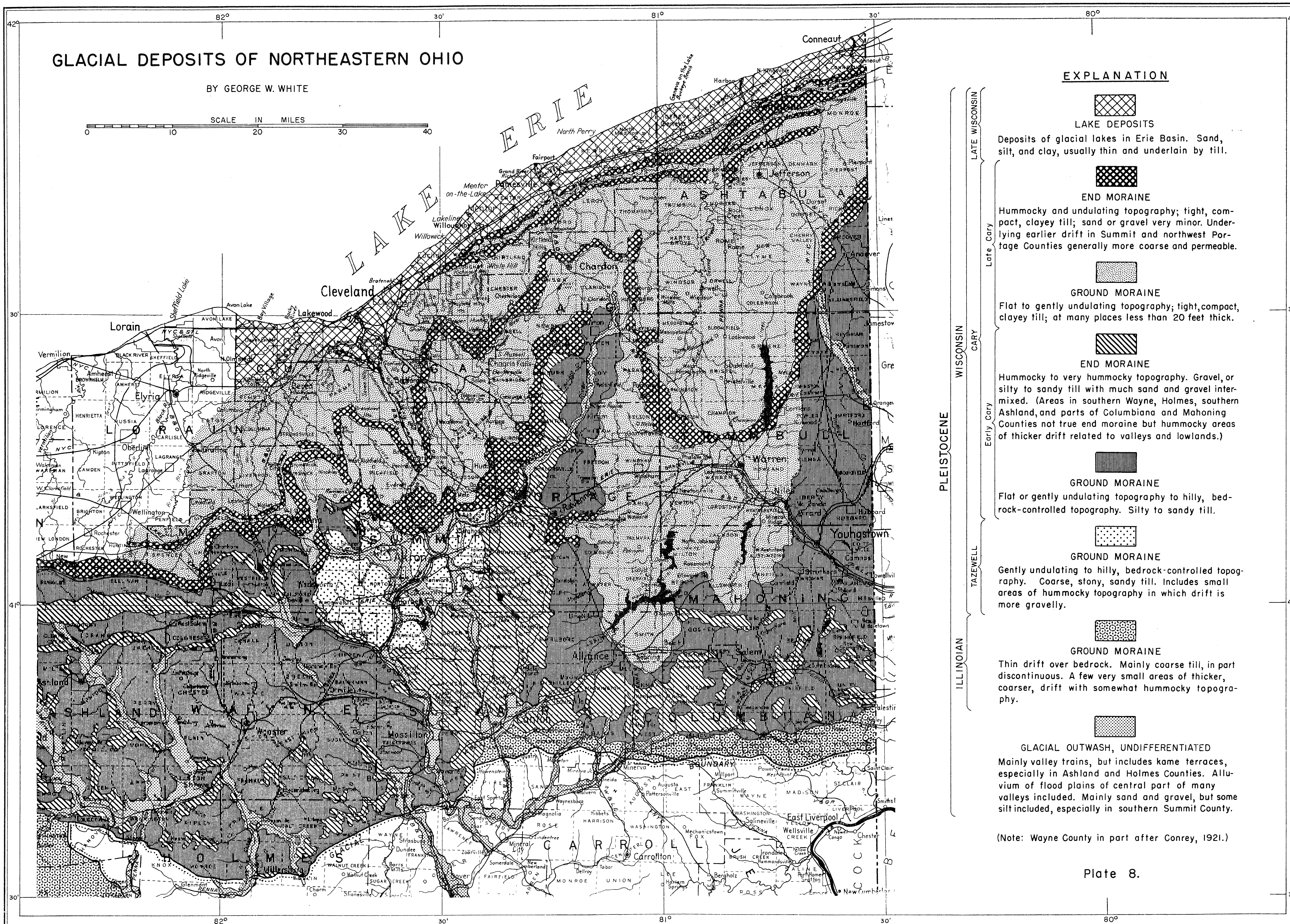
The glacial drift at the surface in Summit County is of Wisconsin age. Differences in thickness, lithologic character, orientation of elongate pebbles, and surface expression show that it was deposited from ice of two different lobes at different times within the Wisconsin stage.

East of the highland of Geauga County the ice of the Grand River lobe advanced into the Grand River lowland of Ashtabula and Trumbull Counties; it then spread westward and southwestward into Geauga, Portage, and Stark Counties, and into the extreme eastern and southeastern parts of Summit County. West of the Geauga County highland the Killbuck lobe of the Wisconsin stage advanced over the lower land between the Summit County upland and the highland in northwestern Richland County. (See pl. 8.)

There are only two major types of drift or deposits left by a glacier. One type consists of material laid down directly by the ice as it wastes away. This material is called till and occurs principally as ground moraine, or till plain. Till is a mixture of unstratified materials in which the individual particles range in size from clay or silt to boulders. Till is generally called "clay" or "hardpan" by well drillers.

The other major type of glacial deposit, commonly called outwash, consists chiefly of sand, gravel, and silt that has been carried and laid down in stratified layers by melt water from the ice. Outwash occurs in the form of kames, outwash plains, and valley trains.

**Tazewell deposits.**—As shown on the map, plate 6, most of the drift in the southern half of the county is of early Wisconsin (or Tazewell) age. This drift was deposited by ice advancing southeastward, as indicated by the direction of the glacial scratches on the bedrock (Leverett, 1902, pl. 13). The highland areas in central and southwestern Summit County are covered by ground moraine that consists of coarse sandy till containing a high proportion of sandstone and sandy shale fragments derived from local bedrock. It is compact and relatively impervious, as is the clay till of later age in the northern part of the county. The thickness of the till in the ground moraine is generally between 15 and 30 feet; in places it is less than this, and bedrock crops out, chiefly on steeper slopes. The surface of the ground moraine


GLACIAL DEPOSITS OF NORTHEASTERN OHIO
BY GEORGE W. WHITE
SCALE IN MILES
0 10 20 30 40
LAKE ERIE
EXPLANATION
PLEISTOCENE
WISCONSIN
LATE WISCONSIN
CARY
Late Cary
Early Cary
TAZEWELL
ILLINOIAN
LAKE DEPOSITS
Deposits of glacial lakes in Erie Basin. Sand, silt, and clay, usually thin and underlain by till.
END MORAINE
Hummocky and undulating topography; tight, compact, clayey till; sand or gravel very minor. Underlying earlier drift in Summit and northwest Portage Counties generally more coarse and permeable.
GROUND MORAINE
Flat to gently undulating topography; tight, compact, clayey till; at many places less than 20 feet thick.
END MORAINE
Hummocky to very hummocky topography. Gravel, or silty to sandy till with much sand and gravel intermixed. (Areas in southern Wayne, Holmes, southern Ashland, and parts of Columbiana and Mahoning Counties not true end moraine but hummocky areas of thicker drift related to valleys and lowlands.)
GROUND MORAINE
Flat or gently undulating topography to hilly, bedrock-controlled topography. Silty to sandy till.
GROUND MORAINE
Gently undulating to hilly, bedrock-controlled topography. Coarse, stony, sandy till. Includes small areas of hummocky topography in which drift is more gravelly.
GROUND MORAINE
Thin drift over bedrock. Mainly coarse till, in part discontinuous. A few very small areas of thicker, coarser, drift with somewhat hummocky topography.
GLACIAL OUTWASH, UNDIFFERENTIATED
Mainly valley trains, but includes kame terraces, especially in Ashland and Holmes Counties. Alluvium of flood plains of central part of many valleys included. Mainly sand and gravel, but some silt included, especially in southern Summit County.
(Note: Wayne County in part after Conrey, 1921.)
Plate 8.

is smooth to gently undulating and it generally conforms to the surface of the underlying bedrock (pl. 9).

In the valleys of Van Hyning Run and Hudson Run in Norton Township are two elongate areas in which the drift is from 30 to more than 100 feet thick. The surface is undulating to hummocky and it has a morainic aspect. The material is till, in places somewhat washed, for it includes some gravel masses. At the southeastern end of each of these valleys where they become part of the larger valley of Wolf Creek, the till gives way to gravelly kame deposits.

Within the area covered by drift of the Tazewell ice are deposits of sand and gravel (pl. 6), most of which are located in wide valleys. Many were not deposited entirely from meltwater from the Tazewell ice; they are complex in origin and have been modified and enlarged by meltwater from later ice advances.

Kames were deposited at the margin of the waning ice or around ice masses that had become separated from the main ice sheet. Kames massed along valley walls form what is appropriately called a kame terrace. In the headwater areas of Yellow Creek and Shocalog Run in southweastern Bath Township, in the valley of Wolf Creek in southern and western Copley Township, and in the area north of Barberton in Norton Township are kame and kame terrace deposits of Tazewell age. Knolls of gravel 10 to 40 feet in height are common. Northeast of Barberton are gravel knolls almost 100 feet in height. Kettle holes are prominent in these kame deposits. They are the casts of the last remaining ice masses, and some of which now contain marshes or ponds.

Post-Tazewell outwash occurs at lower levels in southwestern Bath Township. It was deposited by meltwater from later readvances of the ice which flowed southeast through the Tazewell area down the Shocalog valley.

The materials of the kames range from coarse to fine gravel and include considerable sand. Till masses are present, especially near the margins of the areas and in those kames that consist of poorly sorted gravel. The more level areas between kames have the character of valley trains, in that the material is generally better sorted and not as coarse as it is in the kames.

The kame areas described above grade downstream along Schocalog Run and Wolf Creek into fine sand and silt, which forms the floor of a wide valley extending from Fairlawn southward to Barberton, and of a lowland to the east extending from a point between Kenmore and Barberton to the Tuscarawas River. Silt occurs southward in the Tuscarawas Valley to the south boundary of the county. Extensive, shallow depressions occur in the surface of the silt deposits. These, in part, are kettle holes like those in Shocalog valley and upper Wolf Creek valley; in part, they are kettle holes that have been modified by silt deposits from the late Cary ice advance that reached the buried valley south of Fairlawn. That area is now occupied by Pigeon Creek and lower Wolf Creek. Shallow channel scars occur in the surface of the wide silt area south of Barberton in southwestern Coventry and in northern Franklin Townships. The depressions are swampy, or are occupied by ponds, and they contain extensive organic deposits. The peat in the Copley marshes is reported to be as much as 40 feet in some places.

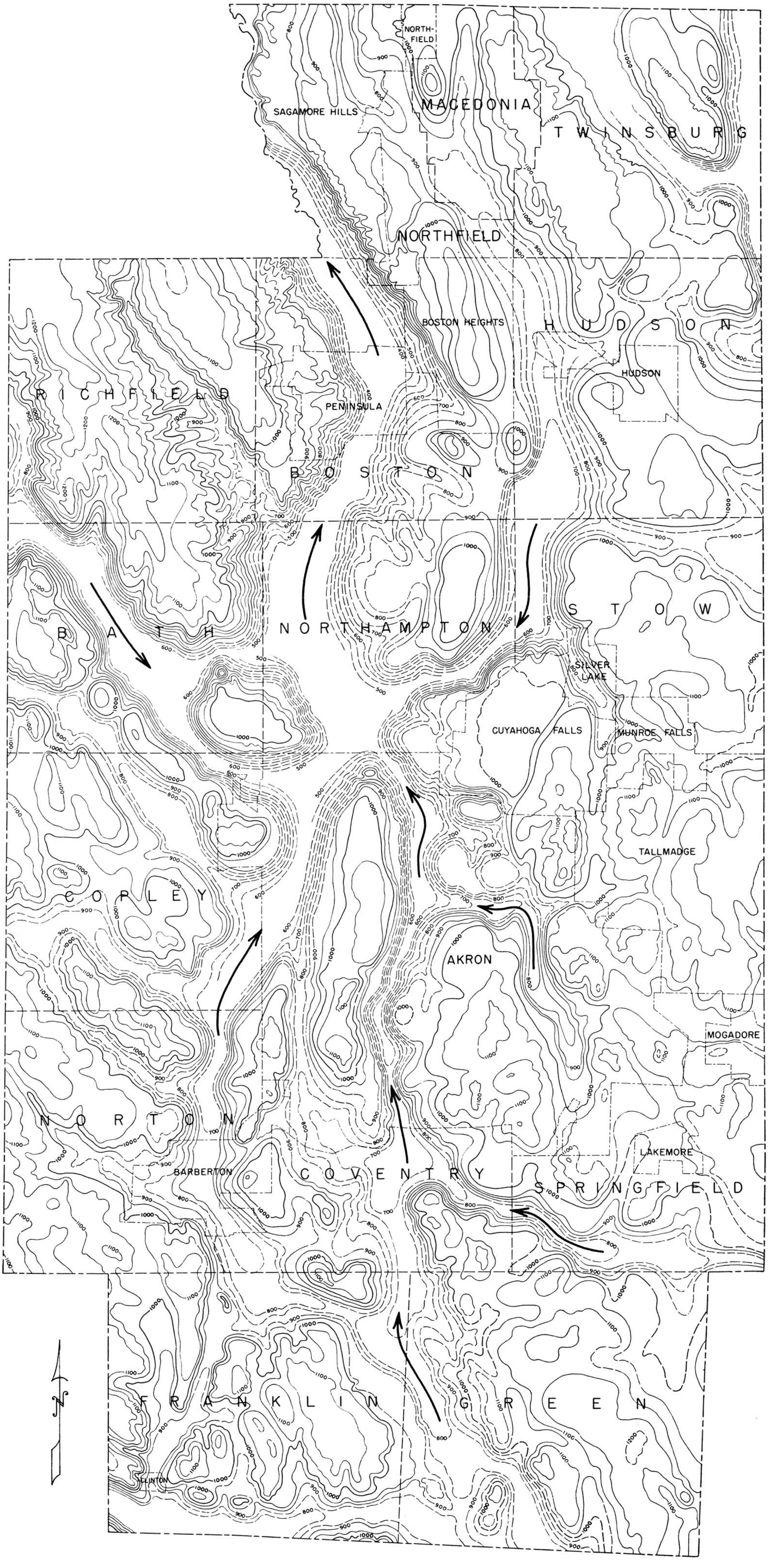
A complex outwash deposit occurs in the Little Cuyahoga River valley at Akron. The outwash extends from Old Forge west to the Cuyahoga Gorge, and south almost to Springfield Lake. It occurs also in the mile-wide depression in the central part of the city. The deposit consists in part of kames and kame terraces of Tazewell age; part is outwash from the late Cary ice margin, which reached as far south as Cuyahoga Falls; and the remainder is from the Grand River lobe of early Cary age which reached the eastern part of the county and discharged melt waters down the Cuyahoga and Little Cuyahoga Rivers. Most of the so-called Akron complex is composed of medium to fine gravel and coarse sand. The bedding is commonly horizontal, rather than steeply dipping, as is shown in sections exposed in many gravel pits. Interbedded in the complex are lacustrine silts, deposited at different times in ponds. The surface of the complex is irregular. That part north of the Little Cuyahoga River is fairly level, with the exception of a few large kettle holes. In the southern part of Akron, south of Summit Lake, the topography is somewhat rougher because of the presence of numerous large kettle holes. The Tuscarawas River flows through a series of these in Coventry Township.

**Early Cary deposits.**—Deposits in the eastern part of the county; in eastern Tallmadge Township; in eastern, southeastern and southern Springfield Township; in Green Township; and in southern Franklin Township, were laid down by ice of Cary age. The drift in the eastern part of the area was deposited by the Grand River lobe; that in the southwestern part was deposited by the Killbuck lobe. The Cary ice made two major advances; till deposited during the first advance is

A Photograph showing Tazewell ground moraine. The rolling surface is a reflection of the topography of the underlying bedrock. View is looking northwest across the Tuscarawas River in Franklin Township.

B Photograph showing glacial outwash gravel exposed in a pit at Paxton, Copley Township. The water in the pit represents the level of the water table.

**Plate 9. Photographs of glacial deposits in Summit County, Ohio.**




MAP OF
# SUMMIT COUNTY, OHIO
SHOWING TOPOGRAPHY OF THE BEDROCK SURFACE
AND DIRECTION OF FLOW OF THE MAJOR PREGLACIAL STREAMS

ELEVATIONS IN FEET ABOVE SEA LEVEL
CONTOUR INTERVAL 50 FEET

SCALE IN MILES
0 1 2 3 4 5

Plate II.

A Photograph showing the topography of the kame end moraine of the Grand River lobe in southeastern Franklin Township. Hills in the foreground are kames. Depression behind the house is a kettle hole.

B Photograph of sand-and-gravel outwash deposited by the Grand River lobe and exposed in a gravel pit near the Tuscarawas River in southern Springfield Township. Water in the foreground is at the level of the water table.

**Plate 10. Photographs of glacial deposits in Summit County, Ohio.**

of different character than that deposited during the later advance. Cary drift of both advances is considerably younger than drift of Tazewell age. This is shown by a difference in weathering and erosion of the two drifts.

End moraines are deposits that accumulated along the ice front where the front remained relatively stationary for a long time. Early Cary drift in Summit County (except in a small area in southern Franklin Township) is part of the great end moraine that extends from central Geauga County south-southeast across western Portage County into central Stark County (pl. 8). That part in Summit County belongs to the western margin of this moraine complex. The drift of the end moraine generally consists of coarse sandy till, gravel, sandy gravel, and sand. The surface is hummocky; in places very high, sharp kames form the most rugged and picturesque glacial topography of Ohio (pl. 10). It has been possible to separate the predominantly till areas from the predominantly gravel kame areas of the moraine, and this has been done on plate 6.

Relatively small areas of the end moraine in northeastern Tallmadge Township, in eastern Springfield Township, and in southern Franklin Township, and a relatively large area in central Green Township consist of till. The till is sandy to sandy silty and contains a high proportion of pebbles and cobbles. Many of the rock fragments are sandstone or sandy shale, but crystalline rocks also occur. Included in the till are gravel and sand masses.

The drift is from 15 to 40 feet thick in Tallmadge and Springfield Townships, and from 50 to 100 feet thick in Green and Franklin Townships. Drift in a linear area in Green Township that extends northwest-southeast from a point north of Greensburg has a thickness of less than 30 feet. It is shown by a special pattern on plate 6.

In eastern Tallmadge Township, in southern and southeastern Springfield Township, and in northeastern, western, and southwestern Green Township, the end moraine is composed mainly of gravel and coarse sand aggregated in prominent kames. Large quantities of gravel have been quarried from many pits in the area. The material ranges in size from coarse gravel to sand; much of it is medium to sandy gravel. Till masses also occur.

In several valleys that discharged melt water from the ice of the Grand River lobe, valley trains of gravel and coarse sand extend from the end moraine through the area of Tazewell drift. A narrow valley train at the Portage County line extends west in the Cuyahoga valley to Cuyahoga Falls, where it grades into the great outwash complex in the Akron area. Some of the melt water may have passed southward through a wide channel in Tallmadge east of Cuyahoga Falls. A well-developed valley train extends from the moraine margin at Mogadore westward in the Little Cuyahoga valley to the great outwash complex at Akron. Some of the gravel north and northwest of Springfield Lake is outwash from the moraine. A great deal of outwash was carried down the Tuscarawas valley from the ice margin in southwestern Springfield Township (plate 10). In that area it is difficult to draw the boundary between end moraine and pitted outwash. Some of the outwash extends from the former ice margin at Turkeyfoot Lake northward to the Tuscarawas valley, and westward through a low area in northern Franklin Township to the Tuscarawas valley. In the latter area the outwash consists of fine sand and silt.

The drift in the kame moraine area attains a maximum thickness of more than 100 feet and the drift may be much thicker than 100 feet in buried valleys. Where there are buried rock hills, as in southeastern Green Township, and in the area in east Springfield Township, the drift thickness is reduced and it may be less than 50 feet.

**Late Cary deposits.**—The drift in the northern part of Summit County differs markedly from that in the southern part, as the northern drift is more clayey and it contains a much smaller proportion of pebbles and cobbles. The clayey character of the late Killbuck drift may be explained if the ice is assumed to have retreated into the Erie basin. During the readvance of the ice large amounts of lacustrine clays and silts were picked up from the basin and moved forward, together with ground-up clayey shale of Devonian age.

In many places in Cuyahoga County, in northwestern Portage County, and in Medina County, late Cary clay till overlies early Cary till. This relationship is exhibited at several localities in northern Summit County, but here the sections are not as clearly distinguishable as they are in adjacent counties.

Areas covered by late Cary ground moraine generally are confined to uplands, but they also include the sides of some valleys. The material is very compact and impervious, fine-grained, clayey to silty-clay till. At places it contains pebbles and cobbles, though much is so pebble-free that it resembles lacustrine silt. On plate 6, some true lacustrine silt and silty clay are included in the area shown as ground moraine in the Cuyahoga Valley, where it was not practicable to separate the deposits in the mapping. The thickness of the ground moraine is generally from 20 to 30 feet but at places it is less than 20 feet, and the bedrock or earlier (Tazewell) till crops out. The thinnest ground moraine appears to be in Twinsburg Township, where large tracts are covered by less than 20 feet of till.

Extensive tracts of end moraine also occur within the area of late Cary drift. The most prominent of these is the moraine that marks the margin of this advance. Its thickness is generally from 100 to 200 feet, and its position corresponds to that of the deep preglacial valleys across Bath and Northampton Townships. The thickness of the moraine in Stow Township is generally less than 100 feet, and its topographic expression is less striking. This is because it does not follow a deep valley. It is probable that much of the thicker drift is of early Wisconsin or Illinoian age.

The next most prominent end moraine lies on either side of the Cuyahoga Valley. It crosses the valley at Peninsula in Boston Township. This moraine has been correlated with the Defiance moraine (Cushing, Leverett, and Van Horn, 1931, fig. 8). Its position in northeastern Ohio is shown on plate 8. It is composed of drift ranging generally from 50 to 100 feet in thickness, except in the Cuyahoga Valley east of Peninsula, where its thickness has not been determined.

Between the moraine that marks the margin of the late Cary advance and the Defiance moraine are several elongate morainic tracts. They are generally in deep valleys and they range in thickness from 50 to 200 feet or more. The northern part of the late Cary moraine in Northampton Township is probably of later origin than the main part of this moraine, the northern part being related to the morainic tract along Furnace Run to the northwest, and to the discontinuous morainic tracts in southeastern Boston Township and in central and northeastern Hudson Township.

The drift of the end moraines is dense clayey till. It is similar in character to the ground moraine, but includes masses and lenses of sand and gravel. It is probable that in the lower part of the moraines in the deep valleys the drift is of earlier age, for in some well records considerable sand and gravel is noted.

Associated with the late Cary moraines are kames that may cover an area up to almost 2 square miles. The material is coarse sand and fine gravel with some cobbles and boulders. In some places it contains masses of till. The deposits range from about 20 feet to more than 100 feet in thickness. The small area of gravel at Macedonia is a fan shaped deposit built by a tributary of Brandywine Creek where it enters the flat basin from the hills to the north.

Extensive areas of fine sand and silt form parts of the lowlands, as in Northfield and Macedonia townships. Similar deposits occur in western Hudson Township and in a section of the city of Cuyahoga Falls. The material consists of outwash from the ice and lacustrine deposits of glacial and postglacial age. The fine sand is often called "quicksand" in well records, and the silt may be recorded as "clay." The deposits are more than 100 feet thick in places.

### Late Glacial and Postglacial deposits in Cuyahoga and Other Valleys

In the Little Cuyahoga valley, below Market Street in east Akron, and in the Cuyahoga valley north of its junction with the Little Cuyahoga valley, are outcrops of silt and clay. The silts, of lacustrine origin, are brown, yellow, and blue. They are finely laminated and contain no pebbles.

As the ice withdrew to the north water was ponded between the ice and the divide between the Erie and Ohio Basins, which runs northwest-southeast through Akron. A main outlet for the water was through the Akron lowland where Summit Lake is now located, but other outlets were used at various times. Newberry (1873, pp. 201-222), Claypole (1887, p. 218, 1888, pp. 421-458) and Leverett (1902); and Cushing, Leverett and Van Horn, (1931, pp. 57-81) have all noted this early drainage. Because more than one advance and retreat of the ice took place during the Wisconsin stage, and because there were one or more advances and retreats during the Illinoian stage, several lakes have existed at different times and the lacustrine deposits are not all of one age (Cushing, Leverett, and Van Horn, 1931, p. 69; Bagley, 1950, pp. 1561-62). Precise and detailed mapping of these lacustrine deposits is not within the scope of this report. The deposits occur mainly in the area mapped on plate 6 as "flood plain," though some deposits occur higher on the valley walls within the area of the Bath moraine.

Other flood-plain areas also are shown on the glacial map, plate 6, but these are small in extent. Alluvium is at the surface in these areas. It is generally silty and of no great thickness.

Kettle holes are common features in Summit County. Many of them are swampy and contain an accumulation of organic material in the form of peat or muck. Below this material in some places is a few feet of marl, a calcareous deposit. In addition to the large kettle holes shown on plate 6, there are thousands too small to be shown.

## Bedrock Surface and Valleys Buried by Glacial Drift

If it were possible to completely remove the glacial deposits from Summit County, the exposed bedrock surface would then look much as it did before glaciation. Many of the hills are capped by the resistant Sharon conglomerate member of the Pottsville formation. These hilltops are all that remain of a formerly more extensive surface, which, because of its relatively greater resistance, formed a widespread platform that protected the formations below it, and became progressively more exposed as the formations above it were removed. The Sharon conglomerate member dips to the southeast, the bedrock hilltops in the northwestern part of the area therefore, are generally higher than those in the southeastern part.

The rocks above the Sharon conglomerate member form an irregular, rather indefinite escarpment. The escarpment faces northwestward, and is roughly parallel to the edge of the Appalachian Plateau in Medina and Cuyahoga Counties. It is not a steep, abrupt cliff, but marks the beginning of a general rise from the platform of the Sharon. Thus, an idealized cross section of the bedrock surface across the county would show a gentle downward slope from the northwest corner southeast to about the center of the county, and then a steeper, but less regular slope up the escarpment face to a high in the southeast. In Richfield Township the highest bedrock hill is 1,250 feet above sea level. Eleven miles southeast, near Akron, the bedrock hills are 1,000 to 1,050 feet above sea level. In Green Township to the southeast the elevation of the bedrock reaches 1,200 feet above sea level.

The preglacial topography resembled the present topography of the unglaciated portion of the Appalachian Plateau. The major valleys were broad and steep-sided, and their gradients were gentle; the hills were high, generally smooth, and gently rolling. The shorter tributary valleys were narrow, and their gradients were steep in the headwater regions, becoming more gentle toward the mouth.

In the northwestern half of Summit County the bedrock hills are narrow and long, and are separated by parallel valleys. The general trend of the long axes of the hills and valleys is northwest-southeast. The main pattern is interrupted by valleys at right angles to the general trend.

In the southeastern part of Summit County the bedrock topography is distinctly different from that to the northwest. There is no definite pattern of hills and valleys but rather a broad gently rolling upland cut by a few deep, broad valleys.

Elevations range from less than 400 feet above sea level at the lowest point (the southwest corner of Northfield Township) to 1,250 feet at the highest point (the northwest corner of Richfield Township). It was essentially a mature region.

There were, of course, some modifications made by the eroding ice, but the major topographic features have remained unchanged. Valleys were deepened, but only those whose courses were parallel to the direction of ice movement. Hilltops were rounded, and some minor valleys were cut by streams that the ice diverted from their normal channels.

Before the advance of the first glacier, the drainage system in Summit County was quite different from that in existence today. The name "Teays Stage" has been given, (Stout, Ver Steeg, and Lamb, 1943, p. 51) to the drainage system present in Ohio prior to the earliest glacial stage of the Pleistocene epoch. It is applied to all streams correlative with the Teays River, the master or type river of the system, which flowed across Ohio in a northwesterly direction and drained all of the southern two-thirds of the State. Neither the Teays River nor its tributaries drained Summit County because of a divide south of the county. The drainage was north to the Lake Erie basin and from there eastward to the ocean. The principal stream rose southeast of Summit County near Canton in Stark County. Two branches, one entering Summit County in Springfield Township, the other entering the county in Green Township, combined south of Akron. From this confluence the former river flowed north through Akron, Peninsula, and Boston. Between Akron and Cleveland the valley of this ancient river is occupied by the Cuyahoga River.

The name "Akron River" might well be given this ancestral Cuyahoga River because of its beginning in the Akron area. It was formerly considered (Stout, Ver Steeg and Lamb, 1943, p. 51) part of the preglacial Dover River, a much larger stream which rose in Belmont, Harrison, and Guernsey Counties. On the basis of bedrock elevations in Stark County (Schaefer, White, and Van Tuyl, 1946, pl. 3) and in Medina County (from the files of the Ohio Division of Water), not previously available, it seems more likely that the course of the Dover River was farther west through Canal Fulton in Stark County, and that it crossed the extreme southwestern corner of Summit County near Clinton. It flowed into Medina County through the valley of Chippewa Creek. In Teays time the Ravenna River (Stout, Ver Steeg, and Lamb, 1943) also drained a small portion of Summit County; it flowed across Twinsburg Township. The preglacial streams were generally larger than those of the present, and they cut broad, deep valleys into the bedrock. The Teays drainage system in Ohio was disrupted by the advance of a pre-Illinoian glacier which blocked the northward and westward passage of the principal streams, and caused them to seek new outlets to the south. Whether this early glacier reached Summit County is conjectural, but it is probable that the drainage system that followed it was essentially the same as the Teays system.

The Illinoian glacier ended the post-Teays drainage system and deposited glacial debris in the valleys. Very likely post-Illinoian drainage was similar to the Teays and post-Teays systems because the valleys, though partly filled, were substantially lower than the surrounding country and still controlled the stream pattern. Channels such as in Franklin Township west of Turkeyfoot Lake, in southwest Akron, and in the northeastern corner of Copley Township were probably cut during Illinoian time when ice or glacial drift blocked the normal stream channels.

The Wisconsin ice again changed the drainage of Summit County. Some streams still follow the preglacial pattern, others are cutting new channels across buried valleys and hills. Some of the older valleys are so filled with glacial debris that drainage is poor—for example, the Portage Lakes area, or the valley of Mud Brook in northeastern Summit County. A drainage divide extends from Ghent, in Copley Township, through Akron, to Springfield Lake. South of the divide some streams drain south into the Ohio River system.

A few streams in Summit County are cutting new channels in headwater areas but follow old valleys farther downstream. The Cuyahoga River, for example, flows west across the county to a point north of Akron, where it turns north and follows the valley of the preglacial Akron River to Lake Erie. The drift in the buried valley has been eroded much faster than the rock in the uplands. This has produced a waterfall where the Cuyahoga River enters the old valley. The falls were located originally about at the highway bridge on State Route 8. Subsequent erosion has worn them back to their present location. Similar falls occur in tributary streams along the Cuyahoga Valley, as in Brandywine Creek in Northfield Township.

During the glacial epoch the main valleys became drainageways for meltwaters from the glaciers, and they were partly filled with outwash materials. The glacial drift in the main buried valleys in Summit County generally is more than 200 feet thick and in some places it is more than 400 feet thick. These deposits offer the best possibilities within the county for obtaining large ground-water supplies. A study of the configuration of the bedrock surface and of an accurate map of the buried valleys is therefore essential to a complete inventory of the ground-water resources. This was made from data obtained from well records and rock outcrops. Plate 11 shows, by means of contours drawn on the bedrock surface, the ancient drainage channels in Summit County and the probable direction of flow of the major preglacial rivers. Contours on the bedrock surface are shown also on the water map, plate 1.

## Occurrence of Ground Water in the Glacial and Post-Glacial Deposits

As shown on the glacial map, plate 6, a large part of Summit County is covered by till deposited as ground and end moraine. Although the till was deposited by different lobes of Wisconsin ice and is therefore of different character according to its source, it is generally impermeable and contains little or no available water. Well drillers commonly describe it as yellow or blue clay. It ranges in thickness from about 10 feet to more than 100 feet. It is generally thin on the tops of the bedrock hills and thick in the buried valleys. Nearly all the wells in the till areas, particularly in the areas shown as ground moraine, are drilled into the underlying bedrock to obtain water. Where the till has been deposited over partly buried valleys, water can be gotten from the underlying outwash. In places, particularly in the end moraine areas and in the areas covered by till of the early Cary ice, waterbearing gravel lenses are interbedded in the till, and generally they yield small supplies. Because such gravel is surrounded by till, recharge is very slow.

Some dug wells in the county yield water from a weathered zone in the top of the bedrock, and a few dug wells reportedly yield water from the till. Dug wells provide a large seepage area through which to receive water, and have large storage space for the accumulation of water between periods of pumping. However till yields water very slowly, and such wells produce only small supplies; yields from such wells therefore are generally adequate only for hand pumps. During dry periods till sometimes shrinks and develops cracks, and dug wells in the till may thus be subject to contamination from the surface. Formerly, shallow dug wells were much more common than they are today and Leverett (1896, pp. 548-549) writes of such wells near Hudson as follows:

> Hon. M. C. Read has published a paper upon the water of Hudson and vicinity, in which it is shown that many shallow wells are obtained at the junction of the yellow and blue till at depths of 10 to 15 feet or less. This source of supply he considers dangerous, for the reason that the yellow clay in seasons of drought opens a series of fissures which readily admit the washings off the surface in showers following such droughts. As in underdraining clay lands the fissures will be opened more rapidly near the drains, on account of the earlier desiccation along them, so they will open up more rapidly for the same cause around the wells, and these will be put in complete communication with the network of openings reaching to the surface. In examining such wells Mr. Read has found centipedes, sow bugs, and earthworms by hundreds brought up in the first drawings of water after copious summer showers. They have sought moisture in the fissures of the clay, and the fact that they were uniformly carried in great numbers into the well when a dashing rain succeeded a long-continued drought shows how directly these fissures connected with the well . . .

The coarse outwash material in kame and valley train deposits, under certain conditions, forms the best aquifers in the county. The material consists generally of highly permeable gravel and sand, though in some places blocks of till are imbedded in the gravel. The conditions necessary for large yields are that the deposits be fairly extensive and lie substantially below the water level in the aquifer. For example, a part of the kame moraine in eastern Springfield Township and western Green Township, deposited by the Grand River lobe, contains very coarse material, but it is in the form of high, steep-sided hills. The water table in these hills is far below the land surface and much of the material, therefore, is dry. Water entering the gravel from rainfall is quickly dissipated by leakage through the sides of the hill. Wells must be drilled fairly deep and, except where the gravel extends well below the water table, yields are not large. They are generally larger, however, than from wells in the till areas, and are adequate for most farm and domestic needs.

In places, such as in the Tuscarawas Valley in southern Springfield Township and elsewhere, the outwash has been laid down in buried valleys now occupied by the larger streams. Such locations make possible the largest sustained yields in the county because the aquifers are generally recharged by water from the streams that cross them. Maximum yields depend on the thickness of the aquifer, its permeability, and the distance of the wells from the source of recharge. Wells properly located and constructed may yield more than 1,000 gallons a minute. At present the only large withdrawal from such an area in Summit County is west of Cuyahoga Falls, where the city pumps an average of 1,200 gallons a minute from 2 or 3 wells. This amount does not indicate the maximum quantity available.

Outwash sand and gravel in buried valleys not now occupied by the larger streams are recharged primarily from rainfall. Initial yields from these aquifers may be quite large, but the sustained yields are generally less than from those areas that receive recharge from streams. Where the outwash is thick, such as in the buried valleys that underlie south-central and east Akron, large seasonal withdrawals may be made from water in storage in the gravels. In south-central Akron an average of 13 million gallons of ground water a day is pumped for industrial cooling purposes during the warm months. By the end of the season water levels in the wells are low and pumping at the summer rate could not be continued much longer. During the winter months the water in the gravels is replenished, so that by the time the next pumping season begins it usually has recovered to the level it had at the beginning of the previous pumping season.

Some of the glacial outwash was deposited as silt and fine sand in ponds or lakes. The silt, which is commonly called "clay" by the well drillers, is relatively impermeable. It contains little or no available ground water. The sand is generally called "quicksand" by the driller. It contains large quantities of water, which, however, is extremely difficult to recover without also pumping sand. Screens fine enough to hold back the sand are too fine to permit the very rapid entry of water into the well.

Some of the deeper buried valleys contain outwash deposited during early stages of glaciation and afterward covered by till or silt. Fairly large yields are available to wells that penetrate this buried outwash where the materials are coarse. Recharge to such aquifers is limited by the amount of precipitation that percolates through the overlying sediments or to the amount of recharge available from a surface source some distance away. It is difficult to map the buried coarse material because it was deposited under widely varying conditions. Some wells, even though drilled near wells of good yield, may encounter only fine material. The better wells yield as much as 500 gallons a minute for short periods, but their sustained yield is probably somewhat less than this.

As the ice sheets retreated from Summit County, lakes were formed in the Cuyahoga Valley in which thick layers of silt were deposited. The silts, together with associated till deposits, are not water bearing. In that area most home-owners are forced to rely on cisterns for their water supply.

Recent alluvium, consisting of silt and sand deposited by the present streams on their flood plains, and peat and marl laid down in swamps in the kettleholes, are of little importance. The deposits are impermeable and generally thin, and most wells are drilled through them to obtain water from the underlying formations.

## GEOLOGY AND WATER-BEARING PROPERTIES OF THE CONSOLIDATED ROCKS

The consolidated rocks that underlie Summit County, at least to the depth penetrated by wells seeking oil, gas, or salt, are of sedimentary origin and were deposited during the Paleozoic era. During much of Paleozoic time the area was covered by seas, in which sheets of mud, calcareous mud, and sand and gravel were deposited. For a time inland lakes existed, and salt and gypsum were formed. At times shallow water, or shoreline conditions, existed, deltas were formed, and vegetation accumulated in the swamps. Consolidation of the sediments changed the mud into shale, the calcareous mud into limestone or dolomite, the sand and silt into sandstone and siltstone, the gravel into conglomerate, and the vegetation into coal.

The exposed consolidated rocks in Summit County consist primarily of interbedded shale, sandstone, and conglomerate. In places the shales are sandy and the sandstone is more nearly siltstone. A few thin limestones and some coal beds occur in the southern part of the county. Beneath the exposed rocks are more shales, underlain in turn by thick limestone. At greater depths are beds of gypsum, anhydrite, and salt. Some formations, found elsewhere in the State, have been removed in Summit County by erosion during the intervals in the Paleozoic era when the region was above sea level, and their absence is marked by unconformities.

The formations listed in table 2 are not found everywhere in the county. Some have been removed locally by erosion. The geologic map on plate 5 shows the areal distribution of the exposed consolidated rocks. Only the major units, the Pennsylvanian, Mississippian, and Devonian systems, are shown. The map and the discussion of the rock units are based on field studies, well records, and previous reports dealing with the geology of the area. More complete descriptions of the occurrence and distribution of the consolidated rock formations in the county may be found in reports by Cushing, Leverett, and Van Horn (1931), Prosser (1912), and Newberry (1873).

### Stratigraphic Sequence, Character, and Distribution of the Rocks

#### Pennsylvanian System

The youngest consolidated rocks in Summit County are the members of the Pottsville formation of the Pennsylvanian system. Stout (Stout, Ver Steeg and Lamb, 1943, table 1) gives the following as a generalized section of the Pottsville formation in Ohio:

| Member | Kind of Material | Thickness | Interval |
|---|---|---|---|
| | Clay, plastic | 4′ | |
| Homewood | Shales or sandstone | 10′ | 15′ |
| Tionesta No. 3b | Coal, local | 1′ | ...... |
| | Clay, plastic | 5′ | |
| | Shale and sandstone | 24′ | |
| Upper Mercer | | | |
| Big Red Block | Ore, irregular | 4″ | 32′ |
| Upper Mercer | Limestone or flint | 1′8″ | |

| Member | Kind of Material | Thickness | Interval |
|---|---|---|---|
| Bedford | Coal, patchy | 1′ | ...... |
| | Clay, siliceous | 3′ | |
| | Shale and sandstone | 7′ | |
| Sand Block | Ore, siliceous, local | 6″ | 15′ |
| | Shale and sandstone | 3′6″ | |
| Upper Mercer No. 3a | Coal, local | 1′ | ...... |
| | Clay, siliceous, plastic | 3′ | |
| | Shale and sandstone | 11′ | |
| Lower Mercer Little Red Block | Ore, kidney | 3′ | |
| | Shale, siliceous | 1′9″ | 18′6″ |
| Lower Mercer | Limestone, marine | 2′ | |
| Middle Mercer | Coal | 6″ | |
| | | | ...... |
| | Clay, siliceous, plastic | 3′6″ | |
| | Shale and sandstone | 5′ | 9′ |
| Flint Ridge | Coal, local | 6″ | |
| | | | ...... |
| | Clay, plastic and flint | 4′ | |
| | Shale and sandstone | 5′ | |
| Boggs | Ore and limestone, marine | 6″ | 11′6″ |
| | Shale, siliceous | 1′ | |
| Lower Mercer No. 3 | Coal | 1′ | |
| | | | ...... |
| | Clay, siliceous | 3′ | |
| | Shale and sandstone | 23′ | 28′ |
| Lowellville Poverty Run | Limestone or ore, marine | 1′ | |
| Vandusen | Coal, unsteady | 1′ | |
| | | | ...... |
| | Clay, impure | 2′ | |
| | Shale and sandstone | 17′ | 20′6″ |
| Bear Run | Coal, local | 1′6″ | |
| | | | ...... |
| | Clay, siliceous | 3′ | |
| Connoquenessing or Massillon | Shale or sandstone | 24′ | 29′ |
| Quakertown No. 2 | Coal, patchy | 2′ | |
| | | | ...... |
| | Clay, siliceous | 5′ | |
| | Shale and sandstone | 12′ | 17′3″ |
| Huckleberry | Coal, local | 3″ | |
| | | | ...... |
| | Clay, siliceous | 3′ | |
| | Shale, argillaceous | 1′ | 10′3″ |
| Guinea Fowl | Ore, local | 3″ | |
| | Shale, gray, siliceous | 5′9″ | |
| Anthony | Coal | 3″ | |
| | | | ...... |
| Sciotoville | Clay, flint and plastic | 4′ | |
| | Shale and sandstone | 20′ | |
| Sharon | Ore, local, marine | 3″ | 32′ |
| | Shale, siliceous | 4′9″ | |
| Sharon No. 1 | Coal, patchy | 3′ | |
| | | | ...... |
| | Clay, impure | 2′ | |
| | Shale, siliceous, irregular | 5′ | 18′ |
| Sharon | Conglomerate | 10′ | |
| Harrison | Ore, local, impure, marine | 1′ | |
| | | | ...... |

Not all of the members listed occur in Summit County, nor are they everywhere of the same character or thickness shown in the generalized column. Rocks of the Pottsville formation in Ohio are extremely variable and may change in both character and thickness within short distances. Within a few miles a shale may give way to a sandstone. The coals usually occur in patches. Members present in one locality may be represented only by an unconformity in another. The generalized section showing the alternating layers of shales, clays, sandstone, limestone and coal illustrates the physical character of the Pottsville formation in Summit County.

The Lower Mercer limestone member is the highest stratigraphic unit of the Pottsville in Summit County. All younger Pennsylvanian rocks have been removed by erosion. The Lower Mercer limestone member, the Middle Mercer coal and clay member, and the Flint Ridge coal and clay member are exposed in a quarry at Aultman (Stout, Stull, McCaughery, and Demorest, 1923, p. 177). The Boggs, the Lower Mercer coal, the Lowellville-Poverty Run, and the Vandusen members have not been recognized in the county. In a quarry, just west of Mogadore, the Bear Run, Massillon and Anthony members are present (Lamborn, Austin, and Schaaf, 1938, p. 84). The Quakertown No. 2 coal is represented by a trace of carbonaceous material, and the Huckleberry and Guinea Fowl members are absent. The shales of the Massillon member are also present in quarries in Akron. In a quarry south of Barberton the Massillon member is separated from the Anthony member only by a thin black shale at the horizon of the Quakertown No. 2 coal member (Lamborn, Austin, and Schaaf, 1938, p. 76). In a second quarry near Mogadore the Sciotoville member is present beneath the Anthony (Stout, Stull, McCaughey, and Demorest, 1923, p. 141). The Sharon No. 1 coal member has been mined in southern Norton Township and in Franklin Township. The Sharon conglomerate member also is present in the county, and occurs in cliffs, such as "Ritchie Ledges," and in many road cuts. In places it has been quarried.

The greatest mass of the Pottsville formation occurs southeast of a roughly semicircular line extending from Barberton northeast through Stow Township, south of Darrowville. Generally, north and northwest of the line, the Sharon conglomerate member is the only Pennsylvanian rock present. It occurs in patches capping the higher hills. Progressively younger rocks occur in successive concentric belts southeast of the line. The youngest consolidated rocks in any one area are those that cap the bedrock hills. Beneath Tallmadge, Akron, and Norton Townships, the Massillon sandstone member is generally the uppermost unit, though in places, particularly at the tops of the bedrock hills, shales and thin sandstones occur above it. In northern Springfield Township and in Green Township the Lower Mercer limestone member is the youngest rock unit present. In Green Township the Pottsville formation, or a portion of it, reaches a thickness of 250 to 300 feet. In Springfield and Franklin Townships it is about 200 feet thick, and in Norton and Tallmadge Townships it is 100 to 150 feet thick.

The most prominent and continuous members of the Pottsville formation are the Massillon sandstone member and the Sharon conglomerate member. The Massillon member is fine to coarse grained and in places it may be pebbly. It is cross-bedded and generally a buff color, though it may be pink, brown, or several other shades when weathered. It is well cemented and has been quarried elsewhere in Ohio for building stone. Its thickness varies considerably, and in places the Massillon horizon may be predominantly shale. Near Mogadore the Massillon member consists of 2 feet of clay, 3 feet of shale, and 5 feet of sandstone (Lamborn, Austin and Schaaf, 1938, p. 84). South of Barberton, in a quarry, the Massillon sandstone member is 16 feet thick. It is believed that in Summit County the sandstone rarely exceeds 20 feet in thickness.

The Sharon conglomerate member occurs some 50 to 80 feet beneath the Massillon sandstone member. The interval varies considerably, and it may be less than 20 feet in places. The Sharon, although called a conglomerate, is composed predominantly of medium-grained sandstone, loosely cemented. The conglomeratic zone is chiefly at the base of the rock and consists of a mass of rather well sorted white quartz pebbles. The space between the pebbles is occupied by sand grains. The Sharon conglomerate member of the Pottsville is the basal member of the Pennsylvanian system. It was deposited in basins or troughs formed by pre-Pennsylvanian erosion of the surface of the underlying Mississippian rocks. Consequently, its thickness is quite variable. In the northern and northeastern parts of the county, where it now caps the bedrock hills, it ranges in thickness from only a few feet to as much as 50 feet or more. North of Twinsburg it is 44 feet thick and at Hudson it is 46 feet thick. Near Barberton it is 64 feet thick, and in a deep well at Akron (Prosser, 1912, pp. 173-176) it was found to be 40 feet thick. Where erosion has removed the overlying drift the Sharon forms cliffs and ledges. The most spectacular of these are "Boston Ledges" and "Ritchie Ledges" in Boston Township. The main falls of the Cuyahoga River in the center of Cuyahoga Falls are formed by the Sharon. The Sharon has been quarried for the quartz pebbles near Copley. Photographs of the Sharon conglomerate member are shown on plate 12.

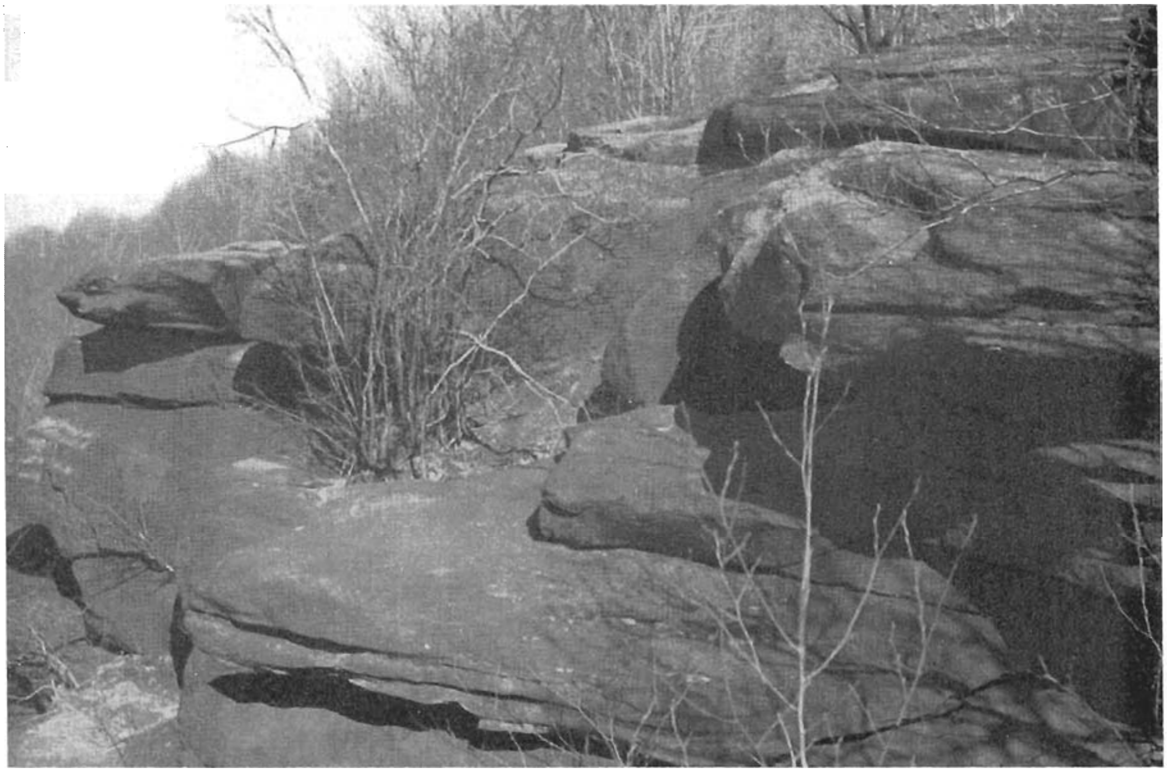
Correlation and identification of the various members of the Pottsville formation in Summit County from the drillers' logs shown in plate 22 has not been attempted, because the distinction between a shale and a sandy shale or between a sandstone and a shaly sandstone cannot usually be detected in well cuttings. For example, many drillers frequently determine the character of the rock by its ease of drilling with the result that a rock that appears to be sandstone may actually be a shaly sandstone or a sandy shale, or it may consist of several interbedded layers of thin sandstones and shales. Moreover, very thin, platy sandstones sometimes appear white in well cuttings, and may therefore be called "lime shells" by the driller.

### Mississippian System

The Mississippian system in Ohio has been subdivided by Stout (Stout, Ver Steeg and Lamb, 1943, table 1) into six groups or formations. They are, in descending order: Maxville, Logan, Cuyahoga, Sunbury, Berea, and Bedford. The Maxville and the Logan do not occur in Summit County, having been removed, together with the upper part of the Cuyahoga group, by pre-Pennsylvanian erosion. In the Summit County area the Cuyahoga group is subdivided into the Meadville shale, the Sharpsville sandstone, and the Orangeville shale. According to DeWitt (1951), though the Sunbury shale elsewhere in Ohio is a distinct rock unit separated from the Orangeville by local siltstones, in northeastern Ohio it is a member of the Orangeville and it will be so considered in this report. The Berea sandstone and the Bedford shale are both present in Summit County, though in places part of the Bedford was removed by erosion prior to deposition of the Berea sandstone.

The youngest recognizable Mississippian unit in Summit County, the Cuyahoga group, forms the bedrock in much of the northern and northeastern parts of the county. Capped by the Sharon conglomerate member of the Pottsville formation, rocks of the Cuyahoga group comprise most of the bedrock hills in that area. Cuyahoga rocks also outcrop in the deeper buried valleys in the southwestern part of the county, though at no place in Summit County is there a complete section present. In the northern part of the county the Cuyahoga group averages about 250 feet in thickness; at Akron, where it is covered by the Sharon, a deep well (Prosser, 1912, p. 173) penetrated only 170 feet of Cuyahoga rocks. A few miles to the west of that well in what once was called Kenmore, and now is a part of Akron, a salt well (Prosser, 1912, pp. 173-176) penetrated about 300 feet of the Cuyahoga. Near Barberton the log of the shaft of the Columbia Chemical

A Photograph showing quartz pebbles at the base of the Sharon conglomerate member of the Pottsville formation. Arrows indicate contact between the Sharon and the underlying Cuyahoga group. View is at "Old Maid's Kitchen" in the Akron Metropolitan Park, west of Cuyahoga Falls.



B Photograph of the Sharon conglomerate member at Ritchie Ledges in Virginia Kendall Park, Boston Township.

Plate 12. Photographs of the Sharon conglomerate member of the Pottsville formation in Summit County, Ohio.

Co. limestone mine (Stauffer, 1944) shows more than 350 feet of Cuyahoga rocks.

The Cuyahoga group consists of interbedded sandstones and shales. The sandstones may be platy and only a few inches thick (pl. 13 **A**). Where they are as much as 8 or 10 feet thick, they are composed of thin beds ranging from 2 to 8 inches in thickness. The shales may be sandy or clayey and range in thickness from less than one foot to as much as 100 feet. Individual beds of the Cuyahoga group have not been differentiated in the well logs (pl. 22), for the reasons described in the section dealing with the Pottsville formation. That part of the Cuyahoga group which occurs most generally beneath the glacial drift is the Meadville shale. The Sharpsville sandstone, according to Prosser (1912), underlies parts of Northfield Township and is also present in the Cuyahoga gorge southwest of Cuyahoga Falls, where it forms the lower falls. Plate 13 **B** is a photograph of the Sharpsville sandstone taken near the lower falls. The Orangeville shale occurs in the sides of the deep buried valleys, except in a small area in Northfield Township where it is the bedrock. The following portion of Stauffer's log of the shaft at the limestone mine at Barberton illustrates the character of the Cuyahoga group:

| Rock Type | Thickness (feet) |
|---|---|
| Sandstone with shale partings | 10 |
| Shale with bands of sandy layers | 10 |
| Shale | 30 |
| Sandstone | 10 |
| Sandstone with interbedded shale | 30 |
| Shale with interbedded thin sandstone | 5 |
| Sandstone with interbedded shale | 60 |
| Sandstone | 10 |
| Shale | 5 |
| Shale with lawyers of sandstone | 50 |
| Shale | 120 |
| Sandstone | 10 |
| Shale (called Sunbury by Stauffer) | 22 |

The Berea sandstone, according to DeWitt (1951) was deposited in three phases. The first phase was the filling of the channels cut after deposition of the Bedford. The sandstone of this phase is massive and in places it contains pebbles. The second phase was deposited by rivers, in sheets 20 to 30 feet thick, and it is crossbedded. The third phase was deposited at the bottom of shallow seas and is a thin bedded, fine grained sandstone 5 to 20 feet thick, with shale partings between the beds. The channel deposits have not been recognized as such in Summit County. The Berea is at or near the surface only in the northwestern part of the county. It forms the bedrock surface in part of Northfield Township, where it is 40 feet thick. It also forms the falls on Brandywine Creek and it crops out in the sides of the Cuyahoga Valley. It has been quarried at Peninsula where it is about 58 feet thick. The photograph, plate 14 **A**, shows a portion of the Berea sandstone. Presumably the Berea occurs also in the sides of the buried valleys. Elsewhere in the county it is covered by thick layers of consolidated rocks and glacial deposits. It has been penetrated by deep wells in search of oil or gas but identification from the available well records is difficult. That the Berea may not everywhere be present is indicated by the fact that it was not identified in the limestone mine shaft at Barberton.

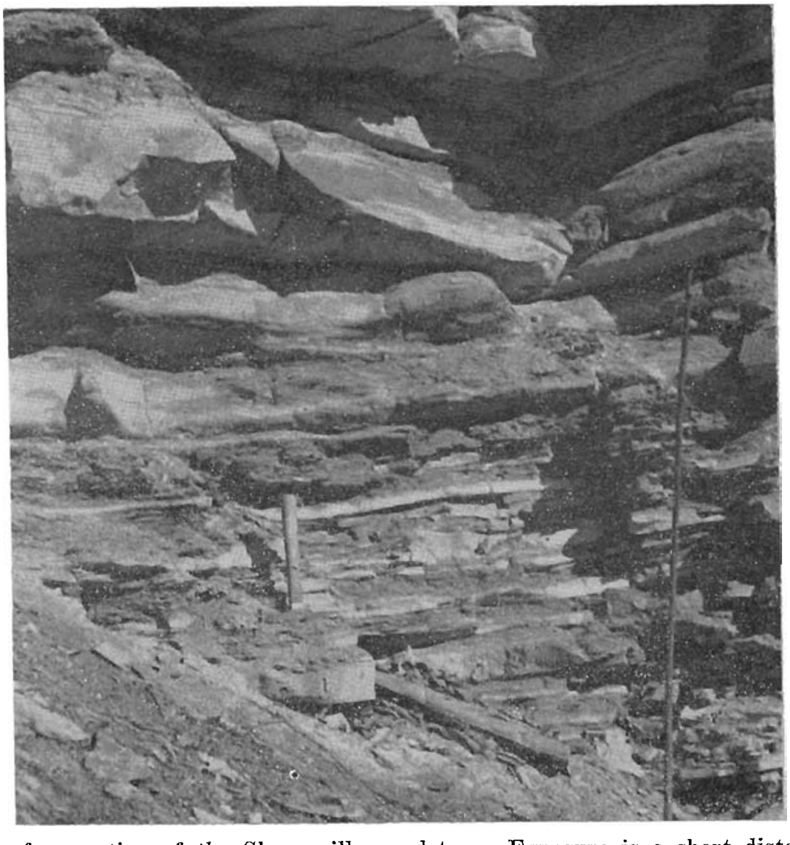
The Bedford shale forms the bedrock surface of a small part of western Northfield Township and is exposed in the walls of the Cuyahoga River north of Peninsula. Presumably it occurs also in the walls of some of the deeper buried valleys. DeWitt (1951) reports that in the Peninsula area the Bedford consists of about 85 feet of light gray silty shale containing many thin platy sandstones.

## Devonian and Silurian Systems

Following is a condensation of the log of the shaft of the limestone mine at Barberton (Stauffer, 1944) which shows the formations that occur in Summit County beneath the Mississippian rocks. The nomenclature and the correlation are Stauffer's.

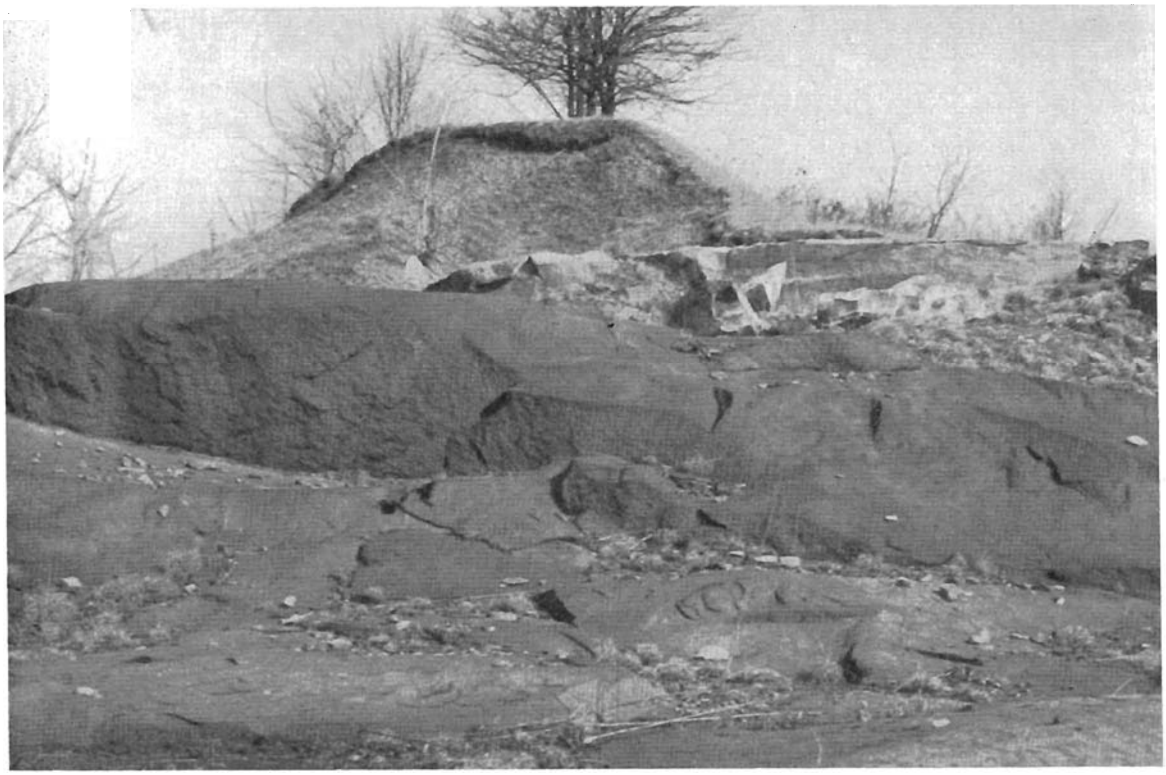
| Devonian | Thickness (feet) |
|---|---|
| Cleveland shale (Ohio shale of this report) | |
| Shale, black, slaty, with thin layers of sandstone | 3 |
| Shale, black to gray | 57 |
| Chagrin formation | |
| Shale, dark gray, with interbedded sandstone | 10 |
| Shale, gray, with interbedded gray sandstone | 130 |
| Shale, slaty, gray | 60 |
| Shale, gray, argillaceous, thick bedded with thin gray sandstones | 35 |
| Shale, gray, slaty | 45 |
| Shale, gray, argillaceous, soft | 180 |
| Huron shale | |
| Shale, gray, to brown to black | 989 |
| Hamilton shale | |
| Shale, blue gray, gray brown, and black | 108 |
| Delaware limestone | |
| Limestone, gray, crystalline | 5 |
| Columbus limestone | |
| Limestone, gray to light gray with occasional flint or chert layers | 215 |
| Lucas dolomite | |
| Limestone, dolomitic, gray, cherty or sandy | 36 |
| Sylvania sandstone | |
| Sandstone, gray to white | 5 |

A View across Brandywine Creek at Little York in Northfield Township, showing the thin-bedded, platy character of the Sharpsville sandstone; a typical sandstone in the Cuyahoga group.



B Photograph of a portion of the Sharpsville sandstone. Exposure is a short distance downstream from the lower falls of the Cuyahoga River.

Plate 13. Photographs of the Sharpsville sandstone in Summit County, Ohio.



A Photograph showing the upper portion of the Berea sandstone exposed in a quarry near Peninsula, Boston Township.

B Photograph of an exposure of the Ohio shale in a railroad cut near Brecksville Station. The cut is on the west side of the Cuyahoga River nearly opposite the center of Northfield Township.

Plate 14. Photographs of the Berea sandstone and the Ohio shale in Summit County, Ohio.

**Silurian**

| | |
|---|---|
| Bass Island dolomites | |
| Limestone, dolomitic, gray to dark gray and dolomite, gray to dark gray formation | 94 |
| Salina formation | |
| Gypsum and gypsiferous shales | 200 |
| Salt with interbedded gray shale and shaly limestone | 100 |

The only rocks older than the Mississippian that are exposed in Summit County are the Cleveland member of the Ohio shale, and the Chagrin shales. They occur in the sides of the Cuyahoga River valley along the western edge of Northfield Township, shown in the photograph, plate 14B. Presumably, the lower walls and the bottom of the buried valleys beneath the Cuyahoga River, Yellow Creek, and Mud Brook are composed of Devonian rocks, probably the Cleveland member and the Chagrin shale. The presence in the county of rocks deeper than those are known only from records of a few scattered oil, gas, and salt wells.

## The Occurrence of Ground Water in the Consolidated Rocks

The bedrock beneath Summit County is the source of water for most of the wells in the county. Yields from wells in the consolidated rocks are much less than from wells in the glacial outwash, but, with few exceptions, they exceed the yields available from the glacial till. Except in a few areas the quantities available from the bedrocks are generally adequate for most farm and domestic needs. In places, they suffice for small municipal or industrial requirements.

The Pottsville formation of Pennsylvanian age yields more water to wells than any other consolidated rock formation in Summit County. Of all such wells surveyed during the course of this investigation, none was reported as having failed to yield water. The water generally is found in the sandstones, although some may come from fractures in the shale. Reported yields generally range from 5 to 50 gallons a minute; higher yields are reported from the Sharon conglomerate member. Wells are drilled into the Pottsville only as deep as is necessary to obtain a quantity of water sufficient to meet the needs of the well owner, and that depth is generally dependent upon the number and thicknesses of the sandstone beds encountered. Generally the quantity of water available from a well can be increased by drilling deeper into the Pottsville. Some wells have gone dry during dry periods. Usually this situation results from too shallow a well or too short a pump column; that is, when the normal seasonal decline in water level occurs, the water level in such wells is near or below the bottom of the well or pump column. The average yield from 100 representative wells in the Pottsville formation, excluding those wells obtaining more than 50 gallons a minute from the Sharon, is 11 gallons a minute.

The Sharon conglomerate member is the principal aquifer of the Pottsville formation. Presumably the Massillon member is nearly or equally as productive, but the available data do not show definitely which wells obtain most of their yield from the Massillon or what the yields are. Small municipal and industrial supplies are available generally from the Sharon. The village of Twinsburg is supplied by water from wells and a spring in the Sharon. Lakemore pumps an average of 25 gallons a minute daily from the Sharon. The U. S. Stoneware Co. in Tallmadge reported that one of two wells in the Sharon yielded a maximum of 200 gallons a minute for relatively short periods. The average yield from both wells is 55 gallons a minute. The city of Hudson is supplied by several wells in the Sharon which yield an average of 145 gallons a minute. The Sharon crops out in many places in the county, usually producing a spring line at its base. Many farms and homes obtain water from such springs.

The Mississippian rocks generally yield less water than the rocks of the Pottsville formation, though their yields, with a few exceptions, are sufficient, for most farm and home needs. Again, as with the Pottsville formation, the sandstones are the principal sources of water, and the yields of wells are roughly proportional to the number of water-bearing sandstones they intercept. The Berea and Sharpsville sandstones are in places the best aquifers, yielding up to 20 gallons a minute. These two sandstones seem to be of principal value in Northfield Township, where they are close to the surface. In most of Richfield Township the Berea is deep and only one well (No. 442) has reached it. Well 220, ending in the Berea sandstone in Macedonia Township, contains salty water. It is believed that the Berea contains saline water southeast of well 220.

The Cuyahoga group, because it forms the bedrock over large areas, is the main source of water for most wells in the Mississippian rocks. Except in areas such as in Boston and Northampton Townships, where it is buried under a great thickness of clay or till, small supplies can generally be obtained from the Cuyahoga group. So far as can be determined, the Bedford formation supplies only a few wells in the northwestern corner of Northfield Township. Yields are very small and the wells frequently go dry. This may result in part from the fact that the Bedford crops out nearby in the steep side of the Cuyahoga Valley, and whatever water is in the formation may drain out through the outcrop. In this area the best wells are those that derive water from the weathered zone at the base of the till or from the top of the bedrock.

The average yield of 100 representative wells in rocks of Mississippian age is 9 gallons a minute.

The Ohio and Chagrin shales crop out in Summit County only in Northfield Township. Only a few wells derive water from these formations. Consequently, there are few data from which to determine their potential yield. Both rock units are predominantly shale, and water would occur only in fractures. It is believed, therefore, that their water-bearing properties are poor.

The sustained yield from any of the water-bearing consolidated rocks is limited to the amount of recharge they receive. Although some of the rocks crop out in the deep buried valleys where they may be recharged by water from the alluvium in the valleys, most of the recharge comes from rainfall. Nearly all of the bedrock surface is covered by glacial drift, generally till. The till is relatively impermeable and transmits water very slowly. Consequently, large yields, particularly from the Sharon, are available only in areas where the rock aquifer is thick enough to provide large storage, or where it crops out beneath the drift over broad areas. Although the yields of individual wells in the Sharon have been known to exceed 50 gallons a minute, several such wells close together would probably interfere with one another, and their combined yield might then be no more than the yield from any one or two wells.

Ground water at considerable depth has been reported in some of the oil- and gas-well records on file in the offices of the Ohio Division of Mines in Columbus. A few of the brine wells drilled by the Colonial Salt Co. in Akron, encountered deep seated water before reaching the salt formations. All the records indicate that the great thickness of Devonian shales contains no water. All the water encountered was in the so-called "Big Lime" of the well drillers nomenclature, that is the Devonian and Silurian limestones and dolomites that occur beneath the shale. Van Horn (in Cushing, Leverett, and Van Horn, 1931, p. 130) reports on such water in the Cleveland area as follows:

> There is one deep seated water-bearing stratum in the Silurian limestone known as the Big Line, just below the Newburg gas sand. It is called the Big Water, and is reached at depths of about 2,400 to 2,600 feet, and has caused more or less trouble in drilling for gas. Another water-bearing layer is reached at a depth of about 1,400 feet.

The Newburg sand mentioned by Van Horn occurs below the salt formations and is therefore not listed in the log of the limestone mine. None of the records indicate whether the water is fresh. It is believed, however, to be saline or at least highly mineralized.

# GROUND-WATER CONDITIONS IN SPECIFIC AREAS

Ground-water conditions are not the same in all parts of Summit County. Generally they differ with changes in geology and bedrock topography. The map, plate 1, shows the ground-water conditions that exist at different places in the county. It was compiled from the well data listed in table 6, from the logs shown in plate 22, and from the field investigations of the geology.

The following discussion of the ground-water conditions in specific areas is meant to supplement and explain the tables of well data, the well logs, and the ground-water map. With two exceptions, the areas considered are the individual townships whose boundaries form convenient, rectangular subdivisions of the county. Besides the townships, the cities of Akron and Cuyahoga Falls are treated individually in the following discussion. Both include parts of several townships. The areas are discussed in alphabetical order.

The wells for which data are listed have been numbered by townships, beginning with number 1 in Northfield Township in the northwestern part of the county. The first well listed in each succeeding township has been given the number of an even hundred and the rest of the wells in that township follow consecutively. All wells are listed in table 6. The townships are listed as they were numbered from west to east and north to south, and not alphabetically. A few wells are listed in Portage Township, which no longer exists. The U. S. Geological Survey topographic maps that were used as the base for several of the maps in this report were made in the early 1900s. At that time Akron was in Portage Township. It has since grown to include all of Portage Township and parts of adjacent townships. To maintain the rectangular system of subdivision the present corporate limits were disregarded, and the wells in what was Portage Township have been grouped together in the numbering system. The remainder of the wells in Akron have been listed in other township groups.

The quality of the ground water is not described in this section. Detailed analyses of samples of ground water are discussed in the section on the quality of the ground water. Information on the quality of the water in many wells is shown in table 6 under remarks. This usually represents the impressions of the well owner and may not be accurate. For example, well water of average hardness may be called very hard water by a person who has been accustomed to softened city water.

Yields reported from wells in different areas do not necessarily represent maximum yields. An exception are detailed data available from municipalities or industries. Most of the reported yields from farm or home wells were estimated by the drillers. In many cases greater yields can be obtained from larger wells or with pumps of greater capacity.

Well numbers referred to in the township discussions are the same numbers used in table 6 and on plate 22. Well locations on plate 2 also are shown by the same numbers.

## AKRON

Part of Akron is underlain by two deeply buried valleys. One valley trends northwest through east Akron. The other trends north through the center of Akron. It is a portion of the buried valley of the preglacial "Akron River." The two valleys join just north of the business district and continue north as a single valley beneath the present Cuyahoga River (pl. 11). The eastern tributary valley is crossed by the Little Cuyahoga River, as is also the preglacial "Akron River" valley just north of the business district. In that area, the Little Cuyahoga River has cut a deep gorge into sand and gravel deposits of the "Akron complex." Although there is highly permeable material in the valley walls, it is generally above drainage and contains no water. Bedrock is 100 to 300 feet beneath the present valley floor. The intervening glacial drift is largely outwash material, and it is possible that fairly large supplies of ground water may be available from it. Unfortunately, there are practically no data that show the character of the material or its water-bearing properties.

The glacial outwash farther upstream in each buried valley has not been deeply cut by streams. Consequently, nearly all of the permeable material is below drainage, and it yields the largest quantities of ground water now pumped in Summit County. In the summer, industrial pumpage from both buried valleys exceeds 17 million gallons a day. The largest users of ground water are the Firestone Tire & Rubber Co. and the Goodyear

Tire & Rubber Co. Ground water is used by these companies only during the warm months of the year when the surface water is too warm. The Firestone Co. pumps an average of 1.4 billion gallons of ground water during each pumping season; the average daily withdrawal is about 6 million gallons. The Goodyear Co. pumps about 970 million gallons each year in about 215 days. This is an average of about 4.5 million gallons a day.

The Goodyear well field is in the buried valley in east Akron, Area C on plate 2; the Firestone well field is in the preglacial "Akron River" valley south of the business district, Area B on plate 2. The Colonial Salt Division of the General Foods Co. pumps 1,000 to 1,500 gallons a minute from three wells (2122, 2123, and 2124) just west of the Firestone field. A short distance to the east the Miller Rubber Co. pumps about 1,000 gallons a minute from one well (2146). South of Waterloo Road (U. S. Route 224) and in the same buried valley, the Goodrich Tire & Rubber Company pumps 3,000 to 4,000 gallons a minute from three wells during 7 months of the year.

Cross sections showing the character of the material in the preglacial "Akron River" valley in the vicinity of the Firestone well field are shown on plate 15. The valley is filled, to depths greater than 250 feet in some places, with interbedded and interlensing layers of coarse to fine alluvium and clay or till. At different times during the glacial epoch the valley probably contained streams of rapidly flowing meltwater which left coarse alluvium. At other times the valley contained lakes in which fine sand and clay were deposited. As a result the fill is a complex mixture, and it is difficult to predict just where in the valley the coarser materials occur. A thick clay layer found in one well may not be found in a nearby well (e.g., wells 2112 and 2098 in section I-I'). It may have been cut out by a preglacial river and the resulting valley filled with coarser alluvium. Consequently, it has been necessary for each company to drill test wells to determine the best locations for production wells.

Drainage in the area is poor. Much of the surface is covered by a loam soil or by fill added to relieve the mucky conditions. There is probably very little recharge from precipitation in the immediate vicinities of the well fields. Most recharge to the well fields must come from the Tuscarawas River, where it crosses the valley about a mile south of Waterloo Road, or from water in storage in the aquifer at some distance from the pumping, and from precipitation in areas where the aquifers reach the surface. Probably the Goodrich field, which is near the Tuscarawas River, benefits most by direct infiltration from the river.

Two observation wells (2004, 2117) have been maintained in the Firestone well field since 1947. As shown on plate 16, the graphs of the fluctuations in water levels in these wells reveal an annual cycle. In the spring water levels are high; they decline as pumping begins, continue to decline until late summer or fall (when the pumps must be throttled down to maintain the level at about the top of the well screens), and rise during the winter months after pumping stops. In some years they decline less than in others because of cooler summers and less demand for ground water. During most of the period of record the water levels have recovered each year to about the high of the previous year. There is no apparent net decline, though the annual yield each year depends partly on the degree to which the water levels have recovered from the previous year. Well 2117 is in the extreme northern end of the well field, farthest from the pumped wells, and the water level in it declines less each year than in well 2004, which is near several pumped wells. If all the companies in the area pumped the year round their daily yield might be less than their daily yield during the present shorter periods of pumping, and the total quantity pumped each year would then be little more than the present total. The average sustained yield from the Firestone field would be about 4 million gallons a day under those conditions.

The alluvium in part of the buried valley north of Wilbeth Road contains salt water, and salt water has also appeared recently in wells at the northern edge of the Firestone field. The extent of the contaminated area is not exactly known, and the boundaries shown on plate 1 are only approximate. The concentration of salt in the water has not been determined. As large withdrawals continue south of the contaminated area, the salt water will be drawn toward the well field and the present pumped areas will become salty.

Cross sections showing the character of the fill in the buried valley in east Akron at the Goodyear well field are shown on plate 17. The valley fill is similar to that in the Firestone area, consisting of layers of sand and gravel and clay or till. Unlike that in the Firestone area, the surface is covered with coarse alluvium. Recharge to the water-bearing formations is from local rainfall and the Little Cuyahoga River where it crosses the valley north of the well field. Much ground water withdrawn from the field during the pumping season comes from storage in the alluvium.

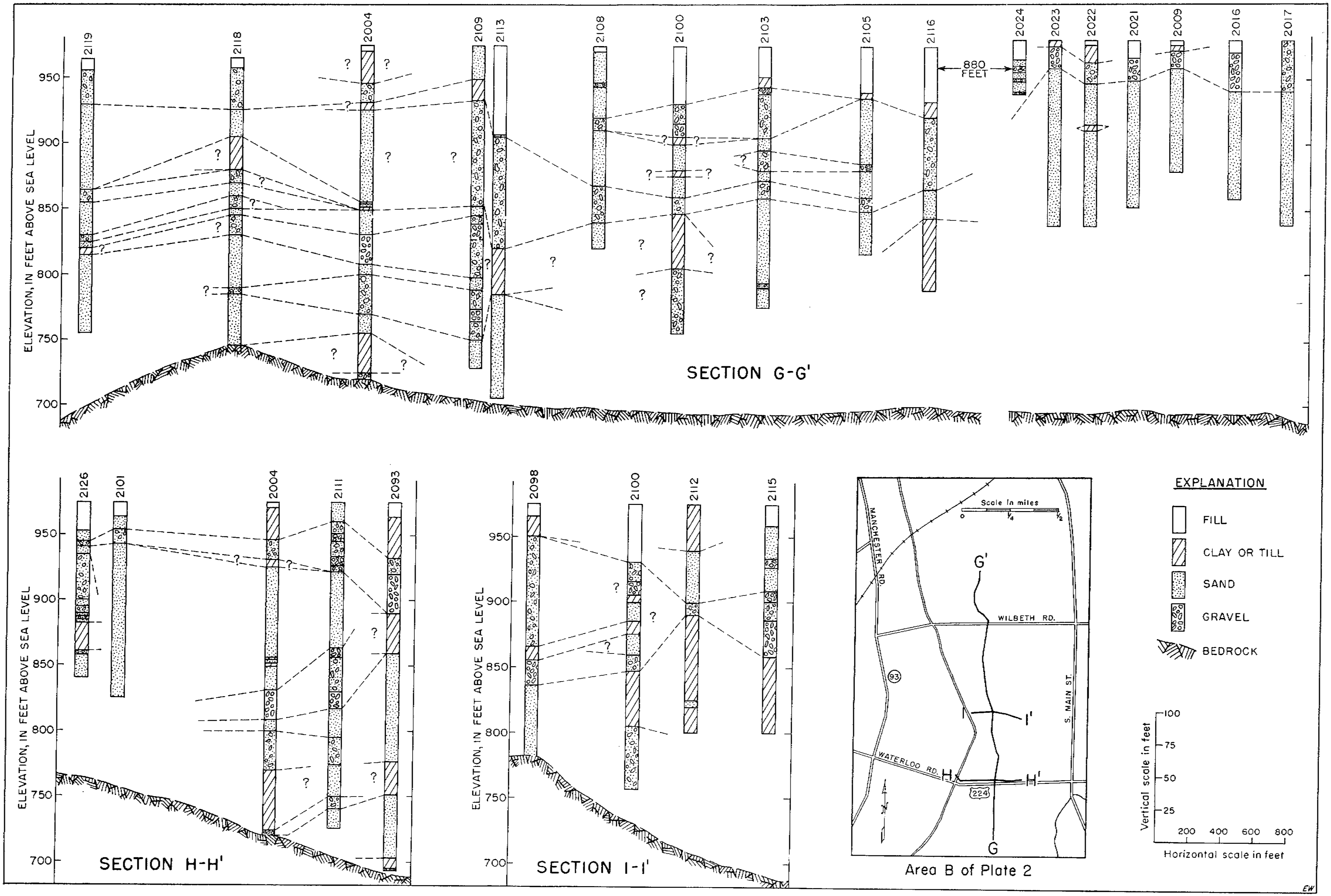



Plate 15. Cross sections showing character of material filling buried valley in south Akron, Summit County, Ohio.

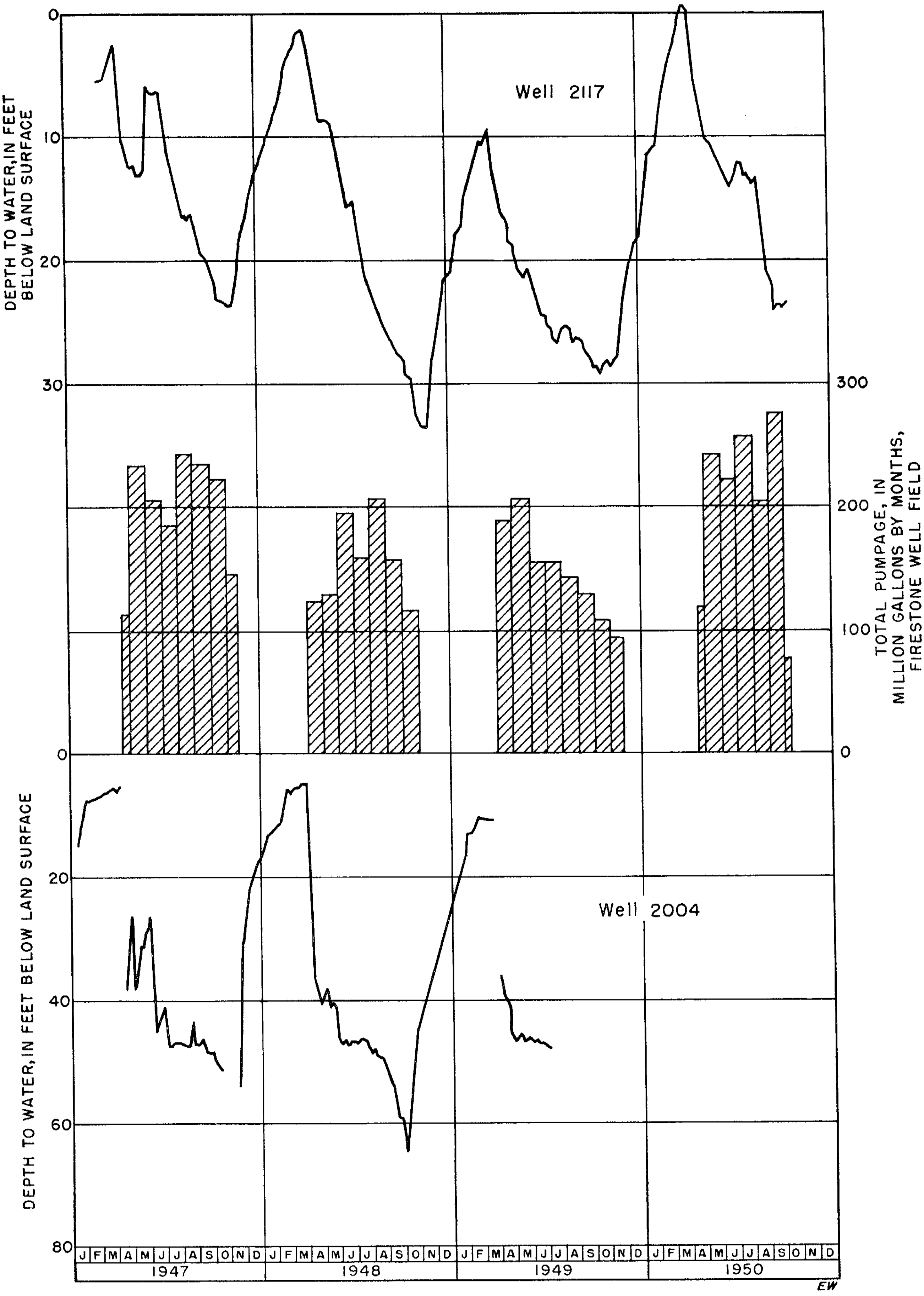



Plate 16. Fluctuation of water level in two observation wells in the Firestone well field compared to pumpage from the well field.

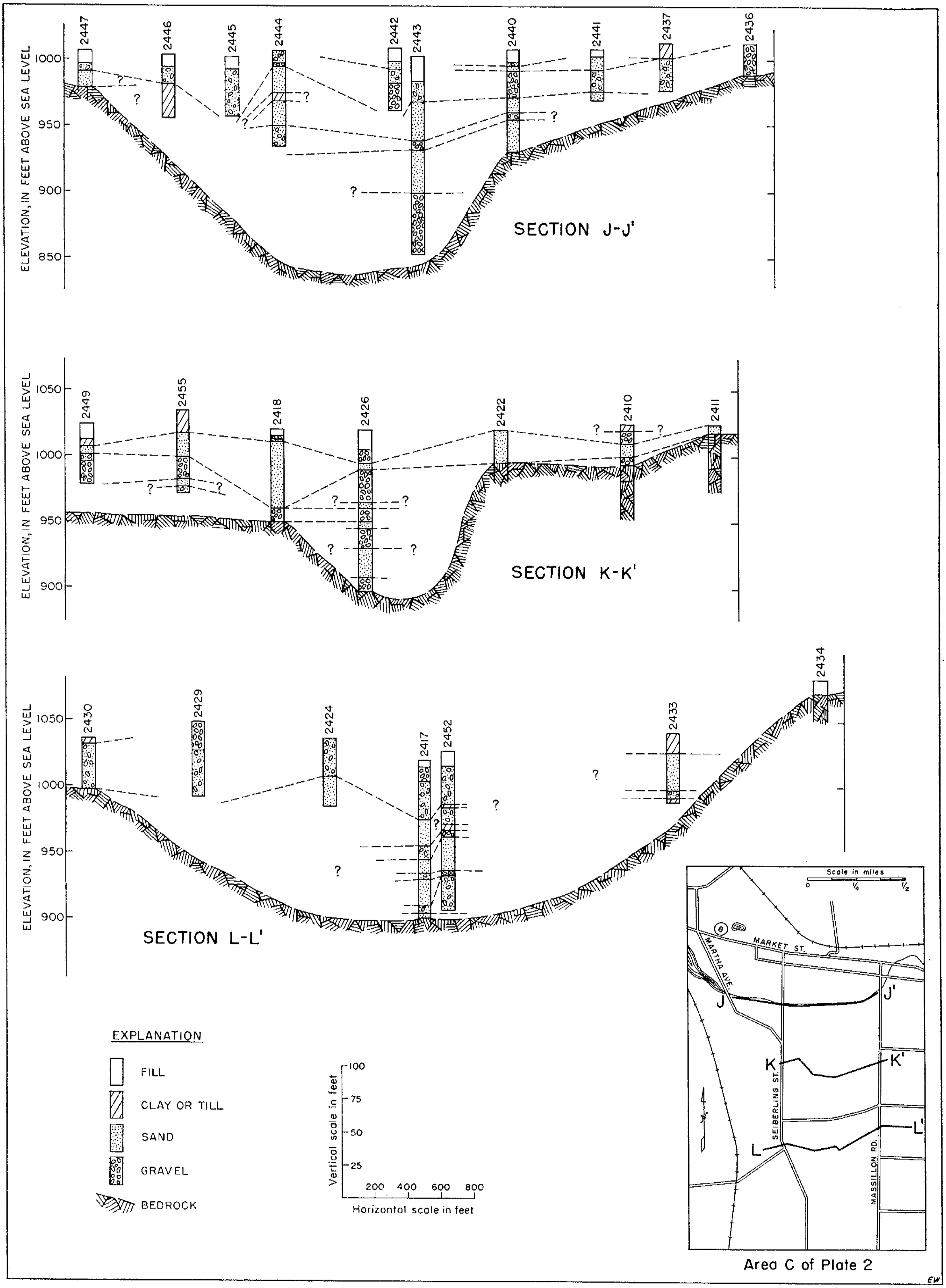



Plate 17. Cross sections showing character of material filling buried valley in east Akron, Summit County, Ohio.

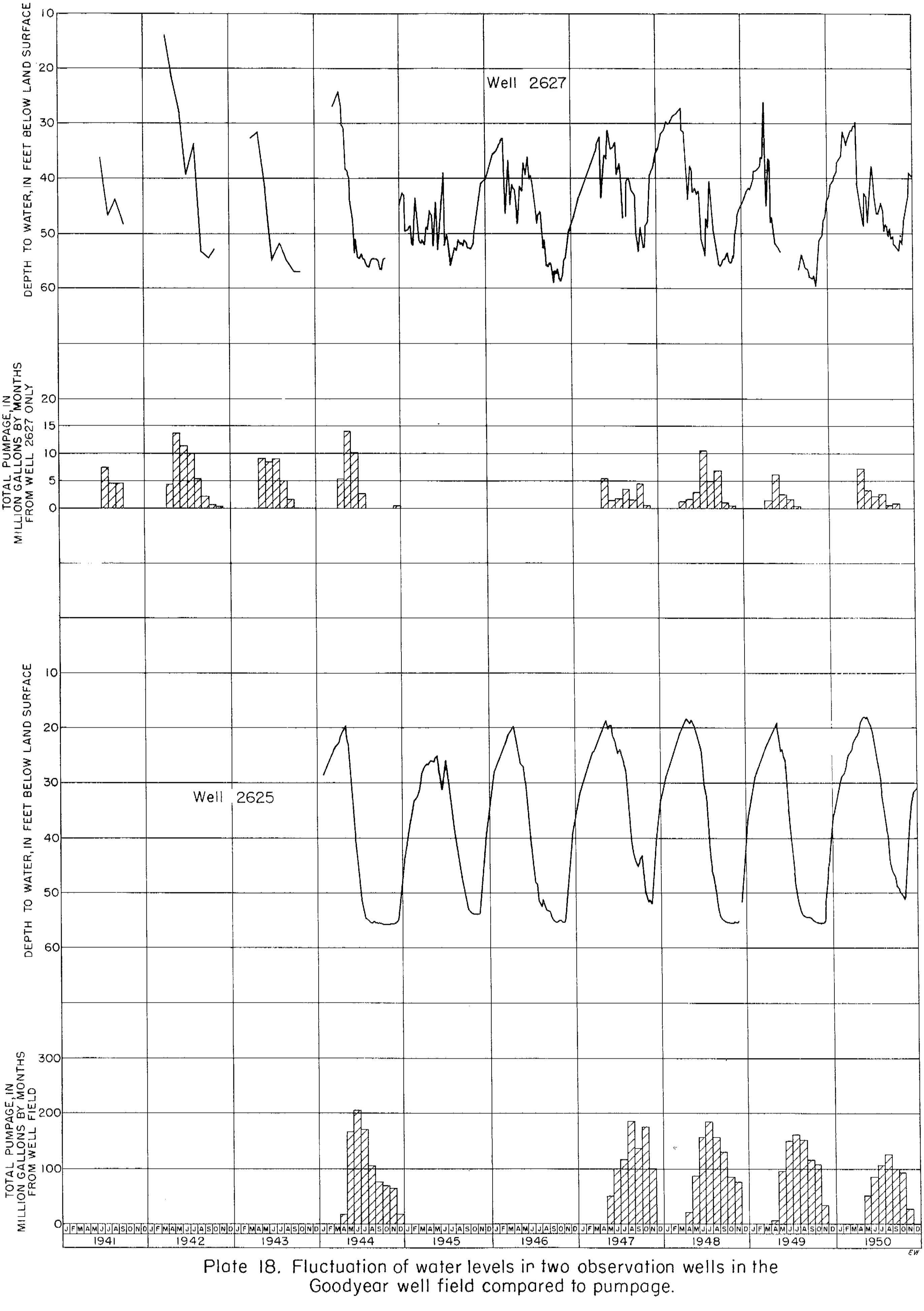



Plate 18. Fluctuation of water levels in two observation wells in the Goodyear well field compared to pumpage.

The water level records (pl. 18) from two observation wells (2625, 2627) show a seasonal fluctuation much like that in the Firestone well field. The Goodyear Co. pumping is also seasonal, water being withdrawn only during the warm months. The pumpage exceeds the rate of recharge and the water levels decline until they reach a constant level, at the top of the well screens, which is maintained by reducing pumpage when necessary. After pumping stops in the fall water levels recover. The quantities of water available seasonally are somewhat less than from the preglacial "Akron River" valley, because of differences in the areal extent and depth of the alluvium. There is also less available storage. There appears to be no net decline of water levels in the east Akron area.

In 1944 E. J. Schaefer, of the U. S. Geological Survey, made a 24-hour pumping test in the Goodyear area, by pumping well 2636 at the rate of 905 gallons a minute and observing the resulting drawdown in well 2625. From the data he computed a transmissibility of 135,000 gallons a day per foot-width of aquifer and a coefficient of storage of 0.0391. If the aquifer is assumed to be about 19 million square feet (the area south of the Little Cuyahoga River underlain by alluvium) in area and to average 60 feet in thickness, the amount of water in storage is then about 222 million gallons. If it is further assumed that an average of 30 per cent of the average annual precipitation of about 35 inches reaches the aquifer, an additional 128 million gallons a year is provided. The figures are approximate, and of course not all of the water in the aquifer can be removed. But when compared to the quantities actually pumped, the figures show that about 600 million gallons a year infiltrates to the aquifer from the Little Cuyahoga River.

Along the western edge of Akron, where there are few available data, is a portion of another deep buried valley. It is a continuation of the valley beneath Barberton and is described in more detail in the discussion of ground-water conditions there. If conditions similar to those at Barberton exist in the Akron portion of the valley, at least moderate quantities of ground water are available.

The remainder of the Akron area is underlain by shallow bedrock covered with till. Very few wells in Akron obtain water from the bedrock, but the same formations in other parts of the county yield small to moderate supplies. Sufficient quantities for small industrial demands may be available from the Pottsville formation, particularly the Sharon conglomerate member.

The municipal water supply of the city of Akron is obtained from surface reservoirs in Portage County and Geauga County east of the city. At times some water is obtained from wells in the western part of the city. These wells were used by Kenmore before that community was annexed by Akron. There are no records of pumpage.

## BATH TOWNSHIP

A wide and deeply buried valley underlies Bath Township from the northwest corner to the southeast corner, beneath the valley of Yellow Creek. The bedrock floor of the buried valley is more than 300 feet deep. The valley has been filled with outwash and till from different glaciers. The surface is covered by an impervious clay till of late Cary age. Beneath the till occur alternating layers of sand and gravel and clay or till. The well data are not sufficient to show accurately the principal sand and gravel aquifers nor to permit their maximum yield to be estimated. Wells are generally from 50 to 100 feet deep, though some are as much as 200 feet deep. Reported yields range from 5 to 25 gallons a minute, determined by bailer tests or the capacity of small pumps, and do not indicate the maximum yields available from large-diameter, properly constructed wells. Water levels in the area are fairly close to the surface, and flowing wells are not uncommon.

Another buried valley underlies the southeastern corner of the township parallel to the valley beneath Yellow Creek. Bedrock is 150 to 200 feet deep. The youngest deposits in the buried valley consist of sand and gravel outwash from the late Cary ice. Their thickness is not known, but in one well (777) it was reported to be more than 55 feet. These deposits may be a source of large ground-water supplies.

Except for a few small areas, adequate farm and home supplies are obtainable everywhere in the township. Wells generally obtain water from the Mississippian rocks at depths ranging from 50 to 100 feet. Yields differ but they seldom exceed 15 gallons a minute. The Sharon conglomerate member occurs only in the western part of the township where it caps a bedrock hill. It crops out as ledges in several places around the hill and, in such places, springs issue from the base.

## BOSTON TOWNSHIP

Wells in the upland area of Boston Township west of the Cuyahoga River valley obtain some water from shale of Mississippian age but yields are small and some wells can be pumped dry. In the northeastern corner of the township a bedrock hill is capped by the Sharon conglomerate member of the Pottsville formation which yields supplies to domestic or farm wells. Along the eastern edge of the township small supplies of ground water are obtained from sand and gravel lenses in the till or from the Mississippian rocks. In the remainder of the township, with the possible exception of the Cuyahoga River valley, ground water is very scarce. Unsuccessful wells are numerous. In the upland east of the valley several dry wells have been drilled to depths ranging from 150 to 250 feet. In this part of the township cisterns are in common use.

The fill beneath the Cuyahoga River may be a fairly large source of ground water. Subsurface information is scarce, but a few wells in the valley obtain water from sand and gravel that underlies the silt on the valley floor. These wells are all less than 70 feet deep; only two exceed 40 feet. One, well 558, 60 feet deep, was reported to have yielded 42 gallons a minute in a bailer test. The bedrock floor is 250 to 300 feet below the land surface, and the intervening fill may contain extensive water-bearing sands and gravels.

## COPLEY TOWNSHIP

The glacial geology and the ground-water conditions in Copley Township are controlled mainly by the bedrock surface. The preglacial surface consists of three approximately parallel, elongate uplands separated by two valleys that trend northwest-southeast. The valleys slope to the southeast and are tributary to a deeper northeast-southwest valley in the eastern part of the township. They are filled mainly with glacial alluvium, and the hills are covered by thin impermeable till of Tazewell age.

Wells in the upland areas obtain water from the bedrock of Mississippian age; in a few places the Sharon conglomerate member is immediately beneath the till. Yields range from 5 to 15 gallons a minute and depths of wells average about 75 feet. Supplies sufficient for small municipal and industrial use are not generally available.

At Copley the Minnesota Mining & Manufacturing Co. pumps from two wells (1250 and 1251) in the Mississippian rocks. Each well when drilled in 1941 yielded 120 gallons a minute, but now the sustained yields are only about 35 gallons a minute from one well and 30 gallons a minute from the other. Even that rate has caused water levels in the wells to decline. In an attempt to find a glacial aquifer the company thoroughly test-drilled a small buried valley immediately north of Copley, filled mostly with clay till. Fourteen wells (1242-44, 1246-48, 1254-58, 1262 and 1263) were drilled to bedrock. All were dry or they could be bailed dry in a few minutes.

A buried valley enters Copley Township just west of Montrose and extends diagonally across the township beneath Shocalog Run, joining a somewhat deeper and wider valley that underlies Pigeon Creek. The surface of both valleys is covered by clay and silt deposited in a glacial lake. Beneath the clay and silt, are alternating layers of alluvium and till or clay. Bedrock is 200 to more than 400 feet beneath the surface. The wells in these valleys average about 50 feet deep, their reported yields ranging from 5 to 20 gallons a minute. Flowing wells are not uncommon and drive-point wells are fairly numerous. All the wells surveyed were small-diameter, farm or home wells. Although in places very fine sand is encountered, supplies suitable for industrial or small municipal use can probably be obtained in this valley, farther south, in Norton Township, industrial pumpage amounts to more than 1,000 gallons a minute.

Another buried valley underlies Wolf Creek in the southwestern corner of the township. The surface of this valley is covered with fairly coarse sand and gravel outwash. Bedrock is 100 to 200 feet beneath the surface. Under the surface gravel are, presumably, alternating layers of alluvium and clay or till, similar to the deposits in other valleys in the township. The area is rather sparsely settled and contains only a few wells, most of which are shallow dug wells. It is believed, however, that large quantities of ground water can be obtained in this area, particularly near Wolf Creek where infiltration supplies might be developed.

In the extreme northeastern corner of the township is a continuation of part of the deeply buried valley described previously in the discussion of Bath Township. In a portion of the area it has been difficult to obtain ground water because fine material frequently is encountered in drilling. One, well 2211, was drilled to a depth of 315 feet in search of coarser material and was finally bottomed in the shale bedrock.

## COVENTRY TOWNSHIP

About half of the area shown on the map as Coventry Township (pl. 1) is now included in the corporate limits of Akron. Ground-water conditions in most of that area have been previously described, in the Akron section. The remaining portion is discussed here.

In the center of the township are parts of the Portage Lakes, natural and man-made lakes that once supplied water to the Ohio Canal. They are now used largely for recreation lakes, though some water is used by industries in Akron and Barberton, and are surrounded by many summer homes and cottages whose residents rely on wells for their water needs. Adequate supplies can be obtained with little difficulty.

A major buried valley underlies the lakes and, just south of Akron, it is joined by another buried valley from the east and by a buried tributary valley from the west. The Tuscarawas River follows the course of the buried valley that joins from the east, and it flows along the southern edge of the west-joining valley. Bedrock in the deeper parts of these valleys is more than 300 feet beneath the surface. The valleys are partly filled with coarse outwash and kames deposited from the early Cary ice of the Grand River lobe. In places lakes and swamps mark depressions formed by the melting of large ice block remnants. The depressions are usually filled with fine silt and clay. The Tuscarawas River flows through such a swamp just south of Akron.

The character of the material in the deeper parts of the buried valleys is not known because few wells have been drilled deeper than about 100 feet. However, the valleys are a part of the buried valley system beneath the center of Akron, and from well data there it may be assumed that they are filled with layers of coarse and fine alluvium and some clay or till. Plate 15 shows a cross section of the valley near Waterloo Road in Akron. Large quantities of water suitable for municipal or industrial use are available from the three buried valleys, particularly along the Tuscarawas River where large sustained yields may be obtained from infiltration. The area extending from the vicinity of the Portage Lakes eastward along the Tuscarawas River is potentially the best ground-water area in Summit County.

The upland areas in Coventry Township are covered by sandy till generally not more than 40 feet thick, except in the southwestern part of the township where it is 80 to 100 feet thick. Wells obtain water from the underlying Pennsylvanian bedrocks or from sand and gravel lenses in the till. A few wells obtain water from the Mississippian rocks beneath the Sharon conglomerate member. Wells average about 70 feet deep and they yield from 5 to 40 gallons a minute.

The extreme southwestern corner of Coventry Township is underlain by a buried valley 200 to 250 feet deep. There is practically no information about the character of the fill in that valley, though it is presumed to be mostly alluvium. The surface is covered with fine outwash. Adequate water supplies for farm or home use should be readily obtainable, but if large quantities of water are withdrawn from the area, the aquifers may become contaminated by salt from the salt water areas to the west and south.

## CUYAHOGA FALLS

Cuyahoga Falls obtains water from five drilled wells in the glacial outwash along the Cuyahoga River. The wells are in the eastern part of the city. They are about 130 feet deep. Three of the wells have capacities in excess of 1,500 gallons a minute; one, well 1156, has a reported specific capacity of more than 300 gallons a minute per foot of drawdown. The average pumpage from all wells is 1.5 million gallons a day. During peak withdrawals, more than 2.5 million gallons a day has been pumped.

An analysis of the water from the Cuyahoga Falls wells is given in table 4. The water is softened by zeolite and chlorinated before distribution.

At irregular intervals during the past 6 years, water levels in the wells have been measured by employees of the Cuyahoga Falls waterworks, while the wells were being pumped. The records show that the levels have fluctuated with the quantity being pumped, over a range of only a few feet. The aquifer is probably recharged directly from the Cuyahoga River by induced infiltration, and the present pumpage is not the maximum available. Approximately 2,500 feet of the aquifer is in contact with the south side of the river. The glacial alluvium at both the Goodyear and Cuyahoga Falls well fields is from the same source, though the material at Cuyahoga Falls appears to be the coarser. Its thickness at Cuyahoga Falls is not known, but wells are 130 to 140 feet deep and do not reach bedrock. Assuming that a connection exists between the river and the aquifer 500 feet (about the width of the river and therefore the greatest possible distance) from the south bank of the river, and further assuming a transmissibility of 100,000 gallons per day per foot, to allow a margin of safety, the available yield from properly spaced wells located along the south bank and having an available drawdown of 80 feet would be about 20 million gallons a day.

## FRANKLIN TOWNSHIP

Beneath Turkeyfoot Lake is part of the deep, broad channel that was cut into the rock by a preglacial river flowing north from the western edge of Green Township, through the Portage Lakes area and the middle of Akron. West of Turkeyfoot Lake, another valley was cut diagonally across the corner of the township from the lake toward Barberton to the northwest in Norton Township. The depth to bedrock in these valleys is believed to be more than 200 feet in places. The surface is covered with fine glacial outwash material, mostly sand. There are few available data to indicate the character of the drift beneath the fine surface material, for only a few wells have been drilled in the area. They encountered coarser alluvium beneath the sand and are generally less than 75 feet deep. Small ground-water supplies are available everywhere in the area, and drive points or properly constructed dug wells are adequate for domestic or farm needs. The deeper materials probably consist partly of glacial alluvium. More drilling may prove the existence of deposits of coarse material that will yield large ground-water supplies, limited by the recharge that can pass through the fine surface material.

East of the Tuscarawas River in section 9, there is a calcium chloride disposal area. Calcium chloride is extremely soluble in water, and undoubtedly it has been carried into the river or underground by rain water. If large supplies of ground water are developed from the alluvium in the area, salt water will eventually be drawn into the aquifer unless there is an impervious layer of clay or till separating the equifer from the calcium chloride disposal area or recharge comes from some place to the east. If there is no heavy pumping small domestic wells probably will not be contaminated by salt unless they are very close to the waste pile. Only one such well, No. 2725, was found to contain salt at the time of the investigation.

A deeply buried valley underlies the Clinton area in Franklin Township. It is part of the principal preglacial valley west of the "Akron River" basin. A minor tributary valley enters it from the north beneath the Tuscarawas River, and a larger tributary enters it from the east beneath Nimisila Creek. The valleys join near Clinton where bedrock is more than 200 feet beneath the surface. The main valley is filled with layers of fine to coarse alluvium and clay or till (see logs of wells 2825-2828). The surface is covered by fine outwash and till. Large water supplies may be available at depth from the coarse material, though yields are limited by the recharge that passes through the surface material. Yields adequate for domestic and farm use are readily available, generally from shallow wells. Flowing wells are common in and near Clinton. Both the Tuscarawas River and Chippewa Creek at times contain salt wastes, and any large withdrawals of ground water that would depend on infiltration from these two rivers would eventually result in contamination of the water.

The tributary valley beneath Nimisila Creek is bordered by kame moraine deposits, largely sand and gravel. Not much is known about the materials in the valley. The surface is a broad, flat plain covered by thick pasture, which appears to be very well drained. It appears to the author to be much like other valleys that contain coarse glacial outwash. Consequently, he believes that large sustained supplies of ground water are available by infiltration from Nimisila Creek. Test drilling would be a good way to find out whether the gravels are suitable for large ground-water supplies.

The remainder of the township is a bedrock upland covered by sandy till, except along part of the Tuscarawas River, where it is covered by fine silt. In places the till is fairly thick, and wells obtain small yields from gravel lenses in the till. Most of the ground water in the area comes from the shales and sandstones of Pennsylvanian age, covered by less than 40 feet of till. In many places the rocks are exposed. The principal aquifer is the Sharon conglomerate member of the Pottsville formation, though many wells obtain water from the rocks above the Sharon. In places the Massillon member of the Pottsville formation occurs from 50 to 75 feet above the Sharon. Wherever it crops out and forms ledges its base is an important spring zone.

Most of the reported yields from the wells in bedrock are less than 25 gallons a minute. Larger supplies are available, however, from the Sharon conglomerate member, as from the wells at the Columbia Chemical Division of the Pittsburgh Plate Glass Co. The company has two well fields. In one there are five wells (2716-2720) that together obtain an average of 550 gallons a minute from the Sharon and overlying rocks. In the other well field are two wells (2773 and 2774) that together yield an average of 400 gallons a minute from the bedrocks.

## GREEN TOWNSHIP

The preglacial river that cut the valley described in the sections on Franklin and Coventry Townships and Akron flowed diagonally across the southwest portion of Green Township. Here, as in Franklin Township, are few available data from which to determine the character of the material filling the valley. Presumably it is mostly glacial alluvium with layers of clay or till. The surface of the valley is covered by kame hills. These hills contain much coarse sand and gravel but they are high, narrow, and steep, and are quickly drained after a rain. As they contain little or no ground water, wells are drilled through them to the level of adjacent drainage. Large supplies of ground water may be available from deeper gravels in the valley, but more drilling is necessary to determine this definitely. Ground water for home or farm use is generally available, particularly in the lowlands where drive-point wells are fairly common.

Along the eastern edge of the valley the Grand River ice built high kames, some more than 200 feet high. The hills are mostly sand and gravel, but they do not yield much water because most of the permeable material is above the water table.

In the Meyersville area a preglacial valley has been partly filled by sand and gravel of the kame moraine of the Grand River lobe. Large quantities of ground water are available in that area, particularly along the branch of the Tuscarawas River that flows through Meyersville. At that place large yields, perhaps up to 1,000 gallons a minute, or more, may be available. South of Meyersville the valley is filled with fine silt and sand. Most drilled wells there penetrate bedrock, though a few dug and driven wells obtain water from the glacial drift.

The remainder of the township is covered principally by till ranging in thickness from 20 feet to more than 75 feet. In places where the till is thick, it contains gravel lenses which yield some water. Most of the wells obtain water from the bedrock which consists of shales and sandstone of Pennsylvanian age. Many of the wells are less than 70 feet deep though a few are more than 100 feet. The yields range from 5 to 20 gallons a minute; the water is generally obtained from the rocks above the Sharon conglomerate member. The Sharon conglomerate member probably would yield enough water for small municipal or industrial uses, but in places it is more than 200 feet deep, deeper than anywhere else in Summit County. Only a few wells have been drilled into it.

## HUDSON TOWNSHIP

The western part of Hudson Township is underlain by a fairly deep buried valley. In places the bedrock is more than 300 feet below the land surface. The valley has been filled with layered glacial alluvium and till or clay. Fine sand is found in places. The sand contains water but is difficult to develop. Only a few wells have been drilled, mostly shallow, small-diameter wells. Below the sand coarser material is generally found. The author believes that relatively large ground-water supplies, enough for municipal or industrial use, could be developed in this valley. For example, one well (685), supplies all the water used by the Cleveland Boys Farm. It is 72 feet deep and is reported to yield 200 gallons a minute with a drawdown of only 19 feet.

In the northwestern corner of the township the valley is filled with till. Similar material is found in a small tributary valley northwest of Hudson and in the northeastern part of the township. In these areas wells obtain water from sand and gravel lenses in the till, in places just above the bedrock. Many of the wells are more than 100 feet deep. Yields are generally less than 10 gallons a minute.

The remainder of Hudson Township is covered by a rather thin layer (25 to 40 feet) of impermeable clay till. The till is underlain mainly by the Sharon conglomerate member and, in places, by thin sandstones and shales. All the wells in this area obtain water from the rock. They are generally between 50 and 75 feet deep, but some are more than 150 feet deep. Reported yields range from 5 to 10 gallons a minute, though larger yields are available from the Sharon conglomerate member.

### Hudson

The municipal water supply at Hudson is from wells near the southeastern corner of the city. The log of one of the wells (636) shows that the Sharon conglomerate member is the principal aquifer; it is about 45 feet thick and lies beneath about 35 feet of glacial till. All the wells have been drilled through the Sharon to the rocks of the

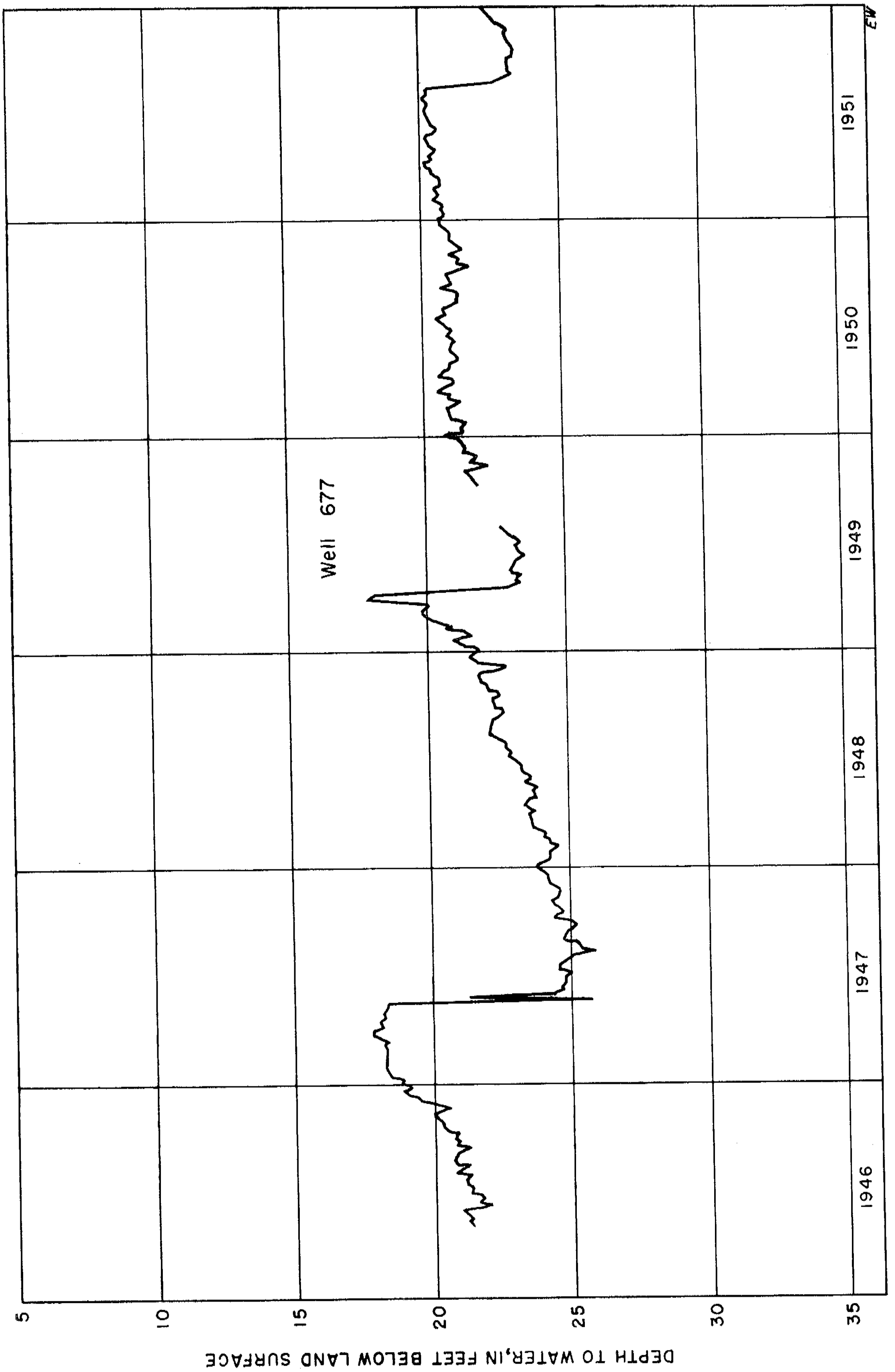



Plate 19. Fluctuation of water level in an observation well in the city well field at Hudson.

Cuyahoga group. Well 636 was drilled 166 feet into the Cuyahoga group which consisted mainly of shale. An analysis of the water from the wells is shown in table 4.

In June 1946 well 636 was pumped and the effects on the water levels in the other wells were observed. Unfortunately, not much was determined about the hydraulic characteristics of the Sharon because the pumping rate was not steady; it varied from 160 to 220 gallons a minute. The test did show that more than 160 gallons a minute could be withdrawn from the aquifer for at least 24 hours, the length of the test period. However, the water level in well 636 was still going down at the end of the 24-hour test period, which means that the total capacity of the well is less than the rate at which it was pumped.

The history of the well field is revealing. In the past when a new well was placed in service its initial pumping rate was greater than the rate that could be maintained after it had been continuously in service for a time. It was necessary to reduce the rate until the pumping level became stable. Plate 19 is a hydrograph of the observation well 677, located in about the center of the well field. The sharp drop in water level that occurred in 1947, 1949, and again in 1951 was caused by pumping from a new well. In each case the new well at first carried most of the pumping load. Then, as the pumping level declined the pumping rate was decreased and the load was distributed among the other wells. As a result the water level in the observation well gradually rose.

During the period of record (1946-51) an average of about 200,000 gallons a day was pumped, mostly from 3 or 4 wells. This is a safe yield, for the hydrograph does not show a downward trend. Each well, though, is producing nearly its total capacity, and it is doubtful that production from the well field can be greatly increased. More water can be obtained, however, by drilling new wells outside the present well field.

## MACEDONIA TOWNSHIP

Nearly all the wells surveyed in Macedonia Township penetrate bedrock, mostly shales and sandstone of Mississippian age. Yields range from 3 to 10 gallons per minute, generally less than yields from Mississippian rocks to the west in Northfield Township. The Sharpsville sandstone is more than 130 feet deep in most places, and the Berea sandstone is generally more than 200 feet deep. The upper portion of the Cuyahoga group is predominantly shale. Wells get water either at the thin fractured shale zone at the contact between the bedrock and the overlying till or from the deeper sandstones. The average depth of the wells in the township that penetrate the Mississippian rocks is 156 feet.

The bedrock in the area has a regional dip to the east-southeast; the Berea sandstone, therefore, is progressively deeper eastward. Well 220 is reported to be 200 feet deep and to end in the Berea sandstone. The water tastes slightly salty. Down dip from this well, the water in the Berea sandstone probably gets progressively more salty.

Along the eastern edge of Macedonia Township the upland is underlain by the Sharon conglomerate member. Here the Sharon is an important aquifer, and yields abundant water for home and farm use from wells less than 60 feet deep. The Sharon forms ledges and cliffs in places along the western edge of the upland. Springs issue at the base of these rock exposures, and some farms rely entirely on them for water.

The southwestern portion of the township is underlain by a deep preglacial valley. The valley contains silt and fine sand, or "quicksand" as it is usually called by the driller. Although it contains water, this material is too fine grained to be developed as a source of supply. Most wells are drilled through the sand into the bedrock, which is reached at depths ranging from 130 to 200 feet.

## NORTHAMPTON TOWNSHIP

In almost two-thirds of Northampton Township ground-water supplies are small. The Cuyahoga River Valley and the adjacent uplands are covered by silt, clay, and till. Bedrock, which is generally shale, is deep. The uplands have been deeply eroded by small tributary streams into high, narrow ridges, separated by deep, narrow valleys. Sand and gravel lenses in the clay and till are of such small extent that water that percolates down to them is quickly drained into the valleys. Dry wells are common; some have been drilled more than 200 feet in search of water. Cisterns are used throughout the area.

There are a few shallow wells, nearly all are less than 50 feet deep, in the bottom lands of the Cuyahoga River valley. Many are dug wells or drive points. They get water from sand and gravel near the surface beneath the overlying silt. More extensive water-bearing sand and gravel deposits may lie deeper in the thick glacial material that fills the valley.

In the eastern third of Northampton Township ground-water supplies are readily obtained for domestic or farm use. The Sharon conglomerate member underlies two bedrock hills and yields 5 to 25 gallons a minute to wells generally less than 100 feet deep. Along the extreme eastern edge of the township is a part of a buried valley, most of which is beneath Stow Township, which is filled with layers of sand and gravel and clay or till, covered by till. In places in the valley yields from sands and gravels may be fairly large.

## NORTHFIELD TOWNSHIP

Nearly everywhere in Northfield Township adequate ground-water supplies are available for farm and domestic use, and supplies sufficient for small industrial or municipal requirements are available in a limited area. Only in an area about a mile wide along the Cuyahoga valley in the western part of the township is there difficulty in obtaining ground water. There the glacial material consists of impermeable lacustrine silt and clay and it contains little or no water. A portion of that area is underlain by the Bedford and Ohio shales, and shallow dug or drilled wells generally obtain a little water at or near the top of these shales. Those wells are likely to go dry in dry weather, especially those near the steep walls of the Cuyahoga Valley or its tributaries.

A buried valley underlies the north-central portion of Sagamore Hills and adjacent areas. Beneath Sagamore Hills the valley has been filled by late Cary deposits making up the Defiance moraine, and most wells obtain water from sand and gravel lenses in till. Some of these wells are reported to have a capacity of 20 to 30 gallons a minute. The sand and gravel lenses are surrounded by clay till, and therefore it is doubtful that any of the wells will maintain such a yield very long. The water-bearing lenses are not extensive and they occur at various depths. Farm or household wells that fail to encounter sand and gravel generally obtain water from the bedrock at depths of 100 to 150 feet.

The portion of the buried valley in the eastern and southeastern parts of Northfield Township is filled with glacial outwash, mostly silt and sand. It contains much water, but here, as in many other places, the fineness of the material makes recovery of the water difficult or impractical. Well drillers commonly log it as quicksand and drill through it to more favorable materials. Some wells (see 78 and 79) are developed in thin lenses of sand and gravel, but most wells obtain water from the bedrock at depths of 100 to 150 feet.

In the southwestern corner of the township is a small portion of the Cuyahoga River valley. The bedrock floor of the drift filled valley is more than 400 feet below the river. The surface is covered with silt and clay of glacial and recent origin, which contain little or no water. The character of the material beneath the silt and clay is little known but, because the valley must have been an outlet for glacial meltwaters during the glacial epoch, it should contain layers of sand and gravel as well as till and lucustrine clay. If so, and if the sand and gravel layers are thick and extensive, they may be important aquifers in the future. The area should be test-drilled before plans are made for developing supplies in the valley, and provision for controlled pumping tests should be made in those plans.

The Jaite Paper Co. obtains water from two wells (see well 90, table 6 and pl. 2) which might indicate the presence of an important, though deep aquifer in the valley. Mr. C. T. Carmichael, of the Jaite Co., reported on the two wells in 1947. They were drilled before 1917, 450 feet deep and 20 feet apart. No logs are available but company records indicate that they did not reach bedrock. The wells flowed when they were drilled, and they continued to flow until 1945 at the rate of about one million gallons a day from both. In 1945 the demands of the plant had increased and pumps were installed. Since then the wells have been pumped at the rate of 1.5 to 2 million gallons a day.

In the remainder of the township most of the wells are drilled into the bedrock. A few dug wells obtain water from the zone of contact between the bedrock and the overlying till, but the till generally contains little or no water. The underlying bedrocks are of Mississippian age, the principal sources of ground water being the sandstone lenses in the Cuyahoga group. These include the Sharpsville sandstone and the Berea sandstone. Most wells are drilled only deep enough to supply the necessary quantity of water. In the central part of the township the Berea sandstone is near the surface and nearly all the wells obtain water from it. To the east the Berea dips beneath the Cuyahoga group and most wells do not reach it; instead, they end in a sandstone or a sandy shale in the Cuyahoga group. Yields from these wells can generally be increased by drilling them deeper to the Berea sandstone. Most of them do not exceed 150 feet in depth; many range from 50 to 90 feet in depth.

## NORTON TOWNSHIP

A deep, rather broad, buried valley underlies Wolf Creek in the eastern part of Norton Township. Bedrock is from 250 to 300 feet below the surface. The surface is underlain with silt and fine sand deposited in a glacial lake. Beneath the fine material the valley is filled with alternating layers of coarse and fine alluvium and a few beds or lenses of clay. Farm and domestic wells are shallow drive points, and dug wells are common. Along the edges of the valley, at the mouths of tributary valleys, sand and gravel outwash has been deposited; however, ground-water yields from these deposits are sufficient only for home wells, because the permeable materials are mostly above drainage and are not extensive. Large industrial ground-water supplies are obtained from the buried valley at Barberton.

The remainder of the township is covered by sandy, silty till of Tazewell age. In the valleys of Hudson Run and Van Hyning Run the till is 50 to 100 feet thick and contains lenses of sand and gravel. Wells yield 5 to 10 gallons a minute from these lenses. Where gravel is not encountered water is generally obtained from the underlying Mississippian rocks.

The till on the uplands is quite thin, generally less than 30 feet thick, and wells obtain water from the underlying Pennsylvanian rocks. The wells are generally less than 100 feet deep, the average being about 60 feet. Reported yields range from 5 to 25 gallons a minute. Yields up to about 50 gallons a minute are probably available from the Sharon conglomerate member.

### Barberton

The municipal water supply for the city of Barberton is from a surface reservoir on Wolf Creek in southern Copley Township. At one time Barberton used water from a well near the northern edge of the city in the valley of Wolf Creek. The superintendent of the waterworks reported that the well readily yielded 1,000 to 1,500 gallons a minute. It was abandoned when the water became salty.

Industries in Barberton pump about 2 billion gallons of ground water each year from a major buried valley that underlies Wolf Creek and a large part of the city (area A of pl. 2). The Columbia Southern Chemical Corp. pumps 3 to 4 million gallons a day during about 4 months of each year from 5 large-diameter (5-foot) concrete wells. The Seiberling Rubber Co. withdraws about 3 million gallons a day the year round from 3 or 4 wells located not far north of the Columbia Southern Chemical Corp. well field. The Midwest Rubber Co., also nearby, pumps an average of 1 million gallons each day from 2 wells. Pumpage from 2 wells at the Seiberling Latex Co. amounts to an average of about 500,000 gallons a day.

Cross sections of the buried valley at Barberton are shown on plate 20. In most places in the valley bedrock is more than 200 feet below the surface. The material above the bedrock consists of alternating layers of fine to coarse glacial outwash and clay or till. The surface is covered by fine sand or silt. That the valley fill is quite heterogeneous is shown by the cross section. Accordingly, though there are many large-capacity wells in the area, it is difficult to find suitable well sites, and many test wells have been drilled for each successful well. A large part of the glacial fill is too fine grained for large yields. For example, the Seiberling Latex Co., east of the Seiberling Rubber Co., has two wells across Wolf Creek. Each well yields about 200 gallons a minute with a drawdown of about 6 feet, and has a specific capacity of about 33 gallons per foot of drawdown. At the nearby Seiberling Rubber Co. well field one well has a specific capacity of 68 gallons a minute per foot of drawdown, another has a specific capacity of 68 gallons a minute per foot of drawdown, and a third has a specific capacity of 96 gallons a minute per foot of drawdown. During one period the Seiberling Latex Co. drilled 16 evenly space test holes along Wolf Creek without finding enough sand and gravel to warrant drilling a well.

Recharge to the aquifers at Barberton is principally from local precipitation. Because of the fine grained material that covers the area, recharge by infiltration from Wolf Creek is probably small. Reliable water-level data from the well fields are not available. There has been no decline in yield from any of the wells, during the several years of pumping, caused by a net decline in water levels. However, pumpage at the Columbia Southern Chemical Corp. does exceed the recharge at times. During each pumping season water levels go down in the wells until the pumping rate is reduced enough to maintain them at a constant level. Each year, after pumping stops, the water levels recover about to the level of the year before. It is interesting to note that the water level in Lake Anna, situated in a kettle hole in the center of Barberton, reportedly drops 3 to 5 feet during the summer pumping season. If true, this means that the level of Lake Anna represents the water table in the principal aquifer.

The Tuscarawas River crosses the buried valley in southeastern Barberton, where it is paral-

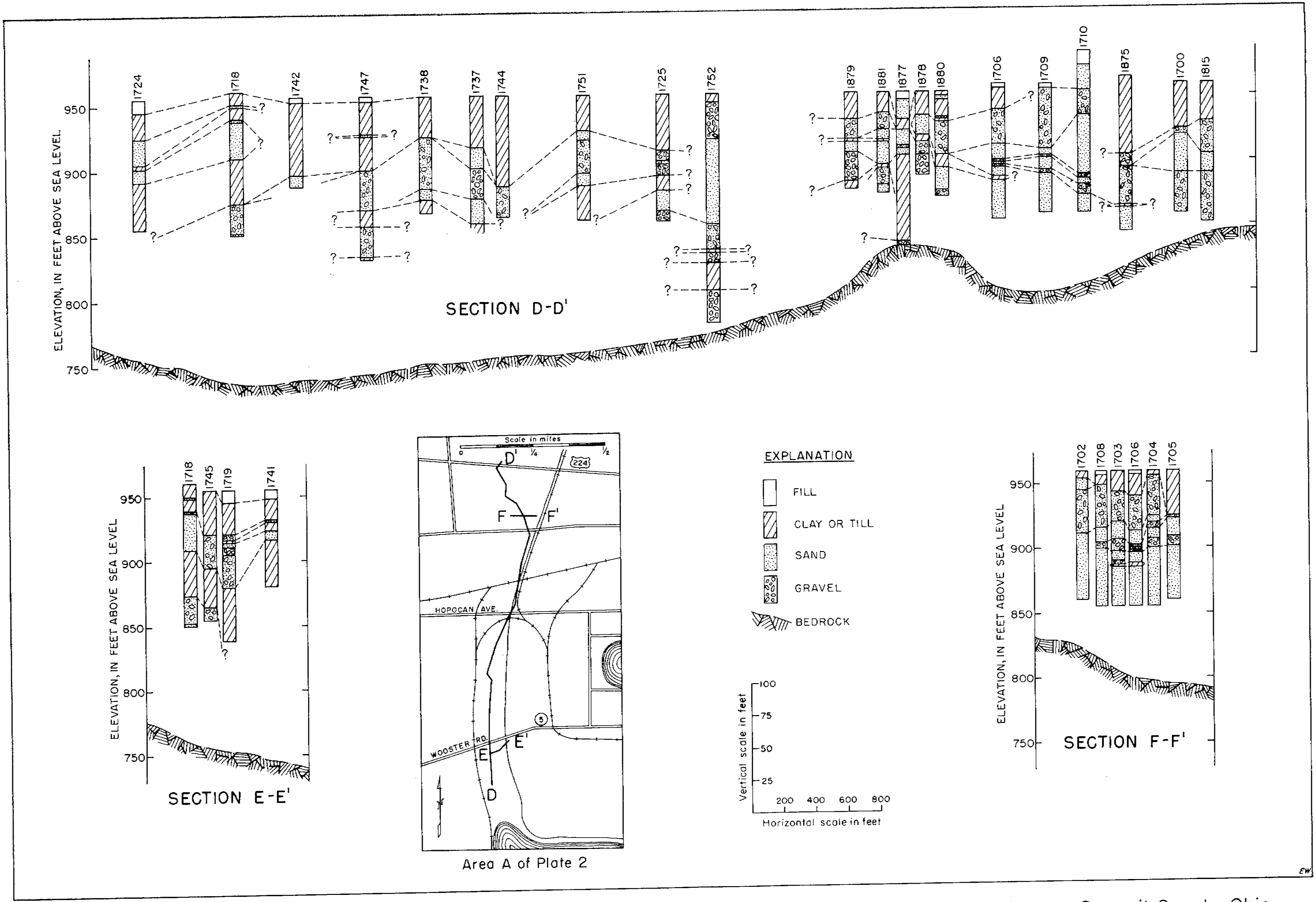



Plate 20. Cross sections showing character of material filling buried valley beneath Wolf Creek in Barberton, Summit County, Ohio.

lelled on both sides by fairly coarse outwash gravel. Normally the area would be excellent for the development of a large ground-water supply by induced infiltration from the river. The Columbia Southern Chemical Corp. investigated this possibility and found that the ground water contains more than 20,000 parts per million of calcium chloride, caused probably by a calcium chloride disposal area located west of and across the river from the area tested. The extent of the salt contamination is not known because there are no accurate analyses available of water from the industrial wells along Wolf Creek. It extends at least as far as well 1753, now owned by the Midwest Rubber Reclaiming Co., and formerly used as a source of water for Barberton. As mentioned before, the superintendent of the Barberton waterworks reported that the well was abandoned because of salt. Certainly, continued pumping from the industrial well fields in the area must eventually draw the saline water to those well fields also.

## RICHFIELD TOWNSHIP

In nearly all of Richfield Township wells, covered largely by impermeable clay till, obtain water from the bedrock. The bedrock surface forms a rather high upland between two buried valleys that underlie the Cuyahoga River and Yellow Creek. The upland is further divided by a buried valley that underlies Furnace Run. The hill west of Furnace Run is capped by the Sharon conglomerate member which is generally less than 30 feet below the surface. The Sharon is the best aquifer in the township, the Sharpsville sandstone and the Berea sandstone are not important.

Wells penetrating the Sharon obtain sufficient water for small industrial water requirements at depths that seldom exceed 100 feet and average about 75 feet. The Babb Apple Orchard has a well (465) 80 feet deep that is drilled through 38 feet of the Sharon. It is used at intervals when the fruit trees are sprayed, and then it delivers 300 gallons a minute. The yield of the well under sustained pumping would probably be much less, perhaps about 40 or 50 gallons a minute. Even that is enough for the needs of small industries.

Outside the area underlain by the Sharon conglomerate member the bedrock in Richfield Township consists of shales and thin sandstones of Mississippian age which underlie 30 to 60 feet of glacial drift. Wells range in depth from about 30 feet to more than 150 feet and yields are extremely variable. Well 413 yields less than 2 gallons a minute; well 443 yields 50 gallons a minute. Both wells are drilled into the shales of the Cuyahoga group, to depths of 150 and 62 feet, respectively. Wells in the area underlain by the Mississippian rocks generally obtain some water if they are drilled deep enough, but specific amounts have not been determined.

In the southwestern part of the township and in the upper valley of Furnace Run, yields of 5 to 50 gallons a minute are obtained from gravels and sands in or beneath till. These are the only places in the township where water is obtained from the glacial drift. A few dug wells in other places are fed by water at the top of the bedrock, but they can easily be pumped dry.

## SPRINGFIELD TOWNSHIP

The northwestern portion of Springfield Township is in the city of Akron. Ground-water conditions in that area are described in the section on Akron.

The best ground-water area outside Akron is along the Tuscarawas River in the southern part of the township. Kame-moraine and outwash deposits, mostly sand and gravel, make available large sustained yields in places near the river where infiltration can be induced. The gravels away from the river are also an excellent source of ground water, but supplies are not as great as in areas where river recharge is available.

In other places in the township wells obtain water from sand and gravel outwash and kame moraine material or from the bedrock shales and sandstones of Pennsylvanian age. Wells are generally less than 100 feet deep and they average about 70 feet. Yields up to 50 gallons a minute are available from the bedrock and up to 125 gallons a minute from the sands and gravels. In places there are kames, but they occur above drainage and contain only small amounts of water. By drilling deep enough, ground water is available everywhere for farm and domestic needs, and in places there is water sufficient to meet small industrial or municipal needs.

Springfield Township has two incorporated communities, the villages of Mogadore and Lakemore. Mogadore gets water from the Akron municipal supply. Lakemore has its own supply from two drilled wells (2565 and 2566) that penetrate sandstones and shales of Pennsylvanian and Mississippian age. Lakemore's average daily consumption is 30,000 gallons. In 1944 well 2565 was tested at rates of 110 and 250 gallons a minute; at 250 gallons a minute the drawdown was 51 feet, but it was a short test and therefore inconclusive. The sustained yield of the well is probably less than 250 gallons a minute. An analysis of Lakemore's water is in table 4. Its only treatment is chlorination.

## STOW TOWNSHIP

Ground water is generally available everywhere in Stow Township. A deep buried valley, filled with layers of alluvium and clay or till, underlies the northwestern corner of the township. Wells in the buried valley get water from sand and gravel, but in places fine sand makes drilling difficult. All the wells investigated are small farm or home wells, drilled a few feet into shallow alluvium. Their average depth is about 70 feet, and the average yield reported is 6 gallons a minute. However the reported yields are not a true indication of the amount of water available in the area; larger yields are probably available from deeper and larger wells. As the buried valley is more than 400 feet deep in places, there is much material still to be tested.

Silver Lake, in the south central part of Stow Township, overlies a buried valley that is tributary to the one just described. This valley is 150 to 200 feet deep and contains sand and gravel deposits in places, which yield the largest quantities of water in the township. The Cuyahoga Falls water supply comes from this valley, farther south.

Another buried valley lies southwest of Darrowville in the north-central part of the township. It is small and shallow, but it contains sand and gravel. Yields are not large, because much of the permeable material is in hills above drainage. They are adequate for farm and domestic use, however, and are readily available at depths generally less than 75 feet.

Nearly all the rest of Stow Township is covered by glacial till. Except in a small area in the northeastern corner, ground water is obtained from the bedrock, most of which is of Pennsylvanian age and lies from 25 to 30 feet beneath the surface. In a few places it is more than 50 feet deep. It consists mostly of thin shales and sandstones that lie on the Sharon conglomerate member. In places the overlying rocks have been eroded and the Sharon directly underlies the till.

Wells in the Sharon average 75 to 100 feet in depth, some being more than 125 feet deep. Reported yields range from 5 to 15 gallons a minute, though it is probable that the Sharon will yield up to 50 gallons a minute or more to properly constructed wells.

## TALLMADGE

What remains of Tallmadge Township outside the Akron city limits has been incorporated as the Village of Tallmadge. It is a suburban residential section and does not have a public water supply. The many home owners there rely on wells for their water needs.

Most of Tallmadge is covered by till, either sandy, silty till of the Tazewell ground moraine or sandy till of the early Cary end moraine. The till contains little or no water. There are a few gravel kames, but they are perched on top of hills above drainage and are not water bearing. Nearly all the wells get water from the bedrock.

The bedrock is 10 to 50 feet below the surface, except at a few places where it is deeper than 50 feet. It consists of thin shales and sandstones of the Pottsville formation which overlie the Sharon conglomerate member. Few wells penetrate the Sharon as far as the underlying Mississippian rocks. Wells range from 35 to 150 feet in depth, and average about 75 feet. Yields are reported to range from 1 to 25 gallons a minute.

Water supplies sufficient for small municipal or industrial use are available from the Sharon. Wells 1581 and 1582, of the U. S. Stoneware Co., are as deep as the Mississippian rocks and they probably get some water from these rocks and from those above the Sharon, but the latter is the principal aquifer. Mr. Yingle, the company's chief engineer, reported that well 1581 was tested in 1943 at the rate of 55 gallons a minute. After 24 hours of pumping, the water level in the well was constant; the drawdown produced was 65 feet. Well 1582 yielded 200 gallons a minute when drilled in 1948, and the reported drawdown was 50 feet. It was pumped at the rate of 200 gallons a minute for only a short time, however, and presumably the sustained yield would be less. The company now pumps it at only 50 gallons a minute.

A small area in the southeastern corner of Tallmadge contains sand and gravel. Wells there obtain water from the alluvium or the underlying bedrock. There are a few flowing wells.

## TWINSBURG TOWNSHIP

All of Twinsburg Township is covered by late Cary clay till which generally contains little or no water. A preglacial valley was cut diagonally, from northwest to southeast, across the center of the township. Northwest of Twinsburg the valley has been filled with end moraine. A few wells get water from gravel lenses, but it is usually necessary to drill into the bedrock for sufficient water for farm or domestic needs. Southeast of Twinsburg the buried valley is deeper and contains more sand and gravel. In that area yields of 5 to 10 gallons a minute are readily obtained from wells 60 to 100 feet deep.

The eastern edge of the township is underlain by a very deep preglacial valley, but there is little available information about it. The surface is covered with clay till and is swampy. Only one well (60) has been drilled in the valley; it is 241 feet deep and does not reach bedrock. It reveals layers of till, silt, and sand and gravel. Adequate farm and home supplies are available from the sand and gravel, and more drilling in the valley might reveal extensive sand-and-gravel aquifers from which fairly large ground water supplies could be obtained.

The bedrock uplands are capped by the Sharon conglomerate member. Yields from the Sharon range from 5 to 85 gallons a minute, though in most places the aquifer is too thin to yield more than about 20 gallons a minute for long periods. Wells in the Sharon generally are less than 70 feet deep and all, so far as is known, obtain water. In some places the Sharon is exposed as ledges and cliffs. These commonly have springs at their base, which yield good supplies for farm or home use. It might be possible to get small municipal or industrial supplies from the Sharon where it is thickest.

In other parts of Twinsburg Township wells get water from the Mississippian rocks at depths ranging from 50 to 150 feet. There is no record of a well in the Berea sandstone, and few wells have penetrated to the Sharpsville sandstone. One well that does reach the Sharpsville (no. 305) is 220 feet deep. The water in it is reported to contain a little hydrogen sulfide. Such water is commonly called sulfur water.

### Twinsburg

Twinsburg is an unincorporated community of about 500 people, served by the Wilcoxton Water Co. The company gets water from four wells and a spring all located on a level hilltop about 1.5 miles north of town. The spring and three of the wells are in the Sharon conglomerate member. The fourth well was drilled through the Sharon into the Sharpsville sandstone, and presumably it taps both formations. The log of well 309 shows 44 feet of sandstone underlying 10 feet of till. The well was reported to have been tested when it was drilled at the rate of 87 gallons a minute; the drawdown was not recorded. The community uses 17,000 gallons of water a day, on the average. The water is untreated except for chlorination.

# CHEMICAL CHARACTER OF THE GROUND WATER

Water has been called the universal solvent. It is fairly pure as it falls from the sky, except for dissolved atmospheric gases and particles of soot and dust picked up on the way down. On the ground it picks up particles of soil and it may acquire some color and bacteria. When it percolates into the ground, the rocks through which it passes filter it and purify it, but the water in turn dissolves some of the mineral matter from the rock.

The chemical character of the ground water in Summit County is known from the analyses of water from 27 wells, given in table 3, representing all the principal water-bearing formations. Analyses of the municipal ground-water supplies in Summit County are given in table 4.

Fifteen of the samples were analyzed by the U. S. Geological Survey; 15 samples, including 3 from municipal supplies, were analyzed by the Ohio Department of Health. The results show only the chemical characteristics and do not indicate sanitary conditions.

In 1947 the Division of Water issued a report on the industrial utility of the surface waters of Ohio (White, W. F., 1947) which contains a description of the various mineral constituents found in natural waters. The report deals with surface water, but most of the constituents described also occur in ground water. The following brief discussion of the constituents listed in the column headings in table 3 and 4, in the order in which they appear, is adapted from White's report.

**pH.**—The intensity of acidity or alkalinity of a water as determined by the hydrogen-ion concentration, of which the pH is an index. It is of importance with reference to the corrosive properties of water, and to its proper treatment at water-treatment plants. The pH represents the negative logarithm of the number of moles of ionized hydrogen per liter of water, and the pH scale is used to denote acidity or alkalinity. A neutral water has a pH of 7.0. The pH of most natural waters ranges between 6.0 and 8.0. Some alkaline waters have pH values greater than 8.0 and waters containing free mineral acid usually have values less than 4.5.

**Color.**—In a water analysis the term "color" refers to the appearance of water that is free from suspended solids. A color of less than 20 passes unnoticed. The color of the water is reported only in the analyses made by the Ohio Department of Health.

**Specific conductance.**—The specific conductance of a water is a measure of its ability to conduct a current of electricity. It varies with the mineral concentration and the degree of ionization of the dissolved constituents.

**Silica ($SiO_2$).**—Silica is dissolved from practically all rocks. A few natural waters contain less than 3 parts per million of silica and some contain more than 50 parts per million. Silica affects the usefulness of a water because it contributes to the formation of boiler scale.

**Iron (Fe).**—Iron is dissolved from many rocks and soils. On exposure to the air, water that contains more than about 0.3 part per million of iron soon becomes turbid with the insoluble compound produced by oxidation. Excessive iron in the water stains white fixtures and clothing. It is the principal cause of what many well drillers call "red water."

**Manganese (Mn).**—Manganese was determined in analyses by the Ohio Department of Health. Acid waters may have relatively large quantities of these constituents and they can be troublesome to certain users of water. Manganese is especially objectionable in laundry work and in textile processing that involves washing, because, like iron it stains the material.

**Calcium (Ca).**—Calcium, like silica, is also dissolved from practically all rocks. Calcium is a cause of hardness of water and is one of the active agents in forming boiler scale.

**Magnesium (Mg).**—Magnesium is dissolved from many rocks. Its effects are similar to those of calcium, and, in addition, waters that contain much magnesium (together with chloride) are likely to be corrosive, especially in steam boilers and other heating equipment.

**Sodium and potassium (Na and K).**—Sodium and potassium are dissolved from practically all rocks, but in humid regions they generally make up only a small part of the dissolved mineral matter in ground water, unless it is deep seated water. Moderate quantities of these constituents have little practical effect, but more than 50 or 100 parts per million of the two may require careful operation of steam boilers to prevent foaming. Water that contains large quantities of sodium

## TABLE 3

**Analyses of water from representative wells in Summit County, Ohio**
**(Chemical constituents given in parts per million)**
**(Analyzed by Quality of Water Branch, U. S. Geological Survey)**

| Well no. | Source | Date | pH | Specific conductance at 25°C (Micromhos) | Silica ($SiO_2$) | Iron (Fe) | Calcium (Ca) | Magnesium (Mg) | Sodium and potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Dissolved solids | Hardness as $CaCO_3$ Total | Hardness as $CaCO_3$ Noncarbonate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 764* | Glacial outwash deposits | 3-18-49 | 8.1 | 451 | 11 | 0.67 | 38 | 12 | 46 | 258[1] | 8.1 | 16 | 0.2 | 0.4 | 252 | 144 | 0 |
| 1000* | do | 3-18-49 | 8.0 | 597 | 15 | 3.3 | 84 | 26 | 8.8 | 326[1] | 63 | 1.9 | .1 | .0 | 360 | 316 | 49 |
| 1271* | do | 2-18-49 | 7.6 | 1020 | 9.5 | .34 | 148 | 38 | 9.7 | 332 | 149 | 83 | .1 | 2.7 | 670 | 526 | 253 |
| 1305* | do | 11-20-47 | 7.6 | 389 | 12 | .51 | 62 | 11 | 6.5 | 255 | 2.4 | 1.6 | .1 | .3 | 219 | 200 | 0 |
| 1776* | do | 3-18-49 | 7.8 | 324 | 10 | 1.3 | 42 | 11 | 11 | 201 | 6.2 | 1.9 | .2 | .1 | 180 | 150 | 0 |
| 2091* | do | 11-14-47 | 7.1 | 1510 | 11 | .10 | 156 | 35 | 107 | 276 | 166 | 260 | .0 | 1.1 | 929 | 533 | 307 |
| 2251* | do | 3-18-49 | 8.1 | 381 | 14 | .48 | 55 | 13 | 7.9 | 228[1] | 15 | 3.5 | .2 | .0 | 216 | 191 | 4 |
| 2604* | do | 2-18-49 | 7.9 | 515 | 6.6 | .21 | 80 | 16 | 4.9 | 198 | 94 | 9.5 | .1 | 2.7 | 328 | 265 | 103 |
| 2631* | do | 11-19-47 | 7.7 | 1000 | 9.6 | .09 | 156 | 38 | 16 | 230 | 352 | 18 | .0 | .6 | 734 | 545 | 357 |
| 2714* | Glacial till | 3-18-49 | 6.8 | 356 | 10 | 2.9 | 26 | 17 | 6.9 | 11 | 85 | 21 | .0 | 28 | 254 | 135 | 126 |
| 2944* | do | 2-18-49 | 8.1 | 446 | 12 | 1.6 | 69 | 15 | 2.2 | 227 | 48 | 1.6 | .1 | .0 | 270 | 234 | 48 |
| 2820* | Massillon and Lower Pottsville | 11-21-47 | 7.2 | 162 | 7.9 | .09 | 14 | 5.0 | 10 | 45 | 30 | 3.0 | .0 | 7.2 | 98 | 56 | 19 |
| 1011* | Lower Pottsville, including Sharon cong.member | 2-18-49 | 7.5 | 1820 | 5.5 | .56 | 223 | 83 | 133 | 484 | 705 | 38 | .3 | 2.4 | 1490 | 898 | 501 |
| 317* | Sharon cong. member | 11-14-47 | 7.1 | 410 | 7.6 | .05 | 46 | 16 | 14 | 144 | 63 | 10 | .1 | 15 | 246 | 181 | 63 |
| 25* | Berea | 11-14-47 | 7.2 | 687 | 19 | .05 | 98 | 31 | .. | 325 | 91 | 7.8 | .2 | 1.2 | 440 | 372 | 106 |

*Analyses shown graphically on Plate 21.
[1]Includes the equivalent of any carbonates ($CO_3$) present

**(Analyzed by the Ohio Department of Health)**

| Well no | Source | Date | Color | pH | Silica ($SiO_2$) | Total iron (Fe) | Total manganese (Mn) | Calcium (Ca) | Magnesium (Mg) | Sodium and potassium (Na + K) | Bicarbonate ($HCO_3$) | Chloride (Cl) | Fluoride (F) | Total solids | Hardness as $CaCO_3$ Total | Hardness as $CaCO_3$ Noncarbonate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1591* | Pottsville | 9-9-44 | 4 | 7.0 | 10 | 4.0 | .36 | 51 | 14 | 0 | 193 | 3 | 0.2 | 190 | 163 | 5 |
| 1631 | do | 9-9-44 | 6 | 6.4 | 9 | 17 | .43 | 42 | 11 | 5 | 185 | 7 | .2 | 230 | 187 | 35 |
| 2193* | do | 9-9-44 | 6 | 7.45 | 10 | 1.2 | .05 | 50 | 14 | 10 | 122 | 6 | .2 | 220 | 150 | 50 |
| 2400* | do | 9-9-44 | 4 | 7.6 | 12 | .1 | .01 | 36 | 12 | 4 | 227 | 3 | .3 | 202 | 181 | 0 |
| 2758 | do | 9-9-44 | 3 | 6.2 | 11 | .5 | .04 | 40 | 14 | 4 | 124 | 9 | .1 | 182 | 137 | 35 |
| 488* | Sharon cong. | 9-9-44 | 3 | 7.0 | 9 | 1.9 | .36 | 42 | 14 | 24 | 43 | 28 | .1 | 344 | 157 | 122 |
| 236* | Cuyahoga group | 9-9-44 | 7 | 7.5 | 16 | 1 | .09 | 58 | 17 | 6 | 232 | 5 | .2 | 242 | 215 | 25 |
| 572 | do | 9-9-44 | 0 | 7.05 | 17 | .35 | .09 | 47 | 17 | 30 | 259 | 5 | .2 | 266 | 187 | 0 |
| 633* | do | 9-9-44 | 7 | 7.1 | 17 | 5.2 | .27 | 132 | 45 | 20 | 518 | 7 | .4 | 648 | 515 | 90 |
| 1327 | do | 9-9-44 | 2 | 5.8 | 12 | 1.2 | .15 | 14 | 11 | 10 | 23 | 25 | .1 | 170 | 82 | 63 |
| 1328* | do | 9-9-44 | 3 | 7.45 | 11 | 1.5 | .03 | 77 | 29 | 8 | 381 | 3 | .3 | 380 | 312 | 0 |
| 2746* | do | 9-9-44 | 3 | 7.55 | 14 | .35 | .05 | 49 | 14 | 9 | 210 | 2 | .2 | 218 | 182 | 10 |

* Analyses shown graphically on Plate 21.

## TABLE 4

**Analyses of water from public supplies in Summit County, Ohio**
**(Chemical constituents in parts per million)**
**(Analyzed by the Ohio Department of Health)**

| Municipality | Source | Sample from | Treatment | Date | pH before treatment | pH after $CaCO_3$ treatment | Silica ($SiO_2$) | Total iron (Fe) | Manganese (Mn) | Calcium (Ca) | Magnesium (Mg) | Carbonate ($CO_3$) | Bicarbonate ($HCO_3$) | Free $CO_2$ | Chloride (Cl) | Fluoride (F) | Total solids | Hardness as $CaCO_3$ Total | Hardness as $CaCO_3$ Noncarbonate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cuyahoga Falls | Glacial outwash deposits | Waterworks raw | | 3-15-43 | 7.4 | 7.5 | 9 | 0.5 | 0.15 | .. | .. | 0 | 207 | 12 | 15 | 0.0 | 332 | 245 | 75 |
| Cuyahoga Falls | do | Waterworks tap | Zeolite | 3-15-43 | 7.6 | 7.9 | 9 | 0.0 | 0.0 | .. | .. | 0 | 201 | 8 | 15 | 0.0 | 334 | 56 | 0 |
| Hudson | Pennsylvanian Sharon cong. member and Cuyahoga group | Waterworks raw | | 7-20-43 | 7.0 | 7.0 | 12 | 0.35 | 0.15 | 122 | 45 | 0 | 488 | 77 | 8 | 0.2 | 622 | 488 | 88 |
| Hudson | do | Waterworks tap | Lime-soda | 7-20-43 | 9.0 | 9.7 | 10 | 0.00 | 0.00 | 9 | 18 | 18 | 89 | 0 | 8 | 0.15 | 232 | 96 | 23 |
| Lakemore | Pottsville | Waterworks tap | Chlorine | 9-28-43 | 7.5 | 7.5 | 9 | 0.15 | 0.05 | .. | .. | 0 | 238 | 11 | 4 | 0.30 | 230 | 177 | 0 |

salts may also be injurious to the soil and crops irrigated with it, and some water contains so much sodium that it is unfit for nearly every use.

**Carbonate and bicarbonate ($CO_3$ and $HCO_3$).**—Carbonate and bicarbonate occur in water largely through the action of carbon dioxide, which enables the water to dissolve carbonates of calcium and magnesium, which are converted to bicarbonates. Carbonate is not present in appreciable quantities in most natural waters. Water containing large quantities of bicarbonates are unsatisfactory for use in boilers or condensers without treatment because, when heated, the soluble bicarbonates of calcium and magnesium are converted to insoluble carbonates. These are deposited as scale in boiler tubes or condensing systems.

**Sulfate ($SO_4$).**—Sulfate is dissolved from gypsum and other sulfate minerals and is formed by the oxidation of sulfides of iron and other metals; it is generally present in considerable quantities in water from many beds of shale. In waters that contain much calcium and magnesium it contributes to the formation of hard scale in steam boilers and it may increase the cost of softening.

**Chloride (Cl).**—Chloride is dissolved in small quantities from soil or rock in most parts of the county. Ordinarily chloride in water has little effect on its use unless it is present in large quantities, as it is in brines. Chloride in excess of 300 to 500 parts per million can generally be detected by taste. Water that contains excessive amounts of calcium or magnesium chloride is highly corrosive. Industries require water relatively free of these salts. Excessive quantities in relatively shallow ground water generally results from a surface source of contamination.

**Fluoride (F).**—Fluoride has been reported to be in the rocks of the earth's crust to about the same extent as chloride. The quantity of fluoride present in natural water is usually much less than chloride.

**Nitrate ($NO_3$).**—Nitrate in water represents the final oxidation of nitrogenous organic material. The quantities present have little effect on the ordinary use of water, though an excess of about 10 parts per million may indicate organic pollution. For this reason, and because of the discovery that high-nitrate water is associated with cyanosis in infants, the nitrate content of drinking water has, in recent years, received a great deal of attention. Cyanosis results from improper aeration of the blood. It generally results when the high-nitrate water is used in the preparation of the baby's formula.

**Dissolved solids.**—Dissolved solids (the residue on evaporation) consists of all the dissolved mineral constitutents in the water. Uncontaminated waters having less than 500 parts per million of dissolved solids are generally satisfactory for domestic and most industrial uses. Waters having more than 1,000 parts per million of dissolved solids are unsuitable for most uses, though such waters are used in many areas where better water is not available.

**Hardness.**—Hardness is usually expressed as the quantity of calcium carbonate ($CaCO_3$) equivalent to the calcium and magnesium present. Water having a hardness of less than about 60 parts per million is usually rated as soft, and softening is seldom justified. Hardness up to 150 parts per million does not seriously interfere with the use of water for many purposes, but softening may be profitable, especially for laundries. Water having a hardness greater than 150 parts per million can profitably be softened for many uses.

Quantities of the mineral constituents determined by the water analyses are given in this bulletin in two forms: parts per million (ppm) and equivalents per million (epm). A quantity expressed in parts per million is a measure of the weight of the concentration of a dissolved constituent compared to the weight of a million parts of the water. Parts per million may be converted to grains per gallon by dividing by 17.12. An equivalent per million is a unit chemical equivalent weight of a constituent present in a million unit weights of water. It is computed by dividing the concentration of a constituent in parts per million by the chemical combining weight of the constituent, or by multiplying by the combining weight factor:

$$\text{epm} = \text{ppm x } \frac{\text{valence}}{\text{atomic weight}}$$

The analyses in table 3 and 4 are given in the ionic form in parts per million, with no attempt to state the manner in which they are combined. The principal constituents in the samples of water from Summit County have been graphically plotted to scale on plate 21 in equivalents per million. The samples were from 23 wells representing all the principal water-bearing formations. The cations (positive ions) are plotted next to the anions (negative ions) from bottom to top.

The effect of any one constituent depends a great deal on what the water is used for. Ground water, excellent for drinking, might be unusuable for boiler water because of scale forming minerals.

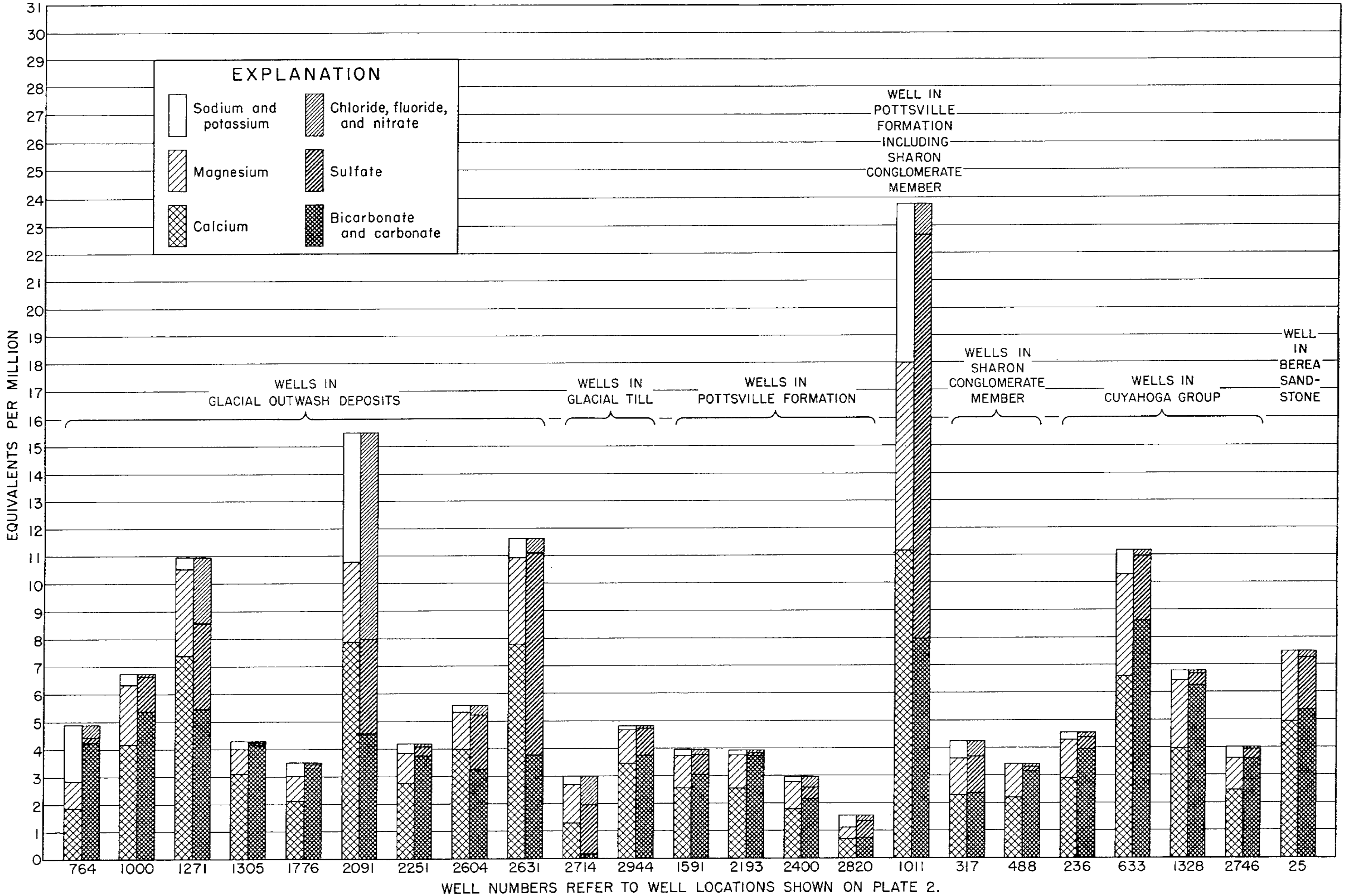



Plate 21. - Chemical analyses of ground water from wells in Summit County, Ohio.

Water used as raw material in chemical processes must meet exacting requirements that may vary with the process involved. Water used only for cooling may be of almost any quality, except corrosive, (and even corrosive water may be used where better water is not available) for its temperature is the important consideration.

There are many methods of treating water to remove objectionable constituents. "Red water" and hard water for the home are improved by the use of small softeners, generally of the zeolite type, that require little maintenance. Municipal and industrial treatment of water is generally on a large scale, and their methods are designed accordingly. Nordell (1951) discusses in detail the quality of water needed for many industrial processes and for municipal uses, and he describes many methods for treating the various types of water.

Concerning the chemical composition of drinking water, the U. S. Public Health Service (1943) has this to say:

> The following chemical substances which may be present in natural or treated waters should preferably not occur in excess of the following concentrations where other more suitable supplies are available . . .
>
> Copper (Cu) should not exceed 3.0 ppm
> Iron (Fe) and Manganese (Mn) together should not exceed 0.3 ppm
> Magnesium (Mg) should not exceed 125 ppm
> Zinc (An) should not exceed 15 ppm
> Chloride (Cl) should not exceed 250 ppm
> Sulfate ($SO_4$) should not exceed 250 ppm
> Phenolic compounds should not exceed 0.001 ppm in terms of phenol
> Total solids should not exceed 500 ppm for a water of good chemical quality. However if such water is not available, a total solids content of 1,000 ppm may be permitted.

The wells sampled in Summit County were selected because of location and source of water. Table 3 lists several analyses of water from each of the principal water-bearing formations. Little consistency in chemical characteristics of the water from any one aquifer is evident in the few samples analyzed. The data indicate chemical quality of the ground water only in the immediate vincinity of the well from which each sample was taken.

The iron content and the hardness of ground water affect the suitability of water, perhaps more than the other mineral constituents. In Summit County the hardness of water from 11 wells in the glacial deposits ranged from 135 to 545 parts per million and the iron content ranged from 0.09 to 3.3 parts per million. In 9 wells in the Pennsylvanian rocks the range was 56 to 898 parts per million of hardness and .05 to 17 parts per million iron. In 7 wells in the Mississippian rocks the range was 82 to 515 parts per million of hardness and .05 to 5.2 parts per million of iron. Both the hardest water (898 ppm, well 1011) and the softest water (56 ppm, well 2820) came from Pennsylvanian rocks. Water with the most iron (17 ppm, well 1631) and that with the least (0.05 ppm, well 317) also came from Pennsylvanian rocks. A sample (well 25) from the Mississippian rocks was equally low in iron. Table 5 gives the hardness and the iron content of 25 ground-water samples in Summit County, related to the geological formations.

TABLE 5

Average hardness and iron content of ground water from different geologic formations in Summit County (in parts per million)

| Aquifer | Total Hardness as $CaCO_3$ | Iron (Fe) | Number of samples |
|---|---|---|---|
| Glacial outwash | 329 | .77 | 9 |
| Pennsylvanian | 234 | 2.82* | 9 |
| Mississippian | 266 | 1.36** | 7 |

*Excluding the two samples from wells 1631 and 1591 which had an iron content of 17 and 4 ppm respectively, the average of the remaining samples is 0.63 ppm.

**Excluding the sample from well 633, which contained 5.2 ppm of iron, the average of the samples is 0.74 ppm.

In some areas, particularly in the valley of Wolf Creek near Barberton, incrustation of the screen causes much difficulty in the large-diameter industrial wells and results in a decline in yield. For example, a well of the Seiberling Rubber Co. had a capacity of 1,200 gallons a minute when it was drilled in 1943; in 1946 its capacity was only 350 gallons a minute, because of incrustation of the well screen. Several wells have been abandoned for this reason and new wells have been drilled to replace them. Incrustation has also been a factor in wells in the buried valleys in Akron. Similar conditions may occur elsewhere if large withdrawals are made from the glacial outwash deposits.

Briggs (1949) says, about incrustation:

> Well screen incrustation is usually due to the precipitation of carbonates—principally of calcium—from the ground water in the proximity of the well screen . . . The deposit fills the voids, and the flow of water into the well is proportionately reduced.

The probable explanation for this phenom-

> enon is as follows: Calcium carbonate can be carried in solution in ground waters in proportion to the amount of dissolved carbon dioxide in the water. The capacity of water to hold carbon dioxide in solution varies with the pressure—the higher the pressure the more carbon dioxide will be held. When water is pumped from a well, the water table is drawn down to produce the necessary gradient or pressure differential in the water-bearing formation to cause water to flow into the wells. The hydrostatic pressure in the deeper portions of the water-bearing formation is thus decreased, the greatest change being at the well. Because of the reduction in pressure, more or less carbon dioxide is released from the water. When this occurs, the water is often unable to carry in solution its full load of calcium carbonate and part of this limey material is then precipitated in the sand adjacent to the well screen.
>
> The precipitation of iron and manganese compounds (carbonates) may also be caused by the release of carbon dioxide from the ground water . . . Just as a change in pressure can result in the precipitation of calcium (or iron) carbonates, so a change of velocity could conceivably be enough to provide the necessary upset and result in the formation of insoluble iron and manganese hydroxides. These hydroxides are jelly-like and small quantities occupy relatively large volumes. Any oxidation that may take place will form the hydrated oxides of iron and manganese . . .
>
> * * *
>
> In the unwatered part of the formation in the cone of depression surrounding a pumping well, air enters the voids and undoubtedly oxidizes the iron in the films of water adhering to the individual sand grains. If pumping is started and stopped intermittently, a coating of iron oxide can build up and the void space in this part of the formation would be progressively reduced . . .
>
> Iron bacteria and other slime-forming organisms can live in ground water by feeding on methane, ammonia, manganese, or iron. The production of slime is a result of the life cycle of the organisms, and iron is changed to insoluble oxides by the iron bacteria in particular . . .

In Summit County iron compounds are probably the greatest cause of incrustation, because calcium and magnesium are not present in large quantities in water from the glacial gravels. A sample (1776) of ground water from the alluvium in the buried valley near Barberton contained 1.3 ppm of iron, but only 42 ppm of calcium and 11 ppm of magnesium. Iron bacteria may also cause some incrustation, particularly where drawdowns in the wells are great.

Briggs (1944) tells what corrective measure to take:

> Thus far a means of entirely preventing the incrustation of well screens has not been found. Certain things can be done, however to delay it and make it a less serious trouble.
>
> First, the well screen itself should have the maximum possible inlet area to reduce the velocity of flow through the screen openings to a minimum. The length of the screen should be adequate, and the well should be properly finished by using the right method of developing the formation surrounding the screen. Second, the pumping rate may be reduced, under some circumstances, and the pumping period increased. This produces benefits to the extent that the drawdown is decreased. Third, the pumping load may be divided among a larger number of smaller wells instead of obtaining all of the supply from one or a few larger wells. This also has the effect of reducing the drawdown.

Several chemical treatment methods designed to remove the incrustation are also described by Briggs in the same paper. A mechanical method of improving the yield from incrusted wells has been suggested by John G. Ferris, of the U. S. Geological Survey, Lansing, Mich. The method is essentially one of redevelopment of the aquifer by alternately surging and cleaning the well. The surging is done best with a surge block or by air, and it is designed to create a disturbance in the formations around the screen, break up the incrusted material, and draw the fine materials into the well where they can be removed by bailing. There should be several periods of surging each period, one-half to three-quarters of an hour long. The rate of surge should be slow at first, and gradually increased; care must be taken not to destroy the well by too violent action. This method does not necessarily remove the incrustants from the screen (they can generally be removed by chemical treatment), but it is designed principally to break up the incrustation of the aquifer where it is not ordinarily reached by chemical treatment. It has been used with some success by the city of Kalamazoo, Mich., where wells in glacial material had declined in yield considerably because of incrustation. The ground water contains large amounts of iron and calcium carbonate. The yields of all the wells treated, including some gravel-packed wells, were greatly increased by Mr. Ferris' method and in most cases were restored to about the original amounts. The wells at Kalamazoo are now surged at regular intervals of a few years.

# SUMMARY OF GROUND-WATER CONDITIONS IN SUMMIT COUNTY

The best ground-water areas in the county are in parts of buried valleys where permeable outwash gravels are crossed by major streams. These conditions occur along the Tuscarawas River in Springfield and Coventry Townships, and along the Cuyahoga River east of Cuyahoga Falls. Large withdrawals of ground water can be sustained in those areas by water entering the aquifer from the streams. Yields are limited only by the amount of infiltration that can be induced.

Some buried valleys contain permeable outwash gravels but they are not crossed by major streams, or the gravels are isolated beneath till or silt. In those areas recharge is from precipitation, in places from some distance. Consequently, available yields are smaller. In some areas where the glacial outwash is thick, extensive large withdrawals can be made for short periods from storage in the aquifer. At one place in Akron, for example, 6 million gallons of water a day is pumped during the summer months. The wells are in a deep buried valley. By the end of each pumping season the water levels in the well field are quite low, but by the time pumping is resumed in the spring the aquifer usually has been fully recharged.

Nearly all of these better ground water areas are in the southern part of the county. A few areas, underlain by deep buried valleys covered by clay-till, or silt and fine sand, have not been thoroughly tested. They may contain large quantities of ground water. There is little available information on the character of the deeper glacial deposits at those places, but in each area a few wells have encountered coarse alluvium. If there are extensive deposits of sand and gravel, large seasonal withdrawals, as at Akron, probably are possible.

The poorest ground water areas in Summit County are the uplands bordering the Cuyahoga valley. The very thick deposits of silt and clay, or clay till, there contain no water. The bedrock is shale and is from 200 to more than 400 feet beneath the surface. It too contains no water. In a few places along the Cuyahoga River permeable bedrocks and glacial gravels are exposed in the valley walls. The water that enters this permeable material soon drains out into the valleys. The poorest ground water areas in Summit County occur in the western two-thirds of Northampton Township and the central part of Boston Township. In these areas most of the water is supplied by cisterns.

In other areas moderate supplies of ground water for domestic or stock use are generally available. In many places small municipal or industrial supplies also are available. Water generally is obtained from the bedrock or from gravel lenses in the till. The till contains little or no water and is relatively impervious. In a few areas dug wells yield a small amount of water from the weathered zone at the top of the bedrock. In a few places buried valleys contain fine sand, often logged by the driller as quicksand. Although the fine sand contains water, it cannot be separated from the sand. In these places water is generally obtained from the bedrock, sometimes at considerable depths.

A major ground-water problem in Summit County is that of salt contamination. If present pumping conditions in south Akron and in Barberton are not changed, the areas of contamination will grow until several of the most important well fields in the county will become unusuable, and a large part of a valuable natural resource will then be lost. Detailed investigations might lead to a way to halt this encroachment. Pumping wells between the salt area and the well fields might create a ground-water divide between them. These wells, would pump to waste, of course, and that in itself would create the problem of what to do with the salty waste water. Also, pumping to waste would probably reduce the available yield from the well fields. At any rate, investigations are necessary to determine such things as the direction of the ground-water flow, the source of recharge, and the areal extent of the contamination before a solution can be found, if one can be found.

It has been brought out in this report that there are quite a few areas in Summit County, other than those presently being pumped, from which large quantities of ground water are available. There apparently is a much larger quantity of ground water available than is now being used, and most of the areas for development are not near the contaminated areas. Because many of the data in this report are from small-diameter wells and from field investigations of the surface geology, test wells should be drilled and pumping tests conducted before the development of any large well fields is begun at any of the promising sites.

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## TABLE 6.

## RECORDS OF WELLS IN SUMMIT COUNTY, OHIO

### Explanation of terms and symbols:

Number .................................... The number of the well shown on the map, plate 2; underlined number means that the information given in "depth to bedrock" column was used in constructing the bedrock contour map, plate 1.

File number ............................... The number under which the driller's log of the well is filed in the offices of the Ohio Division of Water, Department of Natural Resources. Well logs are shown graphically on plate 22.

Owner or name........................... The name of the land owner or tenant at the time the well was drilled or at the time of the well survey.

Elevation of well....................... Determined approximately from the topographic maps of the United States Geological Survey; m, elevation determined by instrumental leveling.

Depth to bedrock....................... Depth to the surface of the consolidated rocks, based on driller's log of well; m, length of casing measured in the field; r, reported by owner or tenant.

Depth of well............................. Depth reported by driller, owner, or tenant; m, well measured at time of field survey.

Character of material.............. Geologic material in which water was obtained or in which well was terminated, based on driller's log of well; g, gravel; s, sand; sh, shale; ss, sandstone; un, undifferentiated glacial drift, may be sand, gravel, or till; (r), reported by owner or tenant.

Geologic horizon ...................... Refers to the geologic age of the deposits; D, Devonian; M, Mississippian; P, Pennsylvanian; Q, Quaternary.

Water level ............................... The depth below land surface of the static water level in the well as reported by the driller, land owner, or tenant; m, water level in the well measured at the time of the field survey.

Date ............................................ Date of determination of the static water level.

Rate ............................................. The rate, in gallons per minute, at which the well was pumped or bailed.

Drawdown ................................. The amount of lowering of the water level in the well caused by the withdrawal of water at the rate indicated in the rate column.

Type of well............................... D, dug; Dr, drilled; Dv, driven; D Dv, dug and driven; D Dr, dug and drilled.

Type of pump............................. AL, air lift; C, cylinder; Cent., centrifugal; T, turbine; E, electrically powered; G, gasoline driven; H, hand operated; S, steam powered; W, wind driven.

Diameter of well ....................... Approximate inside diameter of well or casing.

Use .............................................. A, abandoned; AC, air conditioning; B, boiler; Br, source of brine; C, cooling; D, domestic supply; I, industrial; Ir, irrigation; O, observation well; PS, public supply; RR, railroad; S, stock; T, test well.

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NORTHFIELD TOWNSHIP | | | | | | | | | | | | | | |
| 1 | 1961 | I. E. Thomas | 990 | 17 | 55 | sh | M | 20 | 6- 4-49 | 2 | | Dr | C,H | 4 | D | Pumped dry in 30 min. |
| 2 | | I. Klein | 910 | | (r)140 | | | | | | | Dr | AL,E | 5 | D | Goes dry after heavy pumping. |
| 3 | 1962 | J. R. Johnston | 970 | 24 | 41 | sh | M | 17 | 1-11-49 | 6 | 3 | Dr | | 5 | D | |
| 4 | | J. E. Warp | 950 | r 15 | r 52 | | | r 30 | 8- 5-47 | | | Dr | C,E | | D,S | |
| 5 | | J. Mottel | 890 | | | s (r) | Q | | | | | D | C,E | 35 | D | |
| 6 | | W. Mackey | 1010 | m 50 | | | | m 70 | 8- 5-47 | | | Dr | | 4 | D | |
| 7 | 1554 | K. Cylulski | 1020 | 30 | 137 | sh,ss | M | 40 | 4- 8-48 | 7 | Small | Dr | C,H | 6 | D | |
| 8 | | C. Stancik | 1030 | | r 60 | | | m 14 | 8- 5-47 | | | Dr | AL,E | 6 | D | |
| 9 | 195 | R. Gursner | 1025 | 20 | 64 | sh | M | 17 | | 6 | Small | Dr | | 4 | D | |
| 10 | 1533 | Joseph Nasser | 1015 | | 244 | sh,ss | M | 10 | 11-22-47 | 3 | 200 | Dr | T,E | 4 | D | |
| 11 | 1416 | Fred Marilla | 1030 | 14 | 77 | sh | M | 20 | 11-20-47 | 3 | Small | Dr | C,E | 4 | D | |
| 12 | 196 | Eugene Mull | 1030 | 23 | 224 | sh,ss | M | 84 | | 3 | 10 | Dr | | 4 | D | |
| 13 | 1159 | L. Weichman | 1055 | 18 | 84 | sh | M | 13 | 9-19-46 | 10 | Small | Dr | | 5 | D | |
| 14 | | F. Posar, Jr. | 1060 | | r 20 | | | | | | | Dr | C,E | | D | |
| 15 | | Biehl | 1025 | | r 85 | | | r 15 | | | | Dr | AL,E | 6 | D | Contains iron. |
| 16 | 1531 | Homer Fosnight | 1025 | 11 | 51 | sh | M | 10 | 10- 8-47 | 20 | 5 | Dr | | 4 | D | |
| 17 | 1160 | Carl Vankett | 1010 | 20 | 71 | sh | M | 30 | 7-30-46 | 2 | Small | Dr | | 5 | D | |
| 18 | 197 | Ted Weck | 990 | 121 | 138 | s & g | Q | 50 | | 6 | 10 | Dr | | 4 | D | |
| 19 | 1406 | Dr. C. J. Canathers | 985 | | 53 | g | Q | 25 | 6-23-47 | 20 | Small | Dr | | 5½ | D | |
| 20 | 1818 | Kathryn Foulhaler | 945 | | 100 | s & g | Q | 18 | 5-11-48 | 30 | 20 | Dr | AL,E | 5½ | D | |
| 21 | | A. Kirby | 940 | | | | | | | | | | | | D | Spring. Water hard. |
| 22 | 1532 | Cyrus Eaton, Jr. | 905 | | 42 | s & g | Q | 20 | 12- 2-47 | 20 | 8 | Dr | AL,E | 6 | D | |
| 23 | 1511 | A. E. Lalli | 945 | 25 | 61 | ss | M | 37 | 4-15-48 | 20 | 15 | Dr | | 6 | D | |
| 24 | 1313 | K. R. English | 920 | 3 | 30 | ss | M | 35 | 7- 9-46 | 8 | Small | Dr | | 6 | D | |
| 25 | | R. W. Harvey | 945 | r 25 | r100 | ss (r) | M | r 35 | | | | Dr | C,E | 6 | D | Analysis given in text. |
| 26 | 984 | Hawthornden State Hosp. | 955 | 15 | 114 | sh,ss | M | 43 | 8- 9-40 | | | Dr | | 10 | A | When pumped with well no.27 at a total of 365 gpm, nearby drilled domestic wells went dry. |
| 27 | 985 | do | 955 | 17 | 90 | sh,ss | M | m 31 | 8- 6-47 | | | Dr | | 10 | A | Water stage recorder installed in 1948; record is erratic. |
| 28 | 749 | H. Higgins | 930 | 20 | 70 | sh,ss | M | 40 | | 5 | Small | Dr | | 5½ | D | |
| 29 | 750 | C. Ware | 930 | 20 | 72 | sh,ss | M | 48 | | 5 | Small | Dr | | 5½ | D | |
| 30 | | A. Schroeder | 930 | | r 85 | | | | | | | Dr | AL,E | 4 | D | |
| 31 | 1401 | G. Frenek | 860 | 20 | 45 | ss | M | 35 | 9-10-47 | 5 | Small | Dr | | 6 | D | |
| 32 | 1158 | J. R. Harff | 805 | 20 | 73 | sh | D | 25 | 7-29-46 | | | Dr | | 5 | D | |
| 33 | 1312 | T. Ganley | 800 | 10 | 25 | sh | D?,M? | 10 | 7- 5-46 | 8 | | Dr | | 6 | D | |
| 34 | 752 | O. Cesek | 780 | 17 | 72 | sh | D | 42 | | | | Dr | | 5½ | D | |
| 35 | | | 780 | m 15 | | | | m 15 | 8- 5-47 | | | Dr | C,H | 5 | | |
| 36 | 1315 | E. Barbic | 790 | 12 | 64 | sh | D?,M? | 52 | 8-20-46 | | | Dr | | 5½ | D | |
| 37 | 751 | Paul E. Murphy | 885 | 15 | 46 | ss | M | 26 | | 5 | Small | Dr | | 5½ | D | |
| 38 | 1402 | Wm. Ball | 875 | 3 | 40 | ss | M | 33 | 8-27-47 | 25 | Small | Dr | | 6 | D | |
| 39 | 1403 | Howard Carl | 925 | 19 | 68 | ss | M | 50 | 9- 4-47 | 20 | Small | Dr | | 6 | D | |
| 40 | 1404 | J. S. Gnaczyk | 925 | 12 | 50 | ss | M | 40 | 9- 2-47 | 20 | Small | Dr | C,H | 6 | D | |
| 41 | 1311 | R. J. McNinn | 910 | 28 | 66 | ss,sh | M | 44 | 7- 3-46 | 15 | Small | Dr | | 6 | D | |
| 42 | 1003 | Frank Pieman | 995 | | 64 | g | Q | 20 | 5-29-46 | | | Dr | | 4½ | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NORTHFIELD TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 43 | 215 | Frank Pieman, Jr. | 995 | | 112 | s & g | Q | 80 | | 10 | Small | Dr | | 4½ | D | |
| 44 | 898 | Geo. Martini | 990 | 93 | 156 | sh,ss | M | 101 | | 6 | 55 | Dr | | 4 | D | Well was pumped dry in 30 min. at 6 gpm. |
| 45 | 899 | Wm. Weinman | 985 | 132 | 144 | ss | M | 18 | | 6 | 10 | Dr | | 4 | D | |
| 46 | | Geo. Smith | 985 | | r150 | | | r 15 | | | | Dr | C,H | 8 | D | Contains iron. |
| 47 | 208 | Lee Bears | 995 | 132 | 145 | ss | M | 26 | | 6 | 11 | Dr | | 4 | D | |
| 48 | 207 | Wm. Lockhardt | 990 | 134 | 162 | ss | M | 60 | | 5 | 9 | Dr | | 4 | D | |
| 49 | 204 | Charles Folop | 990 | 124 | 143 | sh | M | 45 | | 6 | 5 | Dr | | 4 | D | |
| 50 | 201 | B. M. Myers | 990 | 129 | 151 | sh,ss | M | 91 | | 8 | 5 | Dr | | 4 | D | |
| 51 | 202 | Margaret Meyers | 985 | 98 | 164 | sh,ss | M | 70 | | 6 | 20 | Dr | | 4 | D | |
| 52 | 203 | H. E. Humphrey | 985 | 121 | 154 | sh,ss | M | 79 | | 6 | 9 | Dr | | 4 | D | |
| 53 | | A. Johnson | 980 | | r180 | | | r 90 | | | | Dr | AL,E | 4 | D | |
| 54 | 1007 | A. W. Rivers | 980 | 65 | 133 | sh,ss | M | | | | | Dr | | 5 | D | |
| 55 | 1368 | O. T. Wells | 910 | 39 | 136 | sh,ss | M | 41 | 10- 2-47 | 7 | 15 | Dr | AL,E | 5 | D | |
| 56 | | R. Flint | 920 | | r 85 | | | | | | | Dr | AL,E | 6 | D | |
| 57 | | C. W. Holdrin | 950 | | r 32 | un | Q | r 15 | 8- 5-47 | | | D | C,H | | D | |
| 58 | 1318 | C. Gannett | 900 | 29 | 50 | ss | M | 20 | 9- 9-46 | 15 | Small | Dr | | 5½ | D | |
| 59 | 199 | S. H. Johnson | 890 | 21 | 115 | ss,sh | M | 13 | | 3 | | Dr | | 4 | D | |
| 60 | | Marshall | 865 | | m 29 | un | Q | m 13 | 8- 6-47 | | | D | T,E | 33 | D | |
| 61 | 1528 | T. Vagase | 885 | 26 | 46 | ss | M | 32 | 8-21-48 | 20 | Small | Dr | | 6 | D | |
| 62 | 198 | G. G. Marshall | 875 | | 122 | sh | D?,M? | 49 | | | | Dr | | 5½ | D | |
| 63 | 1654 | Gene Yankee | 965 | | 75 | s & g | Q | 37 | 8-10-48 | 7 | 5 | Dr | | 4 | D | |
| 64 | 1405 | J. Woznick | 910 | 28 | 66 | ss | M | 42 | 7-17-47 | 10 | Small | Dr | C,H | 5½ | D | |
| 65 | 1321 | L. Augby | 905 | 35 | 64 | ss,sh | M | 30 | 10-16-46 | 10 | Small | Dr | | 6 | D | |
| 66 | 1319 | H. C. Hayes | 905 | 22 | 48 | ss | M | 20 | 9-10-46 | 15 | | Dr | | 5½ | D | |
| 67 | 1320 | J. Mantin | 905 | 40 | 60 | ss | M | 20 | 10-14-46 | 15 | Small | Dr | | 5½ | D | |
| 68 | | N. Boucek | 780 | | 10 | un | Q | m 6 | 8- 6-47 | | | D | C,H | 24 | D | |
| 69 | 1009 | Henry Bormann | 890 | 8 | 25 | sh,ss | M | | | | | Dr | | 4½ | D | |
| 70 | 903 | J. C. Mandusky | 975 | 55 | 131 | sh,ss | M | 40 | | 6 | 8 | Dr | | 4 | D | |
| 71 | 1146 | Stanley Roebuck | 980 | 63 | 135 | sh | M | 41 | 3- -47 | 10 | 26 | Dr | | 6 | D | |
| 72 | 1417 | W. Dzerzynski | 980 | 41 | 120 | sh | M | 17 | 12-26-47 | | | Dr | | 4 | D | |
| 73 | 206 | Northfield Farms Inc. | 985 | 98 | 156 | sh | M | 65 | | 7 | 30 | Dr | | 4 | D | |
| 74 | 976 | H.O.L.C. - Northfield | 995 | 80 | 160 | sh,ss | M | | | | | Dr | | | D | |
| 75 | 209 | W. F. Brickman | 980 | 64 | 167 | sh,ss | M | 60 | | 7 | 40 | Dr | | 4 | D | |
| 76 | 901 | Lloyd Dewong | 975 | 97 | 144 | sh,ss | M | 23 | | 6 | 20 | Dr | | 4 | D | |
| 77 | 1819 | Guy Boswell | 980 | 21 | 41 | sh | M | 11 | 4-21-48 | 7 | 7 | Dr | | 5 | D | |
| 78 | 1408 | O. J. Leach | 965 | | 104 | s & g | Q | | | | | Dr | | 6 | D | Flows |
| 79 | 1369 | Jerome Gier | 965 | | 81 | s & g | Q | | | | | Dr | T,E | 5 | D | |
| 80 | | | 970 | m 70 | m70 | | | m 6 | 9-26-47 | | | Dr | | 6 | | |
| 81 | 214 | F. E. Percy | 960 | 0 | 140 | sh,ss | M | 90 | | 25 | 50 | Dr | | 5 | D | Well was pumped dry in 3 hrs. at 25 gpm. |
| 82 | 902 | Ed. Sholle | 975 | 9 | 21 | ss | M | 4 | | 6 | Small | Dr | | 4 | D | |
| 83 | 1430 | Harry Metcalf | 1005 | 24 | 170 | sh,ss | M | 85 | 12- 8-47 | 5 | 25 | Dr | | 5 | D | |
| 84 | 1015 | Louise Burghardt | 1000 | 32 | 220 | sh,ss | M | | | | | Dr | | 5½ | D | |
| 85 | | Metcalf | 990 | r 20 | r 28 | | | r 15 | 8- 6-47 | | | Dr | C,E | 6 | D,S | |
| 86 | 1407 | Frank Dorick | 970 | 8 | 60 | sh | M | | 6-11-47 | 10 | 60 | Dr | | 5½ | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **NORTHFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 87 | | E. Ritnour | 920 | | 24 | un | Q | m 16 | 8- 6-47 | | | D | C,H | | D | |
| 88 | 211 | Joe David | 810 | 4 | 72 | sh,ss | D?,M? | 11 | | 5 | 9 | Dr | | 4 | D | |
| 89 | 212 | R. S. Tappenden | 845 | 32 | 120 | sh | D | 35 | | | | Dr | | 6 | D | |
| 90 | | Jaite Paper Co. | 655 | | r450 | s & g(r) | Q | | | | | Dr | T,E | | I | Two flowing wells reportedly supplied 1.5 mgd. Now pump 2 mgd from one well, alternating wells every 24 hours. Total hardness 130 ppm. |
| 91 | | R. Johnson | 660 | | m 26 | un | Q | m 14 | 8- 6-47 | | | D | C,E | | D,S | Water hard. |
| 92 | | A. C. Benson | 985 | | | | | | | | | Dr | C,E | 6 | D,S | Water soft. |
| 93 | 213 | Willis Hale | 860 | 14 | 111 | sh,ss | D?,M? | 71 | | 7 | 6 | Dr | | 4 | D | |
| 94 | | C. Franklin Hawks | 930 | | 136 | | | | | | | Dr | C,E | 4 | D | |
| 95 | 1530 | Charles Schoept | 1000 | 8 | 60 | sh | M | 8 | 1- 2-48 | 2 | 40 | Dr | | 5 | D | |
| 96 | 1555 | Sam Proe | 1055 | 12 | 103 | sh | M | 10 | 11-19-47 | 2 | 93 | Dr | | 12 | | |
| 97 | | Sky Haven Airport | 1030 | | 96 | | | m 56 | 8- 6-47 | | | Dr | C,H | 6 | D | Can be pumped dry. Adjacent well, 240 feet deep is salty. Water contains iron. |
| 98 | 1510 | J. Schoepf | 1030 | 14 | 100 | sh | M | 19 | 2-21-48 | | | Dr | | 5½ | D | |
| 99 | 1479 | Edwin S. Garnet | 985 | 84 | 180 | sh,ss | M | 19 | 2-20-48 | 10 | 48 | Dr | C,H | 5½ | D | |
| 100 | | R. S. Walters | 985 | | r 75 | s | Q | | | | | Dr | | 4 | A | Originally flowed. Now plugged. |
| | | **MACEDONIA TOWNSHIP** | | | | | | | | | | | | | | |
| 200 | | Schmidt | 1045 | | r 50 | | | | | | | Dr | C,E | 6 | D | Water hard, contains iron. |
| 201 | 978 | L. Gouss | 1035 | 95 | 125 | sh | M | | | | | Dr | | | D | |
| 202 | 1616 | Dan Falk | 1040 | | 46 | s & g | Q | | | 12 | 22 | Dr | C,H | 5½ | D | |
| 203 | 1821 | R. Hughes | 1035 | 38 | 41 | sh | M | 21 | 7-16-48 | 6 | 9 | Dr | | 5 | D | |
| 204 | 1615 | Harvey H. Prague | 1025 | | 42 | s & g | Q | 16 | 6-25-48 | 20 | 20 | Dr | C,H | 5½ | D | |
| 205 | 1677 | J. E. Carpenter | 1040 | 17 | 206 | sh,ss | M | 145 | 9- 9-48 | 6 | 15 | Dr | | 4 | D | |
| 206 | 216 | Andrew Rerer | 1012 | 78 | 181 | sh,ss | M | 70 | | | | Dr | | 4 | D | |
| 207 | | R. Korinek | 1010 | | r 86 | | | r 6 | | | | Dr | T,E | 6 | D | |
| 208 | 979 | Bedford Coal Co. | 1010 | 98 | 215 | ss | M | | | | | Dr | | | D | |
| 209 | 1505 | Wm. F. Fathauer | 1035 | 140 | 208 | ss | M | 90 | 3-26-48 | 7 | 30 | Dr | T,E | 4 | D | |
| 210 | | W. Beck | 1020 | | r200 | ss (r) | M | | | | | Dr | C,E | 6 | D | |
| 211 | | Hagek | 975 | | r 74 | | | | | | | Dr | AL,E | 4 | D | Water soft. |
| 212 | 1370 | F. L. Moe | 1005 | 97 | 206 | sh,ss | M | 71 | 10-13-47 | 3 | 64 | Dr | C,E | 5 | D | |
| 213 | 217 | H. Holbrook | 995 | 93 | 180 | sh,ss | M | 40 | | 7 | 60 | Dr | | 4 | D | |
| 214 | 218 | R. E. Taylor | 995 | 78 | 176 | sh,ss | M | 55 | | 6 | 9 | Dr | | 4 | D | |
| 215 | 982 | Twp. Public School | 1000 | | 206 | ss | M | | | | | Dr | | | PS | |
| 216 | 1373 | E. E. Daltorio | 990 | 97 | 208 | sh,ss | M | 73 | 10-20-47 | 4 | 135 | Dr | | 5 | D | Pumped dry in 30 min. at 3.5 gpm. |
| 217 | 219 | A. T. Collin | 990 | 88 | 129 | sh | M | 84 | | 5 | 7 | Dr | | 4 | D | |
| 218 | 220 | N. T. Mallott | 990 | 98 | 176 | sh,ss | M | 52 | | 7 | 58 | Dr | | 4 | D | |
| 219 | 221 | D. C. Rowe | 1015 | 95 | 200 | sh,ss | M | 160 | | 6 | 10 | Dr | | 4 | D | |
| 220 | | E. Morgan | 1040 | | r200 | | | | | | | Dr | C,E | 6 | D | Water slightly salty. |
| 221 | | Charles Pluma | 1140 | | r 40 | s | Q | | | | | Dr | T,E | 4 | D | Originally flowed. |
| 222 | 1813 | John Akerstrom | 1080 | 23 | 76 | sh | M | 12 | 10-12-48 | 3 | | Dr | | 5 | D | |
| 223 | 222 | P. L. Hayes | 1090 | 48 | 205 | sh | M | 82 | | 7 | 10 | Dr | | 4 | D | |
| 224 | | | 1100 | | r 65 | | | | | | | Dr | C,E | 6 | D | Water hard, contains iron. |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MACEDONIA TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 225 | 1400 | Mable Shaw | 1050 | 68 | 82 | sh | M | 30 | 10-20-47 | 10 | 20 | Dr | AL,E | 6 | D | |
| 226 | 1650 | M.L. Thornton | 1045 | 51 | 121 | sh | M | 10 | 6-23-48 | 4½ | 74 | Dr | | 5 | D | |
| 227 | 1820 | John Tusel | 1010 | 105 | 113 | ss | M | 37 | 11- 4-48 | 5 | 33 | Dr | | 5 | D | |
| 228 | 1429 | Frank Volny, Jr. | 990 | | 38 | s | Q | 0 | 9-20-47 | 6 | 6 | Dr | | 4 | D | |
| 229 | 224 | R. B. Horton | 1065 | 46 | 87 | sh | M | 30 | | 10 | 25 | Dr | | 4 | D | |
| 230 | | L. Gluks | 1070 | | r100 | | | | | | | Dr | C,E | 6 | D | |
| 231 | 897 | G. Schenerman | 1115 | 24 | 49 | ss | P | 11 | | 4 | 10 | Dr | | 4 | D | |
| 232 | | J. H. Reese | 1065 | | | | | | | | | Dr | AL,E | | D | Water hard. |
| 233 | 505 | C. L. Brown | 1060 | | 54 | s & g | Q | 21 | | 7 | Small | Dr | | 4 | D | |
| 234 | 506 | C. R. Hastings | 1085 | 58 | 89 | ss,sh | M?,P? | | | 6 | 10 | Dr | | 4 | D | |
| 235 | 515 | R. B. Treacey | 1120 | 23 | 60 | ss | P | 20 | | 5½ | 7 | Dr | | 4 | D | |
| 236 | | T. O. Glott | 1035 | | | sh (r) | M | | | | | Dr | | | D | Analysis given in text. |
| 237 | 1875 | E. W. Bly | 1060 | | 38 | g | Q | 13 | 4-12-48 | 7 | 10 | Dr | | 5 | D | |
| 238 | 1965 | H. A. Pulley | 1130 | 19 | 67 | ss | P | 30 | 4-16-49 | 6 | | Dr | C,H | 5½ | D | |
| 239 | 1963 | C. E. Martin | 1020 | 93 | 211 | sh,ss | M | 60 | 2-20-49 | 6 | 70 | Dr | | 5 | D | |
| | | TWINSBURG TOWNSHIP | | | | | | | | | | | | | | |
| 300 | 1149 | S. C. Slook | 1025 | 23 | 37 | | | | | | | Dr | | 5½ | D | |
| 301 | | J. Boucek | 1030 | r 35 | r 91 | sh | M | m 4 | 9-25-47 | | | Dr | C,H | 4 | D | |
| 302 | 2 | State of Ohio | 1035 | 2 | 190 | ss | M | 50 | | | | Dr | | 5½ | PS | |
| 303 | | H. E. Watson | 1010 | | r 80 | | | | | | | Dr | T,E | 6 | D,S | |
| 304 | | Mike Nimick | 965 | | m 12 | s & g(r) | Q | m 6 | 9-25-47 | | | D | T,E | | D | Water soft. |
| 305 | | J. Swanson | 1080 | | r220 | | | | | | | Dr | C,E | 4 | D,S | Water level in nearby dug well, 12 feet below land surface. Water contains some hydrogen sulfide. |
| 306 | | W. Johnston | 1030 | m47 | 80? | | M | m50 | 9-25-47 | | | Dr | C,H | 6 | D | |
| 307 | 1656 | W. H. Luxon | 1045 | 13 | 50 | sh | M | 12 | 9-15-48 | 5 | 35 | Dr | | 5 | D | |
| 308 | | Wilcoxton Water Co. | 1110 | | r 55 | ss | P | | | | | Dr | | | PS | Water supply for Twinsburg, Ohio. Town also uses one additional well and a spring. Total pumpage from all sources average 12 gpm daily. |
| 309 | 1655 | do | 1105 | 10 | 69 | ss | P | 20 | 7-31-48 | 87 | 30 | Dr | | 8 | PS | |
| 310 | | do | 1110 | | r 215 | ss | M?,P? | | | | | Dr | | | PS | |
| 311 | 823 | John Wargo | 1070 | 25 | 53 | sh | M | 14 | 11- 9-48 | 6 | 6 | Dr | | 4 | D | |
| 312 | | P. Odiemzki | 970 | | r 85 | | | | | | | Dr | T,E | 6 | D | Sometimes flows. |
| 313 | 1864 | Fred Bissell | 980 | | 39 | un | Q | 22 | 10- 8-48 | 18 | Small | Dr | | 8 | D | |
| 314 | 1389 | Mathew Cerveny | 995 | 28 | 60 | sh | M | 15 | 11- 4-47 | 5 | 10 | Dr | | 5½ | D | |
| 315 | | Squires | 990 | r 40 | r 52 | sh (r) | | r 24 | | | | Dr | C,H | 6 | D,S | |
| 316 | 1191 | E. Reihl | 1060 | 28 | 79 | ss | M | 38 | 3-19-47 | | | Dr | | 5 | D | |
| 317 | | Anton Placek | 1160 | r 18 | r 52 | | P | r 25 | | | | Dr | AL,E | 6 | D,S | Analysis given in text. |
| 318 | | R. Rudel | 1110 | r 29 | r 52 | sh | P | | | | | Dr | | 4 | D | Flows 2 feet above land surface at 20 g.p.m. |
| 319 | 1396 | Frank Blabol | 1150 | 16 | 40 | ss | P | 15 | 12- 1-47 | 5 | 10 | Dr | C,H | 5½ | D | |
| 320 | | State of Ohio | 1140 | | m 39 | | | m 10 | 9-25-47 | | | Dr | C,H | 3 | PS | |
| 321 | 502 | Robert Nickles | 1140 | 14 | 40 | ss | P | 22 | | 6 | Small | Dr | | | D | |

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TWINSBURG TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 322 | 501 | Wm. Cash | 1145 | 18 | 57 | ss | P | | | 5 | 30 | Dr | | 5½ | D | |
| 323 | 977 | Wm. Cash | 1130 | 18 | 57 | ss | P | | | | | Dr | | | D | |
| 324 | | Hewiss | 1120 | | r 38 | | P | | | | | Dr | C,E | | D | Water contains iron. |
| 325 | 1189 | Joe Brady | 1120 | 14 | 60 | ss | P | 10 | 12-16-46 | 10 | | Dr | | 5 | D | |
| 326 | 1154 | do | 1120 | 11 | 62 | ss | P | 35 | 7- 5-46 | 15 | | Dr | | 5 | D | |
| 327 | 1157 | do | 1115 | 8 | 63 | ss | P | 35 | 7- 8-46 | 10 | | Dr | | 5 | D | |
| 328 | 1153 | do | 1095 | 23 | 60 | ss | P | 35 | 7- 9-46 | 15 | | Dr | | 5 | D | |
| 329 | 1642 | John A. Cheeks | 1060 | 35 | 50 | ss | M | 25 | 6-15-48 | 10 | 10 | Dr | AL,E | 5½ | D | |
| 330 | 1038 | Crown Hill Cemetery | 1100 | 23 | 38 | ss | M | 15 | 10-11-46 | 15 | 10 | Dr | | 5 | PS | |
| 331 | | F. Simeck | 1130 | | r100? | | | | | | | Dr | C,E | 4 | D | Water hard, contains iron. |
| 332 | 983 | K. N. McClintock | 1110 | 10 | 100 | ss | M?,P? | | | | | Dr | | | D | |
| 333 | 981 | Benes | 1110 | 11 | 84 | ss | M?,P? | | | | | Dr | | | D | |
| 334 | 1155 | F. Hintz | 1120 | 15 | 86 | ss | M?,P? | 44 | 9-23-46 | 10 | 8 | Dr | | 4 | D | |
| 335 | 1156 | J. Gallo | 1115 | 10 | 88 | ss | M?,P? | 30 | 9-27-46 | 10 | 20 | Dr | | 4 | D | |
| 336 | | H. Loubsher | 995 | | r 25 | | | | | | | Dr | C,H | | D,S | Water hard. |
| 337 | 1398 | Herbert G. Stewart | 1000 | | 74 | s & g | Q | 2 | 11- 7-47 | 10 | 20 | Dr | | 4 | D | Water encountered at 63 feet, flowed, cased off. |
| 338 | | | 995 | | 98 | | | m 4 | 9-25-47 | | | Dr | | 3 | | |
| 339 | 1678 | B. H. Beverstock | 980 | | 109 | s & g | Q | 3 | 6-21-48 | 7 | 4 | Dr | | 4 | D | |
| 340 | 503 | Spring | 975 | | 65 | s & g | Q | | | | | Dr | | | D | Well flows. |
| 341 | 1367 | M. L. Thornton | 1040 | 7 | 67 | ss | M?,P? | 28 | 10- 4-47 | 7 | 11 | Dr | | 4 | D | |
| 342 | 1037 | Veterans of Foreign Wars | 1100 | 3 | 50 | ss | P | 28 | 9-23-46 | | | Dr | | 5 | PS | |
| 343 | | C. Muetzel | 1105 | r 4 | r 85 | ss (r) | M?,P? | r 26 | | | | Dr | AL,E | | D | Water soft. |
| 344 | | W. Flick | 1160 | | r 85 | | | | | | | Dr | C,E | 4 | D | Water hard. |
| 345 | | Lumpkin | 1145 | | r 83 | | | | | | | Dr | C,H | 6 | D,S | |
| 346 | | J. Boyd | 1120 | 29 | 80 | ss | P | 35 | 7- 2-46 | 20 | | Dr | | 5½ | D | |
| 347 | | Swisher | 1140 | | r 60 | | | | | | | Dr | | 3 | D,S | Water hard. |
| 348 | | C. W. Poe | 1040 | 2 | 50 | ss | P | 17 | | 10 | 2 | Dr | | 4 | D | |
| 349 | | Pete Anton | 1020 | | r 73 | ss,sh | | | | | | Dr | AL,E | 6 | D | Water hard. |
| 350 | 998 | J. Kniz | 1045 | 22 | 74 | ss | M?,P? | 40 | 11- 2-45 | 10 | Small | Dr | | 5½ | D | |
| 351 | 1014 | James Maulis | 1130 | 25 | 66 | ss,sh | M?,P? | 30 | 7-20-46 | | | Dr | C,H | 5 | D | |
| 352 | | J. Furka | 1040 | | r 30 | | | | | | | Dr | C,E | 6 | D,S | |
| 353 | 997 | Paul S. Knotochill | 990 | 25 | 68 | sh | M | 56 | 10-29-45 | 6 | 68 | Dr | | 5½ | D | |
| 354 | 1397 | Ray Shacka | 1020 | 20 | 62 | ss,sh | M | 46 | 6-27-47 | 8 | Small | Dr | C,H | 5½ | D | |
| 355 | | | 1015 | | m 24 | | | m 22 | 9-25-47 | | | D | | | A | |
| 356 | 517 | James Casper | 1020 | 14 | 31 | ss | P | 27 | | 30 | Small | Dr | | 4 | D | |
| 357 | 1526 | Frank E. Siess | 1025 | 10 | 80 | sh,ss | M?,P? | 8 | 10-13-47 | 15 | 50 | Dr | | 4 | D | |
| 358 | | O. H. Peterson | 1105 | | r 63 | | | m 12 | 9-25-47 | | | Dr | T,E | 3 | D | Water hard. |
| 359 | | O. H. Reebor | 1070 | m 3 | r 50 | | M | m 14 | 9-25-47 | | | Dr | | 4 | D | |
| 360 | 1964 | Herbert G. Stewart | 995 | | 241 | s & g | Q | | | | | Dr | | 4 | D | Flows. |
| 361 | 1966 | John Angeloff | 1020 | 26 | 57 | sh | M | 6 | 2-23-49 | 5 | 14 | Dr | | 4 | D | |
| 362 | 1967 | J. J. Franko | 1100 | 31 | 90 | sh,ss | M | 18 | 5-14-49 | 7 | 40 | Dr | AL,E | 5½ | D | |
| 363 | 1968 | Wilford H. Terrill | 980 | | 58 | s & g | Q | 3 | 4-20-49 | 5 | 45 | Dr | AL,E. | 5½ | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RICHFIELD TOWNSHIP | | | | | | | | | | | | | | |
| 400 | | F. Gray | 1250 | | | | | | | | | Dr | C,E | | D,S | Water hard, contains iron. |
| 401 | 1504 | G. G. Roberts | 1260 | 30 | 65 | sh,ss | P | 25 | 3-17-48 | 10 | 65 | Dr | | 6½ | D | Pumped dry in 2 hours at 10 gpm. |
| 402 | | Metzger | 1230 | | r 190 | | | | | | | Dr | AL,E | 6 | D,S | Water hard. |
| 403 | 1822 | Arthur Luther | 1225 | 35 | 74 | ss | P | 37 | 11- 2-48 | 15 | 8 | Dr | | 5 | D | |
| 404 | | R. Brown | 1130 | | r 95 | | | r 40 | | | | Dr | | 4 | D | |
| 405 | 1611 | Craig Myers | 1035 | | 73 | s & g | Q | 7 | 5- 3-48 | 6 | 23 | Dr | | 4 | D | |
| 406 | | A. Kopinsky | 1160 | r 29 | r 89 | | | r 29 | | | | Dr | | 4 | D | |
| 407 | 1388 | Otto Gleine | 1165 | 43 | 93 | sh,ss | M | 51 | 10-28-47 | 10 | 24 | Dr | | 5 | D | |
| 408 | 1653 | Dave Hoppinger | 1165 | 18 | 88 | sh | M | 25 | 8-30-48 | 20 | 30 | Dr | | 5½ | D | |
| 409 | 1830 | John Scuba | 1175 | 15 | 58 | sh | M | 20 | 10-15-48 | 15 | 18 | Dr | | 5½ | D | |
| 410 | | R. Kern | 1120 | r 20 | r 60 | | | r 22 | | | | Dr | AL,E | | D | Water hard. |
| 411 | | P. Walsh | 1050 | | 28 | un | Q | m11 | 8- 7-47 | | | D | C,H | 24 | D | Well is dry in dry weather. Water soft. |
| 412 | | J. Woda | 1040 | | r 90 | | | m 13 | 8- 7-47 | | | Dr | | 5½ | D | |
| 413 | 1390 | G. E. Murton | 1050 | 22 | 150 | sh | M | 20 | 10-17-47 | 2 | 130 | Dr | | 5 | D | Pumped dry in 3 hrs. at 2 g.p.m. |
| 414 | | J. Smolinski | 1120 | | r 71 | | M | m 8 | 8- 7-47 | | | Dr | C,H | 4 | D,S | Water hard, contains iron. |
| 415 | 1631 | Herman Mohorcic | 1150 | 30 | 65 | sh | M | 20 | 5-26-48 | 10 | 25 | Dr | | 5 | D | |
| 416 | | | 1150 | m 27 | | | | m 5 | 8- 7-47 | | | Dr | C,H | 5 | | |
| 417 | 1652 | Theodore Kirk | 1045 | 130 | 140 | sh | M | 72 | 9-20-48 | 12 | 48 | Dr | | 5 | D | Some water at 90 feet - cased off. |
| 418 | 1560 | Robert Grupe | 1085 | 48 | 80 | sh | M | 25 | 5- 3-48 | 4 | 50 | Dr | C,H | 5 | D | |
| 419 | 1672 | Henry Wilks | 1080 | 20 | 60 | sh | M | 20 | 9-19-48 | 6 | 35 | Dr | | 5 | D | |
| 420 | 1613 | Wm. E. Weitzel | 1050 | 54 | 100 | sh | M | 40 | 5-22-48 | 3 | 50 | Dr | C,H | 5 | D | |
| 421 | 489 | W. E. Malm | 1135 | 38 | 70 | sh,ss | M | 28 | | 30 | 27 | Dr | | 5½ | D | |
| 422 | 1804 | Paul J. Hergenroeder | 1135 | 41 | 53 | sh | M | 28 | 10- 6-48 | 15 | 8 | Dr | | 5 | D | |
| 423 | 488 | Eunice Merton | 1150 | 50 | 72 | sh | M | | | 50 | 41 | Dr | | 6½ | D | |
| 424 | | A. Kopanki | 1280 | | 49 | | P | m 42 | 8- 7-47 | | | Dr | C,H | 6 | D | |
| 425 | 1635 | John Stewart | 1235 | 39 | 87 | ss | M?,P? | | 7-19-48 | 10 | 18 | Dr | | 5½ | D | |
| 426 | 487 | Melvin Rond | 1290 | 22 | 158 | ss | P | | | | | Dr | | 6½ | D | |
| 427 | 1612 | B. T. Lyons | 1285 | 18 | 100 | ss | P | 77 | 6-28-48 | 7 | 20 | Dr | | 5 | D | |
| 428 | 486 | Daniel G. Hoffman | 1265 | 20 | 90 | ss | P | | | 7 | 90 | Dr | | 4 | D | Pumped dry in 1 hr. at 7 g.p.m. |
| 429 | 1609 | W. Richfield Park, Inc. | 1185 | 118 | 119 | sh | M | 63 | 6-14-48 | 6 | 50 | Dr | C,H | 5 | PS | |
| 430 | | Girl Scout Camp Crowell | 1100 | | r 95 | | M | | | | | Dr | AL,E | | PS | |
| 431 | 1634 | John L. Young | 1080 | 70 | 28 | sh | M | 20 | 7-22-48 | 10 | 62 | Dr | | 6 | D | Pumped dry in 2 hrs. at 10 g.p.m. |
| 432 | 493 | L. A. Federman | 1165 | 61 | 70 | ss | M | 30 | | 20 | 20 | Dr | | 5 | D | |
| 433 | 1506 | William Douglas | 1210 | 29 | 75 | ss | M | 44 | 4-12-48 | 15 | 15 | Dr | | 5 | D | |
| 434 | 490 | O. E. Gaman | 1305 | 15 | 163 | ss | M?,P? | | | | | Dr | | 6½ | D | |
| 435 | 1559 | Larry Foster | 1300 | 28 | 40 | ss,sh | P | 17 | 4-26-48 | 30 | 4 | Dr | | 5½ | D | |
| 436 | 492 | P. A. Brauw | 1290 | 6 | 112 | ss,sh | M?,P? | 45 | | 15 | | Dr | | 6½ | D | |
| 437 | | Walter Ellis | 1190 | r 40 | r 140 | | M | | | | | Dr | C,E | 6 | D | Water hard, contains iron. |
| 438 | 1610 | John J. Rockwood | 1265 | 14 | 65 | ss | P | 15 | 7- 8-48 | 7 | 35 | Dr | | 5 | D | |
| 439 | 495 | Chandler Humphrey | 1240 | 32 | 40 | ss | P | 28 | | 10 | 14 | Dr | | 6½ | D | |
| 440 | 496 | Bert Hort | 1230 | | 85 | s | Q | | | | | Dr | | 5½ | D | Flows. |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RICHFIELD TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 441 | 1805 | John Gabriel | 1210 | 29 | 44 | sh | M | 24 | 10- 2-48 | 7 | 18 | Dr | | 6 | D | |
| 442 | 1306 | East Ohio Gas Co. | 1150 | 50 | 395 | ss | M | 43 | 7-12-47 | 20 | 127 | Dr | T,E | 8 | I | |
| 443 | 1151 | Dick Stine | 1145 | 30 | 63 | sh | M | 18 | 4-28-47 | 50 | 4 | Dr | | 6½ | D | |
| 444 | | R. Elder | 1140 | | 69 | | M | m 68½ | 8-12-47 | | | Dr | | 6 | A | |
| 445 | 1636 | F. P. Davidson | 1125 | 32 | 70 | sh | M | 20 | 8-16-48 | 8 | 45 | Dr | | 5 | D | |
| 446 | 1846 | Paul Boughton | 1080 | 74 | 150 | sh | M | 40 | 9-29-48 | | | Dr | | 5 | D | |
| 447 | | C. A. Toroski | 1035 | | r 117 | | | m 47 | 8-12-47 | | | Dr | AL,E | 6 | D | |
| 448 | | A. Potter | 1110 | | m 21 | | | m 15 | 8- 7-47 | | | Dr | | 6 | D | |
| 449 | 1632 | Larry Higgins | 1040 | 38 | 65 | sh | M | 35 | 8- 6-48 | 6 | 25 | Dr | | 5½ | D | |
| 450 | | A. Yappel | 1110 | 33 | 58 | sh | M | m 19 | 8-12-47 | 20 | | Dr | C,H | 5 | D | Water hard, contains iron. |
| 451 | 1614 | Valentine M. Holeski | 1060 | 30 | 40 | sh | M | 8 | 12-25-48 | 25 | 12 | Dr | | 5½ | D | |
| 452 | 1314 | Wm. J. Miller | 1160 | 56 | 82 | ss,sh | M | 35 | 7-29-46 | 10 | Small | Dr | | 5½ | D | |
| 453 | 1428 | Stephen C. Gladwin | 1190 | 16 | 78 | sh | M | 34 | 2- 2-48 | 6 | 29 | Dr | AL,E | 4 | D | |
| 454 | | Ross Garmen | 1240 | m 32 | m 37 | | P | m 5 | 8-12-47 | | | Dr | | 5 | A | |
| 455 | 1807 | Harry Eastwood | 1255 | 41 | 60 | ss | P | 37 | 9-25-48 | 13 | 5 | Dr | | 5½ | D | |
| 456 | 1806 | Alvine Clementz | 1280 | 40 | 124 | sh | M | 74 | 11-12-48 | 45 | 8 | Dr | | 5 | D | |
| 457 | 1507 | Nelson Cross | 1265 | 31 | 95 | ss | P | 64 | 4- 5-48 | 15 | 12 | Dr | | 5½ | D | |
| 458 | 1496 | E. O. Korb | 1215 | 31 | 59 | ss,sh | M | 17 | 3-15-48 | 15 | 15 | Dr | | 5½ | D | |
| 459 | 498 | J. King | 1160 | 38 | 74 | sh | M | 40 | | 6 | Small | Dr | | 4 | D | |
| 460 | 871 | W. A. Dobbins | 1200 | 21 | 38 | sh | M | 14 | | 6 | Small | Dr | | 4 | D | |
| 461 | 499 | Frank Neillie | 1200 | 24 | 100 | ss | P | 20 | | 4 | Small | Dr | | 4 | D | |
| 462 | 1006 | J. Hajek | 1205 | 17 | 86 | ss | P | 20 | 3- 6-47 | 8 | | Dr | C,H | 5½ | D | |
| 463 | 1508 | Joe Amstat | 1225 | 6 | 79 | ss | P | 49 | 4- 7-48 | 4 | 27 | Dr | | 5 | D | |
| 464 | | P. Janoski | 1170 | | | | | | | | | Dr | C,W | 6 | S | |
| 465 | 1607 | R. N. Babb | 1255 | 18 | 80 | ss,sh | M?,P? | 10 | 7-10-48 | 300 | | Dr | T,E | 8 | Ir | Wells used in apple orchard. |
| 466 | | A. Petty | 1220 | | | | | | | | | | | | D | Flowing spring. |
| 467 | 1188 | H. B. Richards | 1265 | 28 | 72 | sh | M | 45 | 6-20-47 | 10 | 10 | Dr | | 5 | D | |
| 468 | 1509 | Jack Kelley | 1205 | 36 | 52 | sh | M | 12 | 4- 9-48 | 12 | 25 | Dr | | 5½ | D | |
| 469 | | | 1060 | | | | | m 36 | 8-12-47 | | | Dr | C,H | 5 | | |
| 470 | | R. Bachen | 930 | | r 35 | un | Q | r 30 | | | | D | C,H | 36 | DS | Water soft. |
| 471 | | W. F. Grimm | 910 | | r230 | | | m117 | 8-12-47 | | | Dr | C,H | 6 | D | |
| 472 | | O. D. Carter | 795 | | r 11 | un | Q | m 9 | 8-12-47 | | | Dr | C,H | 28 | D,S | Can be pumped dry. |
| 473 | | C. W. Steffen | 1030 | m 43 | r135 | | | | | | | Dr | AL,E | 6½ | D,S | Nearby dug well, water level 12 feet below land surface. Water hard, contains iron. |
| 474 | | C. E. Ford | 1165 | | r 98 | | | | | | | Dr | C,H | 5 | A | Water contains iron sulfate. |
| 475 | | C. D. Kirby | 1110 | | 17 | un | Q | m 10 | 8-12-47 | | | D | | 27 | D | |
| 476 | | John Egbert | 1205 | r 65 | r 90 | | | | | | | Dr | AL,E | 5½ | D,S | Nearby dug well, water level 8 feet below land surface. |
| 477 | 1483 | T. A. Love | 1190 | 35 | 53 | sh | M | 11 | 2- 4-48 | 6 | 20 | Dr | | 4 | D | |
| 478 | 1606 | L. R. Rafanell | 1180 | 23 | 62 | ss,sh | M?,P? | 20 | | 10 | 11 | Dr | | 4 | D | |
| 479 | 1633 | Francis Hunt | 1155 | | 92 | un | Q | 20 | 7-28-48 | 25 | 70 | Dr | C,H | 5 | D | Pumped dry in 2 hrs. at 25 gpm. |
| 480 | | C. Plant | 1160 | | r175 | | | | | | | Dr | AL,E | 6 | D,S | Water hard. |
| 481 | 1561 | George Whalen | 1130 | 50 | 77 | sh | M | 37 | 5- 7-48 | 30 | 10 | Dr | C,H | 5 | D | |
| 482 | | R. Wiglow | 1225 | | r 65 | | | | | | | Dr | AL,E | 4 | D | |
| 483 | 1870 | Lewis Holmes | 1095 | | 49 | s & g | Q | 16 | 3-21-49 | 10 | 14 | Dr | | 5 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **RICHFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 484 | 1427 | Roy Galloway | 1030 | | 126 | s & g | Q | 64 | 12-20-47 | 10 | 4 | Dr | | 5 | D | |
| 485 | 1391 | Donald Cass | 1040 | | 92 | s & g | Q | 61 | 10-10-47 | 6 | 25 | Dr | | 5 | D | |
| 486 | | Steve Younger | 1050 | | m 23 | un | Q | m 15 | 8- 7-47 | | | D | T,E | 24 | D,S | Water hard. |
| 487 | 1608 | Henry Dunasky | 1060 | | 34 | g | Q | | | | | Dr | | 5 | D | Flows. |
| 488 | | S. Symes | 1305 | | r150 | ss | P | | | | | Dr | | | D | Analysis given in text |
| 489 | 1879 | Blanche Massey | 1265 | 44 | 48 | ss | P | 17 | 12-23-47 | 6 | 10 | Dr | | 5 | D | |
| 490 | 1880 | Margaret Carroll | 1030 | | 80 | un | Q | 44 | 3-30-48 | 12 | 16 | Dr | | 5 | D | |
| 491 | 1971 | Howard F. Guerin | 1010 | | 109 | s | Q | 74 | 6- 6-49 | 20 | Small | Dr | | 5 | D | |
| 492 | 1972 | Burrell Cormany | 1255 | 48 | 90 | ss | P | 61 | 4-16-49 | 15 | 11 | Dr | | 5 | D | |
| 493 | 1973 | H. B. Garmen | 1205 | 44 | 74 | ss | M?,P? | 43 | 5-13-49 | 20 | 10 | Dr | | 5 | D | |
| 494 | 1974 | Steve Capka | 1055 | | 75 | g | Q | | | | | Dr | | 5 | D | Flows. |
| 495 | 1968 | Walter Eakmann | 1190 | | 57 | | Q | 14 | 4-25-49 | 12 | 26 | Dr | | 5 | D | |
| 496 | 1970 | M. H. Stanton | 1195 | 97 | 205 | s & g | Q | 14 | 4-18-49 | 6 | 28 | Dr | | 4 | D | |
| | | **BOSTON TOWNSHIP** | | | | | | | | | | | | | | |
| 500 | 1659 | John Puchalsky | 985 | 50 | 114 | sh | M | 45 | 4-29-48 | 1 | 69 | Dr | | 5½ | D | Pumped dry in 4 hrs. at 1 gpm. |
| 501 | 1389 | Clyde Everett | 965 | 45 | 80 | sh | M | 40 | 10-21-47 | 5 | 34 | Dr | | 5 | D | |
| 502 | 82 | R. B. Mueller | 845 | 13 | 84 | sh,ss | M | 16 | | | | Dr | | 4 | D | |
| 503 | | F. P. Woda | 660 | | r 18 | g (r) | Q | | | | | D | C,H | | D,S | Water contains iron. |
| 504 | | M. L. Stanford | 740 | | r200 | s (r) | Q | | | | | Dr | C,H | 6 | A | Can be pumped dry. |
| 505 | | Hopka | 665 | | r 18 | | | r 12 | | | | D | C,H | | D,S | |
| 506 | | Kaufman | 880 | | r 45 | | | r 10 | | | | D | | 60 | D,S | |
| 507 | | Reinbolt | 910 | | r100 | | | | | None | | Dr | | | A | |
| 508 | 1658 | Chas. Haag | 1030 | 19 | 75 | sh | M | 7 | 8-10-48 | 3 | | Dr | | 5 | D | |
| 509 | 81 | Ray Mosahsky | 1060 | 14 | 84 | sh | M?,P? | 12 | | 1 | 10 | Dr | | 4 | D | |
| 510 | | W. R. Morris | 1000 | | r120 | | | | | | | Dr | C,E | 4 | D | Water soft. |
| 511 | 80 | Ed. C. Mars | 1020 | 24 | 51 | sh | M | 12 | | | | Dr | | 4 | D | |
| 512 | 79 | George Sholle | 1025 | 14 | 39 | sh,ss | M?,P? | 16 | | 7 | Small | Dr | | 4 | D | |
| 513 | 71 | John Boxco | 1065 | 5 | 32 | ss | P | 8 | | 6 | 9 | Dr | | 4 | D | |
| 514 | 72 | A. W. Pratt | 1065 | 10 | 40 | ss | P | | | | | Dr | | 4 | D | |
| 515 | 73 | Emil Sholle | 1065 | 14 | 77 | sh | M?,P? | 8 | | 4 | 10 | Dr | | 4 | D | |
| 516 | 79 | Joe Koberna | 1065 | 9 | 41 | ss,sh | M?,P? | 7 | | 5 | 8 | Dr | | 4 | D | |
| 517 | 75 | John Koberna | 1065 | 5 | 40 | ss,sh | M?,P? | 6 | | 3 | 11 | Dr | | 4 | D | |
| 518 | 76 | Frank Koberna | 1070 | 11 | 34 | ss | P | 7 | | 5 | 10 | Dr | | 4 | D | |
| 519 | 77 | George Sholle | 1065 | 19 | 56 | ss | P | 8 | | 3 | 10 | Dr | | 4 | D | |
| 520 | 78 | Robert C. Donley | 1070 | 7 | 43 | ss | P | 17 | | | | Dr | | 4 | D | Pumped dry at 5 gpm. |
| 521 | 1803 | Boston Hill Gun Club | 1065 | 16 | 62 | ss | P | 24 | 10-25-48 | 7 | 16 | Dr | | 5 | PS | |
| 522 | | A. N. Alexander | 1030 | | r119 | g (r) | Q | r 15 | | r 8 | r 60 | Dr | AL,E | 4 | D | Water hard. |
| 523 | | E. Bender | 980 | | r220 | | | | | | | Dr | | 4 | D,S | Flows. Water hard, contains iron. |
| 524 | | John Elliot | 1060 | | r100 | | | | | | | Dr | C,E | 6 | D,S | Once used by three families. Water hard. |
| 525 | 88 | Village of Boston Hgts. | 1030 | 49 | 91 | ss | P | 30 | | 6 | 8 | Dr | | 4 | PS | |
| 526 | | Helen Bosch | 955 | | m 23 | | | m 10 | 9-23-47 | | | Dr | C,E | | D | Water soft. |
| 527 | 1812 | Bruno Pruskinski | 885 | | 255 | s | Q | | | None | | Dr | | 5½ | A | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BOSTON TOWNSHIP—(Continued)** | | | | | | | | | | | | | | | | |
| 528 | | L. A. Krall | 920 | | m 21 | | | m 9 | 9-23-47 | | | D | | 60 | A | |
| 529 | | Volunteers of America | 840 | | | | | | | None | | Dr | | | A | Two other deep wells drilled. No water. |
| 530 | | Tessmer | 940 | | | | | | | | | D | C,E | 36 | D | |
| 531 | | Emery | 860 | | | | | | | | | Dr | C,E | | D | Water contains iron, and sulphur compounds. |
| 532 | 83 | Wilbur M. Platt | 880 | 17 | 59 | sh,ss | M | 24 | | | | Dr | | 4 | D | |
| 533 | | Amann | 925 | | r128 | | | | | | | Dr | C,E | | D | Water soft. |
| 534 | 1422 | King Kennedy | 1095 | 24 | 65 | sh | M | 25 | 12-16-47 | 10 | 12 | Dr | | 4 | D | |
| 535 | | H. H. Mayer | 980 | r 20 | r 20 | | | | | | | D | C,E | 36 | D,S | Water hard. |
| 536 | 1660 | Joe Ritch, Jr. | 880 | 17 | 35 | ss | M | | | | | Dr | | 4 | D | |
| 537 | 1811 | Harry Schneider | 870 | 14 | 60 | ss | M | 12 | 8- 4-48 | 8 | 48 | Dr | | 5½ | D | Pumped dry in 4 hrs. at 8 gpm. |
| 538 | 84 | L. D. Gustarison | 740 | 18 | 130 | sh | D | 30 | | 2 | 100 | Dr | | 6½ | D | Pumped dry in 3 hrs. at 2 gpm. |
| 539 | | Phillips | 790 | | m 27 | | | m 5 | 9-18-47 | | | D | | | D | Water hard, contains iron. |
| 540 | | C. H. Carpenter | 730 | r 60 | r 70 | | | | | | | Dr | | | A | Contains natural gas. |
| 541 | | R. H. Hudson | 860 | | | | | | | | | Dr | | | A | Insufficient water supply. Contains iron. |
| 542 | | Houston | 720 | | r 60 | | | | | None | | D | C,H | | A | |
| 543 | | Albrecht | 900 | | m 28 | | | m 9 | 9-19-47 | | | D | | | D | Water hard. |
| 544 | 1662 | Helen R. Kouba | 905 | 125 | 245 | ss,sh | D?,M? | 75 | | 2 | 170 | Dr | | 6½ | D | Pumped dry at 2 gpm. |
| 545 | 87 | W. D. Smith | 1015 | 80 | 226 | ss,sh | M | 40 | | 5 | 186 | Dr | | 5½ | D | Pumped dry at 5 gpm. |
| 546 | 351 | L. J. Wooster | 970 | | 89 | s & g | Q | 20 | | 6 | Small | Dr | | 4 | D | |
| 547 | 1661 | Malcolon Law | 1010 | | 80 | s & g | Q | 35 | 4-23-48 | | | Dr | | 4 | D | |
| 548 | | Ramser | 1030 | | r113 | s & g | Q | | | | | Dr | C,E | 4 | D | Water hard. |
| 549 | | Michael Korba | 1020 | | r 85 | | | | | | | Dr | C,E | | D | Water hard. |
| 550 | 1622 | John O'Dell | 1045 | 134 | 153 | sh | M | 61 | 4-28-48 | 5 | 19 | Dr | | 4 | D | |
| 551 | 1 | State of Ohio | 1000 | | 296 | s & g | Q | 30 | | | | Dr | | 3 | PS | State roadside park. |
| 552 | 1863 | Michael Steidl | 1005 | | 53 | g | Q | 28 | 4- 5-48 | 6 | 8 | Dr | | 4 | D | |
| 553 | 1452 | Antonio Marcelli | 1030 | | 116 | s | Q | 43 | 12-13-47 | 5 | 57 | Dr | | 4 | D | |
| 554 | | Chas Gougould | 1025 | | r 75 | s (r) | Q | | | | | Dr | C,H | 6 | D,S | Water contains iron. |
| 555 | | Boehmer | 875 | | r219 | ss (r) | | | | | | Dr | C,E | 6 | D,S | |
| 556 | | John R. Long | 930 | | r185 | | | r155 | | | | Dr | C,E | 6 | A | Pumped dry in 15 min., contains oil and natural gas. |
| 557 | | Boy Scouts of America | 740 | | r 50 | g (r) | Q | | | | | Dr | C,E | | PS | Water hard. |
| 558 | 1000 | Village of Peninsula | 710 | | 60 | s & g | Q | 25 | 4- -46 | 42 | 18 | Dr | | 8 | T | |
| 559 | | John Lee | 740 | | r 28 | | | | | | | D | C,H | 35 | D,S | |
| 560 | | Frank Kerns | 720 | | r 18 | | | r 10 | | | | Dr | C,E | 1 | D | Water soft. |
| 561 | 1867 | Gays Biro | 725 | | 33 | s & g | Q | 12 | 3-15-49 | 15 | 3 | Dr | | 4 | D | |
| 562 | | Giro | 720 | | | | | | | | | Dr | C,H | 4 | D | Water used to wash vegetables on small truck farm. Water hard, contains iron. |
| 563 | 1816 | John Szalry | 725 | | 42 | s | Q | 12 | 10- 5-48 | 5 | 15 | Dr | | 4 | D | |
| 564 | | J. A. Houston | 720 | r120 | r183 | sh | D | | | None | | Dr | C,H | | A | |
| 565 | 1868 | Wise | 715 | 10 | 48 | sh | D | 15 | 3-17-49 | 4 | 20 | Dr | | 4 | D | |
| 566 | | F. Poplestein | 1000 | | r104 | | | r 44 | | | | Dr | C,H | 6 | D | Water hard. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **BOSTON TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 567 | | C. Holeski | 1020 | | r 90 | | | | | | | Dr | C,E | | D,S | Water hard contains iron. |
| 568 | | Stanley Okey | 1040 | | r 60 | | | | | | | Dr | C,E | 4 | D,S | Water hard, contains iron. |
| 569 | 85 | James Roush | 1095 | 17 | 131 | sh | M | 30 | | 4 | 92 | Dr | | 4 | D | |
| 570 | 86 | T. E. Major | 1040 | 22 | 83 | sh,ss | M | 29 | | 8 | 26 | Dr | | 4 | D | |
| 571 | | Peter Palmgren | 755 | | r 35 | un | Q | r 27 | | | | D | C,H | 40 | A | Water has an offensive odor. |
| 572 | | C. T. Waragowski | 910 | | r 55 | sh | M | | | | | Dr | | | D | Analysis given in text. |
| 573 | 1885 | Hildbrand | 1020 | 74 | 101 | sh | M | 59 | 4-11-29 | 16 | 22 | Dr | | 5 | D | |
| | | **HUDSON TOWNSHIP** | | | | | | | | | | | | | | |
| 600 | 1657 | G. Page | 1000 | | 94 | s & g | Q | 25 | 7-16-48 | 6 | 4 | Dr | | 4 | D | |
| 601 | | W. Bock | 1015 | | r20 | un | Q | r 17 | 9- 1-47 | | | D | | 36 | D | Water hard. |
| 602 | 1563 | Wallace O. Bock | 1010 | 182 | 216 | sh | M | 45 | 5-17-48 | 5 | 90 | Dr | | 5 | D | |
| 603 | | Witt | 1055 | | r 32 | | | r 27 | | | | D | C,E | 36 | D,S | Water hard. |
| 604 | 1446 | N. A. Pease | 1060 | 46 | 66 | sh | M | 13 | 10-30-47 | 10 | 6 | Dr | | 5 | D | |
| 605 | | R. T. Rapport | 1100 | | r 16 | | | | | | | D | C,E | | D | Flows at times. |
| 606 | | Geier | 1105 | | | | | | | | | Dr | C,E | | D,S | Water hard, contains iron. |
| 607 | | J. P. Hand | 1115 | | r 95 | | | | | | | Dr | AL,E | | D | Iron. |
| 608 | 1447 | R. B. Rogers | 1100 | | 75 | s & g | Q | 10 | 11-20-47 | 7 | 20 | Dr | | 4 | D | |
| 609 | 335 | E. G. Phillips | 1080 | | 138 | s & g | Q | 50 | | 5 | 10 | Dr | | 4 | D | |
| 610 | 337 | M. K. Flickinger | 1060 | | 83 | s & g | Q | 25 | | 6 | 9 | Dr | | 4 | D | |
| 611 | 1617 | Ray Post | 1055 | 15 | 40 | ss | P | | 4- 8-48 | 7 | 10 | Dr | | 4 | D | |
| 612 | 1825 | Madeline Flaherty | 1080 | 86 | 103 | sh | M | | | | | Dr | | 4 | D | |
| 613 | 336 | Wm. Whitaker | 1070 | | 67 | s & g | Q | 18 | | 10 | 12 | Dr | | 4 | D | |
| 614 | 334 | Frank Shiley | 1060 | | 61 | s & g | Q | 13 | | 6 | 9 | Dr | | 4 | D | |
| 615 | 1013 | Raymond S. West | 1070 | | 168 | s & g | Q | | | | | Dr | | 5 | D | |
| 616 | 1823 | I. O. Palmer | 1060 | | 129 | s & g | Q | 30 | 11-16-48 | 10 | 10 | Dr | | 4 | D | |
| 617 | | Chas. Rosenfeldt | 1050 | | r100 | s & g(r) | Q | | | | | Dr | C,E | 4 | D | Water hard. |
| 618 | 1534 | R. C. Hall | 1140 | 18 | 76 | ss | P | 40 | 10-23-47 | 5 | 36 | Dr | | 4 | D | Pumped dry in 30 min. at 5 gpm. |
| 619 | | Lamb | 1130 | m 35 | m107 | | M?,P? | m 45 | 1-24-47 | | | Dr | | 6 | D | |
| 620 | 333 | George Taft | 1120 | 30 | 86 | ss | P | 30 | | 6 | 9 | Dr | | 4 | D | |
| 621 | | Glen France | 1130 | | r100 ? | | | | | | | Dr | C,E | | D,S | Water hard. |
| 622 | 1824 | Edward C. Kenyon | 1095 | 52 | 76 | ss | P | 35 | 6-15-48 | 5 | 5 | Dr | | 4 | D | |
| 623 | | John Douds | 1065 | | r 50 | | | r 19 | | | | Dr | C,E | | S | |
| 624 | | N. C. Schockley | 1085 | | r 60 | | | | | | | Dr | C,E | 4 | D,S | |
| 625 | 1445 | A. J. Jayner | 1060 | 12 | 42 | ss | P | 10 | 11-20-47 | 15 | 10 | Dr | | 4 | D | |
| 626 | 1448 | Harlon Collins | 1010 | 140 | 175 | sh | M | 40 | 10- 5-47 | 5 | 30 | Dr | | 5 | D | |
| 627 | 1352 | Walter C. Kremser | 1070 | 3 | 180 | ss,sh | M?,P? | 58 | 9-29-47 | 45 | 32 | Dr | | 8 | D | |
| 628 | 338 | H. G. Lighton | 1050 | | 109 | s & g | Q | 16 | | 7 | Small | Dr | | 4 | D | |
| 629 | | A. L. Lighton | 1050 | | r119 | s & g | Q | r 6 | | | | Dr | C,E | 6 | D,S | Water contains iron. |
| 630 | | May | 1085 | | 250 | | | m 38 | 9-24-47 | | | Dr | C,H | 4 | A | Water hard, contains iron. |
| 631 | 352 | Mary Barnes | 1080 | 172 | 185 | sh,ss | M | | | | | Dr | | 4 | D | |
| 632 | | Veon | 1090 | | r100 ? | | | | | | | Dr | C,E | 4 | D,S | Water hard, contains iron. |
| 633 | 341 | O. D. Bradley | 1100 | 76 | 79 | ss | M | 43 | | 6 | 4 | Dr | | 4 | D | Analysis given in text. |
| 634 | 1808 | K. L. Weeden | 1090 | | 56 | s & g | Q | 31 | 12- 4-48 | 3 | 25 | Dr | | 6 | D | Pumped dry. |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HUDSON TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 635 | | F. Corbus | 1125 | r 73 | r 93 | ss (r) | M | r 63 | | | | Dr | C,E | 4 | D | Water hard, contains iron. |
| 636 | 987 | Village of Hudson | 1060 | 38 | 250 | ss | M?,P? | 26 | 10- -45 | 145 | 36 | Dr | T,E | 10 | PS | Pumping test run on 6-5-46. Analysis given in text. |
| 637 | 340 | F. Z. Thompson | 1055 | 49 | 79 | ss | P | 29 | | 6 | Small | Dr | | 3 | D | |
| 638 | | | 1090 | | m 66 | | | m 17 | 9-23-47 | | | Dr | C,H | 4 | A | |
| 639 | 342 | J. P. Wagner | 1000 | | 46 | s & g | Q | 7 | | | | Dr | | 4 | D | |
| 640 | | Arthur Smith | 1005 | | r 28 | | | | | | | Dr | C,E | | D | Water hard. |
| 641 | 344 | W. L. Smith | 1005 | | 56 | s & g | Q | 16 | | 7 | Small | Dr | | 4 | D | |
| 642 | | Amos Forman | 1010 | | r 57 | s (r) | Q | | | | | Dr | C,E | 4 | D | Water hard. |
| 643 | | Gale Shuman | 1005 | | r160 | | | | | | | Dr | C,H | 4 | D | Insufficient supply. Water hard, contains iron. |
| 644 | 1777 | Frank Mulbech | 1000 | | 59 | s & g | Q | 18 | 6- 9-48 | 5 | 7 | Dr | | 4 | D | |
| 645 | | | 1010 | | m100? | | | m 11 | 9-24-47 | | | Dr | C,H | 4 | | |
| 646 | 1010 | Esther Queen | 1020 | | 39 | s & g | Q | | | | | Dr | | 4 | D | |
| 647 | | Schlarb | 1060 | r 61 | r 81 | | | | | | | Dr | AL,E | 4 | D | |
| 648 | 350 | Walter Wheeler | 1040 | 29 | 76 | sh,ss | M?,P? | 41 | | 5 | 8 | Dr | | 4 | D | |
| 649 | 349 | Carl Morris | 1015 | 14 | 47 | ss | P | 22 | | 6 | 5 | Dr | | 4 | D | |
| 650 | | Cecil Morse | 1020 | r 60 | r 75 | ss (r) | | r 45 | | | | Dr | AL,E | 6 | S | Water hard, contains iron. |
| 651 | 348 | R. H. Mack | 1025 | 41 | 53 | ss | P | 23 | | 6 | Small | Dr | | 4 | D | |
| 652 | 896 | George Pettycard | 1030 | 35 | 58 | ss | P | 30 | | 6 | 10 | Dr | | 4 | D | |
| 653 | | State of Ohio | 1060 | | m 50? | | | m 41 | 9-23-47 | | | Dr | C,H | 4 | PS | State roadside park. |
| 654 | 1562 | R. C. Kassa | 1040 | 13 | 58 | ss | P | 27 | 4-28-48 | 7 | 14 | Dr | | 4 | D | |
| 655 | 1366 | C. F. Elliman | 1055 | 24 | 47 | ss | P | 17 | 10- 9-47 | 7 | 9 | Dr | | 4 | D | |
| 656 | 1365 | A. M. Wall | 1070 | 29 | 55 | ss | P | 21 | 10- 7-47 | 7 | 6 | Dr | | 4 | D | |
| 657 | | A. H. Stevens | 1015 | | m 11 | un | Q | m 5 | 9-24-47 | | | D | C,E | 36 | D | Water hard. |
| 658 | 346 | Gee | 1080 | 27 | 81 | ss | P | 43 | | 7 | 12 | Dr | | 4 | D | |
| 659 | 1005 | Nick Vachkoff | 1085 | 39 | 81 | ss | P | | | | | Dr | | 5 | D | |
| 660 | | H. F. Gifford | 1090 | | r 90 | | | | | | | Dr | C,H | | D | Water hard. |
| 661 | | T. Starr | 1100 | r 50 | m 65 | | P | | | | | Dr | | 3 | A | Water contains sulfur comp. |
| 662 | | T. A. Johnson | 1080 | r 45 | r 65 | | P | | | | | Dr | C,E | 4 | D | |
| 663 | | G. E. Altizer | 1110 | | | | | | | | | D | C,E | | D,S | Water hard, contains iron. |
| 664 | 343 | N. Kirwan | 1110 | 45 | 97 | ss | P | 72 | | 7 | 5 | Dr | | 4 | D | |
| 665 | 1455 | G. L. Gustley | 1120 | 71 | 101 | ss | P | 75 | 12-15-47 | 5 | 10 | Dr | | 4 | D | |
| 666 | 1140 | M. S. Mann | 1140 | | 128 | s & g | Q | 36 | 6-21-49 | 34 | 6 | Dr | | 4 | D | |
| 667 | | E. Peterson | 1125 | | m110 | | | m 61 | 9-23-47 | | | Dr | C,E | 4 | D,S | Water hard, contains iron. |
| 668 | | Smith | 1075 | | r100? | | | | | | | Dr | C,E | | D,S | Water hard, contains iron. |
| 669 | 347 | K. C. Keen | 1100 | 94 | 111 | ss | P | 55 | | 6 | 7 | Dr | | 4 | D | |
| 670 | | R. Peters | 1105 | | r 35 | | | | | | | D | C,H | 36 | D,S | |
| 671 | | A. Stargar | 1105 | | m 16 | | | m 11 | 9-24-47 | | | D | C,H | | D | Water hard. |
| 672 | 1016 | Ralph O. Schlott | 1075 | 54 | 80 | ss | P | | | | | Dr | | 5½ | D | |
| 673 | | K. Schwartz | 1085 | | | | | | | | | Dr | C,E | 4 | D,S | Water hard. |
| 674 | | City of Hudson | 1055 | | 125 | ss | M?,P? | | | | | Dr | C,E | 8 | PS | Analysis given in text. Average daily pumpage from 4 wells is 145 gpm. |
| 675 | | do | 1055 | | 125 | ss | M?,P? | | | | | Dr | T,E | 8 | PS | Analysis given in text. |
| 676 | | do | 1055 | | 125 | ss | M?,P? | | | | | Dr | T,E | 12 | PS | do |
| 677 | | do | 1055 | | 100 | ss | M?,P? | | | | | Dr | | 8 | O | do |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **HUDSON TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 678 | 1887 | Carl Meyers | 1000 | | 32 | s | Q | 10 | 5- 7-49 | 10 | 3 | Dr | | 4 | D | |
| 679 | 1888 | Ben Kaminski | 1000 | | 94 | s & g | Q | 12 | 4- 8-49 | 5 | 15 | Dr | | 4 | D | |
| 680 | 1889 | K. R. Hale | 1010 | 18 | 65 | ss | P | 23 | 5-14-49 | | | Dr | | 4 | D | |
| 681 | 1890 | Gordon Gray | 1070 | | 121 | s & g | Q | 50 | 2-12-49 | 5 | 10 | Dr | | 4 | D | |
| 682 | 1878 | P. Lawhorn | 1065 | 32 | 79 | ss | P | 30 | 5- 5-48 | 12 | 30 | Dr | | 4 | D | |
| 683 | 1976 | Lloyd C. Hill | 1085 | 13 | 80 | | | 30 | 5-14-49 | | | Dr | | 4 | D | |
| 684 | 1975 | Willard F. Stewart | 1065 | | 128 | s & g | Q | 37 | 6-13-49 | 10 | 40 | Dr | | 4 | D | |
| 685 | 1996 | Cleveland Boys Farm | 990 | | 72 | s & g | Q | | 5- 2-49 | 200 | 19 | Dr | | 8 | PS | Flows. |
| | | **BATH TOWNSHIP** | | | | | | | | | | | | | | |
| 700 | | W. W. Smith | 1055 | | m 25 | un | Q | m 9 | 8-13-47 | | | D | C,H | 29 | D | Water hard. |
| 701 | | D. L. Skirvin | 1045 | | r 105 | s & g(r) | Q | | | | | Dr | AL,E | 5 | D | Water contains iron. |
| 702 | | F. O. Lauterer | 1040 | | m 31 | un | Q | m12 | 8-12-47 | | | D | C,H | 36 | D | Can be pumped dry. Water hard, contains iron. |
| 703 | 37 | James C. Dickson | 1095 | 44 | 70 | sh | M | 23 | | 14 | 16 | Dr | | 4 | D | |
| 704 | | L. P. Shaw | 1185 | r 50 | r 58 | | | | | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 705 | 1603 | R. Widmeyer | 1885 | 18 | 65 | sh | M | 32 | 6- 7-48 | 10 | 12 | Dr | | 5 | D | |
| 706 | 1418 | M. Harvaitt | 1175 | | 56 | s | Q | 25 | 12-20-47 | 15 | Small | Dr | | 5 | D | |
| 707 | 1604 | J. M. Wood | 1170 | 21 | 46 | sh | M | 11 | 7-21-48 | 10 | 5 | Dr | | 4 | D | |
| 708 | 1605 | J. V. Newman | 1150 | 75 | 85 | sh | M | 40 | 6-14-48 | 12 | 12 | Dr | | 5 | D | |
| 709 | 1392 | Vernon Newman | 1070 | 20 | 75 | sh | M | 35 | 11- 5-47 | 5 | 30 | Dr | | 5 | D | |
| 710 | | C. Daily | 780 | | m 14 | un | Q | m12 | 8-14-47 | | | D | T,E | 24 | D | Nearby drilled well in bed-rock contains sulfur comp.; water level 48 feet below land. |
| 711 | 1865 | Herbert Huth | 1130 | 47 | 84 | sh | M | 49 | 1-21-49 | 7 | 15 | Dr | | 5 | D | |
| 712 | | I. Morse | 1110 | | m 32 | | | m22 | 8-13-47 | | | Dr | C,H | 6 | D | Water contains iron. |
| 713 | | R. A. Lincoln | 1150 | | | | | | | | | Dr | C,E | 5 | D,S | Water hard. |
| 714 | | E. J. Ross | 1160 | | | un | Q | | | | | D | C,H | 32 | D,S | Water hard. |
| 715 | | R. Kelly | 1145 | | r110 | g | Q | m13 | 8-14-47 | | | Dr | C,E | 6 | D,S | Water hard, contains iron. |
| 716 | | W. H. Phiz | 1025 | | | | | m11 | 8-13-47 | | | Dr | C,H | 4 | D | Used by two families. |
| 717 | | Neustaffer | 1110 | | m 36 | un | Q | m35 | 8-14-47 | | | D | C,H | 28 | A | |
| 718 | 1453 | H. S. Stoller | 1115 | 33 | 71 | sh | M | 29 | 12-18-47 | 7 | 11 | Dr | | 6 | D | |
| 719 | 1602 | Sam Aldrich | 1120 | 18 | 43 | ss,sh | M | 23 | 6-29-48 | 5 | 10 | Dr | | 5 | D | |
| 720 | | J. J. Becker | 1010 | | r 82 | g | Q | r47 | 4-23-37 | | | Dr | C,E | 4 | D,S | Water hard, contains iron. |
| 721 | 767 | Wm. A. Kelly | 1040 | | 340 | s & g | Q | 75 | | 10 | 150 | Dr | | 5 | D | |
| 722 | 1639 | James E. Laughlin | 1040 | 117 | 125 | sh | M | 65 | 8-26-48 | 7 | 10 | Dr | | 5 | D | |
| 723 | | Ross Cladder | 1130 | r 2 | r 98 | | | r12 | | | | Dr | C,E | 5½ | D | Water hard, contains iron. |
| 724 | | J. K. Mason | 1165 | | r 75 | | | | | | | Dr | AL,E | 5 | D | Water hard. |
| 725 | | A. Strboya | 1190 | | r 85 | | | r27 | | | | Dr | C,H | 4 | D,S | Water hard, contains iron, sulfur. |
| 726 | | H. M. Snyder | 1205 | | r 60 ? | | | | | | | Dr | AL,E | 6 | D,S | Water soft. |
| 727 | 55 | K. W. Shriber | 1080 | 8 | 56 | ss | P | 48 | | 4 | Small | Dr | | 4 | D | |
| 728 | 56 | E. J. Nussdorfer | 1022 | 21 | 59 | sh | M | 31 | | 7 | 10 | Dr | | 4 | D | |
| 729 | 1495 | Carl Leatherwood | 1000 | | 85 | s & g | Q | 24 | 3- 8-48 | 10 | 4 | Dr | | 4 | D | |
| 730 | 1444 | R. A. Ormsby | 960 | | 83 | s & g | Q | 25 | 3- 4-48 | 10 | 5 | Dr | | 4 | D | |
| 731 | 1481 | Homer J. Steiner | 1005 | | 90 | s | Q | 30 | 2-19-48 | 10 | 8 | Dr | | 5 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed | | Water level | | Yield | | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Character of material | Geologic horizon | Below land surface (feet) | Date | Rate (gpm) | Drawdown (feet) | | | | | |
| | | **BATH TOWNSHIP**—(Continued) | | | | | | | | | | | | | | |
| 732 | 1039 | Trustees of Bath Twp. | 1000 | | 86 | s & g | Q | 18 | 11- 1-46 | 10 | 5 | Dr | | 5 | PS | |
| 733 | 1419 | Luther Bartholomew | 980 | | 43 | s & g | Q | 12 | 1- 8-48 | 6 | 4 | Dr | | 4 | D | |
| 734 | 1802 | E. F. Mooneyham | 970 | | 91 | s | Q | 22 | 7- 9-48 | 5 | Small | Dr | | 4 | D | |
| 735 | 1454 | George Carson | 955 | | 152 | s & g | Q | 64 | 12-15-47 | 7 | 10 | Dr | | 4 | D | |
| 736 | 57 | Clapper | 975 | | 138 | s & g | Q | 35 | | 15 | 63 | Dr | | 6½ | D | |
| 737 | 39 | R. C. Brooks | 1000 | 166 | 257 | sh,ss | M | | | | | Dr | | 4 | D | |
| 738 | 1798 | John A. McAlonan | 975 | | 107 | s | Q | 42 | 11-25-48 | 3 | 38 | Dr | | 4 | D | |
| 739 | 40 | D. T. Buchanan | 1025 | 34 | 49 | sh | M | 24 | | 4 | 10 | Dr | | 4 | D | |
| 740 | 41 | V. M. Mettler | 1060 | 19 | 46 | ss | M | 18 | | 4 | 9 | Dr | | 4 | D | |
| 741 | 42 | W. J. Reichert | 1065 | 24 | 54 | ss,sh | M | 31 | | 8 | 10 | Dr | | | D | |
| 742 | 43 | Ross L. Duncan | 1065 | 41 | 71 | sh | M | 32 | | | | Dr | | 4 | D | |
| 743 | 52 | H. B. Gross | 1000 | 135 | 174 | sh | M | 75 | | 3 | 100 | Dr | | 6½ | D | Pumped dry in 3 hrs. at 3 gpm. |
| 744 | 872 | O. L. Byowanger | 1005 | | 173 | s & g | Q | 48 | | 5 | 9 | Dr | | | D | |
| 745 | 1326 | R. J. Preston | 1010 | 15 | 40 | sh | M | 11 | 10-10-47 | 10 | 7 | Dr | | 4 | D | |
| 746 | 51 | J. D. Bender | 1065 | 15 | 44 | sh | M | 18 | | 6 | 10 | Dr | | 4 | D | |
| 747 | 1800 | George A. Leiter | 1105 | 12 | 35 | sh | M | 12 | 10- 1-48 | 10 | 8 | Dr | | 4 | D | |
| 748 | 50 | Robert Hackitt | 1055 | 24 | 62 | sh | M | 11 | | 25 | 30 | Dr | | 6½ | D | |
| 749 | 47 | Caroline Kempel | 1055 | 29 | 55 | sh | M | 6 | | 45 | 20 | Dr | | 6½ | D | |
| 750 | 44 | H. A. McKisson | 1110 | 30 | 56 | sh | M | | | | | Dr | | 6½ | D | |
| 751 | 53 | C. G. Newell | 905 | 93 | 181 | sh | D?,M? | | | | | Dr | | 4 | D | |
| 752 | 1638 | C. W. Wass | 965 | | 192 | s & g | Q | | 8- 4-48 | 5 | 25 | Dr | | 4 | D | |
| 753 | 766 | Schumaker | 985 | | 66 | g | Q | | | | | Dr | | 4 | D | |
| 754 | | H. S. Brinker | 1010 | | r 24 | un | Q | r13 | | | | D | C,H | 24 | D | Water soft. |
| 755 | 1450 | D. L. Stark | 985 | 60 | 117 | sh | M | 50 | 11-13-47 | 6 | 40 | Dr | | 6½ | D | |
| 756 | | Pete Martin | 965 | | r153 | | | 100 r | | | | Dr | C,E | 4 | D | |
| 757 | 70 | Wm. R. Beck | 960 | 255 | 272 | sh | D | 138 | | 4 | 8 | Dr | | | D | |
| 758 | 873 | George Brunskill | 920 | 26 | 35 | sh | M | | | | | Dr | | 4 | D | |
| 759 | 764 | George Brunskill | 930 | | 91 | g | Q | | | | | Dr | | 4 | D | |
| 760 | | J. C. Watts | 905 | | r 40 | s & g(r) | Q | | | | | Dr | T,E | 6 | D | Water hard. |
| 761 | | R. A. Cavanaugh | 860 | | | g (r) | Q | | | 1 | | Dr | | | D | Flows. Used by two families Water hard. |
| 762 | 1801 | Jack Rodgers | 905 | | 91 | s | Q | 6 | 11-13-48 | 6 | 45 | Dr | | 5 | D | |
| 763 | 61 | L. T. Johnson | 895 | | 123 | g | Q | | | 10 | | Dr | | 6½ | D | Flows. |
| 764 | | S. C. Freeman | 920 | | | | | | | | | Dr | | 5 | D | Analysis given in text. |
| 765 | 60 | F. H. Manton | 925 | | 120 | s & g | Q | 12 | | | | Dr | | 5 | D | |
| 766 | 1383 | Harry D. Drain | 965 | | 108 | s & g | Q | 42 | | 5 | 32 | Dr | | 4 | D | |
| 767 | 58 | W. A. Grosh | 910 | | 52 | s & g | Q | | | 10 | | Dr | | 4 | D | |
| 768 | 59 | L. W. Swartz | 915 | | 50 | s & g | Q | | | | | Dr | | 4 | D | Flows. |
| 769 | | Thomas Brophy | 1020 | | r 22 | s & g(r) | Q | | | | | Dr | C,E | 1 | D | Water soft. |
| 770 | 1797 | Robert L. Person | 1020 | 22 | 64 | sh | M | 19 | 12- 4-48 | 10 | 5 | Dr | | 5 | D | |
| 771 | 63 | Dean Vaughn | 1040 | 45 | 69 | sh | M | 38 | | 10 | 7 | Dr | | 4 | D | |
| 772 | 1601 | Ruth Thompson | 1140 | 9 | 83 | sh | M | 32 | 6-10-48 | 10 | 14 | Dr | | 5 | D | |
| 773 | 62 | T. A. McMullen | 1100 | 22 | 53 | sh | M | 6 | | 10 | 14 | Dr | | 4 | D | |
| 774 | | R. Stone | 1010 | | r180 | | | | | | | Dr | | 6 | D,S | Flows 2 feet above land surface. |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **BATH TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 775 | 768 | Charles Miller | 1020 | 23 | 49 | sh | M | 16 | | 8 | 9 | Dr | | 4 | D | |
| 776 | 65 | D. E. Bower | 1020 | | 88 | g | Q | 30 | | 14 | 3 | Dr | | 4 | D | |
| 777 | 1307 | Donald W. Dilley | 1000 | | 55 | s & g | Q | 35 | 8-15-47 | 7 | 10 | Dr | | 4 | D | |
| 778 | 69 | Kendall | 1025 | | 65 | g | Q | 35 | | 15 | 5 | Dr | | 4 | D | |
| 779 | 1129 | Northern Ohio Telephone Co. | 1025 | 16 | 75 | sh | M | 13 | 4-17-47 | 13 | 5 | Dr | | 5 | I | |
| 780 | 1799 | William Mead | 1065 | 18 | 88 | ss,sh | M | 60 | 12- 1-48 | 7 | 10 | Dr | | 4 | D | |
| 781 | 68 | H. A. Burkhammer | 1060 | 29 | 49 | ss | Q | | | | | Dr | | 4 | D | |
| 782 | 1780 | Paul Lenke | 1015 | 12 | 91 | sh | M | 40 | 6- 3-48 | 6 | Small | Dr | | 4 | D | |
| 783 | | A. F. Meier | 1000 | | r 86 | s & g(r) | Q | | | | | Dr | AL,E | 5 | D,S | Nearby dug well 13 feet deep, water level 9 feet below land surface; water hard, contains iron. |
| 784 | 67 | Dr. E. K. Gillette | 1000 | | 62 | s | Q | 25 | | 11 | 17 | Dr | | 6 | D | |
| 785 | 1324 | Dr. F. J. Bussey | 990 | | 158 | s | Q | 80 | 10- 3-47 | 7 | 20 | Dr | | 5 | D | |
| 786 | 1843 | Dr. A. J. Bussey | 995 | | 322 | s & g | Q | 40 | 10- 9-48 | | | Dr | | | D | |
| 787 | 1600 | T. A. Trapas | 1000 | | 52 | s & g | Q | 28 | 5-20-48 | 5 | 42 | Dr | | 5½ | D | |
| 788 | 1844 | T. A. Trapas | 1005 | | 78 | s & g | Q | 22 | 10- 1-48 | 5 | 7 | Dr | | 4 | D | |
| 789 | | S. S. Caldwell | 980 | | m 50? | | | m21 | 8-19-47 | | | Dr | C,H | 4 | A | |
| 790 | | C. Oran | 1040 | 14 | m 26 | | M | m 9 | 8-14-47 | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 791 | 1845 | Chester Oran | 1040 | 21 | 50 | sh | M | 20 | 10- 6-48 | 10 | Small | Dr | | 4 | D | |
| 792 | | | 1060 | | | un | Q | m12 | 8-24-47 | | | D | C,H | 24 | | |
| 793 | 1499 | Sherwin W. Horn | 1035 | 12 | 51 | sh | M | 8 | 4-22-48 | 10 | 8 | Dr | | 5 | D | |
| 794 | 66 | C. E. Liddle | 1045 | 20 | 66 | sh | M | 45 | | 15 | 4 | Dr | | 4 | D | |
| 795 | | S. L. Boyd | 1055 | r16 | r 28 | | | r18 | | | | D | T,E | 36 | D,S | Used by two families. Goes dry occasionally. |
| 796 | | H. S. Rohdes | 1050 | | m 24 | un | Q | m16 | 8-14-47 | | | D | T,E | 25 | D,S | Water hard. |
| 797 | 1977 | G. E. Louthan | 1015 | 20 | 40 | sh | M | 11 | 5-12-49 | 10 | | Dr | C,H | 4 | D | |
| 798 | 1978 | George Papp | 1170 | 20 | 38 | sh,ss | M?,P? | 10 | 4-30-49 | 25 | 5 | Dr | | 6½ | D | |
| 799 | 1979 | Allen McPherson | 1170 | | 62 | s | Q | 14 | 4-28-49 | | | Dr | | 5½ | D | |
| 800 | 1980 | Bonar E. Griffiths | 1105 | 57 | 130 | sh | M | 90 | 4- 9-49 | 6 | 10 | Dr | | 5 | D | |
| 801 | 1981 | M. R. Gaines | 1100 | 21 | 45 | sh | M | 12 | 6- 8-49 | 8 | 20 | Dr | | 5 | D | |
| 802 | 1982 | E. L. Wynn | 1025 | | 141 | s & g | Q | 58 | 3-24-49 | 10 | 7 | Dr | | 4 | D | |
| 803 | 1983 | Harold Snyder | 1140 | 15 | 30 | ss | P | 15 | 6-15-49 | 15 | Small | Dr | | 4 | D | |
| 804 | 1989 | John Ruch | 1125 | 16 | 41 | ss | P | 15 | 6-17-49 | 5 | 12 | Dr | | 4 | D | |
| | | **NORTHAMPTON TOWNSHIP** | | | | | | | | | | | | | | |
| 900 | 1482 | Optimist Club | 810 | | 83 | s & g | Q | 50 | 8-15-47 | 10 | 10 | Dr | | 4 | PS | |
| 901 | 1503 | Merle D. Wilson | 765 | | 134 | s | Q | 65 | 3-19-48 | 5 | 20 | Dr | | 4 | D | |
| 902 | 1354 | James McNeil | 805 | | 103 | s | Q | 60 | 10-26-47 | 2 | 40 | Dr | | 4 | D | Pumped dry in 3 hrs. at 2 gpm. |
| 903 | | Szalay | 720 | | m 14 | un | Q | m12 | 9-17-47 | | | D | T,E | 36 | D,S | Water hard. |
| 904 | | Bohcuch | 700 | | | un | Q | r 5 | | | | D | T,E | | D,S | Water hard. |
| 905 | 905 | Union Joint Stock Bank | 740 | | 66 | s & g | Q | 23 | | 10 | 3 | Dr | | 4 | D | |
| 906 | | Schwartz | 725 | | | un | Q | | | | | D | T,E | 24 | D | |
| 907 | | Hathy | 985 | | m 11 | un | Q | m 1 | | | | D | C,H | 60 | A | Water contaminated. |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NORTHAMPTON TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 908 | | Edw. Keifer | 895 | | | | | | | | | | | | | No ground-water supplies available in vicinity. Use cisterns. |
| 909 | 1817 | J. J. Conway | 940 | 71 | 309 | sh | D?,M? | 125 | 12-20-48 | 1 | | Dr | | 6 | D | |
| 910 | 188 | T. K. Conway | 940 | 90 | 182 | sh | M | 102 | | 1 | 10 | Dr | | 4 | D | |
| 911 | | C. Schaeffer | 1020 | | r 65 | | | r 54 | | | | Dr | C,H | 4 | D,S | Can be pumped dry, but recovers in 30 min. Water hard. |
| 912 | 1671 | H. V. Sohn | 1005 | 90 | 206 | sh | M | 60 | 7-31-48 | 3 | | Dr | | 4 | D | |
| 913 | | James Hornberger | 1070 | | | | | | | | | Dr | C,E | 4 | S | Water hard. |
| 914 | | Glenn Walters | 1040 | | r120 | | | | | | | Dr | | 4 | A | Water contains iron. |
| 915 | | I. R. Jones | 1030 | | r 80 | s & g(r) | Q | | | | | Dr | C,E | | D,S | Water hard, contains iron. |
| 916 | | A. M. Lebaskey | 1000 | | | un | Q | | | | | D | T,E | 36 | D,S | |
| 917 | 1669 | S. R. Bush | 1000 | | 35 | s & g | Q | | 4-27-48 | 40 | 10 | Dr | | 4 | D | |
| 918 | | F. D. Irwin | 1010 | | m 55? | | | m 21 | 9-17-47 | | | Dr | C,H | 4 | D,S | Water contains iron. |
| 919 | 194 | L. A. Kepner | 1020 | 105 | 115 | sh | M | 20 | | 8 | 80 | Dr | | 4 | D | |
| 920 | 190 | Earl Jones | 1060 | 47 | 112 | ss | P | 45 | | 6 | 7 | Dr | | 3 | D | |
| 921 | 189 | W. A. Long | 1060 | 48 | 83 | ss | P | 55 | | 5 | 10 | Dr | | 4 | D | |
| 922 | | Louis Sikula | 1050 | r65 | r132 | | M | r 25 | | | | Dr | AL,E | 4 | D | Water hard, contains iron. |
| 923 | 1881 | C. W. Vaughn | 1010 | 226 | 248 | sh | M | 73 | 2-13-48 | 1 | 162 | Dr | | 4 | D | |
| 924 | | E. H. Bartley | 1030 | | r165 | | | r 75 | | | | Dr | C,E | | D,S | Water hard. |
| 925 | 1882 | Wayne Himmelwright | 1020 | 158 | 200 | sh | M | 85 | 11-17-47 | 6 | 30 | Dr | | 4 | D | |
| 926 | | R. W. Mellon | 930 | | m 14 | un | P | m 3 | 9-18-47 | | | D | C,H | | D,S | |
| 927 | | Dan C. Hardy | 745 | | r 18 | un | P | r 14 | | | | D | T,E | 36 | D,S | Water hard, contains iron. |
| 928 | | Marting | 780 | r 26 | 220 | | | | | | | Dr | | 4 | | No water. |
| 929 | 4 | Walsh Construction Co. | 750 | | 305 | s | Q | 90 | | | | Dr | | 11 | C | |
| 930 | 191 | Duff Payton | 1000 | | 29 | g | Q | | | | | Dr | | 4 | D | |
| 931 | | C. W. Frank | 1010 | | r124 | | | r 70 | | | | Dr | C,H | 4 | D,S | |
| 932 | 1536 | Herbert Wright | 995 | 115 | 156 | sh | M | 108 | 3- 8-48 | 4 | 20 | Dr | | 4 | D | |
| 933 | | N. J. Ball | 955 | r 79 | r119 | | M | r 75 | | | | Dr | C,H | 4 | D | |
| 934 | | Whetmore | 925 | | r255 | s (r) | Q | | | | | Dr | | | A | Well plugged by quicksand. |
| 935 | | R. T. Richards | 970 | | | un | Q | | | | | D | | | | Well being dug. No water at depth of 18 feet. |
| 936 | | John Spellman | 1100 | | r167 | | | r 50 | | | | Dr | C,E | 6 | D,S | |
| 937 | | | 1015 | | m155? | | | m 59 | 9-17-47 | | | Dr | | 4 | | |
| 938 | | W. Sauer | 1000 | | | | | | | | | Dr | C,E | 4 | D | Water hard. |
| 939 | 1670 | Ascot Starlight Theater | 1025 | | 148 | s & g | Q | 53 | 8- 7-48 | 10 | 47 | Dr | | 5 | PS | |
| 940 | 906 | Laurel D. Harrington | 1005 | | 124 | s & g | Q | | | 5 | Small | Dr | | 3 | D | |
| 941 | 1668 | Frank Lettington | 1025 | | 45 | s & g | Q | | | | | Dr | | 4 | D | |
| 942 | | Eddington | 1130 | | | | | | | | | Dr | T,E | 4 | D | |
| 943 | 1640 | James Gattuso | 1010 | | 79 | un | Q | 30 | 7-12-48 | 5 | 40 | Dr | | 4 | D | |
| 944 | 907 | James Stoglin | 1020 | 26 | 61 | ss | P | 5 | | 8 | Small | Dr | | 4 | D | |
| 945 | 909 | Wm. Haidet | 1020 | 36 | 51 | ss | P | 20 | | 5 | Small | Dr | | 4 | D | |
| 946 | | Steele | 1045 | | r 98 | | | | | | | Dr | C,H | | D,S | Water contains iron. |
| 947 | 910 | V. Salner | 1040 | 72 | 96 | ss | P | 51 | | 16 | 10 | Dr | | 4 | D | |
| 948 | | J. J. Falcon | 1010 | r 40 | r 60 | ss (r) | P | m 13 | 9-17-47 | | | Dr | C,H | 4 | D | |
| 949 | | Reed | 1025 | | r 18 | un | Q | | | | | D | C,H | | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NORTHAMPTON TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 950 | | A. C. Dies | 760 | | | | | | | | | Dv | C,E | 1 | D | Used by two families. Soft. |
| 951 | 1519 | C. A. Smith | 805 | | 179 | s | Q | | 1-14-48 | 6 | 26 | Dr | | 4 | D | |
| 952 | 1498 | Albert F. Hardman | 1000 | 36 | 52 | sh | M | 30 | 4-20-48 | 6 | 6 | Dr | | 4 | D | |
| 953 | | Levin | 1000 | | r122 | | | | | | | Dr | C,E | | D | |
| 954 | 193 | Edward Killian | 1060 | 49 | 102 | sh | M | 49 | | 15 | 27 | Dr | | 4 | D | |
| 955 | 1329 | L. A. Vaughn | 1040 | 32 | 65 | sh | M | 36 | 10-17-47 | 10 | 4 | Dr | | 6 | D | |
| 956 | 1891 | B. Brown | 1045 | 30 | 60 | ss | P | 47 | 6- 4-49 | 3 | Small | Dr | | 4 | D | |
| 957 | 1892 | I. P. Keith | 1010 | | 145 | s | Q | 32 | 3-23-49 | 3 | 80 | Dr | | 4 | D | Recovers very slowly. |
| 958 | 1985 | Peter Kovich | 1010 | 47 | 60 | | P | 21 | 5-14-49 | | | Dr | | 4 | D | |
| 959 | 1986 | John Varner | 760 | | 48 | s | Q | 20 | 4- 2-49 | 10 | 15 | Dr | | 4 | D | |
| 960 | 1987 | Ascot Race Track | 1015 | 107 | 164 | sh | M | 67 | 3-18-49 | 25 | | Dr | | 6 | PS | |
| | | STOW TOWNSHIP | | | | | | | | | | | | | | |
| 1000 | | Denver Collins | 1000 | | r 92 | s & g(r) | Q | | | | | Dr | C,E | | D,S | Analysis given in text. |
| 1001 | | A. Swickley | 1020 | | r 28 | | | | | | | Dr | C,E | 1 | D | |
| 1002 | | W. R. Wolfe | 1030 | | r 80 | | | | | | | Dr | C,E | | D,S | Nearby dug well 15 feet deep; water level 11 feet below land surface; water hard, contains iron. |
| 1003 | 570 | J. C. Ostendory | 1010 | | 40 | s & g | Q | | | | | Dr | | 4 | D | |
| 1004 | 572 | Paul Weir | 1025 | | 44 | g | Q | 3 | | 9 | 8 | Dr | | 4 | D | |
| 1005 | 571 | G. C. French | 1010 | | 34 | g | Q | | | 9 | 10 | Dr | | 4 | D | Flows. |
| 1006 | | Jacoby | 1030 | r 53 | r 65 | | | | | | | Dr | C,E | 4 | D,S | Flows. Water hard. |
| 1007 | 1004 | Paul Stonemetz | 1040 | | 35 | s & g | Q | 10 | 6- 3-46 | | | Dr | | 4½ | D | |
| 1008 | 1618 | Rose Vaughn | 1070 | 71 | 90 | ss | P | 35 | 5- 6-48 | 6 | 10 | Dr | | 4 | D | |
| 1009 | 573 | Lawrence Ritchie | 1065 | | 92 | s & g | Q | 15 | | 6 | 9 | Dr | | 4 | D | |
| 1010 | | Hale | 1050 | | m 25 | un | Q | m 12 | 9-12-47 | | | Dr | T,E | 60 | D,S | Water hard, contains hydrogen sulfide. |
| 1011 | | Howard Call | 1100 | r 45 | r100? | ss (r) | P | | | | | Dr | C,E | 6 | S | Analysis given in text. |
| 1012 | 1649 | K. Z. Lossner | 1085 | 41 | 57 | ss | P | 25 | 7-17-48 | 6 | 5 | Dr | | 4 | D | |
| 1013 | 614 | Lambert | 1065 | 41 | 74 | ss | P | 48 | | 7 | 6 | Dr | | 4 | D | |
| 1014 | 1630 | Clifford Diersing | 1090 | 47 | 75 | ss | P | 25 | 8-30-48 | 5 | 20 | Dr | | 4 | D | |
| 1015 | | H. S. Jenkins | 1065 | | | | | | | | | Dr | C,E | | D | Water contains iron and sulfur. |
| 1016 | | Mike Kuka | 1110 | | r 79 | | | | | | | Dr | C,H | 4 | D,S | Nearby dug well can be pumped dry quickly. |
| 1017 | | Paul Anders | 1105 | | | | | | | | | Dr | AL,E | 6 | D,S | Water hard. |
| 1018 | 1440 | A. L. Johnson | 1050 | 145 | 173 | sh | M | 60 | 10-29-47 | 7 | 20 | Dr | | 4 | D | |
| 1019 | 1894 | Henderson | 1060 | 12 | 74 | ss | P | 32 | 4-23-49 | 5 | 6 | Dr | | 4 | D | |
| 1020 | | Charles Brown | 1050 | | | un | Q | | | | | D | C,H | | D,S | Water hard. |
| 1021 | 943 | E. L. Oaks | 1140 | 60 | 105 | ss | P | | | 6 | 7 | Dr | | 4 | D | |
| 1022 | 618 | E. L. Oaks | 1120 | 59 | 112 | ss | P | | | 10 | 10 | Dr | | 4 | D | |
| 1023 | 616 | Thomas Parr | 1105 | 54 | 89 | ss | P | | | 5 | 16 | Dr | | 4 | D | |
| 1024 | | Martin | 1085 | | r 90 | | | | | | | Dr | C,H | 5 | D,S | Water hard, contains iron. |
| 1025 | | Platt | 1110 | | r 94 | | | m 71 | 9-12-47 | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 1026 | | A. Hassel | 1105 | | r120 | | | | | | | Dr | C,E | 4 | D | Used by two families and a gas station. Water hard, contains iron. |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed | | Water level | | Yield | | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Character of material | Geologic horizon | Below land surface (feet) | Date | Rate (gpm) | Drawdown (feet) | | | | | |
| | STOW TOWNSHIP—(Continued) | | | | | | | | | | | | | | | |
| 1027 | 617 | John Stahl | 1120 | 116 | 123 | ss | P | 93 | | 6 | 10 | Dr | | 4 | D | |
| 1028 | 577 | K. T. Wright | 1120 | 39 | 83 | ss | P | 63 | | 6 | Small | Dr | | 4 | D | |
| 1029 | 1363 | W. R. Riel | 1110 | 38 | 93 | ss | P | 61 | 10-20-47 | 7 | 13 | Dr | | 4 | D | |
| 1030 | 579 | Ralph Korp | 1110 | 36 | 84 | ss | P | 40 | | 5 | 10 | Dr | | 4 | D | |
| 1031 | 1361 | R. L. Butler | 1090 | 55 | 79 | ss | P | 52 | 10- 4-47 | 7 | 27 | Dr | | 4 | D | |
| 1032 | 576 | E. J. Lees | 1090 | 50 | 66 | ss | P | | | 9 | 2 | Dr | | 4 | D | |
| 1033 | 575 | R. Hensely | 1090 | 54 | 95 | ss | P | 60 | | 6 | 20 | Dr | | 3 | D | |
| 1034 | 574 | Van W. Keenan | 1085 | 67 | 93 | ss | P | 70 | | 12 | Small | Dr | | 4 | D | |
| 1035 | | George Stinard | 1080 | | r 100 | | | | | | | Dr | T,E | 5 | D,S | Water hard. |
| 1036 | | R. D. Carlson | 1060 | r 2 | r 65 | ss (r) | P | r 24 | | r 15 | Small | Dr | T,E | 4 | D | Water hard. |
| 1037 | | Ruth McGrath | 1045 | | | | | | | | | Dr | T,E | 3 | D | Water hard. |
| 1038 | 557 | Claude Herman | 985 | | 143 | s & g | Q | | | 5 | 20 | Dr | | 4 | D | |
| 1039 | 940 | Claude Herman | 990 | | 57 | s & g | Q | 19 | | 10 | Small | Dr | | 4 | D | |
| 1040 | | Wm. Fabian | 990 | | r 150 | s (r) | Q | | | | | Dr | C,H | 5 | D,S | Water hard. |
| 1041 | 942 | L. J. Chapman | 1025 | | 65 | s & g | Q | 44 | | 5 | Small | Dr | | 4 | D | |
| 1042 | 1796 | Ernest F. Baer | 1000 | | 22 | s | Q | | 10-21-48 | 5 | 10 | Dr | | 5 | D | |
| 1043 | | S. R. Lewis | 990 | | m 19 | un | Q | m 7 | 9-16-47 | | | D | T,E | 36 | D,S | |
| 1044 | 1437 | Henry Nunn | 1095 | | 135 | s | Q | 22 | 11- 3-47 | 10 | 22 | Dr | | 4 | D | |
| 1045 | 560 | L. R. Waddell | 970 | | 75 | s & g | Q | 35 | | 8 | 10 | Dr | | 4 | D | |
| 1046 | 561 | Ralph E. Kline | 975 | | 68 | s & g | Q | 39 | | 6 | 10 | Dr | | 4 | D | |
| 1047 | 562 | C. L. Haag | 980 | 171 | 209 | sh | M | 139 | | 6 | 8 | Dr | | 4 | D | |
| 1048 | 563 | W. Gary | 1000 | 41 | 112 | sh | M | 40 | | 6 | 5 | Dr | | 4 | D | |
| 1049 | 564 | Harry Cole | 1010 | | 44 | s & g | Q | 36 | | 5 | Small | Dr | | | D | |
| 1050 | 569 | F. S. Parkhurst | 1020 | 59 | 100 | sh | M | 45 | | | | Dr | | 4 | D | |
| 1051 | 1793 | W. N. Bowen | 1020 | | 46 | g | Q | 20 | 11- 8-48 | 6 | 1 | Dr | | 4 | D | |
| 1052 | | R. H. Dickinson | 1025 | | | | | m 26 | 9-16-47 | | | Dr | C,H | 3 | D | |
| 1053 | 585 | S. H. Shroder | 1110 | 43 | 91 | ss | P | 65 | | 7 | 20 | Dr | | 4 | D | |
| 1054 | 584 | J. L. Higgs | 1070 | 38 | 82 | ss | P | 42 | | 6 | 11 | Dr | | 4 | D | |
| 1055 | 583 | Harold Hathaway | 1040 | 39 | 65 | ss | P | 35 | | 6 | 5 | Dr | | 4 | D | |
| 1056 | 1794 | Lee Batten | 1095 | 38 | 77 | ss | P | 44 | 11-18-48 | 7 | 10 | Dr | | 4 | D | |
| 1057 | 1438 | Ellen Cartwright | 1115 | 60 | 110 | ss | P | 78 | 12-13-47 | 8 | 5 | Dr | | 4 | D | |
| 1058 | 582 | L. N. Childs | 1095 | 42 | 75 | ss | P | 65 | | 9 | 3 | Dr | | 4 | D | |
| 1059 | 1814 | A. Rasche | 1120 | 51 | 97 | ss | P | 69 | 6- 5-48 | 7 | 6 | Dr | | 4 | D | |
| 1060 | 581 | Wm. D. Ormiston | 1110 | 38 | 97 | ss | P | 72 | | 7 | 9 | Dr | | 4 | D | |
| 1061 | 1565 | C. J. Hopkins | 1140 | 72 | 122 | ss | P | 83 | 4- 5-48 | 5 | 25 | Dr | | 4 | D | |
| 1062 | 580 | F. E. Kisby | 1120 | 42 | 103 | ss | P | | | 3 | 20 | Dr | | 4 | D | |
| 1063 | 622 | Wm. H. Horner | 1110 | 60 | 106 | ss | P | 82 | | 5 | 10 | Dr | | 4 | D | |
| 1064 | 623 | Harold Bosley | 1135 | 63 | 109 | ss | P | 84 | | 5 | 10 | Dr | | 4 | D | |
| 1065 | 624 | James F. Slater | 1135 | 42 | 84 | ss | P | | | 5 | 15 | Dr | | 4 | D | |
| 1066 | 1439 | W. G. Northrup | 1140 | 37 | 115 | ss | P | 80 | 8-10-47 | | | Dr | | 4 | D | |
| 1067 | 587 | George Swartzman | 1140 | 62 | 116 | ss | P | 96 | | 6 | Small | Dr | | 4 | D | |
| 1068 | 1781 | Lucy Mulvaney | 1125 | 66 | 101 | ss | P | | 5-24-48 | 5 | 20 | Dr | | 4 | D | |
| 1069 | 1538 | W. R. Dawe | 1130 | 60 | 109 | ss | P | 81 | 11- 8-47 | 5 | 4 | Dr | | 4 | D | |
| 1070 | 625 | Eugene Collins | 1120 | 73 | 114 | ss | P | 81 | | 10 | 10 | Dr | | 4 | D | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STOW TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 1071 | | John Otto | 1130 | | r130 | | | | | | | Dr | T,E | 4 | D,S | Water hard. |
| 1072 | 627 | E. J. Dorff | 1120 | 74 | 117 | ss | P | 82 | | 7 | 20 | Dr | | 4 | D | |
| 1073 | 619 | Vier Butler | 1140 | 75 | 101 | ss | P | | | 7 | 8 | Dr | | 4 | D | |
| 1074 | | G. W. Spath | 1140 | | r120 | | | | | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 1075 | 621 | Frank Yeager | 1140 | 83 | 119 | ss | P | 85 | | 6 | 5 | Dr | | 4 | D | |
| 1076 | 628 | Hogan Smith | 1120 | 100 | 120 | ss | P | 95 | | 6 | 5 | Dr | | 4 | D | |
| 1077 | 631 | J. A. Nigman | 1120 | 70 | 96 | ss | P | 75 | | 6 | 10 | Dr | | 4 | D | |
| 1078 | 629 | E. D. McCellan | 1115 | 80 | 100 | ss | P | 70 | | 5 | 15 | Dr | | 4 | D | |
| 1079 | 630 | C. E. Lambers | 1110 | 81 | 98 | ss | P | 47 | | 6 | 15 | Dr | | 4 | D | |
| 1080 | 632 | A. L. Cockerham | 1065 | 35 | 64 | ss | P | 30 | | 6 | 9 | Dr | | 4 | D | |
| 1081 | 1815 | Sam Justice | 1065 | 38 | 58 | ss,sh | P | 15 | 11- 6-48 | 8 | 15 | Dr | | 4 | D | |
| 1082 | | A. N. Fenn | 1050 | | r120 | | | r17 | | | | Dr | C,E | 6 | D,S | In nearby dug well 22 feet deep water level 21 feet (m) below land surface: goes dry frequently, water hard. |
| 1083 | 635 | Louis J. Hohen | 1050 | 33 | 45 | | P | 30 | | 10 | 2 | Dr | | | D | |
| 1084 | 638 | J. B. Mitchelson | 1035 | 15 | 88 | ss,sh | P | 74 | | 5 | 10 | Dr | | 4 | D | |
| 1085 | 634 | E. W. Hoover | 1060 | 29 | 44 | ss,sh | P | 37 | | 6 | 8 | Dr | | 4 | D | |
| 1086 | 633 | Gus Weekly | 1065 | 24 | 41 | sh,ss | P | 14 | | 6 | Small | Dr | | 4 | D | |
| 1087 | 1872 | A. W. Rook | 1095 | 20 | 63 | ss | P | 20 | 10-11-47 | 10 | Small | Dr | | 4 | D | |
| 1088 | 636 | J. M. Buchanan | 1140 | 31 | 87 | sh | P | 38 | | 8 | 12 | Dr | | 4 | D | |
| 1089 | 647 | White & Davis | 1100 | 31 | 73 | ss | P | 25 | | 6 | 10 | Dr | | 4 | D | |
| 1090 | 646 | Adam Weil | 1105 | 19 | 31 | ss | P | 27 | | 4 | 1 | Dr | | 4 | D | |
| 1091 | 951 | Falls Savings & Loan Co. | 1125 | 36 | 69 | ss | P | 39 | | 8 | Small | Dr | | 4 | D | |
| 1092 | | G. F. Scott | 1140 | | r 98 | | | m80 | 9-16-47 | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 1093 | 592 | K. E. Thayer | 1095 | 29 | 87 | ss | P | 30 | | 6 | 10 | Dr | | 4 | D | |
| 1094 | 595 | M. J. Sandercox | 1115 | 21 | 84 | ss | P | 60 | | 7 | 7 | Dr | | 4 | D | |
| 1095 | 596 | W. E. Fenton | 1120 | 17 | 89 | ss | P | 21 | | 8 | 6 | Dr | | 4 | D | |
| 1096 | 597 | A. W. Baumberger | 1115 | 28 | 85 | ss | P | 30 | | 5 | 10 | Dr | | 4 | D | |
| 1097 | 606 | Henry Skibiski | 1100 | 11 | 67 | ss | P | 37 | | 5 | 5 | Dr | | 4 | D | |
| 1098 | 605 | Harry J. Lee | 1110 | 19 | 81 | ss | P | 59 | | 7 | 4 | Dr | | 4 | D | |
| 1099 | 604 | R. D. Harrif | 1095 | 10 | 69 | ss | P | 34 | | 5 | 10 | Dr | | 4 | D | |
| 1100 | 594 | Clifford Erwin | 1110 | 21 | 84 | ss | P | 64 | | 7 | 5 | Dr | | 4 | D | |
| 1101 | 593 | Lloyd Ballis | 1095 | 23 | 82 | ss | P | 30 | | 6 | 9 | Dr | | 4 | D | |
| 1102 | 590 | George White | 1110 | 26 | 86 | ss | P | 51 | | 6 | 9 | Dr | | 4 | D | |
| 1103 | 588 | G. R. Wade | 1140 | 65 | 93 | ss | P | 68 | | 6 | 10 | Dr | | 4 | D | |
| 1104 | 1877 | Claire Olson | 1115 | 23 | 89 | ss | P | 56 | 11- 4-47 | 7 | 5 | Dr | | 4 | D | |
| 1105 | 1360 | James Conkle | 1095 | 17 | 78 | ss | P | 48 | 10- 1-47 | 7 | 30 | Dr | | 4 | D | |
| 1106 | 947 | S. F. Kastens | 1090 | 20 | 56 | sh | P | 26 | | 8 | 16 | Dr | | 4 | D | |
| 1107 | 607 | Ada Marhofer | 1090 | 22 | 83 | ss | P | 53 | | 6 | 9 | Dr | | 4 | D | |
| 1108 | 608 | Rev. L. M. Gregory | 1085 | 18 | 83 | ss | P | 58 | | 7 | Small | Dr | | 4 | D | |
| 1109 | | Schetz | 1125 | | r 75 | | | | | | | Dr | T,E | | D | Water soft. |
| 1110 | 1629 | O. V. Bell | 1025 | 46 | 52 | ss | P | 32 | 8- 4-48 | 7 | 6 | Dr | | 4 | D | |
| 1111 | 34 | Pennsylvania R. R. | 1010 | | 45 | s & g | Q | 12 | | 150 | 25 | Dr | | 18 | I | |
| 1112 | 35 | do | 1010 | 45 | 52 | | P | 20 | | | | Dr | | | | |
| 1113 | 770 | Cascade Rubber Co. | 1010 | 11 | 78 | ss | P | 16 | | 34 | | Dr | | 8 | I | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | STOW TOWNSHIP—(Continued) | | | | | | | | | | | | | | | |
| 1114 | 610 | K. J. Henry | 1060 | 0 | 69 | ss | P | 25 | | 6 | 5 | Dr | | 4 | D | |
| 1115 | 609 | Harry F. Kolar | 1080 | 11 | 88 | ss | P | 69 | | 10 | Small | Dr | | 4 | D | |
| 1116 | 611 | Charles H. Booth | 1110 | 18 | 91 | ss | P | 35 | | 6 | 10 | Dr | | 4 | D | |
| 1117 | 1876 | J. R. Burgher | 1100 | 20 | 119 | ss, sh | M?,P? | 64 | 11-21-47 | 10 | 20 | Dr | | 4 | D | |
| 1118 | 945 | Henry Groves | 1100 | 8 | 80 | ss | P | 49 | | 6 | 8 | Dr | | 4 | D | |
| 1119 | 612 | Clara Boston | 1125 | 29 | 92 | ss | P | 22 | | 8 | 6 | Dr | | 4 | D | |
| 1120 | 949 | Wm. Durant | 1120 | 31 | 103 | ss | P | 43 | | 7 | 6 | Dr | | 4 | D | |
| 1121 | 602 | M. D. Shilty | 1105 | 36 | 101 | ss | P | 40 | | 5 | 10 | Dr | | 4 | D | |
| 1122 | 613 | U. T. Rowland | 1125 | 29 | 96 | ss | P | 31 | | 6 | | Dr | | 4 | D | |
| 1123 | 600 | L. H. Abernathe | 1140 | 34 | 106 | ss | P | | | 6 | 30 | Dr | | 4 | D | |
| 1124 | 1362 | E. R. Barrett | 1135 | 24 | 98 | ss | P | 64 | 10-12-47 | 6 | 11 | Dr | | 4 | D | |
| 1125 | 598 | Sadie Bell Jones | 1140 | 24 | 103 | ss | P | 78 | | 6 | Small | Dr | | 4 | D | |
| 1126 | 599 | J. Lechty | 1145 | 12 | 127 | ss | P | 88 | | 7 | 10 | Dr | | 4 | D | |
| 1127 | 950 | Home Owners Loan Corp. | 1150 | 20 | 141 | ss,sh | P | 96 | | 10 | 10 | Dr | | 4 | D | |
| 1128 | 648 | Falls Savings & Loan Co. | 1150 | 21 | 128 | sh,ss | P | 70 | | 6 | Small | Dr | | 4 | D | |
| 1129 | 640 | James N. Buchanen | 1080 | 26 | 48 | ss | P | 15 | | 6 | Small | Dr | | 4 | D | |
| 1130 | 1393 | Felton | 1065 | 19 | 59 | ss | P | 16 | 1-12-47 | 16 | Small | Dr | | 4 | D | |
| 1131 | 1795 | Joe Corley | 1075 | 20 | 107 | sh,ss | P | 47 | 12- 3-48 | 5 | 3 | Dr | | 4 | D | |
| 1132 | 639 | John Mitcher | 1060 | 12 | 62 | sh,ss | P | 32 | | 6 | 10 | Dr | | 4 | D | |
| 1133 | 643 | D. L. Lotts | 1015 | 18 | 66 | sh,ss | P | 40 | | 6 | 8 | Dr | | 4 | D | |
| 1134 | 641 | Mike Gill | 1095 | 37 | 117 | sh,ss | P | 72 | | 6 | 5 | Dr | | 4 | D | |
| 1135 | 642 | R. M. Davis | 1105 | 30 | 130 | sh,ss | P | 70 | | 12 | 10 | Dr | | 4 | D | |
| 1136 | 952 | James Riley | 1110 | 34 | 42 | sh | P | 10 | | 10 | 6 | Dr | | 4 | D | |
| 1137 | | Sisler | 1103 | | r 85 | | | | | | | Dr | C,H | 4 | D | Water soft. |
| 1138 | | L. M. Bugger | 1120 | | r 57 | | | r17 | | | | Dr | T,E | 4 | A | Water hard, contains iron. |
| 1139 | 953 | Maude Hauser | 1105 | 31 | 61 | ss,sh | P | 20 | | 7 | 9 | Dr | | 4 | D | |
| 1140 | 954 | B. Chenoweth | 1105 | 30 | 114 | ss,sh | P | 30 | | 6 | 20 | Dr | | 4 | D | |
| 1141 | 1441 | James Cross | 1120 | 26 | 102 | sh,ss | P | | 11-18-47 | 7 | 5 | Dr | | 4 | D | |
| 1142 | 811 | N. A. Carpenter | 1125 | 14 | 106 | ss,sh | P | 23 | | 7 | 8 | Dr | | 4 | D | |
| 1143 | 1443 | G. C. Kissinger | 1120 | 20 | 86 | ss | P | 41 | 10-30-47 | 10 | 19 | Dr | | 4 | D | |
| 1144 | 645 | C. V. Cross | 1105 | 0 | 55 | ss | P | 35 | | 6 | 8 | Dr | | 4 | D | |
| 1145 | 955 | Wm. Henry | 1020 | 19 | 101 | ss,sh | M?,P? | 30 | | 6 | 7 | Dr | | 4 | D | |
| 1146 | | Hinkle | 1060 | | r 73 | sh (r) | | | | | | Dr | AL,E | 4 | D | Water soft. |
| 1147 | 1673 | Munroe Falls Paper Co. | 1005 | 20 | 62 | sh,ss | M?,P? | | | | | Dr | | 5 | I | |
| 1148 | 644 | E. C. Sayse | 1050 | 3 | 62 | ss | P | 23 | | 6 | 9 | Dr | | 4 | D | |
| 1149 | 1537 | Carl H. Miller | 1090 | 23 | 85 | ss | P | 47 | 8-15-47 | 7 | 11 | Dr | | 4 | D | |
| 1150 | | Miller | 1100 | m 24 | m 87 | ss | P | m46 | 9-12-47 | | | Dr | | 4 | D | |
| 1151 | 1564 | Cliff Abbott | 1130 | 14 | 85 | | P | 50 | 5-10-48 | 5 | 10 | Dr | | 4 | D | |
| 1152 | 1444 | Cueni Construction Co. | 1115 | 20 | 94 | ss | P | 51 | 11-28-47 | 10 | 5 | Dr | | 4 | D | |
| 1153 | 1040 | City of Cuyahoga Falls | 1000 | | 105 | s & g | Q | 19 | | 1000 | 45 | Dr | T,E | 16 | PS | The average daily pumpage from all wells is 1200 gpm. Analysis given in text. |
| 1154 | 989 | do | 1000 | | 130 | g | Q | 15 | 8- -44 | 1500 | | Dr | T,E | 16 | PS | Analysis given in text. |
| 1155 | | do | 1000 | | r149 | s & g(r) | Q | | | r800 | | Dr | T,E | 12 | PS | do |
| 1156 | | do | 1000 | | r130 | s & g(r) | Q | | | 2900 r | | Dr | T,E | 20 | PS | do |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **STOW TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 1157 | | City of Cuyahoga Falls | 1000 | | r149 | s & g(r) | Q | | | r150 | | Dr | T,E | 12 | PS | Analysis given in text. |
| 1158 | | do | 1000 | | r149 | s & g(r) | Q | | | | | Dr | | 12 | A | |
| 1159 | 1893 | do | 1000 | | 120 | s & g | Q | 23 | 6- 4-49 | 1500 | 6 | Dr | T,E | 12 | PS | |
| 1160 | 1895 | Raymond Ingram | 1070 | 16 | 90 | ss | Q | 60 | 4-25-49 | 5 | 10 | Dr | | 4 | D | |
| 1161 | 1896 | Bloom | 1025 | | 46 | s & g | P | 21 | 6- 2-49 | 13 | 1 | Dr | | 4 | D | |
| 1162 | 1897 | John Briding | 1115 | 30 | 55 | ss | P | | | | | Dr | | 4 | D | |
| 1163 | 1988 | Geo. L. Becker | 1015 | | 96 | s & g | Q | 31 | | 6 | 22 | Dr | | 4 | D | |
| | | **COPLEY TOWNSHIP** | | | | | | | | | | | | | | |
| 1200 | | F. Schreiber | 1050 | | | | | | | | | D | C,H | 4 | D,S | Water contains iron. |
| 1201 | 90 | Frick | 1105 | 8 | 65 | ss | M | 25 | | 15 | 5 | Dr | | 4 | D | |
| 1202 | 1327 | George Frick | 1075 | 31 | 45 | ss | M | 25 | 10-11-47 | 10 | 5 | Dr | | 4 | D | |
| 1203 | 91 | Fred Crosier | 1020 | | 51 | s & g | Q | 40 | | 15 | Small | Dr | | 4 | D | |
| 1204 | 1866 | E. C. Wall | 1020 | | 52 | g | Q | 41 | 9-30-48 | 5 | | Dr | | 5 | D | |
| 1205 | 874 | J. L. Lahr | 1030 | 4 | 15 | | | 9 | | 10 | Small | Dr | | 4 | D | |
| 1206 | 98 | Jack Lahr | 1030 | 10 | 54 | | | 22 | | 9 | 5 | Dr | | 4 | D | |
| 1207 | 97 | C. W. Hart | 1025 | 14 | 70 | | | 29 | | 14 | 3 | Dr | | 4 | D | |
| 1208 | 1647 | Easthourne | 995 | 39 | 66 | ss | M | 19 | 8- 3-48 | 7 | Small | Dr | | 4 | D | |
| 1209 | | C. T. Bergdorf | 985 | | r 28 | un | Q | | | | | D | T,E | 36 | D | |
| 1210 | | Borcher | 985 | | r 25 | un | Q | r15 | | | | | | | | Goes dry when used by two families. |
| 1211 | 1541 | R. S. Kirk | 1010 | 299 | 315 | sh,ss | M | 100 | 4-28-48 | | | Dr | | 5 | D | Pumped dry in 24 hrs. at 20 gallons an hour. |
| 1212 | 1540 | William Madden | 1010 | | 149 | s & g | Q | 40 | 4- 5-48 | 25 | 60 | Dr | | 5 | D | |
| 1213 | 626 | Harold R. Compton | 1020 | 65 | 85 | sh | M | 47 | 4-24-46 | 7 | 14 | Dr | | 4 | D | |
| 1214 | 1576 | First Central Trust Co. | 990 | 53 | 100 | sh | M | 17 | 12-22-47 | 4 | | Dr | | 6 | D | Pumped dry in 30 min. at 4 gpm. |
| 1215 | | T. V. Sullivan | 1065 | | r 83 | | | r30 ? | | | | Dr | C,E | 5 | D,S | |
| 1216 | | R. C. Hulmer | 1000 | | r 20 | un | Q | | | | | D | C,E | 38 | D | Water contains iron. |
| 1217 | 1497 | A. R. Sprankle | 995 | | 30 | s | Q | 15 | 4-15-48 | 15 | 3 | Dr | | 6 | D | |
| 1218 | | R. C. Pulver | 1025 | | r 90 | | | r 50 | | | | Dr | AL,E | 4 | D | Water hard. |
| 1219 | 99 | John Kanter | 1120 | 42 | 95 | sh | M | 42 | | 15 | 12 | Dr | | 4 | D | |
| 1220 | 94 | Arthur Ellis | 1120 | 32 | 90 | sh | M | 42 | | 15 | 10 | Dr | | 4 | D | |
| 1221 | 93 | Tucker | 1110 | 31 | 78 | sh | M | 30 | | 15 | 10 | Dr | | 4 | D | |
| 1222 | 92 | C. W. Posey | 1090 | 31 | 75 | sh | M | 15 | | 15 | 10 | Dr | | 4 | D | |
| 1223 | 1382 | Lester Prentiss | 1065 | 27 | 61 | sh | M | 14 | 11-26-47 | 10 | 15 | Dr | | 4 | D | |
| 1224 | 1645 | J. L. Gill | 1060 | 16 | 51 | sh | M | 15 | 9-14-48 | 8 | 15 | Dr | | 4 | D | |
| 1225 | | A. S. Falter | 1030 | r 21 | m 42 | | | m 6 | 8-15-47 | | | Dr | T,E | 4 | D | |
| 1226 | | J. Hinton | 1130 | | m 20 | un | Q | m13 | 8-15-47 | | | D | C,H | 24 | A | Water hard, contains iron. |
| 1227 | | J. O. Krosse | 1080 | | r 67 | | | r19 | | | | Dr | AL,E | 4 | D | |
| 1228 | 1683 | Leroy Scheck | 1120 | 10 | 55 | ss | P | 32 | 9-10-48 | 10 | 12 | Dr | | 4 | D | |
| 1229 | 1646 | Howard Scheck | 1120 | 12 | 69 | ss | P | 40 | 9-13-48 | 10 | 20 | Dr | | 6 | D | |
| 1230 | | R. G. Ferriman | 1060 | r 75 | r110 | | | | | | | Dr | T,E | 4 | D,S | Water contains some hydrogen sulfide. |
| 1231 | 107 | S. H. Francisco | 1065 | | 26 | s & g | Q | 15 | | 10 | Small | Dr | | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | COPLEY TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 1232 | | W. R. Haines | 1050 | | m 15 | un | Q | m 9 | 8-18-47 | | | D | AL,E | 28 | D | Water hard. |
| 1233 | 1148 | Ernest Falb | 1090 | 19 | 58 | sh | M | 14 | 4-19-47 | 15 | 16 | Dr | | 6 | D | |
| 1234 | 101 | Austin L. Keplar | 1085 | 45 | 67 | sh | M | 13 | | 10 | 10 | Dr | | 4 | D | |
| 1235 | 102 | R. F. Eckert | 1060 | | 18 | s | Q | | | 15 | 10 | Dr | | 4 | D | Flows. |
| 1236 | 103 | W. C. Barbar | 1030 | 47 | 81 | sh | M | 20 | | 10 | 18 | Dr | | 4 | D | |
| 1237 | 875 | A. G. Frendema | 1015 | 66 | 84 | | M | 26 | | 10 | 20 | Dr | | 4 | D | |
| 1238 | 104 | Martine Martin | 1010 | 63 | 79 | sh | M | 46 | | 12 | 9 | Dr | | 4 | D | |
| 1239 | 105 | Kenneth Bailey | 1005 | | 39 | s & g | Q | 19 | | 8 | 2 | Dr | | 4 | D | |
| 1240 | 112 | H. D. Becker | 1020 | 19 | 41 | sh | M | 15 | | 6 | Small | Dr | | 4 | D | |
| 1241 | | Cooper | 980 | | r 45 | s & g(r) | Q | | | | | Dr | | 4 | D | Water hard, contains iron. |
| 1242 | 1767 | Minn. Mining and Mfg. Co. | 975 | | 105 | | | 12 | | | | Dr | | | T | |
| 1243 | 1766 | do | 985 | | | | | 6 | | | | Dr | | | T | |
| 1244 | 1768 | do | 995 | 76 | 86 | | | 8 | | | | Dr | | | T | |
| 1245 | 1358 | Russell Craig | 990 | | 25 | s | Q | | 11-15-47 | 8 | 10 | Dr | | 4 | D | Water level 3.5 feet above land surface. |
| 1246 | 1769 | Minn. Mining and Mfg. Co. | 1010 | | 54 | | | 12 | | | | Dr | | | T | |
| 1247 | 1765 | do | 1010 | 82 | 82 | | | 22 | | | | Dr | | | T | |
| 1248 | 1776 | do | 1015 | 52 | 54 | | | | | | | Dr | | | T | |
| 1249 | 1761 | do | 1055 | 23 | 120 | sh | M | 30 | 9-29-41 | | | Dr | T,E | 10 | I | Originally pumped 120 gpm now pumped at 35 gpm continuously. |
| 1250 | 1762 | do | 1055 | 16 | 101 | sh | M | 53 | | 30 | | Dr | T,E | 10 | I | |
| 1251 | 116 | King | 1055 | 40 | 80 | sh | M | 22 | | 3 | | Dr | | 4 | D | |
| 1252 | 754 | George A. Yale | 1045 | 116 | 128 | sh | M | 60 | | 6 | 20 | Dr | | 4 | D | |
| 1253 | 1842 | Faywick Fexi-Grip Co. | 1040 | | 121 | s & g | Q | 28 | 8-22-48 | 22 | | Dr | | 6 | I | |
| 1254 | 1774 | Minn. Mining and Mfg. Co. | 1020 | 43 | 43 | | | | | | | Dr | | | T | |
| 1255 | 1775 | do | 1020 | | 44 | | | | | | | Dr | | | T | |
| 1256 | 1764 | do | 995 | | 75 | | | 10 | 5-27-47 | | | Dr | | | T | |
| 1257 | 1763 | do | 995 | 67 | 67 | | | 15 | | | | Dr | | | T | |
| 1258 | 1771 | do | 1000 | | 45 | | | | | | | Dr | | | T | |
| 1259 | 106 | Elizabeth Osborn | 1020 | | 83 | un | Q | 65 | | 15 | 27 | Dr | | 4 | D | Pumped dry in 1 hr. at 15 gpm. |
| 1260 | 1770 | Minn. Mining and Mfg. Co. | 1020 | 32 | 60 | | | 12 | | | | Dr | | | T | |
| 1261 | | Hankey | 1045 | | m 23 | un | Q | m 9 | 8-19-47 | | | D | C,H | 24 | D | Water hard. |
| 1262 | 1772 | Minn. Mining and Mfg. Co. | 1015 | 73 | 73 | | | 10 | | | | Dr | | | T | |
| 1263 | 1773 | do | 1030 | 59 | 59 | | | 10 | | | | Dr | | | T | |
| 1264 | 1580 | Shoemaker | 1105 | 10 | 52 | ss | P | 17 | 5- 2-48 | 15 | 4 | Dr | | 4 | D | |
| 1265 | 1898 | W. J. Mathews | 1045 | 36 | 105 | ss,sh | M | 32 | 5- 4-48 | 5 | 67 | Dr | | 4 | D | |
| 1266 | | J. A. Byrd | 1160 | r 33 | m 48 | ss (r) | P | r22 | 8-15-47 | | | D | C,H | 24 | D,S | |
| 1267 | 113 | John Knoch, Jr. | 1160 | 10 | 80 | ss | P | 25 | | 15 | Small | Dr | | 4 | D | |
| 1268 | | R. A. Copley | 1075 | | r138 | | | r38 | | | | Dr | T,E | 6 | D | |
| 1269 | 114 | R. G. Miller | 1130 | | 81 | ss,sh | M?,P? | 34 | | 10 | 35 | Dr | | 4 | D | |
| 1270 | | Steve Smith | 1044 | | m 29 | un | Q | m22 | 8-15-47 | | | D | C,H | 23 | D | |
| 1271 | | R. Faust | 1010 | | m 10 | un | Q | m 6 | 2-18-49 | | | D | C,H | | D | Analysis given in text. |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **COPLEY TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 1272 | | W. M. Hill | 1010 | | m 27 | un | Q | m15 | 8-18-47 | | | D | | 26 | A | |
| 1273 | | Denke | 1120 | | r 50 | un | Q | r 7 | | | | D | C,H | 24 | D,S | Water hard. |
| 1274 | | G. Gamauf | 1050 | | r 40 | un | Q | | | | | D | T,E | | D,S | Water hard. |
| 1275 | 876 | Kaufman Realty Co. | 1045 | 35 | 65 | sh | M | 30 | | 5 | 8 | Dr | | 4 | D | |
| 1276 | 121 | do | 1050 | 22 | 52 | sh | M | 20 | | 5 | 25 | Dr | | 4 | D | |
| 1277 | 122 | do | 1055 | 30 | 116 | sh | M | 36 | | 5 | 20 | Dr | | 4 | D | |
| 1278 | 877 | do | 1050 | 38 | 60 | sh | M | 30 | | 55 | 15 | Dr | | 4 | D | |
| 1279 | 123 | do | 1050 | 34 | 73 | sh | M | 30 | | 5 | 25 | Dr | | 4 | D | |
| 1280 | 124 | do | 1045 | 40 | 75 | sh | M | 35 | | 5 | 20 | Dr | | 4 | D | |
| 1281 | 126 | do | 1055 | 30 | 67 | sh | M | 35 | | 5 | 12 | Dr | | 4 | D | |
| 1282 | 878 | Paul Gravila | 1050 | | 34 | g | Q | 30 | | 12 | Small | Dr | | 4 | D | |
| 1283 | 125 | Kaufman Reality Co. | 1045 | 48 | 88 | sh | M | 32 | | 4 | 40 | Dr | | 4 | D | |
| 1284 | 127 | Kaufman Reality Co. | 1040 | 50 | 78 | sh | M | 32 | | 5 | 10 | Dr | | 4 | D | |
| 1285 | 128 | do | 1040 | | 32 | g | Q | 32 | | 5 | 10 | Dr | | 4 | D | |
| 1286 | 129 | do | 1040 | 49 | 72 | sh | M | 30 | | 5 | 20 | Dr | | 4 | D | |
| 1287 | 131 | Ohio Farmers Sport Club | 1040 | 53 | 125 | | M | 35 | | 7 | 11 | Dr | | 4 | PS | |
| 1288 | 757 | N. S. Baughman | 1060 | 35 | 52 | sh | M | 40 | | 10 | 4 | Dr | | 4 | D | |
| 1289 | 758 | Orville Stimpson | 1060 | 30 | 55 | sh | M | 30 | | 10 | 6 | Dr | | 4 | D | |
| 1290 | 1525 | H. J. Aberth | 1110 | 29 | 50 | sh | M | 14 | 4-30-48 | 10 | 10 | Dr | | 4 | D | |
| 1291 | 118 | Harry Doss | 1000 | | 50 | s & g | Q | 8 | | 4 | 40 | Dr | | 4 | D | |
| 1292 | 119 | C. Church | 995 | | 58 | s & g | Q | 16 | | 5 | 15 | Dr | | 4 | D | |
| 1293 | 1395 | O. W. Stinson | 995 | | 45 | s & g | Q | 22 | 12- 1-47 | 5 | 10 | Dr | | 4 | D | |
| 1294 | | | 1000 | | m 62 | | | | 8-19-47 | | | Dr | | 4 | D | |
| 1295 | 1643 | Carl Flecher | 995 | 65 | 75 | ss | M | 15 | 6-18-48 | 12 | 9 | Dr | | 4 | D | |
| 1296 | 1524 | C. G. Shipley | 990 | 48 | 55 | sh | M | 15 | 5- 3-48 | 10 | 12 | Dr | | 4 | D | |
| 1297 | 1394 | A. M. Faller | 1055 | 21 | 59 | sh | M | 15 | 11-29-47 | 6 | 30 | Dr | | 4 | D | |
| 1298 | 1523 | H. Blowers | 990 | | 66 | s | Q | 21 | 5- 5-48 | 3 | 35 | Dr | | 4 | D | |
| 1299 | 1522 | G. W. Towne | 985 | | 63 | s & g | Q | | | | | Dr | | 4 | D | |
| 1300 | | H. K. Brown | 985 | | r 63 | g (r) | Q | r 10 | 8-11-47 | | | Dr | C,E | 6 | D | Water soft. |
| 1301 | 1431 | George Badolich | 985 | | 91 | s & g | Q | | | | | Dr | | 4 | D | |
| 1302 | 1357 | Carl Shaffer | 975 | | 31 | s | Q | 2 | 11-10-47 | 10 | 12 | Dr | | 4 | D | |
| 1303 | 1784 | Wm. E. Hohman | 980 | | 42 | s | Q | 18 | 9-22-48 | 8 | 15 | Dr | | 4 | D | |
| 1304 | 995 | R. L. Miller | 980 | | 58 | s & g | Q | 8 | 10-26-45 | 20 | 27 | Dr | | 4 | D | |
| 1305 | | Maple Valley Green-house | 980 | | r 50 | un | Q | | | | | Dr | | 4 | Ir | Analysis given in text. |
| 1306 | 1792 | John Dunkler | 975 | | 28 | s | Q | 6 | 12-14-48 | 10 | 6 | Dr | | 4 | D | |
| 1307 | 1385 | F. Martinelli | 980 | | 36 | s & g | Q | 10 | 11- 1-47 | 8 | 6 | Dr | | 4 | D | |
| 1308 | 760 | Mike Weaver | 985 | 97 | 100 | sh | M | 26 | | 12 | 40 | Dr | | 4 | D | |
| 1309 | | T. W. Abood | 980 | | r 36 | | | | | | | Dr | C,E | 4 | D | Water soft. |
| 1310 | 1578 | Jack Poston | 995 | 22 | 32 | sh,ss | M | 14 | 5-18-48 | 7 | 6 | Dr | | 5½ | D | |
| 1311 | 140 | John Petrinec | 1025 | | 44 | g | Q | 40 | | 15 | Small | Dr | | 4 | D | |
| 1312 | 138 | John Johnson | 1050 | | 30 | g | Q | 18 | | 20 | 5 | Dr | | 4 | D | |
| 1313 | 136 | Hall | 1020 | | 37 | g | Q | 4 | | 10 | 20 | Dr | | 4 | D | |
| 1314 | 137 | Al Parsons | 1020 | | 39 | s & g | Q | 15 | | 15 | Small | Dr | | 4 | D | |
| 1315 | 756 | J. E. Eckman | 1020 | 0 | 34 | sh,ss | M | 20 | | 12 | 4 | Dr | | 4 | D | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **COPLEY TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 1316 | 134 | S. B. Campbell | 1005 | | 44 | s & g | Q | 12 | | 10 | Small | Dr | | 4 | D | |
| 1317 | 755 | Frank Morgan | 1005 | | 122 | s | Q | 32 | | 12 | 20 | Dr | | 4 | D | |
| 1318 | 1539 | F. W. Brigman | 1000 | | 30 | s & g | Q | 14 | 10-27-47 | 10 | Small | Dr | | 4 | D | |
| 1319 | | Frank Hull | 1010 | | r 40 | un | Q | r 26 | | | | D | C,E | 36 | D,S | |
| 1320 | | Miracle | 980 | | r 30 | | | | | | | Dv | C,E | 1 | D | Water hard. |
| 1321 | 133 | P. Walent | 1010 | 18 | 56 | sh | M | 22 | | 8 | 7 | Dr | | 4 | D | |
| 1322 | | A. Macure | 1003 | | m 27 | un | Q | m 9 | 8-18-47 | | | D | AL,E | 36 | D | |
| 1323 | 132 | Camp | 1040 | 0 | 44 | | M?,P? | 28 | | 4 | Small | Dr | | 4 | D | |
| 1324 | 1529 | H. Gorby | 1060 | 8 | 91 | sh,ss | M | 20 | 4-24-48 | 8 | 40 | Dr | | 4 | D | |
| 1325 | | H. Mussner | 1115 | r 20 | r 62 | ss (r) | P | r30 | | | | Dr | C,E | 6 | D | Supplies two families, and is used to wash truck farm produce. Can be pumped dry in 3 hrs. at 8 gpm—recovers quickly. |
| 1326 | | Tony Humbler | 1045 | | m 21 | un | Q | m19 | 8-15-47 | | | D | C,H | 31 | D | Pumped 100 gal. of water just prior to water-level measurement. Water soft. |
| 1327 | | H. A. Miller | 1080 | | | ss (r) | M | | | | | Dr | | | D | Analysis given in text. |
| 1328 | | C. J. Knittle | 1020 | r 40 | r 55 | sh (r) | M | | | | | Dr | | | D | Analysis given in text. |
| 1329 | 1581 | Elemer H. Rumpf | 1030 | | 54 | s & g | Q | 28 | 6- 4-48 | 6 | 14 | Dr | C,H | 4 | D | |
| 1330 | | A. Berka | 1015 | | r 120 | | | | | | | Dr | C,E | 4 | D | Water soft. |
| 1331 | 110 | Herbert Haddox | 1000 | | 35 | g | Q | 8 | | 20 | Small | Dr | | 4 | D | |
| 1332 | 1899 | M. M. King | 1010 | | 52 | s & g | Q | 6 | 10-12-48 | 10 | 14 | Dr | | 4 | D | |
| 1333 | 1989 | E. D. Bosserman | 1005 | | 50 | un | Q | 10 | 5-14-49 | 4 | Small | Dr | | 4 | D | |
| 1334 | 1990 | Michael Stefanor | 1005 | | 28 | s | Q | 14 | 3-30-49 | 2 | 14 | Dr | | 4 | D | |
| | | **PORTAGE TOWNSHIP (City of Akron)** | | | | | | | | | | | | | | |
| 1400 | 1556 | George Crawford | 1015 | 7 | 77 | sh | M | | 12-16-47 | 6 | 8 | Dr | | 4 | D | |
| 1401 | 828 | Paul Togin | 1000 | 26 | 112 | sh | M | 26 | | 3 | 6 | Dr | | 4 | D | |
| 1402 | 1641 | Lawrence Rilling | 765 | 42 | 65 | sh,ss | M | | | | | Dr | | 4 | D | |
| 1403 | 1110 | Goodyear Tire and Rubber Co. | 750 | | 105 | | | | | | | Dr | | | T | |
| 1404 | 1111 | do | 750 | | 110 | | | | | | | Dr | | | T | |
| 1405 | 1113 | do | 750 | | 91 | | | | | | | Dr | | | T | |
| 1406 | 33 | Portage Golf Club | 1080 | 30 | 135 | sh,ss | M | 12 | | | | Dr | | | T | |
| 1407 | 31 | do | 1050 | 32 | 152 | sh,ss | M?,P? | | | | | Dr | | | T | |
| 1408 | 1433 | John Galat | 1065 | 21 | 68 | ss | P | 30 | 1-27-48 | 12 | 14 | Dr | | 6 | I | Meat packing plant. |
| 1409 | 27 | Swinehart | 820 | | 105 | | | 20 | | | | Dr | | | T | |
| 1410 | 36 | Akron Pure Milk | 980 | | 157 | s & g | Q | | | | | Dr | | | I | |
| 1411 | 29 | Averill Dairy Co. | 955 | | 132 | s & g | Q | | | | | Dr | | | T | |
| 1412 | 1841 | A. Fabbro | 1100 | 38 | 118 | ss | P | 34 | 4- 3-48 | 8 | 18 | Dr | | 4 | D | |
| 1413 | 786 | Grant Sherbondy | 1060 | 12 | 37 | sh | M | 4 | | 5 | 20 | Dr | | 4 | D | |
| 1414 | 781 | A. A. Wise | 1000 | 118 | 125 | sh | M | 27 | | 10 | 60 | Dr | | 4 | D | |
| 1415 | 787 | J. Kuntz | 990 | 122 | 131 | ss | M | 18 | | 3 | | Dr | | 4 | D | |
| 1416 | | V. Kovacs | 980 | | r 42 | s & g(r) | Q | | | | | Dv | C,E | 1 | Ir | Six driven wells used to irrigate truck farm. Water hard, contains iron. |
| 1417 | 1356 | Lee Bowen | 970 | | 32 | s | Q | 7 | | 8 | 10 | Dr | | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **PORTAGE TOWNSHIP (City of Akron)—(Continued)** | | | | | | | | | | | | | | |
| 1418 | 1778 | G. H. Dailey | 980 | 48 | 73 | sh | M | 8 | 6- 9-48 | 5 | 12 | Dr | | 4 | D | |
| 1419 | 1901 | Carl Bratanore | 970 | | 63 | s | Q | 21 | 5- 2-49 | 7 | 4 | Dr | | 4 | D | |
| | | **TALLMADGE TOWNSHIP** | | | | | | | | | | | | | | |
| 1500 | 964 | Henry E. Roberts | 1015 | 54 | 59 | ss | P | 14 | | 7 | 39 | Dr | | | D | |
| 1501 | | N. L. Berry | 1025 | r17 | r56 | | | 417 | | | | Dr | C,H | 4 | D | Water soft. |
| 1502 | 776 | F. Seiler | 1045 | 20 | 35 | ss | P | 11 | | 8 | 12 | Dr | | 4 | D | |
| 1503 | 649 | John Renner | 1040 | 4 | 101 | ss | P | 15 | | 6 | 10 | Dr | | 4 | D | |
| 1504 | 773 | C. P. Davis | 1030 | 12 | 33 | ss | P | 6 | | 7 | 11 | Dr | | 4 | D | |
| 1505 | 771 | Lawrence Burgy | 1025 | 19 | 32 | ss | P | 10 | | 10 | 5 | Dr | | 4 | D | |
| 1506 | 772 | L. E. Wameman | 1035 | 30 | 45 | ss | P | 14 | | 7 | 6 | Dr | | 4 | D | |
| 1507 | 774 | Allen Brantley | 1015 | 26 | 36 | ss | P | 9 | | 6 | 26 | Dr | | 4 | D | |
| 1508 | 775 | F. M. Lovelace | 1020 | | 35 | s & g | Q | 8 | | 12 | Small | Dr | | 4 | D | |
| 1509 | 780 | E. C. Wilson | 1040 | 20 | 31 | ss | P | 17 | | 8 | 4 | Dr | | 4 | D | |
| 1510 | 778 | W. A. Friendly | 1045 | 34 | 46 | ss | P | 24 | | 8 | 6 | Dr | | 5 | D | |
| 1511 | 779 | S. A. Monroe | 1040 | 36 | 45 | ss | P | 26 | | 6 | 9 | Dr | | 5 | D | |
| 1512 | 777 | Rosey Amos | 1060 | 3 | 51 | ss | P | 14 | | 12 | 20 | Dr | | 4 | D | |
| 1513 | 1674 | 1165 Kozey | 1165 | 12 | 25 | ss | P | | | | | Dr | | 4 | D | |
| 1514 | | T. James | 1165 | | r60 | | | | | | | Dr | C,E | 4 | D | Water hard. |
| 1515 | 1648 | James C. Allen | 1120 | | 54 | s & g | Q | 28 | 8- 3-48 | 7 | 3 | Dr | | 4 | D | |
| 1516 | | Edward Jones | 1140 | | r45 | | | r 6 | | | | Dr | C,E | 4 | D | |
| 1517 | 1364 | L. A. Gringsby | 1140 | 51 | 69 | sh | P | 40 | 10-20-47 | 6 | 5 | Dr | | 4 | D | |
| 1518 | 663 | L. L. Ross | 1160 | 82 | 90 | ss | P | 78 | | 15 | 4 | Dr | | 4 | D | |
| 1519 | | A. B. Lundsford | 1210 | | r67 | s & g(r) | Q | | | | | Dr | AL,E | 4 | D | |
| 1520 | | M. C. Millikan | 1140 | | | | | | | | | Dr | C,E | 4 | D | Water soft. |
| 1521 | 665 | A. S. Bortsch | 1195 | 23 | 103 | sh,ss | P | 71 | | 8 | 10 | Dr | | 4 | D | |
| 1522 | | H. W. Graham | 1200 | | r33 | | | | | | | Dr | C,E | 4 | D,S | |
| 1523 | 1859 | J. A. Mayes | 1180 | 10 | 18 | ss | P | | | | | Dr | | 4 | D | |
| 1524 | 664 | Susan Halick | 1205 | 26 | 107 | ss,sh | P | 85 | | 6 | 12 | Dr | | 4 | D | |
| 1525 | | H. Barnes | 1185 | | m20 | s (r) | Q | m16 | 9-11-47 | | | D | T,E | 36 | D,S | Water hard. |
| 1526 | 666 | John Petrob | 1170 | 27 | 61 | ss | P | 41 | | 9 | 2 | Dr | | 4 | D | |
| 1527 | 1572 | Francis Walcott | 1185 | 16 | 97 | sh | P | 37 | 1-21-48 | 4 | 23 | Dr | | 4 | D | |
| 1528 | 1900 | Everitt M. Pritts | 1090 | 17 | 33 | | | 16 | | | | Dr | | 4 | D | |
| 1529 | 673 | Ernest Atwood | 1160 | 26 | 57 | sh | P | 6 | | 6 | 5 | Dr | | 4 | D | |
| 1530 | | Moshoder | 1180 | | r30 | un | Q | r23 | | | | D | T,E | | D,S | Water hard. |
| 1531 | 1620 | Feathers | 1200 | 32 | 62 | ss | P | 35 | 6-21-48 | 15 | Small | Dr | | 4 | D | |
| 1532 | 1409 | H. E. Blocker | 1160 | 26 | 84 | ss | P | 65 | 9-26-47 | 15 | 3 | Dr | T,E | 4 | D | |
| 1533 | 1477 | B. H. Miller | 1145 | 25 | 39 | ss | P | 15 | 11-20-47 | 10 | 6 | Dr | | 4 | D | |
| 1534 | 672 | Fred Strecker | 1110 | 43 | 63 | sh | P | 20 | | 6 | 8 | Dr | | 4 | D | |
| 1535 | | J. Trapani | 1115 | | | un | Q | | | | | D | T,E | | D | Can be pumped dry; water soft |
| 1536 | 923 | R. L. Ruley | 1125 | 33 | 51 | sh | P | 14 | | 10 | 2 | Dr | | 4 | D | |
| 1537 | 668 | L. E. Wright | 1090 | 27 | 60 | sh | P | 16 | | 7 | Small | Dr | | 4 | D | |
| 1538 | 924 | W. A. Metz | 1105 | 20 | 78 | sh | P | 14 | | 10 | 30 | Dr | | 4 | D | |
| 1539 | 1860 | Village of Tallmadge Park Bldg. | 1100 | 14 | 57 | ss, sh | P | 27 | | 7 | 9 | Dr | | 4 | PS | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TALLMADGE TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 1540 | 671 | Charles Rocco | 1090 | 19 | 51 | sh | P | 9 | | 8 | 6 | Dr | | 4 | D | |
| 1541 | 670 | H. Fischer | 1070 | 65 | 86 | ss | P | 36 | | 7 | 12 | Dr | | 4 | D | |
| 1542 | | N. F. King | 1060 | | r 28 | un | Q | | | | | D | T,E | 36 | D | Water soft. |
| 1543 | 658 | Howard Spashawk | 1100 | 21 | 83 | sh,ss | P | 23 | | 4 | 9 | Dr | | 4 | D | |
| 1544 | 654 | F. W. Brooks | 1080 | 13 | 42 | sh,ss | P | 23 | | 3 | 14 | Dr | | 4 | D | |
| 1545 | | F. Renner | 1170 | | e 50 | | | r16 | | | | Dr | T,E | 4 | D | Water hard. |
| 1546 | 655 | W. H. Johnson | 1080 | 6 | 45 | ss | P | 25 | | 3 | 15 | Dr | | 4 | D | |
| 1547 | 656 | R. Martens | 1080 | 10 | 44 | ss | P | 25 | | 1 | 17 | Dr | | 4 | D | |
| 1548 | 659 | T. W. Brigger | 1055 | 8 | 37 | ss | P | 14 | | 5 | 12 | Dr | | 4 | D | |
| 1549 | 661 | H. D. Rose | 1060 | 14 | 82 | sh,ss | P | 42 | | 6 | Small | Dr | | 4 | D | |
| 1550 | 1861 | Harry Jenner | 1180 | 22 | 76 | sh | P | 20 | 11- 5-48 | 5 | 6 | Dr | | 4 | D | |
| 1551 | 782 | Hal Colvin | 1185 | 16 | 77 | ss,sh | P | 52 | | 6 | 19 | Dr | | 4 | D | |
| 1552 | 783 | Edgar W. Seaver | 1185 | 10 | 67 | ss,sh | P | 35 | | 8 | Small | Dr | | 4 | D | |
| 1553 | 660 | W. E. Schley | 1165 | 10 | 64 | ss,sh | P | 25 | | 7 | 25 | Dr | | 4 | D | |
| 1554 | 784 | Frank J. Seiler | 1165 | 10 | 143 | sh,ss | P | 35 | | 6 | 10 | Dr | | 4 | D | |
| 1555 | 994 | A. C. Jewell | 1150 | 28 | 137 | sh | P | 28 | | 3 | 102 | Dr | | 4 | D | Pumped dry in 1 hr. at 3 gpm. |
| 1556 | 662 | Scott Hilman | 1135 | 12 | 146 | sh,ss | P | | | 4 | 10 | Dr | | 4 | D | |
| 1557 | 1489 | Sidney M. Abrams | 1140 | 55 | 159 | ss | P | | 1- 3-48 | 5 | 12 | Dr | | 4 | D | |
| 1558 | 829 | Wm. D. Reynolds | 1130 | 32 | 143 | sh,ss | P | 43 | | 5 | 10 | Dr | | 4 | D | |
| 1559 | 1432 | Ross Webb | 1080 | 13 | 33 | ss | P | 13 | 12-18-47 | 5 | 8 | Dr | | 4 | D | |
| 1560 | 824 | Joe Carter | 1075 | 14 | 50 | ss,sh | P | 18 | | 10 | 2 | Dr | | 4 | D | |
| 1561 | 819 | George Charles | 1025 | | 43 | s & g | Q | 28 | | 6 | 6 | Dr | | 4 | D | |
| 1562 | 816 | L. A. Wheeler | 1020 | | 60 | s & g | Q | 22 | | 6 | 20 | Dr | | 4 | D | |
| 1563 | 785 | Leander Waring | 1025 | 5 | 34 | | P | 12 | | 4 | 15 | Dr | | 4 | D | |
| 1564 | 820 | Earl Greathouse | 1050 | 6 | 134 | sh,ss | P | 40 | | 2 | 30 | Dr | | 4 | D | |
| 1565 | 1675 | Stephen Tripp | 1080 | 5 | 87 | sh | P | 55 | 9-20-48 | 20 | | Dr | | 6 | D | |
| 1566 | 674 | Amos W. Brown | 1075 | 62 | 101 | ss | P | 59 | | 9 | 6 | Dr | | 4 | D | |
| 1567 | 925 | J. Olesky | 1095 | 65 | 174 | ss | P | 32 | | 8 | 9 | Dr | | 4 | D | |
| 1568 | 1570 | Albert Kovarik | 1140 | 17 | 72 | ss,sh | P | 20 | 4-19-48 | 14 | 20 | Dr | | 4 | D | |
| 1569 | 1858 | C. Hysell | 1155 | 26 | 58 | ss,sh | P | | | | | Dr | | 4 | D | |
| 1570 | 1527 | E. Spencer | 1170 | 27 | 54 | ss | P | 25 | 2-24-48 | 15 | 5 | Dr | | 4 | D | |
| 1571 | 1568 | R. H. Haralson | 1180 | 17 | 46 | ss | P | 20 | 5-15-48 | 14 | 30 | Dr | | 4 | D | |
| 1572 | 1573 | Paul Bland | 1170 | 20 | 53 | ss | P | 25 | 3-13-48 | 7 | 7 | Dr | | 4 | D | |
| 1573 | 686 | H. A. Spriggle | 1170 | 51 | 69 | ss | P | 15 | | 8 | 5 | Dr | | 4 | D | |
| 1574 | 1569 | E. J. Oschmann | 1165 | 29 | 52 | ss | P | 10 | 5-11-48 | 7 | 8 | Dr | | 4 | D | |
| 1575 | 689 | A. F. McBride | 1165 | 28 | 59 | sh,ss | P | 7 | | 6 | Small | Dr | | 4 | D | |
| 1576 | | N. C. Oliver | 1180 | | r 92 | | | r30 | | | | Dr | C,E | 6 | D | Water hard. |
| 1577 | 688 | W. D. Shears | 1150 | 41 | 52 | sh | P | 18 | | 7 | 10 | Dr | | 4 | D | |
| 1578 | 687 | Alvin Gravesmehl | 1130 | 37 | 62 | sh,ss | P | 18 | | 14 | 2 | Dr | | 4 | D | |
| 1579 | 928 | Lee Taylor | 1120 | 37 | 57 | sh | P | 45 | | 6 | 5 | Dr | | 4 | D | |
| 1580 | 685 | W. T. Ody | 1135 | 21 | 44 | ss,sh | P | 19 | | 9 | Small | Dr | | 4 | D | |
| 1581 | 1744 | U. S. Stoneware Co. | 1115 | 63 | 162 | ss,sh | P | 34 | 9- -43 | | | Dr | | 8 | I | 65 feet of drawdown (r) after 15 hrs. of pumping at 55 gpm. |
| 1582 | 1874 | do | 1115 | 35 | 144 | ss,sh | P | 25 | 6-24-48 | 200 | 50 | Dr | T,E | 10 | I | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TALLMADGE TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 1583 | 926 | E. Finch | 1100 | 30 | 48 | ss | P | 12 | | 10 | Small | Dr | | 4 | D | |
| 1584 | 1873 | Ernest S. Atwood | 1170 | 33 | 57 | ss | P | 1 | 8-4-48 | 7 | 8 | Dr | | 4 | D | |
| 1585 | 678 | James Crites | 1170 | 47 | 74 | ss | P | 48 | | 10 | Small | Dr | | 4 | D | |
| 1586 | 680 | Hood | 1190 | 30 | 58 | ss | P | 28 | | 5 | Small | Dr | | 4 | D | |
| 1587 | 681 | H. K. Mayes | 1205 | 31 | 42 | ss | P | 29 | | 12 | 1 | Dr | | 4 | D | |
| 1588 | | B. F. Fike | 1150 | | | un | Q | Flows | | | | D | | 36 | D,S | Used by two families. Water hard. |
| 1589 | 1517 | H. Neidert | 1150 | 14 | 56 | ss | P | 12 | 2-26-48 | 8 | 30 | Dr | | 4 | D | |
| 1590 | 699 | W. C. Sand | 1110 | 8 | 50 | ss | P | 20 | | 6 | 18 | Dr | | 4 | D | |
| 1591 | 929 | Fundamental Baptist Church | 1165 | 22 | 68 | sh,ss | P | 17 | | 8 | 20 | Dr | | 4 | PS | Analysis given in text. |
| 1592 | 930 | C. E. Sands | 1140 | 8 | 61 | ss,sh | P | 27 | | 16 | 10 | Dr | | 4 | D | |
| 1593 | 700 | G. A. Hazen | 1160 | 28 | 31 | ss | P | 10 | | 15 | 2 | Dr | | 4 | D | |
| 1594 | 692 | C. F. Sheets | 1190 | 34 | 72 | sh | P | 33 | | 10 | 12 | Dr | | 4 | D | |
| 1595 | 931 | Clayton Young | 1190 | 43 | 69 | ss,sh | P | 32 | | 12 | 7 | Dr | | 4 | D | |
| 1596 | 691 | Mike Mihalke | 1190 | 20 | 66 | ss,sh | P | 25 | | 10 | 5 | Dr | | 4 | D | |
| 1597 | 675 | Sam Sweitzer | 1150 | 38 | 50 | ss | P | 15 | | 10 | 10 | Dr | | 4 | D | |
| 1598 | 677 | Mary Deter | 1145 | | 33 | s & g | Q | 12 | | 6 | Small | Dr | | 4 | D | |
| 1599 | | John O'Lear | 1140 | | | | | | | | | Dr | AL,E | 4 | Ir | Well flows. Supplies greenhouse. Water soft. |
| 1600 | 679 | Milliard Moles | 1140 | 57 | 60 | ss | P | 25 | | 10 | 18 | Dr | | 4 | D | |
| 1601 | 682 | James S. Stump | 1160 | | 50 | s & g | Q | | | 20 | 5 | Dr | | 4 | D | |
| 1602 | 683 | Paul E. Hawkins | 1160 | | 43 | g | | 10 | | 15 | 4 | Dr | | 4 | D | |
| 1603 | 693 | R. A. Munson | 1145 | 37 | 54 | ss,sh | P | | | 24 | 20 | Dr | | 4 | D | Flows. |
| 1604 | 694 | L. A. Resh | 1140 | 64 | 107 | sh,ss | P | 39 | | 10 | 26 | Dr | | 4 | D | |
| 1605 | 695 | Richard T. Murphy | 1140 | | 60 | g | Q | 15 | | 10 | Small | Dr | | 4 | D | |
| 1606 | 696 | Eldon Spises | 1135 | | 41 | un | Q | 14 | | 10 | Small | Dr | | 4 | D | |
| 1607 | 697 | Michael Czuba | 1160 | 22 | 50 | ss | P | 7 | | 10 | 8 | Dr | | 4 | D | |
| 1608 | 934 | Russell M. Lees | 1190 | 28 | 46 | ss | P | 20 | | 12 | Small | Dr | | 4 | D | |
| 1609 | 932 | Oliver Hess | 1205 | 15 | 43 | ss,sh | P | 5 | | 15 | 11 | Dr | | 4 | D | |
| 1610 | | Bauman | 1140 | | | | | | | | | Dr | | | D,S | Water soft. |
| 1611 | 715 | Robert McClintock | 1120 | 39 | 53 | ss | P | 19 | | 6 | Small | Dr | | 4 | D | |
| 1612 | 716 | H. Sells | 1125 | 26 | 42 | sh | P | 5 | | 10 | 9 | Dr | | 4 | D | |
| 1613 | 718 | E. B. Metcalf | 1135 | | 38 | s | Q | 16 | | 25 | 5 | Dr | | 4 | D | |
| 1614 | | | 1170 | m 28 | m 68 | | | m 3 | 9-11-47 | | | Dr | C,H | 3 | | |
| 1615 | 1809 | Paul Ilgonfritz | 1200 | 19 | 81 | ss,sh | P | 40 | 10-28-47 | 12 | 20 | Dr | | 4 | D | |
| 1616 | 1410 | F. B. Thrashen | 1190 | 29 | 70 | ss | P | 18 | 10-20-47 | 8 | 10 | Dr | | 4 | D | |
| 1617 | 710 | R. Vaughn | 1175 | 32 | 61 | | P | 40 | | 10 | 18 | Dr | | 4 | D | |
| 1618 | 711 | C. E. Ledgerwood | 1170 | 31 | 55 | ss | P | 22 | | 8 | Small | Dr | | 4 | D | |
| 1619 | 713 | Albert Sabo | 1175 | 22 | 58 | sh | P | 17 | | 8 | 3 | Dr | | 4 | D | |
| 1620 | 714 | do | 1165 | 16 | 43 | sh | P | 3 | | 7 | 16 | Dr | | 4 | D | |
| 1621 | 719 | C. E. Ledgerwood | 1160 | 14 | 62 | ss,sh | P | 20 | | 10 | 5 | Dr | | 4 | D | |
| 1622 | 937 | Daniel Peters | 1150 | 29 | 34 | ss | P | | | 25 | 10 | Dr | | 4 | D | |
| 1623 | 748 | Ray Sutee | 1160 | 31 | 54 | sh | P | 15 | | 10 | 20 | Dr | | 4 | D | |
| 1624 | 745 | W. F. Seckman | 1160 | 35 | 54 | sh | P | 26 | | 10 | 35 | Dr | | 4 | D | |
| 1625 | 747 | Jack Canaday | 1160 | 27 | 51 | sh | P | 24 | | | | Dr | | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TALLMADGE TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 1626 | 733 | C. W. Seelye | 1165 | 30 | 55 | sh | P | 21 | | 8 | 6 | Dr | | 4 | D | |
| 1627 | 735 | C. E. Ledgerwood | 1165 | 27 | 50 | sh | P | 14 | | 6 | 3 | Dr | | 4 | D | |
| 1628 | | H. H. Ward | 1110 | | r 22 | un | Q | | | | | D | T,E | 35 | PS | |
| 1629 | | C. M. Kidd | 1167 | | r 50 | | | m19 | 9-11-47 | | | Dr | C,H | 4 | D | Water hard. |
| 1630 | 1903 | H. Robey | 1150 | 31 | 65 | ss,sh | P | 20 | | 10 | 7 | Dr | | 4 | D | |
| 1631 | | A. S. McKissick | 1140 | | | sh | P | | | | | Dr | | 4 | D | Analysis given in text. |
| 1632 | 737 | Earl Stock | 1165 | 25 | 47 | ss | P | 15 | | 20 | 17 | Dr | | 4 | D | |
| 1633 | 739 | Juel Bower | 1165 | 25 | 58 | sh | P | 16 | | 8 | Small | Dr | | 4 | D | |
| 1634 | 936 | Don Aiells | 1160 | 19 | 55 | sh | P | | | 20 | 12 | Dr | | 4 | D | Well flows. |
| 1635 | 743 | W. L. Burks | 1160 | 21 | 57 | sh | P | 10 | | 15 | 8 | Dr | | 4 | D | |
| 1636 | 722 | Harold Youngkin | 1165 | 36 | 38 | s & g | Q | 16 | | 8 | Small | Dr | | 4 | D | |
| 1637 | 721 | C. J. Beck | 1160 | 13 | 39 | | P | 5 | | 15 | Small | Dr | | 4 | D | |
| 1638 | 720 | R. L. Tucker | 1160 | 20 | 48 | sh | P | 11 | | 10 | 7 | Dr | | 4 | D | |
| 1639 | 935 | Elmer E. Beard | 1170 | 24 | 33 | ss | P | 8 | | 15 | 10 | Dr | | 4 | D | |
| 1640 | | Earl Nelson | 1180 | | r 32 | | P | | | | | Dr | T,E | 4 | D | Water hard. |
| 1641 | 703 | Earl E. France | 1170 | 25 | 52 | | P | 20 | | 15 | Small | Dr | | 4 | D | |
| 1642 | 705 | Randolph Tallman | 1165 | 28 | 47 | sh | P | 20 | | 8 | Small | Dr | | 4 | D | |
| 1643 | 704 | J. Schrutie | 1095 | 6 | 32 | ss | P | 15 | | 12 | 2 | Dr | | 4 | D | |
| 1644 | 725 | E. R. McClellan | 1095 | 20 | 68 | sh,ss | P | 40 | | 12 | 8 | Dr | | 4 | D | |
| 1645 | | E. D. Turner | 1110 | | r 45 | ss (r) | P | | | | | Dr | C,H | 3 | D,S | Water soft. |
| 1646 | 723 | W. D. Harmon | 1120 | 49 | 55 | | P | 14 | | 12 | Small | Dr | | 4 | D | |
| 1647 | 724 | H. L. Allen | 1130 | | 36 | s | Q | 10 | | 25 | 5 | Dr | | 4 | D | |
| 1648 | 726 | A. McKesseck | 1140 | 32 | 36 | ss | P | 16 | | 12 | 6 | Dr | | 4 | D | |
| 1649 | 727 | S. W. Mathews | 1130 | 36 | 42 | ss | P | 30 | | 9 | 15 | Dr | | 4 | D | |
| 1650 | 1411 | F. W. Fullmer | 1145 | 19 | 57 | ss,sh | P | 27 | 10-24-47 | 15 | 6 | Dr | C,H | 4 | D | |
| 1651 | 730 | J. B. Gearhart | 1145 | 22 | 56 | sh,ss | P | 24 | | 10 | 8 | Dr | | 4 | D | |
| 1652 | 741 | J. W. Dunnington | 1165 | 21 | 53 | sh | P | 9 | | 12 | 9 | Dr | | 4 | D | |
| 1653 | 728 | A. C. Woods | 1145 | 16 | 88 | | P | 31 | | 10 | Small | Dr | | 4 | D | |
| 1654 | 729 | J. W. Richards | 1145 | 48 | 75 | sh,ss | P | 26 | | 4 | 40 | Dr | | 4 | D | |
| 1655 | 938 | Russell Sheppard | 1160 | 35 | 51 | sh,ss | P | 12 | | 10 | 20 | Dr | | 4 | D | |
| 1656 | 939 | J. R. Wigenton | 1145 | 21 | 70 | sh | P | 20 | | 15 | 5 | Dr | | 4 | D | |
| 1657 | 740 | J. L. Wiseman | 1160 | 22 | 60 | sh | P | 10 | | 12 | 12 | Dr | | 4 | D | |
| 1658 | 1412 | W. Williams | 1140 | 24 | 83 | sh | P | 12 | 11-14-47 | 4 | 13 | Dr | C,H | 4 | D | |
| 1659 | 1571 | R. C. Bales | 1140 | 42 | 69 | sh | P | 14 | 4-10-48 | 7 | 8 | Dr | | 4 | D | |
| 1660 | | Long | 1145 | | r 85 | | | | | | | Dr | AL,E | | D | Water hard. |
| 1661 | 1619 | H. & H. Locker Service | 1075 | 49 | 89 | ss | P | 62 | 4- 7-48 | 12 | 3 | Dr | | 4 | C | |
| 1662 | 1044 | Goodyear Tire & Rubber Co. | 1000 | 162 | 168 | | | | | | | Dr | | | T | |
| 1663 | 1046 | do | 995 | 170 | 180 | | | | | | | Dr | | | T | |
| 1664 | 1045 | do | 995 | 114 | 120 | | | | | | | Dr | | | T | |
| 1665 | 1467 | J. J. Buckholzer | 1000 | 12 | 69 | ss | P | 10 | 1-30-48 | 25 | 40 | Dr | | 10 | | |
| 1666 | | Biggs Boiler Co. | 950 | | r 60 | s (r) | Q | | | | | Dr | C,E | 6 | PS | Supplies drinking fountain. |
| 1667 | 1904 | Earl Pippin | 1140 | 40 | 42 | ss | P | 18 | 3-28-49 | 18 | 4 | Dr | | 4 | D | |
| 1668 | 1905 | Richard A. Brust | 1145 | 44 | 45 | ss | P | 15 | 6-16-49 | 17 | Small | Dr | | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **TALLMADGE TOWNSHIP**—(Continued) | | | | | | | | | | | | | | |
| 1669 | 1906 | First Congregational Church | 1145 | 14 | 43 | sh, ss | P | 8 | | 6 | 15 | Dr | | 4 | D | |
| 1670 | 1907 | G. L. Miller | 1100 | | 27 | s & g | Q | 8 | 10-15-48 | 15 | 4 | Dr | | 4 | D | |
| 1671 | 1908 | O. C. Spriggel | 1135 | 62 | 75 | sh | P | 33 | 10-30-48 | 10 | 22 | Dr | | 4 | D | |
| 1672 | 1909 | Neil Moles | 1170 | 14 | 40 | ss | P | 8 | 8-20-48 | 10 | 6 | Dr | | 4 | D | |
| | | **NORTON TOWNSHIP** | | | | | | | | | | | | | | |
| 1700 | 1126 | Seiberling Rubber Co. | 960 | | 102 | s & g | Q | 37 | 1-14-47 | 1600 | 15 | Dr | T,E | 18 | I | |
| 1701 | 1330 | do | 1025 | 129 | 142 | | | | | | | Dr | | 3 | T | |
| 1702 | 1331 | do | 960 | | 100 | | | 45 | 11-12-44 | | | Dr | | 3 | T | |
| 1703 | 1332 | do | 960 | | 105 | | | 42 | 11-30-44 | | | Dr | | 3 | T | |
| 1704 | 1333 | do | 960 | | 105 | | | 42 | 12- 5-44 | | | Dr | | 3 | T | |
| 1705 | 1334 | do | 960 | | 100 | | | 44 | 12- 8-44 | | | Dr | | 3 | T | |
| 1706 | 1335 | do | 960 | | 105 | | | 42 | 12-15-44 | | | Dr | | 3 | T | |
| 1707 | 1336 | do | 960 | | 105 | | | 44 | 12-19-44 | | | Dr | | 3 | T | |
| 1708 | 1337 | do | 960 | | 105 | | | 45 | 12-22-44 | | | Dr | | 3 | T | |
| 1709 | 1338 | do | 960 | | 100 | | | 42 | 12-30-44 | | | Dr | | 3 | T | |
| 1710 | 1339 | do | 985 | | 125 | | | 41 | 1- 9-44 | | | Dr | | 3 | T | |
| 1711 | 1340 | do | 975 | | 120 | | | | | | | Dr | | 3 | T | |
| 1712 | 1785 | do | 955 | | 100 | s & g | Q | 40 | 10-25-41 | | | Dr | T,E | 18 | I | In 1944 yielded 1200 gpm with 25 foot drawdown. In 1946 yield had dropped to 400 gpm. |
| 1713 | 1786 | do | 955 | | 100 | | | 40 | 10-29-41 | | | Dr | | 3 | T | |
| 1714 | 1787 | do | 955 | | 100 | | | 90 | 11- -41 | | | Dr | | 3 | T | |
| 1715 | 1788 | do | 975 | | 95 | | | 32 | 11- -46 | | | Dr | | 3 | T | |
| 1716 | 1789 | do | 970 | 65 | 75 | | | | | | | Dr | | 3 | T | |
| 1717 | 1724 | Columbia Chemical | 960 | | 200 | | | 55 | | | | Dr | | 3 | T | |
| 1718 | 1681 | do | 960 | | 110 | | | 8 | 1924 | | | Dr | | | T | |
| 1719 | 1682 | do | 955 | | 117 | | | 10 | 1924 | | | Dr | | | T | |
| 1720 | 1683 | do | 955 | | 102 | | | 15 | 1924 | | | Dr | | | T | |
| 1721 | 1684 | do | | | 107 | | | 30 | 1924 | | | Dr | | | T | Exact location within well field not known. |
| 1722 | 1685 | do | 955 | | 108 | | | 21 | 1925 | | | | | | | |
| 1723 | 1687 | do | 955 | | 86 | | | 21 | 1925 | | | Dr | | | T | |
| 1724 | 1688 | do | 955 | | 100 | | | 22 | 1925 | | | Dr | | | T | |
| 1725 | 1689 | do | 955 | | 98 | | | 15 | 1925 | | | Dr | | | T | |
| 1726 | 1690 | do | | | 102 | | | 15 | 1925 | | | Dr | | | T | Exact location within well field not known. |
| 1727 | 1691 | do | | | 103 | | | 6 | 1925 | | | Dr | | | T | do |
| 1728 | 1692 | do | | | 55 | | | 7 | 1925 | | | Dr | | | T | do |
| 1729 | 1693 | do | | | 97 | | | 2 | 1925 | | | Dr | | | T | do |
| 1730 | 1694 | do | 955 | | 100 | | | 6 | 1925 | | | Dr | | | T | |
| 1731 | 1695 | do | 955 | | 93 | | | 7 | 1925 | | | Dr | | | T | |
| 1732 | 1699 | do | 955 | | 102 | | | 11 | 1929 | | | Dr | | | T | |
| 1733 | 1700 | do | 955 | | 106 | | | | | | | Dr | | | T | |
| 1734 | 1701 | do | 955 | | 125 | | | 25 | 1929 | | | Dr | | | T | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **NORTON TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 1735 | 1702 | Columbia Chemical | 955 | | 83 | | | 10 | | | | Dr | | | T | |
| 1736 | 1703 | do | 955 | | 103 | | | 10 | 1929 | | | Dr | | | T | |
| 1737 | 1704 | do | 955 | | 98 | | | 10 | 1929 | | | Dr | | | T | |
| 1738 | 1705 | do | 955 | | 90 | | | 7 | 1929 | | | Dr | | | T | |
| 1739 | 1706 | do | 955 | | 50 | | | | | | | Dr | | | T | |
| 1740 | 1707 | do | 955 | | 83 | | | 10 | 1929 | | | Dr | | | T | |
| 1741 | 1708 | do | 955 | | 75 | | | 13 | | | | Dr | | | T | |
| 1742 | 1709 | do | 955 | | 68 | | | | | | | Dr | | | T | |
| 1743 | 1710 | do | 955 | | 83 | | | 7 | 1929 | | | Dr | | | T | |
| 1744 | 1711 | do | 955 | | 99 | | | 12 | 1929 | | | Dr | | | T | |
| 1745 | 1712 | do | 955 | | 101 | | | 9 | 1929 | | | Dr | | | T | |
| 1746 | 1713 | do | | | 91 | | | 7 | | | | Dr | | | T | Exact location within well field not known. |
| 1747 | 1714 | do | 955 | | 125 | | | 11 | 1929 | | | Dr | | | T | |
| 1748 | 1715 | do | 955 | | 93 | | | 11 | | | | Dr | | | T | |
| 1749 | 1718 | do | 955 | | 98 | s | Q | 36 | 1929 | 650 | 8 | D | T,E | 32 | I | Kelly concrete wells gravel packed to a diameter of 42 in. |
| 1750 | 1719 | do | 955 | | 99 | s & g | Q | 4 | 4- -26 | 657 | 6 | D | T,E | 32 | I | do |
| 1751 | 1720 | do | 955 | | 97 | s & g | Q | 1 | 5- -29 | 800 | 11 | D | T,E | 32 | I | do |
| 1752 | 1721 | do | 955 | | 176 | s & g | Q | 22 | | | | D | T,E | 32 | I | do |
| 1753 | | Midwest Rubber Reclaiming | 955 | | r100 | s & g(r) | Q | | 1935 | 900 | | Dr | T,E | 16 | I | Yield 400 gpm in 1947. |
| 1754 | | do | 960 | | r100 | s & g(r) | Q | r24 | 1944 | 1000 | | Dr | T,E | 16 | I | |
| 1755 | 1627 | Floyd Fuller | 1140 | 55 | 80 | ss | P | 40 | 8-14-48 | 10 | Small | Dr | T,E | 4 | D | |
| 1756 | | R. C. Smith | 1150 | r 65 | r 75 | | | | | | | Dr | C,E | 4 | D | |
| 1757 | 354 | Cunningham | 1125 | 45 | 106 | sh | P | 30 | 12-24-43 | 4 | Small | Dr | | 4 | D | |
| 1758 | 1513 | R. A. Mitchell | 1060 | 12 | 40 | ss | P | 20 | 4-10-48 | 16 | 3 | Dr | | 4 | D | |
| 1759 | 1451 | Willis Cunningham | 1125 | 47 | 110 | ss | P | 60 | 1- 2-48 | 10 | Small | Dr | | 4 | D | |
| 1760 | 1413 | Roy Martin | 1120 | 41 | 87 | ss | P | 30 | 12-22-47 | 18 | Small | Dr | T,E | 4 | D | |
| 1761 | 1414 | Richard Dwyer | 1150 | 48 | 125 | ss | P | 90 | 12-17-47 | 10 | Small | Dr | T,E | 4 | D | |
| 1762 | 357 | John Yankovich | 1020 | | 65 | s & g | Q | 16 | | 10 | Small | Dr | | 4 | D | |
| 1763 | 353 | Paul Ladich | 1090 | 12 | 67 | ss,sh | P | 40 | 7-11-42 | 12 | 7 | Dr | | 4 | D | |
| 1764 | 358 | R. L. Smith | 1030 | | 40 | s & g | Q | 11 | | 5 | 15 | Dr | | 4 | D | |
| 1765 | 359 | George Dallas | 1040 | | 70 | g | Q | 22 | | 10 | 23 | Dr | | 4 | D | |
| 1766 | 360 | Brock | 1075 | 30 | 38 | ss | P | 16 | 4- 8-48 | 3 | Small | Dr | | 4 | D | |
| 1767 | 1500 | Adam Pinter | 1105 | 7 | 47 | ss | P | 15 | | 5 | 20 | Dr | | 4 | D | |
| 1768 | 361 | Lewis Gongirer | 980 | 8 | 75 | sh | M | 33 | | 6 | 8 | Dr | | 4 | D | |
| 1769 | 362 | Hugh V. Jones | 975 | 16 | 44 | sh | M | 22 | | 9 | 12 | Dr | | 4 | D | |
| 1770 | 810 | F. J. Ferguson | 1000 | 20 | 65 | ss,sh | M | 25 | | 12 | 15 | Dr | | 4 | D | |
| 1771 | | Harry Krantz | 980 | | r68 | | | | | | | Dv | C,H | 1 | D,S | |
| 1772 | 1644 | Anna Sovary | 970 | | 80 | s | Q | 9 | 7-20-48 | 15 | 7 | Dr | | 4 | D | |
| 1773 | 1839 | M. M. Thompson | 970 | 25 | 82 | sh | M | 52 | 1- 2-49 | 10 | 30 | Dr | C,H | 4 | D | Pumped dry in 2 hrs at 4 gpm. |
| 1774 | | M. Kleer | 1015 | | r50 ? | un | Q | Dry | | | | D | | 36 | A | |
| 1775 | | Harry Kahn | 965 | | | | | | | | | Dv | C,E | 1 | D | Water soft. |
| 1776 | | E. D. Good | 960 | | r27 | s & g(r) | Q | | | | | D | C,E | 36 | D | Analysis given in text. |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **NORTON TOWNSHIP**—(Continued) | | | | | | | | | | | | | | |
| 1777 | | Charles Cartwright | 985 | | r 94 | | | r 44 | | | | Dr | AL,E | 4 | D,S | Water hard. |
| 1778 | 375 | Clyde Brennstuhl | 995 | | 66 | un | Q | 24 | | 8 | Small | Dr | | 4 | D | |
| 1779 | 370 | E. Boken | 1080 | 41 | 77 | ss | P | 40 | | 4 | Small | Dr | | 4 | D | |
| 1780 | 1579 | V.F.W. Post 4466 | 1050 | 46 | 62 | ss | M?,P? | 28 | | 4 | | Dr | | 4 | D | Pumped dry in 2 hrs. at 4 gpm. |
| 1781 | 369 | Brown and Daily | 1100 | 4 | 75 | ss | P | 43 | | 6 | 10 | Dr | | 4 | D | |
| 1782 | | B. Cherry | 1030 | | | un | Q | | | | | D | C,H | 24 | D | |
| 1783 | 368 | J. Tyree | 1020 | 45 | 104 | sh | M | | | 10 | 10 | Dr | | 4 | D | Flows. |
| 1784 | 372 | Clayton Brown | 1025 | 45 | 85 | sh | M | 14 | | 5 | 60 | Dr | | 4 | D | |
| 1785 | 373 | Taylor | 1040 | 17 | 32 | ss | P | 10 | | 20 | Small | Dr | | 4 | D | |
| 1786 | 419 | John Freeman | 1060 | 40 | 42 | ss | P | 24 | | 15 | Small | Dr | | 4 | D | |
| 1787 | 1028 | Gordon Hojck | 1065 | 22 | 72 | ss | P | 40 | | 6 | | Dr | AL,E | 4 | D | |
| 1788 | 422 | J. R. Layman | 1060 | 31 | 43 | ss | P | 24 | | 15 | Small | Dr | | | D | |
| 1789 | 1027 | H. Miller | 1060 | 10 | 89 | ss,sh | M?,P? | 40 | 8- 2-46 | 6 | 49 | Dr | | 4 | D | Pumped dry in 1 hr. at 6 gpm. |
| 1790 | 1835 | Cecil Whited | 1095 | 20 | 72 | ss | P | 18 | 1-10-49 | 10 | 20 | Dr | T,E | 4 | D | |
| 1791 | 366 | T. R. Frashier | 1120 | 15 | 32 | ss,sh | P | 5 | | 8 | 15 | Dr | | 4 | D | |
| 1792 | 912 | Eugene McKee | 1140 | 30 | 48 | sh | P | 12 | | 15 | 4 | Dr | | 4 | D | |
| 1793 | 911 | Kaufman Realty Co. | 1170 | 26 | 41 | ss | P | | | | | Dr | | 4 | D | |
| 1794 | 365 | C. E. Ruse | 1170 | 31 | 110 | ss | P | 80 | | 10 | 10 | Dr | | 4 | D | |
| 1795 | 363 | Yeager | 1170 | 28 | 48 | ss | P | 18 | | 10 | 6 | Dr | | 4 | D | |
| 1796 | | State Of Ohio | 1170 | | | | | m47 | 8-20-47 | | | Dr | C,H | 3 | PS | Roadside park well. Contains iron. |
| 1797 | | Avery Guthery | 1173 | | m19 | un | Q | m15 | 8-19-47 | | | D | C,E | 24 | D | |
| 1798 | 1592 | Wilber Sonders | 1100 | 24 | 102 | ss,sh | P | 50 | 7- 8-48 | 10 | 15 | Dr | T,E | 4 | D | |
| 1799 | 1791 | Ted Persall | 1080 | 36 | 69 | ss | P | 24 | 9-26-48 | 15 | 2 | Dr | C,H | 4 | D | |
| 1800 | 1593 | Win Holvery | 1165 | 21 | 95 | ss | P | 25 | 5-28-48 | 15 | 20 | Dr | T,E | 4 | D | |
| 1801 | 1910 | A. B. Ames | 1000 | | 50 | s | Q | 20 | 6-17-48 | 8 | | Dr | | 4 | D | |
| 1802 | 1626 | George Hurd | 1165 | 20 | 123 | ss | P | 60 | 8- 9-48 | 7 | 25 | Dr | T,E | 4 | D | |
| 1803 | 1991 | E. Tifs | 1165 | 22 | 74 | ss | P | 18 | | | | Dr | | 4 | D | |
| 1804 | 1840 | Spicer | 1170 | 24 | 84 | sh | P | 30 | 1948 | 10 | 25 | Dr | | 4 | D | |
| 1805 | 913 | D. H. Thrasher | 1180 | 50 | 121 | sh,ss | P | 85 | | 10 | 15 | Dr | | 4 | D | |
| 1806 | 421 | J. R. Layman | 1095 | 31 | 63 | sh,ss | P | 30 | | 4 | 15 | Dr | | 4 | D | |
| 1807 | 377 | Cecil Whited | 1080 | 29 | 97 | ss | P | 48 | | 10 | Small | Dr | | 4 | D | |
| 1808 | 378 | Paul Hazel | 1080 | 26 | 38 | ss | P | 18 | | 10 | 5 | Dr | | 4 | D | |
| 1809 | 379 | Perry Starts | 1100 | 22 | 41 | ss | P | 18 | | 9 | 23 | Dr | | 4 | D | |
| 1810 | 418 | Francis | 1070 | 33 | 48 | ss | P | | | 10 | Small | Dr | | 4 | D | |
| 1811 | 380 | E. Manty | 1080 | 31 | 38 | ss | P | 15 | | 8 | 5 | Dr | | 4 | D | |
| 1812 | 381 | Wilbur Brown | 1080 | 27 | 72 | ss | P | 32 | | 7 | 20 | Dr | | 4 | D | |
| 1813 | 919 | Delbert Patterson | 1070 | 24 | 47 | ss | P | 30 | | 8 | Small | Dr | | 4 | D | |
| 1814 | 382 | C. C. Parker | 1060 | 28 | 67 | ss | P | 40 | | 5 | 20 | Dr | | 4 | D | |
| 1815 | 1353 | Midwest Rubber Reclaim. | 960 | | 108 | s & g | Q | 50 | 10-22-47 | 800 | 22 | Dr | T,E | 12 | I | |
| 1816 | | K. Johnson | 1050 | | m19 | un | Q | m 9 | 8-20-47 | | | D | C,H | 36 | D | Water hard. |
| 1817 | 374 | Ray Wallace | 1034 | 37 | 41 | ss | P | 18 | | 10 | Small | Dr | | 4 | D | |
| 1818 | | M. Donat | 1085 | | | | | | | | | Dr | C,H | 4 | D | Water hard, contains iron. |
| 1819 | 1501 | M. F. Rabith | 1080 | 38 | 78 | ss | P | 25 | 3-22-48 | 15 | 15 | Dr | T,E | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed | | Water level | | Yield | | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Character of material | Geologic horizon | Below land surface (feet) | Date | Rate (gpm) | Drawdown (feet) | | | | | |
| | | NORTON TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 1820 | 1502 | Harry Bell | 1065 | 12 | 118 | ss | P | 60 | 2-12-48 | 10 | Small | Dr | T,E | 4 | D | |
| 1821 | 387 | Austen G. Savser | 1080 | 28 | 31 | ss | P | 22 | | 5 | Small | Dr | | 4 | D | |
| 1822 | 1415 | I. A. Gradtisar | 1080 | 34 | 90 | ss | P | 25 | 12- 4-47 | 14 | 22 | Dr | | 4 | D | |
| 1823 | | O. H. Miller | 1030 | | | | | | | | | S | C,E | | D | Flows in basement, 5 feet below land surface. Water hard. |
| 1824 | 1836 | William Bird | 1105 | 22 | 86 | ss | P | 35 | 10-28-48 | 15 | Small | Dr | T,E | 4 | D | |
| 1825 | | Hiram Poling | 1100 | | | | | | | | | Dr | AL,E | 4 | D | Water hard. |
| 1826 | | Don Miller | 1100 | | r 28 | un | Q | r 8 | | | | D | C,E | | D | Water hard. |
| 1827 | 1834 | Ott | 1060 | 24 | 73 | ss | P | 25 | | 10 | Small | Dr | C,H | 4 | D | |
| 1828 | 916 | Glen Baysinger | 1045 | | 94 | s & g | Q | 21 | | 7 | 22 | Dr | | 4 | D | |
| 1829 | 385 | Martin Jordy | 1060 | 29 | 76 | ss | P | 25 | | 15 | 10 | Dr | | 4 | D | |
| 1830 | 384 | R. D. Fifield | 1090 | 46 | 84 | ss,sh | P | 47 | | 10 | 8 | Dr | | 4 | D | |
| 1831 | | J. Hammer | 1120 | | | | | | | | | Dr | AL,E | 5 | D | Water hard. |
| 1832 | 388 | Hudson | 1040 | | 54 | s & g | Q | 28 | | 5 | Small | Dr | | | D | |
| 1833 | | W. Schmidt | 1060 | | r 85 | | | r 20 | | | | Dr | C,E | 4 | D,S | Water soft. |
| 1834 | 917 | Columbia Chem. Co. | 995 | 35 | 60 | ss | M | 28 | | 10 | 2 | Dr | | 4 | I | |
| 1835 | 1594 | Elmer Holstine | 995 | 116 | 130 | sh | M | 60 | | 5 | | Dr | C,H | 4 | D | Pumped dry in 1 hr. at 5 gpm. |
| 1836 | 920 | Charles Withers | 1020 | | 60 | s & g | Q | 16 | | 10 | Small | Dr | | 4 | D | |
| 1837 | | Seiberling Latex Co. | 955 | | 100 r | s & g | Q | | | | | Dr | T,E | 18 | I | Pumped 300 gpm from 2 wells. |
| 1838 | 991 | do | 950 | | 92 | s | Q | 54 | 11-27-45 | 500 | 12 | Dr | | | I | |
| 1839 | 1992 | Paul Gradasik | 1160 | 16 | 95 | ss | P | 45 | 5- 6-49 | 7 | 15 | Dr | | 4 | D | |
| 1840 | 1723 | Columbia Chemical | 930 | 232 | 232 | | | 33 | | | | Dr | | 3 | T | |
| 1841 | 1686 | do | 950 | | 77 | | | 6 | | | e900 | Dr | | | T | |
| 1842 | 1696 | do | 950 | | 130 | | | 21 | | | 2500 e | Dr | | | T | |
| 1843 | 1716 | do | 950 | | 108 | | | | | | | Dr | | | T | |
| 1844 | 1698 | do | 950 | | 99 | | | 16 | | | 2000 e | Dr | | | T | |
| 1845 | 1697 | do | 955 | | 68 | | | 13 | | | 2500 e | Dr | | | T | |
| 1846 | 1733 | do | 945 | 90 | 3006 | ss | M | | | | | Dr | | | Br | |
| 1847 | 1731 | do | 955 | 78 | 3425 | sh | M | | | | | Dr | | | Br | |
| 1848 | 1026 | C. C. Lowry | 1000 | 10 | 70 | ss | P | 40 | 7- 1-46 | 6 | Small | Dr | | 4 | P | |
| 1849 | 1520 | E. Wagner | 1060 | 34 | 51 | ss | P | 39 | 9-22-46 | | | Dr | | 4 | D | |
| 1850 | 1025 | Walter Ackman | 1025 | 15 | 60 | ss | P | 30 | 6-18-46 | 4 | Small | Dr | C,H | 4 | D | |
| 1851 | 1628 | Columbia Chemical | 1020 | 19 | 129 | ss,sh | M?,P? | 27 | 8-17-48 | 80 | 18 | Dr | | 10 | I | |
| 1852 | 390 | J. E. Willis | 1110 | 42 | 44 | ss | P | 25 | | 10 | 10 | Dr | | 4 | D | |
| 1853 | 1884 | John Beckhaw | 1120 | 31 | 65 | ss | P | 25 | 12- 9-47 | 18 | 15 | Dr | C,H | 4 | D | |
| 1854 | 391 | F. Wonders | 1125 | 40 | 98 | sh | P | 43 | | 3 | 45 | Dr | | 4 | D | |
| 1855 | 392 | Floyd West | 1135 | 36 | 45 | ss | P | 8 | | 12 | 10 | Dr | | 4 | D | |
| 1856 | 922 | R. J. Mong | 1120 | 33 | 44 | ss | P | 6 | | 25 | 5 | Dr | | 4 | D | |
| 1857 | | S. H. Trechombo | 1155 | | m 16 | un | Q | m 9 | 9-19-47 | | | D | C,E | 24 | D | Nearby drilled well 150 feet deep contains $H_2S$. Water hard. |
| 1858 | 1837 | Mark Cholak | 1160 | 15 | 75 | sh | P | 50 | 11-28-48 | 15 | Small | Dr | T,E | 4 | D | |
| 1859 | | W. Rodgers | 1160 | | r 92 | | | r 12 | | | | Dr | C,E | 5 | D,S | Water hard. |
| 1860 | 1993 | Anton Okolish | 1035 | 60 | 94 | sh | M | 12 | 4-11-49 | 10 | Small | Dr | C,H | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NORTON TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 1861 | | R. C. Gandee | 1180 | | r 14 | un | Q | r 7 | | | | D | C,E | | D | Drilled wells in vicinity produce very little water. Water hard. |
| 1862 | 1478 | W. D. Kayor | 1180 | 22 | 39 | ss | P | 8 | 12- 4-47 | 7 | 14 | Dr | | 4 | D | |
| 1863 | 1494 | Wayne A. Yanke | 1090 | 45 | 65 | ss | P | 30 | 6- 7-49 | 3 | 35 | Dr | | 4 | D | Pumped dry in 4 hrs. at 3 gpm. |
| 1864 | 1019 | A. Snisher | 1105 | 20 | 84 | ss | P | | | | | Dr | | 4 | D | |
| 1865 | 1651 | Louise Copen | 1110 | 25 | 89 | ss | P | 20 | | 15 | 50 | Dr | T,E | 4 | D | |
| 1866 | | J. W. Blind | 1110 | | r 60 | | | | | | | Dr | AL,E | 4 | D | Water contains iron. |
| 1867 | 1023 | J. C. Winegardner | 1080 | 10 | 80 | ss | P | 45 | 9- 3-46 | 5 | Small | Dr | | 4 | D | |
| 1868 | 1024 | Lance | 1080 | 11 | 80 | ss | P | 30 | 3- 2-46 | | | Dr | C,H | 4 | D | |
| 1869 | 1595 | Wallace Amling | 1050 | 18 | 85 | sh | P | 15 | 4-24-48 | 10 | 30 | Dr | | 6 | D | |
| 1870 | 1351 | Marcello Minney | 1070 | 10 | 39 | | P | | | | | Dr | | 4 | D | |
| 1871 | | N. V. Ward | 1070 | | r 65 | | | | | | | Dr | C,E | 4 | D | Water contains iron. |
| 1872 | 1323 | N. Breitinstine | 1060 | 7 | 47 | | P | | | | | Dr | | 4 | D | |
| 1873 | 1022 | McCarty | 1065 | 22 | 80 | sh,ss | P | 40 | 8-12-46 | 5 | Small | Dr | | 4 | D | |
| 1874 | 1521 | A. Juszli | 1120 | 18 | 40 | ss | P | 18 | 12-15-48 | 6 | 14 | Dr | | 4 | D | |
| 1875 | 1341 | Seiberling Rubber Co. | 965 | | 120 | s & g | Q | 28 | 1945 | 800 | | Dr | T,E | 16 | I | |
| 1876 | 1342 | do | 955 | 70 | 70 | | | 22 | 1925 | | | Dr | | | | |
| 1877 | 1343 | do | 955 | 118 | 125 | | | 29 | 1925 | | | Dr | | | | |
| 1878 | 1344 | do | 955 | | 65 | | | 21 | 1925 | | | Dr | | | | |
| 1879 | 1345 | do | 955 | | 75 | g | Q | 21 | 1925 | 332 | 3 | D | | 32 | A | |
| 1880 | 1346 | do | 955 | | 82 | | | 30 | 12- -28 | 275 | 4 | D | T,E | 32 | I | Pumped continuously at 900 gpm in 1944. In 1946 yield dropped to 200 gpm. |
| 1881 | 1347 | do | 955 | | 78 | | | 29 | 12- -28 | | | Dr | | | T | |
| 1882 | 1348 | do | 955 | | 80 | s & g | Q | 35 | 1931 | 580 | 6 | D | | 32 | A | Originally pumped at 1200 gpm. Pumped dry in 1943. |
| | | COVENTRY TOWNSHIP | | | | | | | | | | | | | | |
| 2000 | 1995 | F. D. Palmer | 1185 | 14 | 138 | ss | P | 88 | | 5 | | Dr | | 4 | D | |
| 2001 | 21 | Firestone Rubber Co. | 975 | | 281 | s & g | Q | | | 1700 | | Dr | T,E | | I | |
| 2002 | 23 | do | 975 | | 202 | s & g | Q | 4 | | 2500 | 26 | Dr | T,E | 30 | I | |
| 2003 | 24 | do | 975 | | 225 | s & g | Q | 19 | | 1500 | 61 | Dr | T,E | 30 | I | |
| 2004 | 25 | do | 975 | 256 | 256 | s & g | Q | | 1928 | 1000 | | Dr | | 30 | O | |
| 2005 | 26 | do | 980 | | 250 | s & g | Q | | | 2300 | | Dr | T,E | | I | |
| 2006 | 1194 | do | 980 | | 22 | | | | | | | Dr | | | T | |
| 2007 | 1195 | do | 980 | | 19 | | | | | | | Dr | | | T | |
| 2008 | 1196 | do | 980 | | 48 | | | | | | | Dr | | | T | |
| 2009 | 1197 | do | 980 | | 102 | | | | | | | Dr | | | T | |
| 2010 | 1198 | do | 980 | | 20 | | | | | | | Dr | | | T | |
| 2011 | 1199 | do | 980 | | 34 | | | | | | | Dr | | | T | |
| 2012 | 1200 | do | 980 | | 32 | | | | | | | Dr | | | T | |
| 2013 | 1201 | do | 980 | | 34 | | | | | | | Dr | | | T | |
| 2014 | 1202 | do | 980 | | 42 | | | | | | | Dr | | | T | |
| 2015 | 1203 | do | 980 | | 62 | | | | | | | Dr | | | T | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | | |
| 2016 | 1204 | Firestone Rubber Co. | 980 | | 122 | | | | | | | Dr | | | T | |
| 2017 | 1205 | do | 980 | | 142 | | | | | | | Dr | | | T | |
| 2018 | 1206 | do | 980 | | 53 | | | | | | | Dr | | | T | |
| 2019 | 1207 | do | 980 | | 50 | | | | | | | Dr | | | T | |
| 2020 | 1208 | do | 980 | | 133 | | | | | | | Dr | | | T | |
| 2021 | 1209 | do | 980 | | 128 | | | | | | | Dr | | | T | |
| 2022 | 1210 | do | 980 | | 142 | | | | | | | Dr | | | T | |
| 2023 | 1211 | do | 980 | | 142 | | | | | | | Dr | | | T | |
| 2024 | 1212 | do | 980 | | 41 | | | | | | | Dr | | | T | |
| 2025 | 1213 | do | 980 | | 41 | | | | | | | Dr | | | T | |
| 2026 | 1214 | do | 980 | | 75 | | | | | | | Dr | | | T | |
| 2027 | 1215 | do | 980 | | 29 | | | | | | | Dr | | | T | |
| 2028 | 1216 | do | 980 | | 20 | | | | | | | Dr | | | T | |
| 2029 | 1217 | do | 1000 | | 27 | | | | | | | Dr | | | T | |
| 2030 | 1218 | do | 1000 | | 28 | | | | | | | Dr | | | T | |
| 2031 | 1219 | do | 1000 | | 26 | | | | | | | Dr | | | T | |
| 2032 | 1220 | do | 1000 | | 45 | | | | | | | Dr | | | T | |
| 2033 | 1221 | do | 1000 | | 79 | | | | | | | Dr | | | T | |
| 2034 | 1222 | do | 980 | 60 | 60 | | | | | | | Dr | | | T | |
| 2035 | 1223 | do | 980 | | 31 | | | | | | | Dr | | | T | |
| 2036 | 1224 | do | 980 | | 40 | | | | | | | Dr | | | T | |
| 2037 | 1225 | do | 980 | | 40 | | | | | | | Dr | | | T | |
| 2038 | 1226 | do | 980 | | 40 | | | | | | | Dr | | | T | |
| 2039 | 1227 | do | 980 | | 60 | | | | | | | Dr | | | T | |
| 2040 | 1228 | do | 980 | | 50 | | | | | | | Dr | | | T | |
| 2041 | 1229 | do | 980 | | 20 | | | | | | | Dr | | | T | |
| 2042 | 1230 | do | 985 | | 20 | | | | | | | Dr | | | T | |
| 2043 | 1231 | do | 985 | | 60 | | | | | | | Dr | | | T | |
| 2044 | 1232 | do | 990 | | 30 | | | | | | | Dr | | | T | |
| 2045 | 1233 | do | 990 | | 34 | | | | | | | Dr | | | T | |
| 2046 | 1234 | do | 990 | | 41 | | | | | | | Dr | | | T | |
| 2047 | 1235 | do | 990 | 35 | 35 | | | | | | | Dr | | | T | |
| 2048 | 1236 | do | 990 | | 30 | | | | | | | Dr | | | T | |
| 2049 | 1237 | do | 995 | | 103 | | | | | | | Dr | | | T | |
| 2050 | 1238 | do | 980 | | 119 | | | | | | | Dr | | | T | |
| 2051 | 1239 | do | 980 | 31 | 31 | | | | | | | Dr | | | T | |
| 2052 | 1240 | do | 980 | 33 | 33 | | | | | | | Dr | | | T | |
| 2053 | 1241 | do | 980 | | 134 | | | | | | | Dr | | | T | |
| 2054 | 1242 | do | 980 | 30 | 30 | | | | | | | Dr | | | T | |
| 2055 | 1243 | do | 980 | | 30 | | | | | | | Dr | | | T | |
| 2056 | 1244 | do | 980 | | 27 | | | | | | | Dr | | | T | |
| 2057 | 1245 | do | 980 | | 74 | | | | | | | Dr | | | T | |
| 2058 | 1246 | do | 980 | | 176 | | | | | | | Dr | | | T | |
| 2059 | 1247 | do | 995 | | 25 | | | | | | | Dr | | | T | |
| 2060 | 1248 | do | 995 | | 24 | | | | | | | Dr | | | T | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| [illegible] | File number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed | | Water level | | Yield | | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Character of material | Geologic horizon | Below land surface (feet) | Date | Rate (gpm) | Drawdown (feet) | | | | | |
| COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2061 | 1249 | Firestone Rubber Co. | 995 | | 21 | | | | | | | Dr | | | T | |
| 2062 | 1250 | do | 980 | | 63 | | | | | | | Dr | | | T | |
| 2063 | 1251 | do | 980 | | 127 | | | | | | | Dr | | | T | |
| 2064 | 1252 | do | 980 | | 72 | | | | | | | Dr | | | T | |
| 2065 | 1253 | do | 980 | | 62 | | | | | | | Dr | | | T | |
| 2066 | 1254 | do | 980 | | 35 | | | | | | | Dr | | | T | |
| 2067 | 1255 | do | 975 | | 108 | | | | | | | Dr | | | T | |
| 2068 | 1256 | do | 975 | | 52 | | | | | | | Dr | | | T | |
| 2069 | 1257 | do | 975 | | 45 | | | | | | | Dr | | | T | |
| 2070 | 1258 | do | 975 | | 155 | | | | | | | Dr | | | T | |
| 2071 | 1259 | do | 975 | | 84 | | | | | | | Dr | | | T | |
| 2072 | 1260 | do | 975 | | 62 | | | | | | | Dr | | | T | |
| 2073 | 1261 | do | 975 | | 28 | | | | | | | Dr | | | T | |
| 2074 | 1262 | do | 995 | 73 | 73 | | | | | | | Dr | | | T | |
| 2075 | 1263 | do | 1000 | | 82 | | | | | | | Dr | | | T | |
| 2076 | 1264 | do | 995 | 111 | 111 | | | | | | | Dr | | | T | |
| 2077 | 1265 | do | 990 | | 40 | | | | | | | Dr | | | T | |
| 2078 | 1266 | do | 980 | 84 | 84 | | | | | | | Dr | | | T | |
| 2079 | 1267 | do | 990 | | 57 | | | | | | | Dr | | | T | |
| 2080 | 1268 | do | 990 | 57 | 57 | | | | | | | Dr | | | T | |
| 2081 | 1269 | do | 985 | | 77 | | | | | | | Dr | | | T | |
| 2082 | 1270 | do | 985 | | 93 | | | | | | | Dr | | | T | |
| 2083 | 1271 | do | 980 | | 59 | | | | | | | Dr | | | T | |
| 2084 | 1272 | do | 975 | | 100 | | | | | | | Dr | | | T | |
| 2085 | 1273 | do | 975 | | 50 | | | | | | | Dr | | | T | |
| 2086 | 1274 | do | 975 | | 50 | | | | | | | Dr | | | T | |
| 2087 | 1275 | do | 975 | | 51 | | | | | | | Dr | | | T | |
| 2088 | 1276 | do | 975 | | 39 | | | | | | | Dr | | | T | |
| 2089 | 1277 | do | 975 | | 59 | | | | | | | Dr | | | T | |
| 2090 | 1278 | do | 975 | | 182 | s & g | Q | | 1928 | 100 | | Dr | | | A | |
| 2091 | 1279 | do | 975 | | 187 | s & g | Q | | 1928 | 600 | | Dr | T,E | | I | Sample analyzed taken from a well immediately adjacent to well no. 2091. Analysis given in text. |
| 2092 | 1280 | do | 975 | | 103 | s | Q | | 1928 | 300 | | Dr | | | A | |
| 2093 | 1281 | do | 975 | 285 | 282 | s & g | Q | | 1928 | 300 | | Dr | | | A | |
| 2094 | 1282 | do | 975 | | 160 | | | | | | | Dr | | | T | |
| 2095 | 1283 | do | 975 | | 161 | | | | | | | Dr | | | T | |
| 2096 | 1284 | do | 975 | | 124 | s | Q | | 1928 | 400 | | Dr | | | A | |
| 2097 | 1285 | do | 975 | | 80 | | | | 1928 | 600 | | Dr | T,E | | I | |
| 2098 | 1286 | do | 975 | 194 | 194 | | | | 1928 | 1800 | | Dr | T,E | | I | |
| 2099 | 1287 | do | 975 | | 220 | | | | | | | Dr | | | T | |
| 2100 | 1288 | do | 975 | | 219 | | | | | | | Dr | | | T | |
| 2101 | 1289 | do | 975 | | 150 | | | | | | | Dr | | | T | |
| 2102 | 1290 | do | 975 | | 203 | | | | | | | Dr | | | T | |
| 2103 | 1291 | do | 975 | | 200 | | | | | | | Dr | | | T | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | |
| 2103 | 1291 | Firestone Rubber Co. | 975 | | 200 | | | | | | | Dr | | | T | |
| 2104 | 1292 | do | 975 | 220 | 225 | | | | 1929 | 2800 | | Dr | T,E | | I | |
| 2105 | 1293 | do | 975 | | 158 | | | | | | | Dr | | | T | |
| 2106 | 1294 | do | 975 | 109 | 135 | | | | | | | Dr | | | T | |
| 2107 | 1295 | do | 975 | | 200 | | | | | | | Dr | | | T | |
| 2108 | 1296 | do | 975 | | 155 | | | | | | | Dr | | 6 | T | |
| 2109 | 1297 | do | 975 | | 247 | | | | | | | Dr | | | T | |
| 2110 | 1298 | do | 975 | | 183 | | | | | | | Dr | | | T | |
| 2111 | 1299 | do | 975 | | 250 | | | | 1939 | 2300 | | Dr | T,E | | I | |
| 2112 | 1300 | do | 975 | | 175 | | | | | | | Dr | | | T | |
| 2113 | 1301 | do | 975 | | 270 | | | | | | | Dr | | | T | |
| 2114 | 1302 | do | 975 | | 143 | | | | | | | Dr | T,E | | I | |
| 2115 | 1303 | do | 975 | | 175 | | | | | | | Dr | | 6 | T | |
| 2116 | 1304 | do | 975 | | 187 | s & g | Q | 22 | | | | Dr | | 6 | T | |
| 2117 | 1305 | do | 975 | | 210 | s & g | Q | 12 | | | | Dr | | 30 | O | Abandoned. Contains salt. |
| 2118 | 1142 | B. F. Goodrich Co. | 965 | 220 | 225 | s & g | Q | 3 | | | | Dr | | | T | Sito of prosont company well fiold. Estimated yield from all wells is 4,000 gpm. |
| 2119 | 1143 | do | 965 | | 210 | s & g | Q | | | | | Dr | | | T | |
| 2120 | 1144 | do | 965 | | 220 | s & g | Q | | | | | Dr | | | T | |
| 2121 | 1145 | do | 970 | | 245 | s & g | Q | | | | | Dr | | | T | |
| 2122 | 1310 | Colonial Salt Co. | 975 | | 91 | s & g | Q | 27 | 8-20-47 | 1000 | 8 | Dr | T,E | 16 | I | |
| 2123 | 1426 | do | 975 | | 98 | s & g | Q | 29 | 11-28-47 | 1000 | 38 | Dr | T,E | 16 | I | |
| 2124 | 1449 | do | 975 | | 98 | s & g | Q | 28 | 1-5-48 | 1000 | 31 | Dr | T,E | 16 | I | |
| 2125 | 1729 | do | 975 | | 125 | s & g | Q | 35 | 11- 2-46 | | | Dr | | 3 | T | |
| 2126 | 1730 | do | 975 | | 135 | s & g | Q | 35 | 10- -44 | | | Dr | | 3 | T | |
| 2127 | 1748 | do | 975 | 72 | 72 | | | | | | | Dr | | 3 | T | |
| 2128 | 1749 | do | 975 | 136 | 136 | s & g | Q | 35 | 10-11-46 | | | Dr | | 3 | T | |
| 2129 | 1750 | do | 975 | 82 | 88 | s & g | Q | 15 | 9- -46 | | | Dr | | 3 | T | |
| 2130 | 1751 | do | 975 | 96 | 98 | s & g | Q | 18 | 9-18-46 | | | Dr | | 3 | T | |
| 2131 | 1752 | do | 975 | 62 | 65 | s & g | Q | 23 | 9-13-46 | | | Dr | | 3 | T | |
| 2132 | 1753 | do | 975 | 92 | 93 | s & g | Q | 19 | 9-11-46 | | | Dr | | 3 | T | |
| 2133 | 1754 | do | 975 | | 100 | s & g | Q | 19 | 9- 6-46 | | | Dr | | 3 | T | |
| 2134 | 1755 | do | 975 | 102 | 2861 | | | | | | | Dr | | 3 | Br | |
| 2135 | 1756 | do | 975 | 69 | 2896 | | | | | | | Dr | | | Br | |
| 2136 | 1757 | do | 980 | 100 | 2957 | | | | | | | Dr | | | Br | |
| 2137 | 1758 | do | 980 | 116 | 2965 | | | | | | | Dr | | | Br | |
| 2138 | 1759 | do | 975 | 155 | 2955 | | | | | | | Dr | | | Br | |
| 2139 | 1760 | do | 975 | 86 | 2970 | | | | | | | Dr | | | Br | |
| 2140 | 957 | George Corder | 1060 | 4 | 50 | ss | P | 50 | | 10 | Small | Dr | | 4 | D | |
| 2141 | 1468 | E. Jarvis | 980 | | 45 | s & g | Q | 75 | 10- 1-47 | 8 | 18 | Dr | | 4 | D | |
| 2142 | 1175 | Peoples Dairy | 1020 | 14 | 100 | ss | P | | | | | Dr | | 12 | I | |
| 2143 | 12 | Miller Rubber Co. | 1000 | 32 | 70 | ss | M | | | | | Dr | | | T | |
| 2144 | 13 | do | 1000 | 38 | 67 | ss,sh | M | | | | | Dr | | 4 | T | |
| 2145 | 14 | do | 1000 | 73 | 74 | s | Q | 28 | | | | Dr | | | T | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2146 | 15 | Miller Rubber Co. | 1000 | | 62 | s & g | Q | 29 | | 1175 | 6 | Dr | | 30 | T | |
| 2147 | 1176 | Firestone Rubber Co. | 1029 | | 31 | s | Q | | | | | Dr | | | T | |
| 2148 | 789 | O. H. Williams | 1000 | | 54 | s & g | Q | 28 | | 5 | 10 | Dr | | 4 | D | |
| 2149 | 791 | Pete Torbico | 1100 | 53 | 144 | ss,sh | P | 65 | | 24 | 7 | Dr | | 4 | D | |
| 2150 | 792 | Otha Young | 1120 | 24 | 67 | ss | P | | | 18 | 3 | Dr | | 4 | D | |
| 2151 | 788 | M. R. Duxbury | 1060 | | 31 | ss | P | 3 | | 6 | 20 | Dr | | 4 | D | |
| 2152 | 454 | Peter Babich | 1150 | 17 | 54 | sh,ss | P | 11 | | 10 | 10 | Dr | | 4 | D | |
| 2153 | 458 | Frank Martain | 1085 | 26 | 52 | sh,ss | P | 25 | | 10 | Small | Dr | | 4 | D | |
| 2154 | 459 | Walter Popeko | 1070 | 29 | 54 | sh,ss | P | | | 10 | | Dr | | 4 | D | |
| 2155 | 455 | John Gallo | 1100 | 20 | 77 | sh,ss | P | 39 | | 5 | 20 | Dr | | 4 | D | |
| 2156 | 456 | John Lisic | 1115 | 17 | 37 | ss,sh | P | 5 | | 10 | Small | Dr | | 4 | D | |
| 2157 | 1557 | B. E. Nave | 1065 | 9 | 21 | ss | P | | | | | Dr | | 4 | D | |
| 2158 | 1558 | G. E. Eline | 1065 | 20 | 112 | ss,sh | P | 65 | | 9 | 40 | Dr | | 4 | D | |
| 2159 | | James S. Merriman | 1070 | | r 85 | | | | | | | Dr | C,E | 4 | D | Used by two families. Water contains iron. |
| 2160 | 1036 | Firestone Rubber Co. | 1025 | 27 | 55 | ss | P | 29 | 9-11-46 | | 2 | Dr | | 4 | PS | Public golf course. |
| 2161 | 30 | North. Ohio Power Co. | 1085 | 57 | 255 | sh,ss | M?,P? | 12 | | 250 | | Dr | | 18 | I | |
| 2162 | 453 | Carl Weigandt | 1020 | | 64 | s & g | Q | 52 | | 5 | Small | Dr | | 4 | D | |
| 2163 | | Pearson | 1010 | | r 30 | | | | | | | Dr | C,E | | D | Water hard. |
| 2164 | 1577 | I. S. Quires | 990 | | 65 | s & g | Q | 50 | 4-30-48 | 10 | Small | Dr | | 4 | D | |
| 2165 | 439 | J. J. Buckson | 1010 | | 85 | s & g | Q | 40 | | 12 | 10 | Dr | | 4 | D | |
| 2166 | 437 | Wright | 975 | 29 | 32 | ss | Q | 10 | | 8 | Small | Dr | | 4 | D | |
| 2167 | | Herbert Burton | 990 | r 65 | r 75 | | | r 32 | | | | Dr | C,E | 4 | D | Adjacent drilled well; 31 feet (m) deep; water level 25 feet (m) below land surface. |
| 2168 | 1459 | J. Simon | 975 | | 22 | s & g | Q | 9 | 12- 1-47 | 10 | 5 | Dr | | 4 | D | |
| 2169 | 1461 | C. B. Johnson | 970 | | 53 | s & g | Q | 31 | 12-31-47 | 3 | 20 | Dr | | 4 | D | |
| 2170 | 993 | A. Catlow | 970 | | 68 | s & g | Q | | | 10 | 12 | Dr | | 4 | D | |
| 2171 | 404 | Mrs. Mullet | 980 | | 88 | s & g | Q | 19 | | 10 | Small | Dr | | 4 | D | |
| 2172 | 1512 | R. J. Stimpfel | 980 | 81 | 105 | sh | M | 10 | 4-12-48 | | 70 | Dr | | 4 | D | |
| 2173 | 554 | G. K. Harry | 995 | | 79 | s & g | Q | 42 | | 15 | Small | Dr | | 4 | D | |
| 2174 | 1167 | John Benak | 1020 | | 120 | g | Q | 44 | 6-25-46 | 5 | 20 | Dr | | 4 | D | |
| 2175 | 959 | Harry D. Curry | 1045 | 41 | 72 | sh,ss | P | 37 | | 6 | 10 | Dr | | 4 | D | |
| 2176 | 1174 | W. H. Dietz | 1010 | | 50 | g | Q | 36 | 6-10-46 | 5 | 2 | Dr | | 4 | D | |
| 2177 | 1173 | Jasper Koracs | 1010 | | 58 | g | Q | 20 | 10-18-45 | 5 | 12 | Dr | | 4 | D | |
| 2178 | 396 | T. Gibbs | 1015 | | 42 | g | Q | 36 | | 5 | 6 | Dr | | 4 | D | |
| 2179 | 398 | Victor Nichols | 1015 | 50 | 80 | ss | P | 18 | | 9 | Small | Dr | | 4 | D | |
| 2180 | 397 | Earnest Darlok | 1015 | | 49 | s & g | Q | 10 | | 15 | 20 | Dr | | 4 | D | |
| 2181 | 808 | C. R. Miklus | 1030 | 40 | 73 | ss,sh | P | 30 | | 7 | 8 | Dr | | 4 | D | |
| 2182 | 958 | Roy Mackey | 1020 | 38 | 62 | ss | P | 6 | | 15 | Small | Dr | | 4 | D | |
| 2183 | 1514 | C. J. Wagner | 1060 | 16 | 40 | ss | P | 8 | 9-13-46 | | | Dr | | 4 | D | |
| 2184 | 1838 | Dick Waltz | 1020 | 70 | 115 | sh | M | | | | | Dr | | 4 | D | |
| 2185 | 1747 | Sun Rubber Co. | 970 | | 57 | s & g | Q | | | | | Dr | | 4 | T | |
| 2186 | 1745 | do | 970 | 52 | 52 | s & g | Q | | | 400 | | Dr | T,E | 12 | I | Became incrusted and yield dropped; pumpage returned to 400 gpm when well was acidized. |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2187 | 1378 | Columbia Chemical Co. | 960 | 33 | 33 | s & g | Q | | | | | Dr | | 6 | T | |
| 2188 | 1379 | do | 960 | 60 | 60 | s & g | Q | | | | | Dr | | 6 | T | |
| 2189 | | X-Cel Dairy Co. | 975 | | r130 | g (r) | Q | | | | | Dr | T,E | 8 | I | Water soft. |
| 2190 | 1380 | Columbia Chemical Co. | 960 | | 55 | s & g | Q | | | | | Dr | | 6 | T | |
| 2191 | 1377 | do | 960 | 96 | 96 | s & g | Q | | | | | Dr | | 6 | T | |
| 2192 | 961 | N. G. Witter | 1020 | 30 | 38 | sh | P | 15 | | 12 | 12 | Dr | | 4 | D | |
| 2193 | | R. K. Burns | 1140 | | | sh | P | | | | | Dr | | | D | Approximate location. Analysis given in text. |
| 2194 | 1912 | R. E. Sutten | 990 | | 109 | s & g | Q | 58 | | 3 | 50 | Dr | | 4 | D | Pumped dry in 1 hr. at 3 gpm. |
| 2195 | 1376 | Columbia Chemical Co. | 960 | | 65 | s & g | Q | | | | | Dr | | 6 | T | |
| 2196 | 1375 | do | 960 | | 63 | s & g | Q | | | | | Dr | | 6 | T | |
| 2197 | 405 | W. Rogers | 1050 | 58 | 70 | ss | P | 25 | | 5 | 25 | Dr | | 4 | D | |
| 2198 | 406 | Clarence Mantz | 1035 | 56 | 73 | ss,sh | P | 20 | | 8 | 30 | Dr | | 4 | D | |
| 2199 | | D. L. Cox | 1030 | r 55 | r 85 | | P | r40 | | | | Dr | C,E | | D | Water hard. |
| 2200 | 407 | Lee Ensley | 1035 | 70 | 88 | ss | P | 30 | | 59 | 20 | Dr | | 4 | D | |
| 2201 | 1172 | L. W. Shafer | 1000 | 83 | 100 | ss | M | 53 | 8-16-46 | 5 | 20 | Dr | | 4 | D | |
| 2202 | 409 | Clifford Lance | 1005 | 88 | 101 | sh,ss | M | 49 | | 6 | 20 | Dr | | 4 | D | |
| 2203 | 401 | Floyd N. Jones | 1015 | 87 | 92 | ss | M | 52 | | 5 | 15 | Dr | | 4 | D | |
| 2204 | 402 | Wiber Riggs | 1035 | 80 | 85 | | P | 40 | | 5 | 25 | Dr | | 4 | D | |
| 2205 | 410 | John Mikles | 1040 | | 80 | g | Q | 50 | | 4 | 10 | Dr | | 4 | D | |
| 2206 | 1165 | A. Bakos | 1080 | 32 | 38 | ss | P | 20 | 6-14-46 | 5 | 4 | Dr | | 4 | D | |
| 2207 | 413 | Basil Pepper | 1050 | 41 | 47 | ss | P | 25 | | 15 | 10 | Dr | | 4 | D | |
| 2208 | 403 | Henry Wimberly | 1050 | 30 | 58 | ss | P | 26 | | 10 | Small | Dr | | 4 | D | |
| 2209 | 1169 | Shivley | 1065 | | 28 | g | Q | 12 | 6-17-46 | 5 | 2 | Dr | | 4 | D | |
| 2210 | 1168 | Nick E. McCurrey | 1065 | 44 | 61 | ss | P | 30 | 1-31-46 | 5 | 16 | Dr | | 4 | D | |
| 2211 | 1491 | L. E. Cormany | 1005 | | 30 | s & g | Q | 10 | 10-26-47 | 15 | 2 | Dr | | 4 | D | |
| 2212 | 1457 | N. Vance | 975 | | 35 | s & g | Q | 2 | 11- 6-47 | 10 | 10 | Dr | | 4 | D | |
| 2213 | 1163 | J. W. Wellock | 975 | 115 | 119 | sh | M | 10 | 12-23-45 | 5 | 60 | Dr | | 4 | D | |
| 2214 | | The C. & J. Motel | 980 | | | | | | | | | Dr | C,E | 6 | PS | Supplies 20 tourist cabins. Water hard, contains iron. |
| 2215 | 416 | L. Bolla | 980 | | 40 | s & g | Q | 5 | | 5 | 10 | Dr | | 4 | D | |
| 2216 | 1166 | John Sauper | 1050 | | 78 | g | Q | 66 | 9-12-46 | | | Dr | | 4 | D | |
| 2217 | 1170 | R. P. Davis | 1040 | | 80 | s | Q | 50 | 1- 8-46 | 5 | 5 | Dr | | 4 | D | |
| 2218 | 809 | D. S. Rose | 1075 | | 102 | g | Q | 90 | | 5 | Small | Dr | | 4 | D | |
| 2219 | 424 | R. Mosley | 1020 | | 90 | g | Q | 68 | | 7 | Small | Dr | | | D | |
| 2220 | 807 | O. B. Carter | 1015 | | 78 | g | Q | 1 | | 12 | 11 | Dr | | 4 | D | |
| 2221 | 1164 | O. R. Harris | 1000 | | 68 | s & g | Q | 10 | 6- 3-46 | 5 | 8 | Dr | | 4 | D | |
| 2222 | 556 | Ross Crecelius | 1000 | | 77 | s & g | Q | 13 | | 20 | 7 | Dr | | 4 | D | |
| 2223 | 1162 | E. H. Lundy | 1000 | | 74 | s & g | Q | | | 5 | 5 | Dr | | 4 | D | Flows. |
| 2224 | | Glintling | 985 | | r15 | un | Q | r11 | | | | D | C,E | 30 | D | |
| 2225 | 1017 | D. D. Daniels | 990 | | 40 | s & g | Q | 10 | 8-18-46 | 5 | 2 | Dr | | 4 | D | |
| 2226 | 475 | Oscar Hodgeson | 1020 | | 59 | s & g | Q | 26 | | 15 | 32 | Dr | | 4 | D | |
| 2227 | 477 | Tony Rock | 1000 | | 58 | s | Q | 36 | | 10 | 3 | Dr | | 4 | D | |
| 2228 | 474 | H. Woodruff | 1000 | | 42 | s | Q | 37 | | 3 | 2 | Dr | | 4 | D | |
| 2229 | 473 | J. W. Longworth | 1000 | | 78 | s | Q | 40 | | 12 | 8 | Dr | | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **COVENTRY TOWNSHIP**—(Continued) | | | | | | | | | | | | | | |
| 2230 | | C. Drongoski | 1000 | | r 22 | s (r) | Q | r 21 | | | | Dv | | 1 | D | Dry in dry weather. Water hard. |
| 2231 | 449 | W. H. Moore | 1020 | | 208 | s | Q | 91 | | 9 | Small | Dr | | 4 | D | |
| 2232 | 1460 | Mike Reed | 1040 | | 64 | s & g | Q | 28 | | 6 | 25 | Dr | | 4 | D | |
| 2233 | | | 1025 | | m 94 | | | | | | | Dr | | 4 | A | |
| 2234 | 1458 | J. Buhalak | 1020 | | 62 | s & g | Q | 48 | 11- 8-47 | 8 | Small | Dr | | 4 | D | |
| 2235 | 1462 | G. G. Bucannon | 1050 | 34 | 104 | ss | P | 52 | 10- 7-47 | 7 | 30 | Dr | | 4 | D | |
| 2236 | 1463 | R. Morris | 1110 | 16 | 120 | ss | P | 64 | 10-10-47 | 6 | 48 | Dr | | 4 | D | |
| 2237 | 441 | J. H. Hohman | 1075 | 35 | 65 | sh,ss | P | 38 | | 12 | 7 | Dr | | 4 | D | |
| 2238 | 442 | Wm. A. Noe | 1050 | 30 | 54 | ss,sh | P | 35 | | 10 | Small | Dr | | 4 | D | |
| 2239 | 443 | W. Counts | 1060 | 14 | 72 | sh,ss | P | 61 | | 10 | Small | Dr | | 4 | D | |
| 2240 | 444 | Wm. H. Hartzler | 1050 | 70 | 79 | sh,ss | P | 58 | | 10 | Small | Dr | | 4 | D | |
| 2241 | 821 | C. W. Orr | 1040 | | 77 | s | Q | 52 | | 6 | 10 | Dr | | 4 | D | |
| 2242 | 463 | H. J. Hohman | 1060 | 40 | 78 | sh,ss | P | 50 | | 10 | Small | Dr | | 4 | D | |
| 2243 | 462 | H. J. Hohman | 1060 | 120 | 140 | ss,sh | P | 56 | | 10 | 14 | Dr | | 4 | D | |
| 2244 | 1911 | J. B. Brown | 985 | | 96 | g | Q | 10 | 5-28-49 | 10 | 10 | Dr | | 4 | D | |
| 2245 | 464 | H. J. Hohman | 1060 | 36 | 63 | sh,ss | P | 26 | | 10 | 4 | Dr | | 4 | D | |
| 2246 | 465 | H. J. Hohman | 1030 | 86 | 106 | sh,ss | P | 23 | | 7 | 17 | Dr | | 4 | D | |
| 2247 | 1914 | Richard Thompson | 1040 | 26 | 47 | ss | P | 14 | | | | Dr | | 4 | D | |
| 2248 | 986 | Firestone Tire Co. | 995 | 199 | 245 | ss,sh | M | | | 50 | 110 | Dr | | 4 | D | Flows. |
| 2249 | 446 | James Stewart | 1090 | 27 | 86 | sh,ss | P | 47 | | 10 | 5 | Dr | | 4 | D | |
| 2250 | | R. T. Carter | 1000 | | r 14 | s & g(r) | Q | 6(r) | | | | Dv | C,E | 1 | D,S | |
| 2251 | | Hershel Horn | 1000 | | r 30 | s & g(r) | Q | | | | | Dv | C,E | 1 | D | Analysis given in text. |
| 2252 | 1043 | Akron Metropolitan Park | 1000 | 178 | 300 | s& ss,sh | M | 10 | 1-25-46 | 42 | 100 | Dr | | 8?,6? | PS | |
| 2253 | 1029 | L. H. Rager | 1040 | 70 | 108 | sh | M | 58 | 8- 1-46 | 5 | 30 | Dr | | 4 | D | |
| 2254 | 451 | W. M. Fleming | 1050 | | 52 | s & g | Q | 40 | | 10 | Small | Dr | | 4 | D | |
| 2255 | 803 | Cooper | 1060 | | 50 | g | Q | 18 | | 4 | Small | Dr | | 4 | D | |
| 2256 | 546 | M. H. Lane | 1115 | | 46 | s | Q | 31 | | 8 | 18 | Dr | | 4 | D | |
| 2257 | 544 | John Babcock | 1090 | 75 | 93 | ss | P | 35 | | 10 | Small | Dr | | 4 | D | |
| 2258 | 540 | Walker | 1100 | | 57 | g | Q | 22 | | 5 | Small | Dr | | 4 | D | |
| 2259 | 539 | Fred Wolfe | 1100 | 56 | 71 | ss | P | 33 | | 10 | 12 | Dr | | 4 | D | |
| 2260 | 538 | E. K. Krepps | 1100 | 63 | 66 | ss | P | 30 | | 5 | Small | Dr | | 4 | D | |
| 2261 | 537 | F. Wood | 1100 | | 63 | g | Q | 35 | | 4 | Small | Dr | | 4 | D | |
| 2262 | 536 | B. H. McGrady | 1100 | 68 | 71 | ss | P | 40 | | 4 | Small | Dr | | 4 | D | |
| 2263 | | C. McCrocklin | 1110 | | | | | | | | | Dr | C,E | | D | Water hard, contains iron. |
| 2264 | 535 | L. Hale | 1140 | 30 | 93 | ss | P | 50 | | 6 | 30 | Dr | | 4 | D | |
| 2265 | 533 | C. L. Syx | 1140 | 34 | 46 | ss | P | 21 | | 12 | 5 | Dr | | 4 | D | |
| 2266 | 532 | R. T. Syx | 1140 | 26 | 36 | sh,ss | P | 30 | | 3 | 22 | Dr | | 4 | D | |
| 2267 | 547 | C. J. Mong | 1090 | 40 | 46 | ss | P | 15 | | 10 | 6 | Dr | | 4 | D | |
| 2268 | 507 | M. C. Martins | 1120 | 16 | 27 | ss | P | 21 | | 10 | 2 | Dr | | 4 | D | |
| 2269 | 528 | O. T. Syx | 1125 | 29 | 62 | sh | P | 21 | | 6 | 21 | Dr | | 4 | D | |
| 2270 | 529 | C. H. Resil | 1080 | 28 | 69 | ss,sh | P | 28 | | 10 | 5 | Dr | | 4 | D | |
| 2271 | 524 | J. C. Robinson | 1060 | 6 | 42 | ss | P | 23 | | 10 | Small | Dr | | 4 | D | |
| 2272 | 520 | Wm. Briggs | 1050 | 4 | 42 | ss,sh | P | 27 | | 2 | 15 | Dr | | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COVENTRY TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2273 | 527 | Frank Minard | 1040 | 20 | 40 | ss | P | 20 | | 10 | 8 | Dr | | 4 | D | |
| 2274 | 525 | O. W. James | 1040 | 27 | 49 | ss | P | 34 | | 12 | 4 | Dr | | 4 | D | |
| 2275 | 826 | Paul Simon | 1040 | 20 | 24 | ss | P | 12 | | 10 | Small | Dr | | 4 | D | |
| 2276 | 484 | W. E. Lark | 1080 | 23 | 50 | ss | P | 24 | | 8 | 13 | Dr | | 4 | D | |
| 2277 | 508 | R. B. Miller | 1080 | 16 | 59 | ss,sh | P | | | | | Dr | | 4 | D | |
| 2278 | 485 | W. M. Myers | 1080 | 32 | 65 | ss | P | 41 | | 8 | 2 | Dr | | 4 | D | |
| 2279 | 511 | Edward Scheus | 1060 | 20 | 33 | ss | P | | | | | Dr | | 4 | D | |
| 2280 | 472 | Hudson Force | 1040 | 77 | 94 | ss | P | 36 | | 18 | 45 | Dr | | | D | |
| 2281 | 1915 | B. B. Hutchison | 1055 | 20 | 75 | ss,sh | P | 55 | 12-10-48 | 15 | 3 | Dr | | 4 | D | |
| 2282 | 1913 | E. C. Sanders | 1120 | 43 | 60 | ss | P | 42 | 10-27-48 | 12 | 8 | Dr | | 4 | D | |
| 2283 | 1916 | R. Billips | 1065 | 137 | 138 | ss | M | 70 | 11-10-40 | 10 | 10 | | | | | |
| 2284 | | Ivan Stripe | 1060 | | r 77 | | | r41 | | | | Dr | C,E | 4 | D | Water hard. |
| 2285 | 478 | David S. Freeman | 1000 | | 103 | s | Q | 77 | | 6 | 11 | Dr | | 4 | D | |
| 2286 | | R. C. Speid | 1080 | r10 | r 78 | | P | | | | | Dr | C,E | 4 | D | Can be pumped dry easily. Water soft. |
| 2287 | 1035 | John Swast | 1065 | 4 | 114 | ss | P | 54 | 9- 9-46 | | 40 | Dr | | 4 | D | |
| 2288 | 1161 | Frank L. Gray | 1020 | | 51 | g | Q | 31 | 10-24-45 | 5 | 3 | Dr | | 4 | D | |
| 2289 | 825 | H. E. Gallagher | 1080 | 167 | 178 | ss | M | 50 | | 8 | 10 | Dr | | 4 | D | |
| 2290 | 433 | Farrell Attabaugh | 1090 | | 82 | s & g | Q | 67 | | 6 | Small | Dr | | 4 | D | |
| 2291 | 431 | Harry Horton | 1000 | | 78 | g | Q | 55 | | 7 | Small | Dr | | 4 | D | |
| 2292 | | Wiley | 1090 | | r41 | un | Q | r35 | | | | D | T,E | | D | |
| 2293 | 426 | Vance Webb | 1100 | | 186 | s & g | Q | 86 | | 4 | 10 | Dr | | 4 | D | |
| 2294 | 1171 | W. J. Brennanan | 1100 | | 129 | g | Q | 99 | | | | Dr | | 4 | D | |
| 2295 | | J. A. Dykes | 1095 | | 117r | | | | | | | Dr | C,E | 4 | D | Water hard. |
| 2296 | 806 | H. Bachtel | 1080 | | 156 | s & g | Q | 76 | | 6 | Small | Dr | | 4 | D | |
| 2297 | 436 | C. Wellington | 1050 | | 87 | s & g | Q | 65 | | 7 | Small | Dr | | 4 | D | |
| 2298 | 432 | Steve Tomsik | 1040 | | 110 | s & g | Q | 76 | | 10 | Small | Dr | | 4 | D | |
| 2299 | 429 | Charles Osborne | 1050 | | 78 | s & g | Q | 18 | | 6 | Small | | | | | |
| 2300 | 428 | J. R. Roach | 1030 | | 62 | g | Q | 42 | | 7 | Small | | | | | |
| 2301 | 1034 | Charles Knox | 1060 | | 162 | s & g | Q | 102 | 9- 6-47 | 5 | 12 | | | | | |
| 2302 | 417 | Steve Stored | 1040 | | 80 | s & g | Q | 55 | | 5 | 6 | | | | | |
| 2303 | | C. J. Johnson | 1040 | | | | | | | | | | | | | Water hard. |
| 2304 | 435 | Clyde Miller | 990 | | 62 | g | Q | 30 | | 7 | Small | | | | | |
| 2305 | 434 | Steve Schneider | 985 | | 60 | g | Q | | | | | | | | | Flows. |
| 2306 | | M. E. Lukats | 965 | | r38 | s & g(r) | Q | r11 | | | | Dr | C,E | 4 | D,S | Water contains iron. |
| 2307 | 1374 | Columbia Chemical | 950 | | 60 | s & g | Q | | | | | Dr | | 6 | T | |
| 2308 | 1725 | do | 960 | 45 | 56 | s & g | Q | | | | | Dr | | 3 | T | |
| 2309 | 1381 | do | 960 | | 95 | s & g | Q | | | | | Dr | | 6 | T | Water contains CaCl. |
| 2310 | | Electromelt Casting Co. | 1060 | | | s & g(r) | Q | r 3 | | | | Dr | T,E | 8 | C | Water contains CaCl. |
| 2311 | | Galat Packing Co. | 1025 | | r 40 | s (r) | Q | r 2 | | 300 | | Dr | T,E | 30 | I | Well screened in fine sand. Water soft. |
| 2312 | 514 | W. M. Hall | 1020 | 26 | 60 | ss | P | 31 | | 12 | 2 | Dr | | 4 | D | |
| 2313 | 534 | Clarence Lemon | 1085 | 21 | 36 | ss | P | 20 | | 12 | 2 | Dr | | 4 | D | |
| 2314 | 531 | George Mudden | 1090 | 25 | 53 | ss | P | 29 | | 8 | Small | Dr | | 4 | D | |
| 2315 | 519 | Frank Woodlee | 1045 | 16 | 49 | ss | P | 20 | | 8 | 5 | Dr | | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPRINGFIELD TOWNSHIP | | | | | | | | | | | | | | | | |
| 2400 | | R. A. Callahan | 1110 | | | sh | P | | | | | Dr | | | D | Approximate location. Analysis given in text. |
| 2401 | 1047 | Goodyear Rubber Co. | 1010 | 36 | 116 | s & g | Q | | | | | Dr | | | T | Flows. |
| 2402 | 1048 | do | 1010 | 50 | 105 | s & g | Q | 10 | | | | Dr | | | T | |
| 2403 | 1049 | do | 1005 | | 155 | | | 13 | | | | Dr | | | T | |
| 2404 | 1050 | do | 1010 | 14 | 63 | | | | | | | Dr | | | T | |
| 2405 | 1051 | do | 1010 | | 135 | | | 10 | 4-13-17 | | | Dr | | | T | |
| 2406 | 1053 | do | 1025 | | 80 | | | | | | | Dr | | | T | |
| 2407 | 1054 | do | 1015 | | 140 | | | | | | | Dr | | | T | |
| 2408 | 1055 | do | 1025 | | 150 | | | | | | | Dr | | | T | |
| 2409 | 1056 | do | 1024 m | | 93 | s & g | Q | | | | | Dr | T,E | 24 | I | |
| 2410 | 1057 | do | 1025 | 32 | 73 | | | | | | | Dr | | | T | |
| 2411 | 1058 | do | 1025 | 7 | 51 | | | | | | | Dr | | | T | |
| 2412 | 1065 | do | 1025 | 32 | 125 | | | | | | | Dr | | | T | |
| 2413 | 1071 | do | 1020 | | 83 | | | | | | | Dr | | | T | |
| 2414 | | do | 1021 m | | 50 | | | | | | | Dr | | | T | |
| 2415 | 1075 | do | 1023 m | | 48 | | | | | | | Dr | | | T | |
| 2416 | 1077 | do | 1025 | 110 | 115 | | | | | | | Dr | | | T | |
| 2417 | 1078 | do | 1020 | 120 | 126 | | | | | | | Dr | | | T | |
| 2418 | 1081 | do | 1020 | 70 | 77 | | | | | | | Dr | | | T | |
| 2419 | 1085 | do | 1015 | 40 | 48 | | | | | | | Dr | | | T | |
| 2420 | 1086 | do | 1040 | | 125 | | | | | | | Dr | | | T | |
| 2421 | 1087 | do | 1010 | 92 | 100 | | | | | | | Dr | | | T | |
| 2422 | 1088 | do | 1020 | 25 | 40 | | | | | | | Dr | | | T | |
| 2423 | 1089 | do | 1020 | | 110 | | | | | | | Dr | | | T | |
| 2424 | 1090 | do | 1036 m | | 51 | | | | | | | Dr | | | T | |
| 2425 | 1091 | do | 1010 | 90 | 97 | | | | | | | Dr | | | T | |
| 2426 | 1092 | do | 1020 | 123 | 126 | | | | | | | Dr | | | T | |
| 2427 | 1093 | do | 1047 m | | 63 | | | 36 | 1943 | | | Dr | | | T | |
| 2428 | 1094 | do | 1015 | 53 | 192 | | | | | | | Dr | | | T | |
| 2429 | 1095 | do | 1046 m | | 56 | | | 36 | | | | Dr | | | T | |
| 2430 | 1096 | do | 1036 m | 38 | 38 | | | | | | | Dr | | | T | |
| 2431 | 1097 | do | 1019 m | | 36 | | | 8 | | | | Dr | | | T | |
| 2432 | 1098 | do | 1023 m | | 35 | | | 16 | | | | Dr | | | T | |
| 2433 | 1099 | do | 1042 m | | 53 | | | | | | | Dr | | | T | |
| 2434 | 1100 | do | 1082 m | 10 | 31 | | | 10 | | | | Dr | | | T | |
| 2435 | 1101 | do | 1023 m | | 43 | | | 19 | | | | Dr | | | T | |
| 2436 | 1102 | do | 1013 m | 23 | 23 | | | 6 | | | | Dr | | | T | |
| 2437 | 1103 | do | 1013 m | | 35 | | | 15 | | | | Dr | | | T | |
| 2438 | | do | 1007 m | | 51 | | | 21 | | | | Dr | | | T | |
| 2439 | 1105 | do | 1007 m | | 45 | | | 17 | | | | Dr | | | T | |
| 2440 | 1106 | do | 1009 m | 78 | 83 | | | 16 | | | | Dr | | | T | |
| 2441 | 1107 | do | 1009 m | | 38 | | | 15 | | | | Dr | | | T | |
| 2442 | 1108 | do | 1009 m | | 48 | | | 21 | | | | Dr | | | T | |
| 2443 | 1109 | do | 1003 m | | 150 | s & g | Q | | | | | Dr | | 24 | A | |

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPRINGFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | | | |
| 2444 | 1114 | Goodyear Rubber Co. | 1007m | | 72 | | | 18 | | | | Dr | | | T | |
| 2445 | 1115 | do | 1002m | | 45 | | | 12 | | | | Dr | | | T | |
| 2446 | 1116 | do | 1003m | | 48 | | | 11 | | | | Dr | | | T | |
| 2447 | 1117 | do | 1006m | 28 | 22 | | | | | | | Dr | | | T | |
| 2448 | | do | 1019m | | 71 | | | 34 | | | | Dr | | | T | |
| 2449 | 1120 | do | 1024m | | 45 | | | 22 | | | | Dr | | | T | |
| 2450 | | do | 1017m | | 65 | | | 12 | | | | Dr | | | T | |
| 2451 | 1122 | do | 1019m | | 44 | | | 14 | | | | Dr | | | T | |
| 2452 | 1128 | do | 1027m | | 121 | s & g | Q | 7 | | | | Dr | | 24 | A | |
| 2453 | 1130 | do | 1017m | | 44 | | | 15 | | | | Dr | | | T | |
| 2454 | 1131 | do | 1019m | | 44 | | | 18 | | | | Dr | | | T | |
| 2455 | 1132 | do | 1034m | | 62 | | | 35 | | | | Dr | | | T | |
| 2456 | 1133 | do | 1022m | | 42 | | | 18 | | | | Dr | | | T | |
| 2457 | 1134 | do | 1040m | | 51 | | | 30 | | | | Dr | | | T | |
| 2458 | 1135 | do | 1025m | | 41 | | | 15 | | | | Dr | | | T | |
| 2459 | 1136 | do | 1026m | | 39 | | | 7 | | | | Dr | | | T | |
| 2460 | 1137 | do | 1023m | | 32 | | | 12 | | | | Dr | | | T | |
| 2461 | | do | 1025m | | 41 | | | | | | | Dr | | | T | |
| 2462 | | do | 1008m | | 53 | | | 20 | | | | Dr | | | T | |
| 2463 | 1140 | do | 1001m | | 50 | | | 10 | | | | Dr | | | T | |
| 2464 | 1141 | do | 1001m | | 104 | | | 2 | | | | Dr | | | T | |
| 2465 | 1177 | Mohawk Rubber Co. | 1000 | 8 | 355 | sh, ss | M?, P? | 20 | | | | Dr | | | I | |
| 2466 | 790 | C. Overfield | 1100 | 12 | 100 | sh | P | 40 | | 10 | 40 | Dr | | 4 | D | |
| 2467 | 1738 | General Rubber Co. | 1010 | | 142 | | | 20 | 1940 | | | Dr | | | T | |
| 2468 | 1739 | do | 1010 | 123 | 132 | | | 24 | 1940 | | | Dr | | | T | |
| 2469 | 1740 | do | 1010 | 138 | 142 | | | 29 | 1940 | | | Dr | | | T | |
| 2470 | 1743 | do | 1010 | 136 | 142 | | | | | | | Dr | | | T | |
| 2471 | 1742 | do | 1000 | 110 | 116 | | | 15 | 5- 2-40 | | | Dr | | | T | |
| 2472 | | American Hard Rubber Co. | 1005 | | 120 | s & g(r) | Q | | | 300 | | Dr | | 24 | I | |
| 2473 | 1741 | General Rubber Co. | 1010 | 20 | 26 | | | | | | | Dr | | | T | |
| 2474 | 812 | C. W. Hawkins | 1050 | 18 | 31 | ss | P | 13 | | 12 | 3 | Dr | | 4 | D | |
| 2475 | 827 | Thomas C. Jones | 1050 | 26 | 56 | ss | P | 16 | | 36 | Small | Dr | | 4 | D | |
| 2476 | 1059 | Goodyear Rubber Co. | 1035 | 14 | 51 | | | | | | | Dr | | | T | |
| 2477 | 1060 | do | 1040 | 34 | 74 | | | | | | | Dr | | | T | |
| 2478 | 1061 | do | 1050 | 9 | 44 | | | | | | | Dr | | | T | |
| 2479 | 226 | L. Wilgues | 1130 | | 50 | ss | P | 30 | | 15 | Small | Dr | | 4 | D | |
| 2480 | 817 | F. A. Swinehart | 1140 | 13 | 56 | ss, sh | P | 30 | | 10 | 20 | Dr | | 4 | D | |
| 2481 | 1679 | A. C. and Y. Railroad | 1043m | 14 | 130 | ss | P | | 10-18-28 | | | Dr | | | T | Flows. |
| 2482 | 1621 | R. C. Boyle | 1055 | 29 | 60 | ss | P | 31 | 2- 3-48 | 15 | 9 | Dr | | 4 | D | |
| 2483 | 1680 | A. C. & Y. Railroad | 1040 | 8 | 149 | ss | P | | 10-18-28 | | | Dr | | | T | Flows 9 feet above land surface. |
| 2484 | 853 | do | 1110 | 59 | 72 | sh | P | 45 | | 15 | Small | Dr | | 4 | I | |
| 2485 | 854 | Robinson Clay Products Co. | 1080 | 14 | 58 | sh | P | 8 | | 12 | 4 | Dr | | 4 | I | |

| Well no. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPRINGFIELD TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2486 | 243 | W. C. Benear | 1140 | 13 | 27 | ss | P | 9 | | 10 | 4 | Dr | | | D | |
| 2487 | 244 | C. Davidson | 1135 | 48 | 54 | ss | P | 18 | | 10 | 5 | Dr | | 4 | D | |
| 2488 | 237 | Burl White | 1135 | 42 | 68 | sh,ss | P | 40 | | 6 | 10 | Dr | | 3½ | D | |
| 2489 | 231 | J. C. Stevens | 1140 | 20 | 35 | | P | 18 | | 20 | Small | Dr | | 2½ | D | |
| 2490 | 228 | Leal Den | 1170 | 20 | 61 | | P | 21 | | 10 | Small | Dr | | 2½ | D | |
| 2491 | 229 | Gary H. Hoover | 1170 | 20 | 40 | | P | 1 | | 10 | Small | Dr | | | D | |
| 2492 | 1486 | Everett Williams | 1165 | 29 | 47 | sh,ss | P | 20 | 2-24-48 | 5 | Small | Dr | | 5 | D | |
| 2493 | 1484 | Otis Corley | 1160 | 35 | 52 | ss,sh | P | 35 | 2-27-48 | | | Dr | | 5 | D | |
| 2494 | 297 | W. Biolsi | 1140 | 26 | 98 | sh | P | 56 | | 10 | 21 | Dr | | 4 | D | |
| 2495 | 1849 | Chestnut Ridge Dairy | 1090 | 35 | 99 | sh | P | 28 | 10- 5-48 | 15 | | Dr | | 4 | I | |
| 2496 | 1062 | Goodyear Rubber Co. | 1070 | 15 | 44 | | | | | | | Dr | | | T | |
| 2497 | 1544 | E. C. Griffin | 1095 | 35 | 72 | ss | P | 31 | 10-22-47 | 8 | 24 | Dr | | 4 | D | |
| 2498 | 1855 | Porter Sturn | 1100 | 24 | 52 | ss | P | 22 | 10- 1-48 | 10 | | Dr | | 4 | D | |
| 2499 | 242 | T. Bean | 1090 | 17 | 68 | ss | P | 27 | | 8 | Small | Dr | | 4 | D | |
| 2500 | 1076 | Goodyear Rubber Co. | 1090 | 20 | 27 | | | | | | | Dr | | | T | |
| 2501 | 1069 | do | 1050 | 55 | 94 | | | | | | | Dr | | | T | |
| 2502 | 1066 | do | 1025 | 80 | 85 | | | | | | | Dr | | | T | |
| 2503 | 1073 | do | 1120 | 45 | 47 | g | Q | | | | | Dr | | | T | |
| 2504 | 1079 | do | 1120 | 40 | 45 | | | | | | | Dr | | | T | |
| 2505 | 1072 | do | 1100 | 40 | 56 | g | Q | | | | | Dr | | | T | |
| 2506 | 1068 | do | 1050 | 62 | 65 | | | | | | | Dr | | | T | |
| 2507 | 1862 | Charles Kesselring | 1040 | 67 | 160 | ss | M?,P? | 35 | 1-10-49 | 50 | 65 | Dr | | 6 | I | |
| 2508 | 1119 | Goodyear Rubber Co. | 1040 | 26 | 26 | | | | | | | Dr | | | T | |
| 2509 | 1067 | do | 1025 | 30 | 56 | | | | | | | Dr | | | T | |
| 2510 | 1070 | do | 1040 | 29 | 30 | | | | | | | Dr | | | T | |
| 2511 | 1456 | E. Phillips | 1050 | 21 | 82 | ss | P | 50 | 10- 8-47 | 6 | 22 | Dr | | 4 | D | |
| 2512 | 814 | James A. Wood | 1040 | 22 | 68 | ss | P | 35 | | 6 | 10 | Dr | | 4 | D | |
| 2513 | 1384 | Walter Richards | 1080 | 11 | 80 | ss | P | 45 | 10- 6-47 | 5 | 30 | Dr | AL,E | 4 | D | |
| 2514 | 830 | Wilbur Terry | 1080 | 28 | 50 | sh | P | 20 | | 6 | 4 | Dr | | 4 | D | |
| 2515 | 1453 | Paul E. Durst | 1170 | 22 | 46 | ss,sh | P | 38 | 10-15-47 | | | Dr | | 4 | D | |
| 2516 | | R. V. Hosey | 1125 | 28 r | 78 r | | | 15 r | | | | Dr | AL,E | 4 | D | Water soft. |
| 2517 | 1042 | C. Remakler | 1130 | 40 | 56 | sh | P | 8 | 9-24-46 | | | Dr | | 4 | D | |
| 2518 | 1322 | Summit Manufactory | 1130 | 53 | 90 | sh,ss | P | 16 | 7-21-47 | | | Dr | | 4 | I | |
| 2519 | 1080 | Goodyear Rubber Co. | 1090 | 35 | 45 | | | | | | | Dr | | | T | |
| 2520 | 1041 | James Widerman | 1110 | 17 | 32 | sh | P | 7 | 9-26-46 | | | Dr | | 4 | D | |
| 2521 | | R. T. Carpenter | 1110 | | 75 r | | | 25 r | | | | Dr | C,E | 4 | D | Water hard. |
| 2522 | 1082 | Goodyear Rubber Co. | 1080 | 95 | 97 | g | Q | | | | | Dr | | | T | |
| 2523 | 1083 | do | 1075 | 72 | 74 | g | Q | | | | | Dr | | | T | |
| 2524 | 1474 | R. C. Crawford | 1080 | | 38 | s & g | Q | 8 | 10- 4-47 | 10 | 8 | Dr | | 4 | D | |
| 2525 | 246 | McCabe | 1085 | 30 | 59 | ss | P | 39 | | 10 | 15 | Dr | | 4 | D | |
| 2526 | 1064 | Goodyear Rubber Co. | 1080 | 57 | 84 | g | Q | | | | | Dr | | | T | |
| 2527 | 245 | H. C. Eller | 1090 | 22 | 43 | ss | P | 25 | | 15 | 2 | Dr | | 4 | D | |
| 2528 | 1487 | E. F. Williams | 1090 | 15 | 37 | ss | P | 20 | | 10 | Small | Dr | | 5 | D | |
| 2529 | 240 | Williard Webb | 1080 | 73 | 92 | ss | P | 12 | | 15 | 2 | Dr | | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPRINGFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | | | |
| 2530 | 1063 | Goodyear Rubber Co. | 1080 | 68 | 119 | g | Q | | | | | Dr | | | T | |
| 2531 | 1535 | J. M. Werner | 1090 | 28 | 44 | ss | P | 8 | | 25 | 6 | Dr | C,E | 4 | D | |
| 2532 | 259 | R. W. Thompson | 1120 | 43 | 60 | ss | P | 12 | | 25 | 1 | Dr | | 4 | D | |
| 2533 | 241 | Frank Higley | 1135 | 45 | 74 | sh | P | 40 | | 10 | 5 | Dr | | 4 | D | |
| 2534 | 1567 | Chestnut Ridge Dairy | 1145 | 34 | 80 | sh | P | 12 | 4- 4-48 | 30 | 3 | Dr | | 4 | D | |
| 2535 | 296 | L. J. Taylor | 1140 | 40 | 48 | ss | P | 22 | | 12 | 1 | Dr | | 4 | D | |
| 2536 | 258 | G. F. Queer | 1120 | 18 | 70 | sh | P | 45 | | 6 | 20 | Dr | | 4 | D | |
| 2537 | 1853 | Herbert Kline | 1190 | 24 | 76 | ss,sh | P | 35 | 10- 7-48 | 7 | | Dr | | 4 | D | |
| 2538 | 1566 | William McGrady | 1170 | 14 | 36 | sh | P | 13 | 5-20-48 | 20 | 7 | Dr | | 4 | D | |
| 2539 | 860 | E. H. White | 1155 | 39 | 79 | sh | P | 35 | | 12 | 15 | Dr | | 4 | D | |
| 2540 | 267 | Robert Baum | 1195 | 12 | 18 | sh | P | 20 | | 10 | Small | Dr | | 4 | D | |
| 2541 | 266 | Harry Shaw | 1145 | 30 | 43 | ss | P | 11 | | 15 | 7 | Dr | | 4 | D | |
| 2542 | 1852 | Richard B. Trumphowe | 1170 | 35 | 54 | ss,sh | P | 32 | | 10 | Small | Dr | | 4 | D | |
| 2543 | 861 | Earl Shotts | 1190 | 73 | 88 | sh | P | 38 | | 10 | 20 | Dr | | 4 | D | |
| 2544 | 1851 | George Krail | 1165 | 53 | 123 | sh | P | 70 | 8-20-48 | 7 | Small | Dr | | 6 | D | |
| 2545 | 254 | J. S. Wright | 1170 | 38 | 59 | sh | P | 6 | | 10 | 39 | Dr | | 4 | D | |
| 2546 | 253 | J. B. Wright | 1180 | 36 | 74 | sh | P | 4 | | 10 | 50 | Dr | | 4 | D | |
| 2547 | 1850 | J. S. Wright | 1185 | 31 | 69 | sh | P | 40 | 1-28-49 | 20 | | Dr | | 6 | D | |
| 2548 | 265 | Della Mathews | 1145 | 32 | 53 | sh | P | 8 | | 2 | 37 | Dr | | 4 | D | |
| 2549 | | A. B. Puesley | 1085 | | 15 | un | Q | m12 | 9-10-47 | | | D | C,E | 36 | D,S | Water soft. |
| 2550 | 264 | M. F. Hogan | 1145 | 18 | 54 | sh | P | 28 | | 6 | 10 | Dr | | 4 | D | |
| 2551 | 1790 | R. M. Pugh | 1140 | 10 | 141 | sh | P | 80 | 1- 4-48 | 5 | | Dr | | 4 | D | |
| 2552 | 262 | E. V. Febry | 1140 | 18 | 95 | sh,ss | P | 40 | | 8 | Small | Dr | | 4 | D | |
| 2553 | 260 | Howard Crane | 1115 | 14 | 46 | sh | P | 9 | 10-16-42 | 8 | 8 | Dr | | 4 | D | |
| 2554 | 1854 | Melvin Trull | 1120 | 22 | 41 | sh | P | 20 | 11-27-48 | 10 | | Dr | | 4 | D | |
| 2555 | 1011 | T. J. Dodd | 1090 | 26 | 60 | ss | P | 3 | 6-10-46 | 20 | Small | Dr | AL,E | 6 | D | |
| 2556 | 1473 | F. D. Ferris | 1135 | 36 | 46 | ss | P | 7 | 10- 3-47 | 10 | 17 | Dr | | 4 | D | |
| 2557 | 250 | E. G. Calvin | 1135 | 17 | 43 | sh,ss | P | 16 | | 9 | 4 | Dr | | 4 | D | |
| 2558 | 252 | W. C. Thomas | 1150 | 42 | 90 | sh,ss | P | 60 | | 10 | 10 | Dr | | 4 | D | |
| 2559 | 255 | C. A. Bodeman | 1140 | 41 | 58 | ss | P | 28 | | 9 | Small | Dr | | 4 | D | |
| 2560 | 256 | O. D. McCambridge | 1160 | | 39 | s & g | Q | 18 | | 10 | 4 | Dr | | 4 | D | |
| 2561 | 257 | H. D. Drushal | 1160 | | 66 | s & g | Q | 45 | | 15 | Small | Dr | | 4 | D | |
| 2562 | 269 | W. L. Callahan | 1240 | | 60 | s & g | Q | 32 | | 6 | 6 | Dr | | 4 | D | |
| 2563 | 272 | L. S. Stackhouse | 1145 | 47 | 72 | sh | P | 23 | | 6 | 15 | Dr | | 4 | D | |
| 2564 | 271 | Earl James | 1140 | 33 | 65 | sh | P | 15 | | 10 | Small | Dr | | 4 | D | |
| 2565 | 800 | Village of Lakemore | 1105 | 37 | 283 | ss,sh | M?,P? | 44 | 9- -44 | 110 | 16 | Dr | T,E | 12 | PS | Average daily pumpage from both wells—25 gpm. Analysis given in text. |
| 2566 | 799 | do | 1100 | 47 | 250 | ss,sh | M?,P? | 63 | 9- -44 | 150 | 50 | Dr | T,E | 12 | PS | do |
| 2567 | 801 | Shaw Sanitarium | 1120 | 103 | 109 | s & g | Q | 52 | | 125 | | Dr | | 10 | PS | |
| 2568 | 1372 | do | 1140 | 111 | 111 | s & g | Q | 37 | | | | Dr | | 10 | PS | |
| 2569 | 230 | C. E. Capple | 1120 | | 53 | g | Q | 23 | | 6 | 17 | Dr | | 4 | D | |
| 2570 | 1810 | Frank Capple | 1120 | 70 | 100 | ss | P | 30 | 10-26-48 | 10 | | Dr | | 4 | D | |
| 2571 | 1546 | Leo Cauyhran | 1120 | 70 | 100 | sh | P | 24 | 10- 1-47 | 10 | 20 | Dr | | 4 | D | |
| 2572 | 281 | F. H. Plant | 1140 | | 65 | s & g | Q | 40 | | 6 | Small | Dr | | 4 | D | |

TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPRINGFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | | | |
| 2573 | 868 | T. W. Goodman | 1120 | | 49 | s & g | Q | 25 | | 6 | 5 | Dr | | | D | |
| 2574 | 280 | J. C. Werner | 1120 | | 63 | g | Q | 15 | | 9 | Small | Dr | | 4 | D | |
| 2575 | 279 | C. F. Wade | 1120 | | 30 | g | Q | 21 | | 6 | | Dr | | 4 | D | |
| 2576 | 862 | Harry Metzner | 1120 | 106 | 135 | sh,ss | P | 25 | | 10 | Small | Dr | | 4 | D | |
| 2577 | 285 | Emmett Machine Co. | 1115 | 114 | 137 | ss,sh | P | 21 | | 25 | 30 | Dr | | 4 | I | |
| 2578 | 1856 | D. R. Fisk | 1120 | | 46 | s & g | Q | 31 | 7-14-48 | | | Dr | | 4 | D | |
| 2579 | | R. W. Price | 1110 | | r 64 | | | | | | | Dr | C,E | 4 | D | Water soft. |
| 2580 | 865 | Leroy Cabb | 1080 | 66 | 74 | ss | P | 34 | | 15 | 15 | Dr | | 4 | D | |
| 2581 | 283 | H. T. Chenowith | 1085 | 6 | 29 | ss | P | 10 | | 15 | 5 | Dr | | 4 | D | |
| 2582 | 284 | A. T. Dundery | 1100 | 22 | 37 | ss | P | 15 | | 10 | 10 | Dr | | 4 | D | |
| 2583 | | E. W. Cietat | 1090 | | r 87 | | | | | | | Dr | AL,E | 4 | D | Water soft. |
| 2584 | | R. T. Smith | 1070 | | | | | | | | | Dr | | | D | Water hard. |
| 2585 | 1470 | Paul Esdell | 1060 | | 40 | s & g | Q | 9 | 11-10-47 | 15 | 4 | Dr | | 4 | D | |
| 2586 | 1469 | B. Cornmesser | 1070 | 92 | 94 | ss | P | 18 | 11- 1-47 | 10 | 15 | Dr | | 4 | D | |
| 2587 | 282 | E. W. Dethloff | 1070 | 85 | 106 | sh | P | 31 | | 6 | 20 | Dr | | 4 | D | |
| 2588 | 1779 | Michael Boyd | 1140 | 12 | 51 | sh,ss | P | 18 | 6- 4-48 | 5 | 2 | Dr | | 4 | D | |
| 2589 | 274 | L. A. Chathman | 1100 | 32 | 67 | sh | P | 25 | | 15 | 15 | Dr | | 4 | D | |
| 2590 | 1547 | Hillview Cottages | 1130 | 15 | 180 | sh,ss | P | 75 | 4-23-48 | 10 | 22 | Dr | T,E | 6 | PS | |
| 2591 | | Becker | 1020 | | r 75 | s & g(r) | Q | r15 | | | | Dr | C,E | 4 | D,S | Water contains iron. |
| 2592 | | F. M. Fleming | 1010 | | r 37 | | | | | | | Dv | C,E | 1 | D | |
| 2593 | 275 | J. Lauer | 1025 | 39 | 57 | ss | P | 21 | | 10 | 30 | Dr | | 4 | D | |
| 2594 | 1542 | H. A. Schott | 1020 | | 64 | g | Q | | 10-29-47 | | | Dr | | 4 | D | Flows. |
| 2595 | 1637 | A. O. Reed | 1035 | | 46 | s & g | Q | 30 | 8- 8-48 | 8 | Small | Dr | | 4 | D | |
| 2596 | | Arfons | 1130 | r90 | r190 | | | 165r | | | | Dr | AL,E | 4 | D | Can be pumped dry easily. Water hard. |
| 2597 | 287 | Wm. J. Kiefer | 1070 | 60 | 80 | sh | P | 48 | | 6 | 15 | Dr | | 4 | D | |
| 2598 | 863 | R. Lee | 1080 | 28 | 102 | sh,ss | P | 80 | | 15 | Small | Dr | | 4 | D | |
| 2599 | | Frock | 1100 | | r 90 | | | r30 | | | | Dr | C,E | 4 | D,S | Contains iron. |
| 2600 | | M. G. Killian | 1085 | | r 27 | g (r) | Q | | | | | D | T,E | 36 | D,S | Water soft. |
| 2601 | 288 | C. H. Gieb | 1040 | 73 | 81 | ss,sh | P | 25 | | 10 | Small | Dr | | 4 | D | |
| 2602 | 1002 | Ritchie and Deason | 1060 | | 37 | g | Q | 6 | 4-23-46 | 10 | 11 | Dr | | 4 | D | |
| 2603 | 289 | Ray Tritt | 1070 | | 50 | | | 28 | | 3 | 8 | Dr | | 4 | D | |
| 2604 | | Lee Higy | 1040 | | r 25 | s & g(r) | P | | | | | Dv | C,E | 1 | D | Analysis given in text. |
| 2605 | | E. R. Reis | 1070 | | r 35 | | | r 23 | 1937 | | | Dr | C,E | 3 | D,S | |
| 2606 | | R. Peterson | 1120 | | r 65 | | | m 14 | 9-10-47 | | | Dr | T,E | 4 | D | Water soft. |
| 2607 | 286 | John Margan | 1100 | | 14 | g | Q | 5 | | 6 | 3 | Dr | | 4 | D | |
| 2608 | | Geiger | 1135 | | r 27 | s (r) | Q | | | | | Dv | C,E | 1 | D | Water hard. |
| 2609 | 1545 | H. L. Hunter | 1060 | | 42 | s & g | Q | 25 | 11- 3-47 | | | Dr | | 4 | D | |
| 2610 | | Stanley Johnson | 1160 | | r 20 ? | | | | | | | Dv | C,E | 1 | D | |
| 2611 | 1471 | R. D. Trant | 1150 | | 40 | s & g | Q | 28 | 12-23-47 | 7 | 6 | Dr | | 4 | D | |
| 2612 | | Brown | 1145 | | m 38 | | | 23 | | | | Dr | | 4 | D | |
| 2613 | 1472 | J. Korvin | 1140 | | 20 | s & g | Q | 10 | 1- 8-48 | 4 | 6 | Dr | | 4 | D | |
| 2614 | 291 | R. Schrock | 1140 | 114 | 154 | sh,ss | P | 75 | | 7 | 45 | Dr | | 4 | D | |
| 2615 | 1832 | R. I. Schoemaker | 1140 | 118 | 143 | ss | P | 75 | 11-30-48 | | | Dr | | 4 | D | |
| 2616 | 1833 | D. R. Burton | 1110 | | 192 | s & g | Q | 45 | 10-20-48 | 10 | | Dr | | 6 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **SPRINGFIELD TOWNSHIP**—(Continued) | | | | | | | | | | | | | | |
| 2617 | 1831 | C. A. Wellspring | 1125 | | 183 | s & g | Q | 45 | 8-12-48 | 10 | Small | Dr | | 4 | D | |
| 2618 | | K. C. Parker | 1115 | | r 97 | | | 54 | | | | Dr | T,E | 4 | D | Water very hard. |
| 2619 | | Ritter | 1130 | | | | | | | | | Dr | T,E | 4 | D,S | Water hard. |
| 2620 | 1676 | Arch McIntyre | 1160 | | 47 | s & g | Q | 35 | 7- 5-48 | 10 | Small | Dr | | 5 | D | |
| 2621 | 1857 | Claude E. Ewart | 1150 | 19 | 92 | ss,sh | P | 28 | 1-19-49 | 10 | | Dr | | 6 | D | |
| 2622 | | Brumbaugh | 1060 | | r 75 | | | r 12 | 1946 | | | Dr | C,E | 4 | D,S | Water hard. |
| 2623 | | Goodyear Rubber Co. | 1010m | | r102 | s & g | Q | | | | | Dr | | 16 | A | |
| 2624 | | do | 1019m | | 119 | s & g | Q | | | | | Dr | | 20 | A | |
| 2625 | | do | 1023m | | 132 | s & g | Q | | | | | Dr | | 20 | O | |
| 2626 | | do | 1019m | | 140 | s & g | Q | | | | | Dr | | 20 | A | |
| 2627 | | do | 1007m | | 80 | s & g | Q | | | | | Dr | T,E | 24 | IO | |
| 2628 | | do | 1005m | | 84 | s & g | Q | | | | | Dr | T,E | 24 | I | |
| 2629 | | do | 1020m | | 86 | s & g | Q | | | | | Dr | | 24 | A | |
| 2630 | | do | 1021m | | 86 | s & g | A | | | | | Dr | T,E | 24 | I | |
| 2631 | | do | 1008m | | 138 | s & g | Q | | | | | Dr | T,E | 30 | I | Analysis given in text. |
| 2632 | | do | 1011m | | 142 | s & g | Q | | | | | Dr | | 30 | A | |
| 2633 | | do | 1024m | | 105 | s & g | Q | | | | | Dr | | 30 | A | |
| 2634 | | do | 1020m | | 108 | s & g | Q | | | | | Dr | T,E | 30 | I | |
| 2635 | | do | 1014m | | 107 | s & g | Q | | | | | Dr | | 30 | I | |
| 2636 | | do | 1027m | | 118 | s & g | Q | | | | | Dr | | 24 | I | Pumping test 3-22-44. |
| 2637 | | do | 1018m | | 88 | s & g | Q | | | | | Dr | | 24 | I | |
| 2638 | | do | 1008m | | 140 | s & g | Q | | | | | Dr | | 24 | I | |
| 2639 | | do | 1015m | | | s & g | Q | | | | | Dr | | 24 | I | |
| 2640 | 1902 | Homer Cross | 1040 | 37 | 61 | ss | P | 31 | 10-21-48 | 20 | 4 | Dr | | 4 | D | |
| 2641 | 1917 | W. L. Callahan | 1180 | 31 | 88 | sh | P | 33 | 7-24-48 | 10 | 22 | Dr | | 4 | D | |
| 2642 | 1918 | John Gadas | 1175 | 17 | 23 | sh | P | 10 | 6- 2-48 | 12 | 5 | Dr | | 4 | D | |
| 2643 | 1919 | George Nolte | 1165 | | 34 | g | P | 14 | 6- 1-48 | 20 | 3 | Dr | | 4 | D | |
| 2644 | 1920 | J. L. Shober | 1110 | 32 | 39 | ss | P | 18 | 9-23-48 | 15 | 6 | Dr | | 4 | D | |
| 2645 | 1921 | C. A. Stephens | 1150 | 16 | 54 | ss | P | | 4-26-49 | 15 | 20 | Dr | | 4 | D | Flows. |
| 2646 | 1922 | Donald Lee | 1150 | 31 | 58 | sh | P | 16 | 6-17-48 | 12 | 24 | Dr | | 4 | D | |
| 2647 | 1923 | Willard Noll | 1155 | 24 | 53 | sh | P | 10 | 11-23-48 | 10 | 15 | Dr | | 4 | D | |
| 2648 | 1924 | G. C. Hinkle | 1150 | | 31 | g | Q | | 6-14-49 | 20 | 8 | Dr | | 4 | D | Flows. |
| 2649 | 1925 | Ronald Moyer | 1150 | 27 | 36 | sh | P | 2 | 6-16-49 | 7 | 5 | Dr | | 4 | D | |
| 2650 | 1926 | M. L. Eckard | 1125 | | 109 | | | 21 | 5-12-49 | 12 | Small | Dr | | 4 | D | |
| 2651 | 1927 | M. P. Romo | 1120 | 117 | 128 | ss | P | 29 | 6-10-49 | 12 | 23 | Dr | | 4 | D | |
| 2652 | 1928 | Harold Whittaker | 1155 | | 78 | s | Q | 26 | 6-11-48 | 18 | 9 | Dr | | 4 | D | |
| 2653 | 1929 | J. R. Kent | 1100 | | 42 | s & g | Q | 21 | | | | Dr | | 4 | D | |
| 2654 | 1930 | L. F. Callaghan | 1100 | | 32 | s & g | Q | 16 | | 10 | | Dr | | 4 | D | |
| 2655 | 1931 | G. Johnson | 1110 | 27 | 31 | sh | P | 16 | | | | Dr | | 4 | D | |
| 2656 | 1932 | J. R. Hunter | 1125 | 31 | 34 | sh | P | 10 | 5- 9-49 | 4 | 16 | Dr | | 4 | D | |
| 2657 | 1933 | M. Marcinko | 1145 | 9 | 190 | ss,sh | P | 130 | 7- 6-48 | 7 | 15 | Dr | | 4 | D | |
| 2658 | 1934 | F. Montagno | 1080 | | 36 | g | Q | 23 | 6-16-48 | 10 | 5 | Dr | | 4 | D | |
| 2659 | 1935 | T. Malenock | 1070 | 24 | 45 | | P | 28 | | | | Dr | | 4 | D | |
| 2660 | 1936 | C. L. Davis | 1015 | 25 | 45 | ss | P | 5 | 12- 8-48 | 9 | 26 | Dr | | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPRINGFIELD TOWNSHIP—(Continued)** | | | | | | | | | | | | | | | | |
| 2661 | 1937 | M. L. Bryant | 1065 | | 54 | s & g | Q | 27 | | | | Dr | | 4 | D | |
| 2662 | 1938 | J. R. Perry | 1065 | | 130 | s | Q | 20 | 8- 3-48 | 10 | 5 | Dr | | 4 | D | |
| 2663 | 1939 | S. Kirkendall | 1110 | 12 | 61 | ss | P | 12 | 5- 5-49 | 10 | | Dr | | 4 | D | |
| 2664 | 1940 | J. N. Simons | 1100 | 17 | 64 | ss | P | 34 | 11-11-48 | 20 | 3 | Dr | | 4 | D | |
| 2665 | 1941 | James Johnson | 1110 | 17 | 57 | ss | P | 35 | | 10 | | Dr | | 4 | D | |
| **FRANKLIN TOWNSHIP** | | | | | | | | | | | | | | | | |
| 2700 | 1942 | C. R. Brinton | 1000 | | 50 | s & g | Q | 23 | | | | Dr | | 4 | D | |
| 2701 | 141 | Mike Blatnick | 1115 | 34 | 60 | ss | P | 14 | | 10 | 5 | Dr | | 4 | | |
| 2702 | 831 | L. Switzer | 1105 | 42 | 59 | ss | P | | | | | Dr | | 4 | | Flows. |
| 2703 | | D. O. Zook | 1100 | | r 63 | | | | | | | Dv | C,E | 1 | | |
| 2704 | 142 | L. Switzer | 1060 | | 26 | g | Q | 8 | | 7 | Small | Dr | | 4 | | |
| 2705 | 1021 | John Martin | 1060 | 40 | 66 | ss | P | 26 | 8-26-46 | | | Dr | | 4 | | |
| 2706 | 1582 | Leonard Kiesling | 1135 | 15 | 114 | sh | P | 70 | 10-28-47 | 10 | | Dr | T,E | 4 | | |
| 2707 | | Barberton Cemetery | 1060 | | | | | m21 | 8-26-47 | | | Dr | C,H | 3 | PS | |
| 2708 | 153 | Grill Church | 1045 | 32 | 50 | ss | P | 26 | | 9 | Small | Dr | | 4 | | |
| 2709 | 154 | Scott Anderson | 1030 | 37 | 40 | ss | P | | | | | Dr | | 4 | | Flows. Water hard. |
| 2710 | 1782 | C. Householder | 1040 | | 48 | s & g | Q | 9 | 9-16-48 | 12 | Small | Dr | C,H | 4 | | |
| 2711 | | C. A. Conner | 1060 | | | | | | | | | Dr | C,E | 4 | | Water hard. |
| 2712 | 143 | David Smith | 1075 | 0 | 63 | ss | P | 26 | | 8 | Small | Dr | | 4 | | |
| 2713 | | F. O. Gern | 1080 | | r 57 | | | | | | | Dr | T,E | 4 | | Water hard. |
| 2714 | | Chas. Hemelry | 1145 | | m 23 | un | Q | m16 | 8-26-47 | | | D | C,H | 36 | D,S | Analysis given in text. |
| 2715 | 1736 | Columbia Chemical Co. | 1120 | 8 | 2834 | ss | P | | | | | Dr | | | Br | |
| 2716 | | do | 1010 | | 90 | | | | | 300 | | Dr | T,E | | I | Wells 2716-2720 incl. used with nearby brine wells to mine salt. Average pumpage from five wells is 550 gpm. Analysis is given in text. |
| 2717 | | do | 1010 | | 90 | | | | | 150 | | Dr | T,E | | I | |
| 2718 | | do | 1010 | | 155 | | | | | 50 | | Dr | T,E | | I | |
| 2719 | | do | 1010 | | 100 | | | | | 150 | | Dr | T,E | | I | |
| 2720 | | do | 1010 | | 87 | | | | | 100 | | Dr | T,E | | I | |
| 2721 | 1726 | do | 975 | | 39 | s & g | Q | 17 | 11-15-46 | | | Dr | | 3 | T | |
| 2722 | | do | 965 | | 68 | | | | | | | Dr | | 6 | T | |
| 2723 | | do | 960 | | 46 | | | | | | | Dr | | 6 | T | |
| 2724 | 144 | H. Smith | 975 | 25 | 95 | ss | P | 55 | | 8 | Small | Dr | | 4 | D | |
| 2725 | | Farrel | 975 | | r 30 | un | Q | m10 | 8-27-47 | | | D | | 24 | A | |
| 2726 | | George B. Baker | 960 | | m 10 | un | Q | m 3 | 8-27-47 | | | D | T,E | 38 | D | Water soft. |
| 2727 | | Walter Garret | 985 | | | s (r) | Q | | 8-27-47 | | | Dv | C,H | 1 | D,S | Adjacent dug well, 11 feet (m) deep; water level 4 feet (m) below land surface. Water soft. |
| 2728 | 832 | F. G. Green | 1055 | | 92 | s & g | Q | 62 | | 10 | Small | Dr | | 4 | D | |
| 2729 | | C. V. Tucker | 1050 | | r 35 | | | | | | | Dv | C,H | 1 | D | |
| 2730 | | C. H. Ross | 1020 | | r 24 | | | | | | | Dv | | 1 | D,S | Water soft. |
| 2731 | 145 | Germano | 1030 | 20 | 82 | ss,sh | M?,P? | 30 | | 5 | 25 | Dr | | 4 | D | |
| 2732 | 1515 | John Rudolf | 1100 | 69 | 108 | ss | P | 86 | 2- 6-48 | 10 | Small | Dr | C,H | 4 | D | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **FRANKLIN TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 2733 | 1516 | V. A. Murray | 1105 | 2 | 129 | sh | P | 83 | 2-20-48 | 10 | 10 | Dr | | 4 | D | |
| 2734 | 1464 | M. D. McClure | 1000 | | 40 | g | Q | 12 | 10- 6-47 | 8 | Small | Dr | | 4 | D | |
| 2735 | 1465 | P. Walters | 1000 | 43 | 45 | ss | P | 24 | 11- 8-47 | 10 | 10 | Dr | | 4 | D | |
| 2736 | 1178 | C. J. Hungerford | 1025 | | 48 | g | Q | | | 4 | | Dr | | 4 | D | |
| 2737 | 1179 | W. McTaggart | 1025 | | 57 | g | P | | | | | Dr | | 4 | D | |
| 2738 | 1309 | S. J. Stroup | 1025 | 22 | 36 | | P | | | | | Dr | | 4 | D | |
| 2739 | 1031 | C. Dunlap | 1025 | | 96 | g | Q | 30 | 10-30-45 | 5 | 5 | Dr | | 4 | D | |
| 2740 | 1591 | W. Grossman | 1020 | 31 | 88 | sh,ss | P | 20 | 6-26-48 | 15 | Small | Dr | | 4 | D | |
| 2741 | 149 | F. Maier | 1010 | | 70 | g | Q | 8 | | 10 | Small | Dr | | 4 | D | |
| 2742 | 148 | Maynard Jobes | 1005 | | 126 | g | Q | 19 | | 10 | Small | Dr | | 4 | D | |
| 2743 | 1187 | Y.M.C.A. | 1000 | | 80 | s & g | Q | 3 | 6-11-47 | 40 | 3 | Dr | AL,E | 5 | PS | |
| 2744 | 1588 | G. L. Smith | 1020 | | 54 | s & g | Q | 22 | 6-21-48 | 10 | 10 | Dr | | 4 | D | |
| 2745 | 156 | Harvy Wymer | 1070 | | 152 | s & g | Q | 25 | | 12 | Small | Dr | | 4 | D | |
| 2746 | 834 | H. T. Ryder | 1020 | 72 | 90 | sh | M | 28 | | 5 | 5 | Dr | | 4 | D | Analysis given in text. |
| 2747 | 761 | W. Freeman | 1070 | 35 | 45 | ss | P | m17 | 8-27-47 | | | Dr | C,H | 4 | D | |
| 2748 | 1490 | M. R. Haught | 1085 | 22 | 40 | ss | P | 12 | 11- 2-47 | 5 | 7 | Dr | | 4 | D | |
| 2749 | 1574 | J. C. Hunter | 1095 | 10 | 60 | ss | P | 41 | 5-20-48 | 8 | 9 | Dr | | 4 | D | |
| 2750 | 1590 | Earl Easterling | 1070 | 28 | 43 | ss | P | 6 | 6- 9-48 | 15 | 6 | Dr | | 4 | D | |
| 2751 | 836 | E. Zellars | 1075 | 22 | 44 | ss | P | 16 | | 12 | Small | Dr | | 4 | D | |
| 2752 | | John Bodnar | 1050 | r36 | r 55 | ss (r) | P | r15 | | | | Dr | AL,E | 4 | D | Water soft. |
| 2753 | 150 | H. Kissinger | 1035 | 47 | 105 | sh,ss | M?,P? | 62 | | 8 | Small | Dr | | 6 | D | |
| 2754 | 1518 | G. E. Starcher | 1020 | 13 | 40 | ss | P | 20 | 3- 5-48 | 6 | 12 | Dr | | 4 | D | |
| 2755 | 151 | E. Egan | 1050 | 0 | 101 | ss | P | 78 | | 7 | Small | Dr | | 6 | D | |
| 2756 | 837 | F. Siber | 1075 | 15 | 66 | ss,sh | P | 30 | | 8 | 12 | Dr | | 4 | D | |
| 2757 | 835 | Harry Long | 1090 | 30 | 93 | | P | 70 | | 5 | 10 | Dr | | 4 | D | |
| 2758 | | John Kunkle | 1040 | r20 | r 92 | ss (r) | P | | | | | Dr | | | D | Approximate location. Analysis given in text. |
| 2759 | 158 | Claude Bridger | 1075 | 40 | 78 | ss,sh | P | | | | | Dr | | 4 | D | |
| 2760 | | Dickerdorf | 1050 | | r 80 | ss (r) | P | | | | | Dr | C,E | 4 | D | Water hard, contains iron. |
| 2761 | | Mike Kitzkitz | 970 | | m 12 | | | m 9 | 8-26-47 | | | D | | 26 | A | Water soft. |
| 2762 | | J. J. Moke | 1060 | | r68 | | | | | | | Dr | AL,E | 4 | D,S | |
| 2763 | 159 | Edward Basler | 1040 | 44 | 70 | ss,sh | P | 38 | | 7 | Small | Dr | | | D | |
| 2764 | 1387 | Mable Frase | 1100 | 54 | 112 | ss,sh | P | 60 | 11-11-47 | 10 | Small | Dr | AL,E | 4 | D | |
| 2765 | 1943 | T. Sheedy | 990 | | 25 | g | Q | 4 | 4-27-49 | 1 | Small | Dr | | 4 | D | |
| 2766 | 1783 | Robert Benions | 1170 | 6 | 73 | ss | P | 51 | 9-27-48 | 12 | 13 | Dr | | 4 | D | |
| 2767 | | F. Labriet | 1040 | | r85 | | | r55 | | | | Dr | AL,E | 4 | D,S | |
| 2768 | 1722 | Columbia Chemical Co. | 965 | 69 | 72 | s & g | Q | 7 | | | | D | T,E | 32 | I | |
| 2769 | | R. W. Potter | 1015 | | r 80 | | | | | | | Dr | T,E | 4 | D | Water soft. |
| 2770 | 161 | Edith Smith | 980 | 24 | 63 | ss | P | 15 | | 12 | Small | Dr | | 4 | D | |
| 2771 | | A. Ramaud | 985 | r15 | r 60 | ss (r) | P | r10( | | | | Dr | C,H | 3 | D | |
| 2772 | 160 | Carl B. Dunak | 970 | 14 | 18 | ss | P | 16 | | 20 | 4 | Dr | | 4 | D | |
| 2773 | | Columbia Chemical Co. | 955 | | 100 | | | | | 150 | | Dr | T,E | | I | Wells 2768, 2773, and 2774 used with nearby brine wells to mine salt. Average pumpage from three wells is 800 gpm. |
| 2774 | | do | 955 | | 100 | | | | | 250 | | Dr | T,E | | I | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (g p m) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FRANKLIN TOWNSHIP—(Continued) | | | | | | | | | | | | | | | |
| 2775 | 1589 | A. Noland | 1095 | 41 | 68 | ss | P | 35 | 6-22-48 | 10 | Small | Dr | | 4 | D | |
| 2776 | 163 | Paul Tichon | 1130 | 31 | 38 | ss | P | 26 | | 6 | 1 | Dr | | 4 | D | |
| 2777 | | T. M. Fouts | 1165 | | r100? | | | | | | | Dr | C,E | 4 | D | Water hard. |
| 2778 | 162 | Willard Grove | 1040 | 26 | 92 | ss | P | 70 | | 5 | Small | Dr | | 4 | D | |
| 2779 | 157 | L. F. Young | 1140 | 18 | 250 | ss | P | 50 | | 9 | 50 | Dr | | 4 | D | |
| 2780 | 839 | Wm. Justus | 1150 | 23 | 71 | | P | 35 | | 8 | Small | Dr | | 4 | D | |
| 2781 | 166 | I. E. Burton | 1155 | 30 | 50 | | P | 16 | | 12 | Small | Dr | | 4 | D | |
| 2782 | 164 | Bodkins | 1165 | 27 | 119 | ss,sh | P | 40 | | 7 | Small | Dr | | 4 | D | |
| 2783 | | V. A. Murray | 1165 | r 12 | r 90 | | P | | | | | Dr | | 4 | A | Yield too small to supply needs of one family. Water hard, contains iron. |
| 2784 | 165 | M. Nemer | 1165 | 15 | 82 | ss | P | 6 | | 6 | 1 | Dr | | 4 | D | |
| 2785 | 167 | B. Baumgardner | 1155 | 25 | 92 | ss | P | 46 | | 8 | Small | Dr | | 4 | D | |
| 2786 | 840 | Clifford Knapp | 1140 | 32 | 82 | ss | P | 40 | | 7 | Small | Dr | | 4 | D | |
| 2787 | 168 | James Ducey | 1145 | 34 | 76 | ss | P | 26 | | 7 | Small | Dr | | 4 | D | |
| 2788 | 841 | F. E. Boylor | 1145 | 30 | 32 | ss | P | 20 | | 2 | 15 | Dr | | 4 | D | |
| 2789 | 1624 | E. Kerstetter | 1130 | 34 | 98 | ss | P | 72 | | 10 | 5 | Dr | | 5 | D | |
| 2790 | | Hugh Larkin | 1090 | r 5 | r 90 | ss (r) | P | | | | | Dr | C,E | 4 | D | |
| 2791 | 842 | J. M. Hardman | 1120 | 50 | 55 | ss | P | 33 | | 5 | 5 | Dr | | 4 | D | |
| 2792 | 762 | T. Higgins | 1120 | 28 | 97 | ss,sh | P | 50 | | 12 | 8 | Dr | | 4 | D | |
| 2793 | 170 | L. D. Stewart | 1080 | 20 | 106 | | P | 82 | | 5 | Small | Dr | | 4 | D | |
| 2794 | | F. Grimes | 1005 | | r 14 | | | | | | | Dv | C,E | 1 | D | Water soft. |
| 2795 | | Joel M. Weaver | 1130 | | r 60 | | | | | | | Dr | AL,E | 4 | D | Water hard, contains iron. |
| 2796 | 1548 | Joe Weaver | 1130 | 40 | 72 | ss,sh | P | 36 | 10-20-47 | 8 | Small | Dr | AL,E | 4 | D | |
| 2797 | 1587 | George Chula | 1145 | 9 | 154 | ss | P | 84 | 3- 4-48 | 20 | 21 | Dr | | 6 | D | |
| 2798 | 846 | Johnson | 1125 | 14 | 73 | ss | P | 65 | | | | Dr | | 4 | D | |
| 2799 | 1827 | Harry Kepler | 1120 | 30 | 80 | ss,sh | P | 60 | 1- 8-49 | 10 | Small | Dr | AL,E | 4 | D | |
| 2800 | 171 | English | 1105 | 27 | 66 | ss | P | 35 | | 3 | | Dr | | 4 | D | |
| 2801 | 172 | Jim Beltz | 1080 | 20 | 70 | ss,sh | P | 42 | | 2 | Small | Dr | | 4 | D | |
| 2802 | 847 | Butler | 1090 | 28 | 71 | ss | P | 40 | | 5 | 8 | Dr | | 4 | D | |
| 2803 | | Ringley | 1050 | r 40 | r 43 | | P | r13 | | | | Dr | AL,E | 6 | D | Water hard. |
| 2804 | 845 | O. E. White | 1100 | 26 | 65 | ss | P | 35 | | | | Dr | | 4 | D | |
| 2805 | 174 | May Daily | 1085 | 30 | 38 | ss | P | | | | | Dr | | 4 | D | |
| 2806 | | A. F. Clagget | 1050 | | r 38 | | | | | | | Dr | C,E | 4 | D | |
| 2807 | 850 | S. Hampshire | 1020 | 31 | 60 | ss | P | 28 | | 3 | 15 | Dr | | 4 | D | |
| 2808 | 1549 | P. Hampshire | 1030 | 50 | 52 | ss | P | 24 | | 10 | Small | Dr | C,H | 4 | D | |
| 2809 | 1586 | Dale Lowes | 1020 | 36 | 58 | ss | P | 28 | 5- 8-48 | 10 | 3 | Dr | | 5 | D | |
| 2810 | 1420 | G. L. Smith | 1125 | 43 | 95 | sh | P | 8 | 12- -47 | 10 | 20 | Dr | | 5 | D | |
| 2811 | | | 1125 | m 28 | m80? | | P | m50 | 7- 8-48 | | | Dr | | 4 | | |
| 2812 | | | 1110 | | m 93 | | | m23 | 8-27-47 | | | Dr | C,H | 4 | | |
| 2813 | | R. A. Harris | 1010 | | r 15 | un | | r12 | | | | D | C,H | 28 | D,S | |
| 2814 | | Wm. Schilling | 1030 | | r 40 | un | | r 22 | | | | D | C,H | 24 | D,S | |
| 2815 | | Frank Oberlin | 1020 | | r 85 | | | | | | | Dr | T,E | 4 | D,S | |
| 2816 | | Cameron | 1030 | | m 14 | s & g(r) | | m 8 | 8-26-47 | | | D | T,E | 24 | D | Water soft. |
| 2817 | | Deibel | 1060 | | r120 | | | | | | | Dr | C,G | 6 | D,S | Water hard. |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRANKLIN TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2818 | 1583 | Glenn Nettle | 1000 | 21 | 50 | ss | P | 21 | 6-16-48 | 12 | Small | Dr | | 6 | D | |
| 2819 | 187 | Chas. Sours | 980 | 26 | 54 | ss | P | 16 | | 10 | Small | Dr | | 4 | D | |
| 2820 | | Dannemiller Orchard | 1120 | r 12 | r135 | ss | P | 100r | | | | Dr | C,E | 4 | D,Ir | Use 3000 gpd when spraying apple trees. Analysis given in text. |
| 2821 | | R. Williams | 1020 | | m 67 | | | m24 | 8-26-48 | | | Dr | | 4 | A | Nearby spring supplies all water needed. Water contains iron. |
| 2822 | 1829 | Wayne Kline | 970 | 38 | 44 | ss | P | 27 | 10-20-48 | 8 | 8 | Dr | | 5 | D | |
| 2823 | 852 | Wendell Weffer | 970 | | 62 | s & g | Q | 18 | | 8 | Small | Dr | | 4 | D | |
| 2824 | 988 | Clinton School | 970 | | 75 | s & g | Q | 19 | | 25 | 4 | Dr | | 6 | PS | |
| 2825 | 1123 | Goodyear Rubber Co. | 945 | 99 | 108 | g | Q | | | | | Dr | | | T | Flows. |
| 2826 | 1124 | do | 945 | 89 | 92 | | | | | | | Dr | | | T | |
| 2827 | 1125 | do | 945 | 145 | 147 | s & g | Q | | | | | Dr | | | T | |
| 2828 | 1127 | do | 950 | | 158 | | | | | | | Dr | | | T | |
| 2829 | 1575 | Joseph Zabadah | 975 | 48 | 70 | ss | P | 39 | 4-30-48 | 15 | 3 | Dr | | 5 | D | |
| 2830 | | S. Ruby | 975 | | m 16 | un | Q | m 7 | 8-27-47 | | | D | T,E | 24 | D,S | Water hard. |
| 2831 | | A. H. Peggott | 970 | | m 97 | s & g(r) | Q | m21 | 8-26-47 | | | Dr | C,H | 4 | D | |
| 2832 | 849 | Dan Buie | 975 | | 45 | s & g | Q | 17 | | 5 | 30 | Dr | | 4 | D | |
| 2833 | 851 | Russell | 1040 | | 30 | g | Q | 22 | | | | Dr | | 4 | D | |
| 2834 | 1421 | I. Smith | 1100 | 22 | 52 | ss | P | 22 | 10-14-47 | 10 | Small | Dr | | 4 | D | |
| 2835 | 1826 | Amos Sinley | 1125 | 44 | 82 | ss | P | 58 | 11-26-48 | 10 | Small | Dr | | 4 | D | |
| 2836 | | | 1125 | m 25 | m 55 | | P | 18 | 8-27-47 | | | Dr | | 4 | | |
| 2837 | 1585 | F. King | 1000 | | 31 | g | Q | 16 | 5-15-48 | 15 | Small | Dr | C,H | 4 | D | |
| 2838 | | Lester E. Yeager | 1010 | | r135 | | | r10 | | | | Dr | | 4 | A | Near an abandoned coal mine. Water contains sulfur. |
| 2839 | | | 1030 | m 50 | m 67 | | | m25 | 8-26-47 | | | Dr | | 4 | A | |
| 2840 | 891 | Stanley Jankowski | 995 | | 55 | g | Q | 6 | | 8 | Small | Dr | | 4 | D | |
| 2841 | 181 | Provens | 980 | | 44 | s | Q | 15 | | 3 | 34 | Dr | | 4 | D | |
| 2842 | 182 | Wm. Provens | 970 | | 44 | g | Q | 8 | | | | Dr | | 4 | D | |
| 2843 | 183 | Wm. Provens | 1040 | | 66 | s & g | Q | 25 | | | | Dr | | 4 | D | |
| 2844 | 180 | Ruby Jestus | 1000 | 60 | 100 | | P | 40 | | 8 | Small | Dr | | 4 | D | |
| 2845 | 179 | D. Schembechlor | 970 | 62 | 71 | | P | 32 | | 9 | Small | Dr | | 4 | D | |
| 2846 | 1663 | Homer Shilling | 1030 | 37 | 56 | ss,sh | P | 15 | 7-28-48 | 12 | 10 | Dr | | 4 | D | |
| 2847 | 1550 | G. C. Sisson | 965 | | 43 | s & g | Q | 8 | 1- 5-48 | 10 | 20 | Dr | | 4 | D | |
| 2848 | 177 | James Dunn | 955 | | 66 | g | Q | 34 | | 4 | Small | Dr | | 4 | D | |
| 2849 | 1584 | Lawrence Long | 1035 | 23 | 59 | sh | P | 25 | 6-30-48 | 5 | 6 | Dr | C,H | 5 | D | |
| 2850 | | A. Buttler | 1025 | r 34 | r 72 | | P | r30 | | | | Dr | AL,E | 4 | D | Water soft. |
| 2851 | 1623 | Wm. Fraiser | 1130 | 5 | 54 | ss | P | 20 | 7-30-48 | 12 | 10 | Dr | | 4 | D | |
| 2852 | | Chas. Butker | 1010 | r 22 | m 22 | | | m15 | 8-26-47 | | | Dr | T,E | 24 | D,S | Water hard. |
| 2853 | 1828 | D. W. Heath | 1000 | | 37 | s & g | Q | 20 | 10-13-48 | 8 | Small | Dr | | 4 | D | |
| 2854 | 1944 | R. H. Weston | 1005 | | 48 | s & g | Q | 18 | 4-26-49 | 10 | 10 | Dr | | 4 | D | |
| 2855 | 1945 | J. E. Ford | 1010 | | 73 | g | Q | 30 | 9- 6-48 | | | Dr | | 4 | D | |
| 2856 | 1946 | R. Carmichael | 1060 | 12 | 130 | sh,ss | M?,P? | 57 | 5- 9-49 | 10 | Small | Dr | C,H | 4 | D | |
| 2857 | 1947 | J. C. Collier | 1140 | 21 | 66 | ss | Q | 18 | 5- 7-49 | | | Dr | C,H | 4 | D | |

## TABLE 6.—RECORDS OF WELLS IN SUMMIT COUNTY, OHIO—(Continued)

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation of well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GREEN TOWNSHIP** | | | | | | | | | | | | | | | | |
| 2900 | 305 | C. E. Diehl | 1020 | | 53 | s | Q | 14 | | 9 | 3 | Dr | | 4 | D | |
| 2901 | 882 | C. E. Diehl | 1020 | | 100 | g | Q | 15 | | 3 | Small | Dr | | 4 | D | |
| 2902 | 306 | Joe Szabo | 1050 | | 144 | s & g | Q | 39 | | | | Dr | | 4 | D | |
| 2903 | | R. F. Bloomfield | 1050 | | r 70 ? | s & g(r) | Q | r 41 | | | | Dr | T,E | 4 | D | Water hard. |
| 2904 | 301 | I. T. Simmons | 1060 | 17 | 42 | ss | P | 20 | | 15 | 5 | Dr | | 4 | D | |
| 2905 | 300 | H. H. Blackerby | 1060 | 2 | 51 | ss | P | 31 | | 7 | 8 | Dr | | 4 | D | |
| 2906 | 302 | Bruce White | 1040 | 19 | 50 | ss | P | 20 | | 2 | 20 | Dr | | 4 | D | |
| 2907 | 303 | R. M. Duff | 1030 | 2 | 44 | ss | P | 19 | | 3 | 11 | Dr | | 4 | D | |
| 2908 | 304 | John Hafner | 1030 | 28 | 80 | ss | P | 37 | | 10 | 31 | Dr | | 4 | D | |
| 2909 | 886 | Paul Passberg | 1060 | 26 | 92 | ss,sh | P | 34 | | 8 | 40 | Dr | | 4 | D | |
| 2910 | 312 | H. E. Rauch | 1100 | | 44 | s | Q | 30 | | | | Dr | | 4 | D | |
| 2911 | 315 | Elmer Grable | 1145 | 72 | 84 | sh | P | 40 | | 6 | 3 | Dr | | 4 | D | |
| 2912 | 313 | Joseph Wilson | 1160 | | 62 | s | Q | 35 | | 3 | 12 | Dr | | 4 | D | |
| 2913 | 889 | T. A. Reeves | 1080 | | 66 | g | Q | 54 | | 5 | 3 | Dr | | 4 | D | |
| 2914 | 1434 | L. S. Luntzkiser | 1140 | | 85 | s & g | Q | 26 | 2- 3-48 | 10 | 4 | Dr | | 4 | D | |
| 2915 | 1847 | do | 1140 | 100 | 108 | sh,ss | P | 36 | 11-21-48 | 12 | 2 | Dr | AL,E | 4 | D | |
| 2916 | 1435 | do | 1140 | 100 | 105 | ss | P | 48 | 12- 8-47 | 10 | 2 | Dr | | 4 | D | |
| 2917 | | | 1140 | | m 85 | | | m57 | 9- 3-47 | | | Dr | | 4 | A | |
| 2918 | 1666 | Elmer L. Grable | 1090 | | 67 | s & g | Q | 14 | 8-24-48 | 10 | | Dr | | 4 | D | |
| 2919 | 1551 | James G. Swesy | 1075 | | 55 | g | Q | 32 | 4- 1-48 | | | Dr | | 4 | D | |
| 2920 | | T. S. Miller | 1090 | | r 18 | s & g(r) | Q | | | | | Dv | C,H | 1 | D | |
| 2921 | | J. A. Anderson | 1030 | r 80 | r150 | | | r40 | | | | Dr | AL,E | 6 | D,S | Water hard. |
| 2922 | 1349 | W. M. Boston | 1125 | | 50 | g | Q | 35 | 10-10-47 | | | Dr | | 4 | D | |
| 2923 | 1625 | H. J. Grable | 1080 | | 45 | s & g | Q | 30 | | 10 | Small | Dr | | 5 | D | |
| 2924 | | H. L. Tanner | 1105 | | | s (r) | Q | | | | | Dr | C,H | 5 | D | |
| 2925 | | Siler | 1125 | m71 | m72 | ss (r) | P | m18 | 9- 4-47 | | | Dr | C,H | 3 | D | |
| 2926 | | E. K. Delaney | 1105 | | | | | | | | | Dr | C,H | | D | Water hard. |
| 2927 | | Mary Burgoon | 1165 | m19 | m76 | | P | m15 | 9- 3-47 | | | Dr | | 5 | D | |
| 2928 | | Mary Smith | 1165 | | | s & g(r) | Q | | | | | Dv | C,H | 1 | PS | Used in small picnic area. |
| 2929 | 317 | Lyle V. Kimmel | 1160 | 85 | 89 | ss | P | 18 | | 12 | 4 | Dr | | 4 | D | |
| 2930 | 887 | Marion D. Hutchison | 1180 | 54 | 65 | ss | P | 18 | | | | Dr | | 4 | D | |
| 2931 | 1012 | A. V. Graham | 1200 | 65 | 132 | ss | P | 29 | 6-29-46 | 20 | Small | Dr | AL,E | 6 | D | |
| 2932 | 888 | R. K. Burns | 1225 | 71 | 78 | sh | P | 10 | | 6 | 28 | Dr | | 4 | D | |
| 2933 | 318 | Eber Bolen | 1175 | | 68 | un | Q | 15 | | 9 | 12 | Dr | | 4 | D | |
| 2934 | 1599 | S. D. Clements | 1205 | 23 | 48 | ss | P | 20 | 5-17-48 | 20 | 14 | Dr | | 4 | D | |
| 2935 | 1848 | C. L. Portz | 1135 | | 75 | g | Q | 35 | 10-13-48 | 10 | | Dr | | 4 | D | |
| 2936 | | | 1165 | | | | | m24 | 9- 3-47 | | | Dr | | 8 | A | Used in drilling nearby gas well. |
| 2937 | | C. S. McCrady | 1130 | | r71 | | | r23 | | | | Dr | T,E | 4 | D,S | When pumped to fill 500-gal. tank, well goes dry but recovers quickly. Water soft. |
| 2938 | 1949 | Mike Kachurchak | 1130 | 35 | 62 | | P | 27 | | | | Dr | | 4 | D | |
| 2939 | 321 | L. E. Plummer | 1130 | 31 | 61 | sh | P | 27 | | 8 | 12 | Dr | C,E | | D,S | Water hard. |
| 2940 | 1553 | E. S. Plummer | 1140 | 40 | 62 | sh | P | | | | | Dr | | | D | |
| 2941 | 307 | Edward Winter | 1100 | | 60 | g | Q | 32 | | | | Dr | | | D | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GREEN TOWNSHIP—(Continued) | | | | | | | | | | | | | | | | |
| 2942 | | Leroy Parsons | 995 | | r 60 | | | | | | | Dr | C,E | | D | Water hard. |
| 2943 | | Carl E. Wise | 1020 | | | s & g(r) | Q | | | | | Dv | C,E | 1 | D | Water hard, contains iron. |
| 2944 | | John Tippel | 1055 | | r 52 | g (r) | Q | r12 | | | | Dr | C,E | 4 | D | Analysis given in text. |
| 2945 | | Ralph Sigenthaler | 1160 | m 40 | m 65 | | P | m13 | 9- 4-47 | | | Dr | C,E | 4 | D | |
| 2946 | 1466 | H. O. Lancaster | 1200 | 27 | 40 | sh | P | 10 | 1- 9-48 | 18 | 15 | Dr | | 4 | D | |
| 2947 | | G. E. Gaylord | 1210 | | r 82 | | | r20 | | | | Dr | T,E | | D | |
| 2948 | 1667 | Charles Willis | 1195 | 35 | 77 | sh | P | 30 | 9-13-48 | 10 | Small | Dr | | 4 | D | |
| 2949 | | R. H. Craig | 1110 | | r 85 | | | | | | | Dr | T,E | 4 | D | Water hard, contains iron. |
| 2950 | | William Prepple | 1105 | | r 21 | s & g(r) | Q | r15 | | | | Dv | C,E | 1 | D,S | Water hard. |
| 2951 | | Tomilo | 1100 | | m 7 | | | m 7 | 9- 3-47 | | | D | | 24 | A | Water hard. |
| 2952 | | J. Kolachki | 1185 | | r 20? | | | | | | | D,Dr | C,H | 4 | D,S | Water in dug well contains hydrogen sulfide. |
| 2953 | | Markey | 1160 | | m 22 | | | m15 | 9- 3-47 | | | D | C,H | 26 | D,S | Water hard. |
| 2954 | 1386 | Clifford L. Detwiler | 1175 | 70 | 80 | ss | P | 35 | 11-21-47 | 10 | 2 | Dr | | 4 | D | |
| 2955 | 970 | State of Ohio | m975 | 73 | 78 | sh | P | 12 | | | | Dr | | | T | |
| 2956 | | | 1205 | m38 | m55 | | | m26 | 9- 3-47 | | | Dr | | 6 | | |
| 2957 | | R. T. Aultman | 1230 | | | | | | | | | Dr | C,H | 4 | D,S | Water hard. |
| 2958 | 1871 | Firestone Land & Parks Co. | 1160 | 46 | 70 | ss | P | 30 | 3-25-49 | 12 | Small | Dr | | 4 | D | |
| 2959 | | E. K. Rawlings | 1140 | | m36 | | | m26 | 9- 3-47 | | | Dr | T,E | 4 | D,S | Water hard. |
| 2960 | | A. B. Loce | 1135 | | | | | | | | | Dr | C,H | | D | Water soft. |
| 2961 | 893 | Morgan | 1200 | 76 | 133 | sh | P | 35 | | 2 | 93 | Dr | | 4 | D | Pumped dry in 8 hrs. at 2 gpm. |
| 2962 | 1425 | O. L. Sine | 1220 | 49 | 75 | sh | P | 51 | 10- 7-47 | 12 | 24 | Dr | | 4 | D | Pumped dry in 45 min. at 12 gpm. |
| 2963 | 330 | Frank Dickerhool | 1175 | 108 | 112 | ss | P | 60 | | | | Dr | | 4 | D | |
| 2964 | 329 | Roy Greenhoe | 1185 | 88 | 97 | | P | 53 | | | | Dr | | 4 | D | |
| 2965 | 1869 | Highland Grange | 1180 | 112 | 117 | ss | P | 54 | 3-17-49 | | | Dr | | 4 | PS | |
| 2966 | 325 | Church of God | 1180 | 108 | 120 | ss | P | 53 | | | | Dr | | 4 | PS | |
| 2967 | 1665 | J. R. McLaughlin | 1175 | 56 | 84 | ss | P | 20 | 5-14-48 | 16 | Small | Dr | | 4 | D | |
| 2968 | 1597 | Mac Shurer | 1195 | 45 | 47 | | P | 24 | 7- 7-48 | 15 | Small | Dr | | 4 | D | |
| 2969 | 1596 | Adrian Prather | 1180 | 40 | 54 | ss | P | 30 | 7-12-48 | 12 | Small | Dr | T,E | 4 | D | |
| 2970 | 1598 | S. C. Groff | 1120 | | 80 | s | Q | 35 | 5-21-48 | 15 | Small | Dr | | 4 | D | |
| 2971 | | George S. Sherril | 1110 | | r83 | | | r30 | | | | Dr | T,E | 4 | D,S | Water hard, contains iron. |
| 2972 | | R. C. Ward | 1130 | r 50? | r78 | | | r20 | | | | Dr | C,H | 4 | D | |
| 2973 | 332 | Lloyd Sheater | 1200 | 82 | 96 | sh,ss | P | 35 | | | | Dr | | 4 | D | |
| 2974 | | H. Hackman | 1160 | | | | | | | | | D | T,E | | D | |
| 2975 | 1552 | A. R. Ash | 1080 | | 94 | s | Q | 60 | 10-27-47 | | | Dr | AL,E | 4 | D | |
| 2976 | 1948 | Jack Glass | 1140 | 35 | 64 | | | 25 | | | | Dr | | 4 | D | |
| 2977 | | C. F. Macafferty | 1070 | | r10 | un | Q | r 6 | | | | D | C,H | | D,S | Water hard. |
| 2978 | 311 | Pille | 1020 | | 62 | g | Q | 30 | | | | Dr | | 4 | D | |
| 2979 | 331 | Ralph Nettle | 1000 | | 98 | g | Q | 42 | | | | Dr | C,H | 4 | D,S | Water hard. |
| 2980 | 1032 | J. F. Kuner | 1120 | 37 | 69 | sh | P | 34 | 8- 6-46 | | | Dr | | 4 | D | |
| 2981 | 1033 | Frank Geig | 1125 | 48 | 142 | sh,ss | P | 66 | 8-15-46 | | | Dr | | 4 | D | |
| 2982 | 309 | Archer | 1080 | | 92 | g | Q | 58 | | | | Dr | | 4 | D | |
| 2983 | 310 | Alex Aladick | 1065 | | 81 | g | Q | 60 | | | | Dr | | 4 | D | |

| Well No. | File Number (Ohio Division of Water) | Owner or name | Elevation at well (feet above sea level) | Depth to bedrock (feet) | Depth of well (feet) | Principal water-bearing bed: Character of material | Principal water-bearing bed: Geologic horizon | Water level: Below land surface (feet) | Water level: Date | Yield: Rate (gpm) | Yield: Drawdown (feet) | Type of well | Type of pump | Diameter of well (inches) | Use | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **GREEN TOWNSHIP—(Continued)** | | | | | | | | | | | | | | |
| 2984 | 308 | G. Bird | 1070 | | 69 | s & g | Q | 39 | | | | Dr | | 4 | D | |
| 2985 | | E. F. Carlson | 1050 | | r 14 | s & g(r) | Q | r12 | | | | D | T,E | 36 | D | |
| 2986 | 1436 | James A. Blankenship | 1040 | | 112 | g | Q | 55 | 1- 7-48 | 10 | Small | Dr | | 4 | D | |
| 2987 | | Albert Baker | 1035 | | r 31 | | | | | | | Dv | C,E | 1 | D | Water hard. |
| 2988 | | | 1035 | | m120 ? | | | m33 | 8-28-47 | | | Dr | C,H | 4 | | |
| 2989 | | C. R. Daily | 1020 | | r150 | | | | | | | Dr | C,H | 4 | D | |
| 2990 | | | 1000 | | m 50 ? | | | m29 | 8-28-47 | | | Dr | C,H | 4 | | |
| 2991 | 892 | Rayle | 975 | | 44 | s & g | Q | 8 | | 3 | 30 | Dr | | 4 | D | |
| 2992 | 894 | G. J. Morrison | 1000 | | 117 | g | Q | 20 | | 10 | Small | Dr | | 4 | D | |
| 2993 | | B. Deiss | 980 | | | | | | | | | Dr | C,E | 4 | D | |
| 2994 | 974 | State of Ohio | m997 | | 20 | | | | | | | Dr | | 4 | T | Wells 2955, 2994-3000 incl. were drilled as test borings for the foundation of the Nimisila reservoir dam. |
| 2995 | 968 | do | m975 | 45 | 55 | | | | | | | Dr | | 4 | T | |
| 2996 | 975 | do | 1000m | | 21 | | | | | | | Dr | | 4 | T | |
| 2997 | 969 | do | m966 | 53 | 59 | | | | | | | Dr | | | T | |
| 2998 | 971 | do | m967 | 35 | 47 | | | | | | | Dr | | | T | |
| 2999 | 973 | do | 1003m | 16 | 20 | | | | | | | Dr | | | T | |
| 3000 | 972 | do | m974 | 52 | 54 | | | | | | | Dr | | | T | |
| 3001 | 1950 | John Petrosik | 1120 | 45 | 52 | | | 23 | | | | Dr | | 4 | D | |
| 3002 | 1951 | G. Ritter | 1120 | | 43 | s & g | Q | 32 | 4- 7-48 | 7 | 3 | Dr | | 4 | D | |
| 3003 | 1952 | R. H. Reischman | 1140 | | 50 | g | Q | 23 | 5- 4-49 | 11 | 3 | Dr | | 4 | D | |
| 3004 | 1953 | Robert Shoemaker | 1130 | | 39 | s & g | Q | 20 | | | | Dr | | 4 | D | |
| 3005 | 1954 | M. A. Diedrich | 1130 | | 36 | g | Q | 16 | 5- 5-49 | 8 | Small | Dr | | 4 | D | |
| 3006 | 1955 | W. A. McCormick | 1200 | 37 | 55 | sh | P | 17 | | | | Dr | | 4 | D | |
| 3007 | 1956 | Walter Onlez | 1160 | 45 | 53 | ss | P | 39 | 5-21-49 | 11 | 1 | Dr | | 4 | D | |
| 3008 | 1957 | J. B. Connell | 1160 | 45 | 51 | ss | P | 40 | 5-28-49 | 20 | 1 | Dr | | 4 | D | |
| 3009 | 1958 | R. L. Boettler | 1105 | | 21 | g | Q | 8 | 10-29-48 | 10 | Small | Dr | | 4 | D | |
| 3010 | 1959 | Dean E. Hartong | 1140 | | 111 | s & g | Q | 38 | 4-16-49 | 8 | 65 | Dr | | 4 | D | |
| 3011 | 1960 | W. H. Beaver | 1150 | 52 | 71 | ss | P | 36 | 4-23-49 | 10 | 2 | Dr | | 4 | D | |

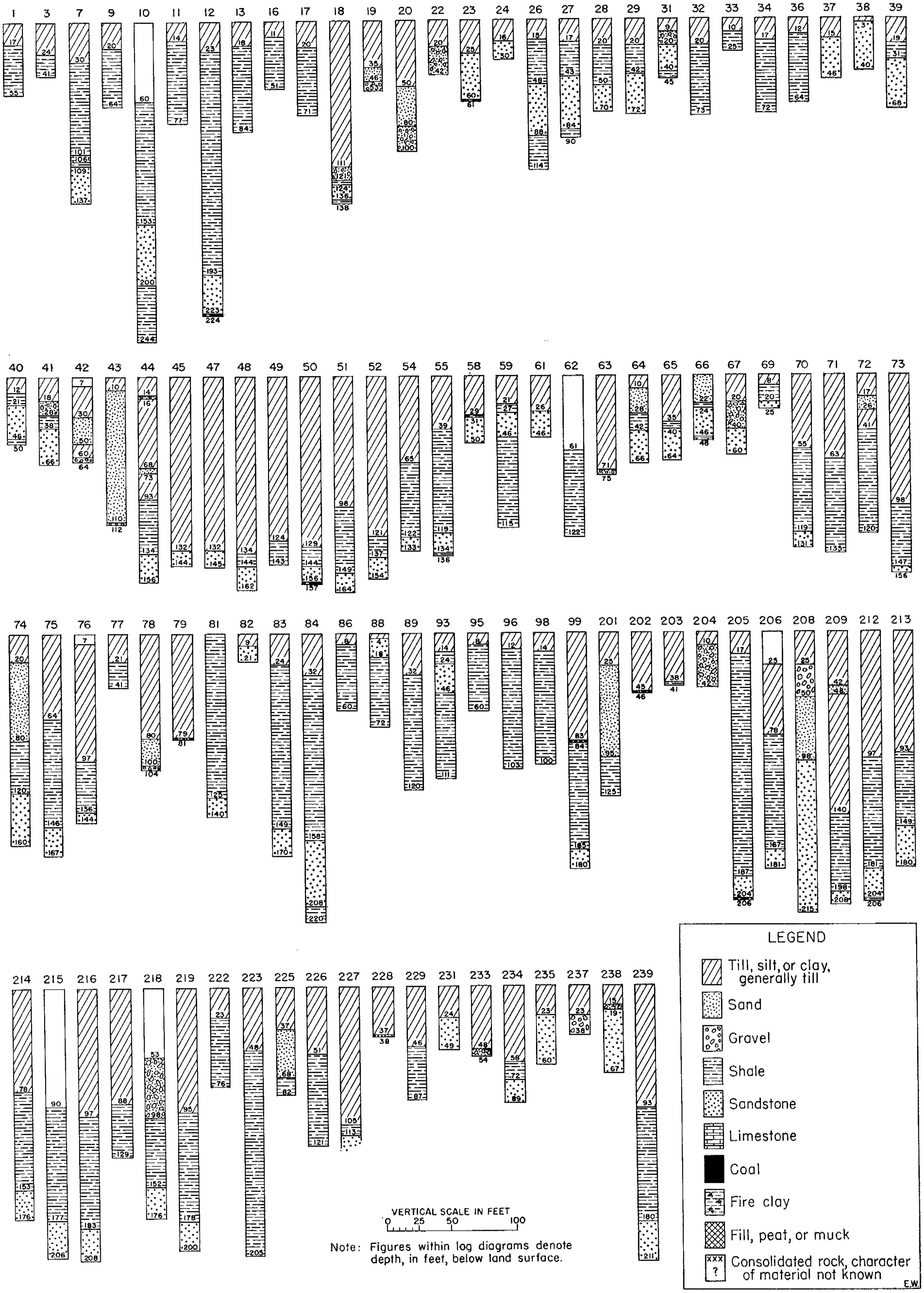



Plate 22A.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

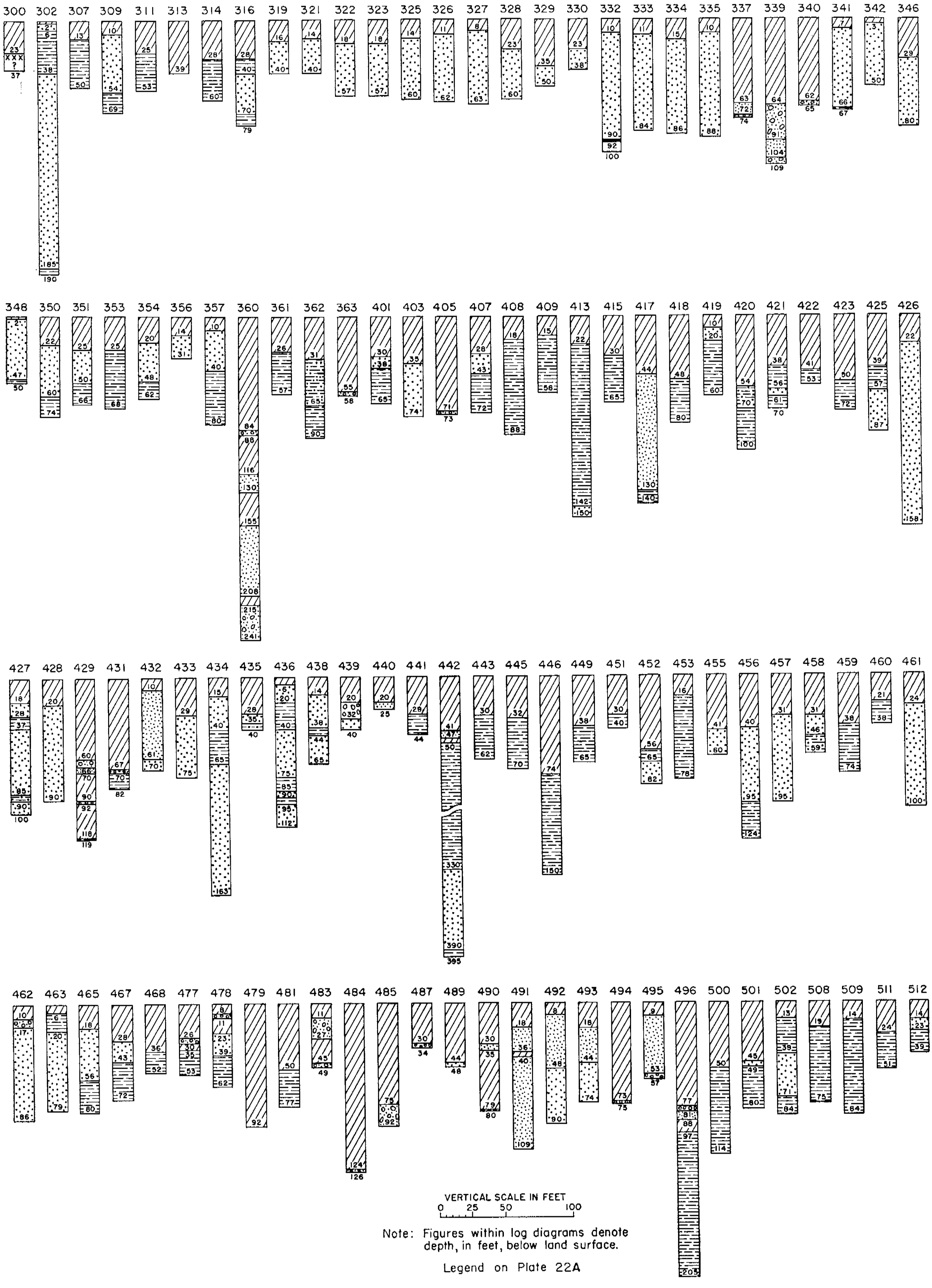



Plate 22B.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

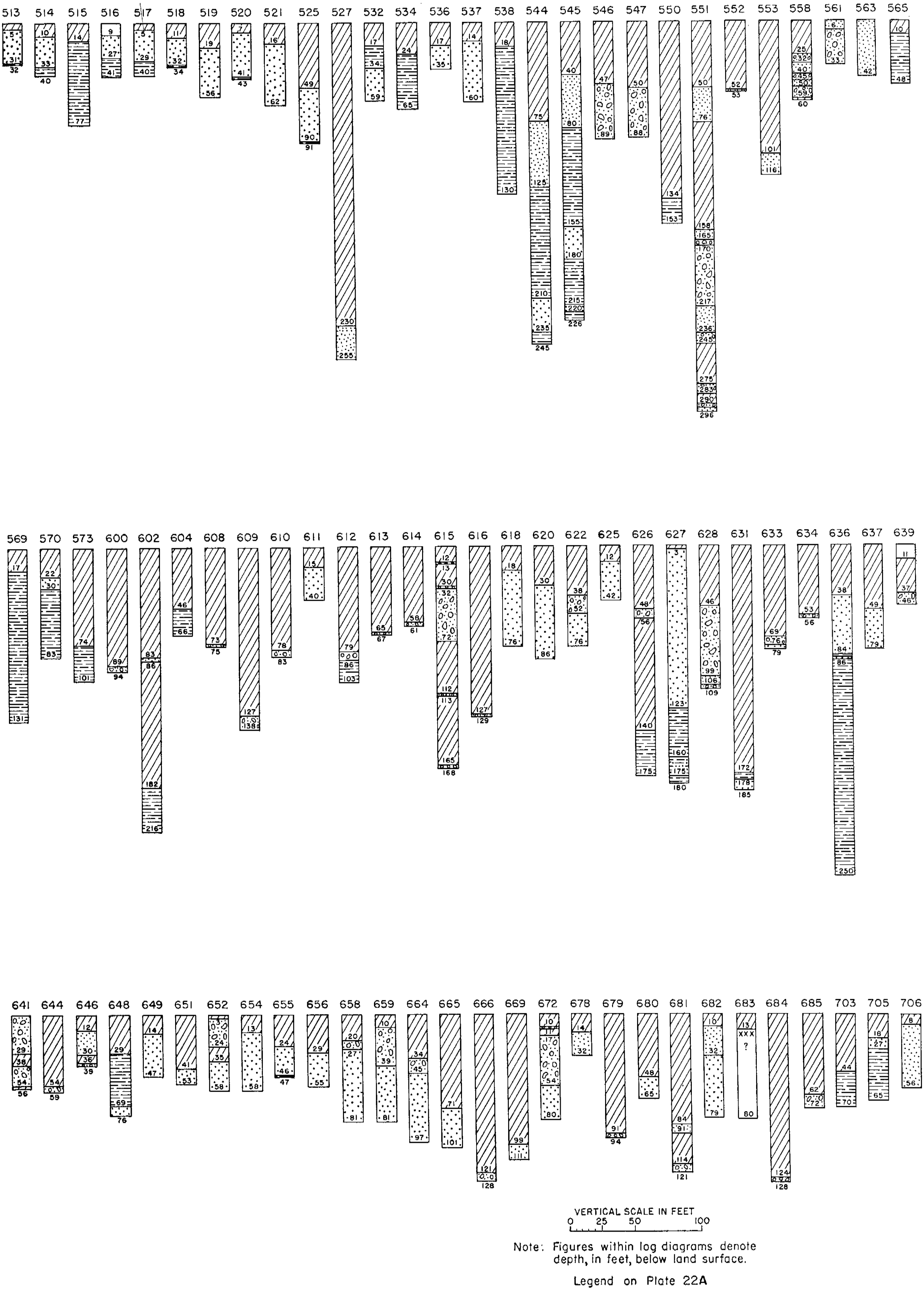



Plate 22C.-Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

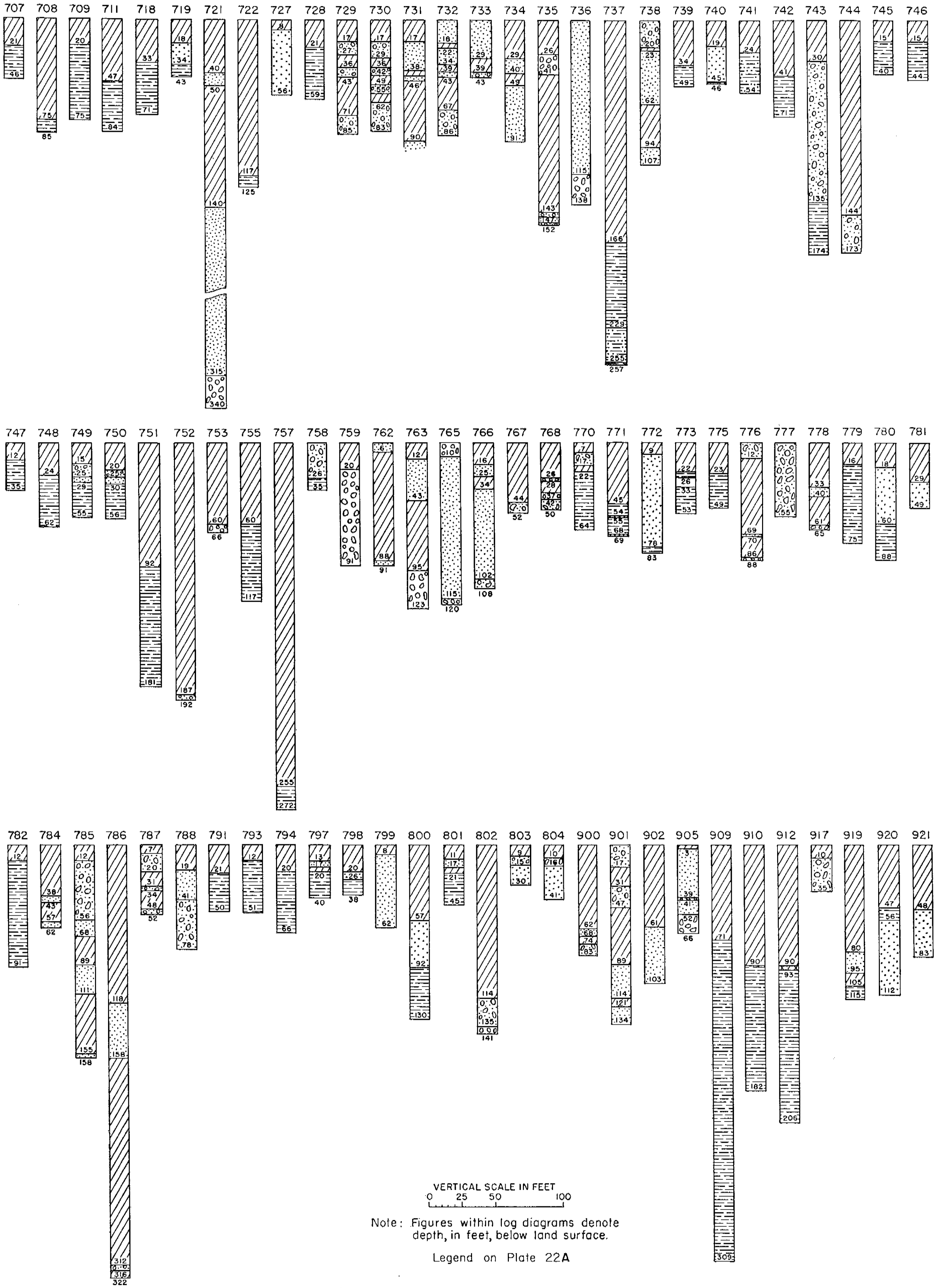
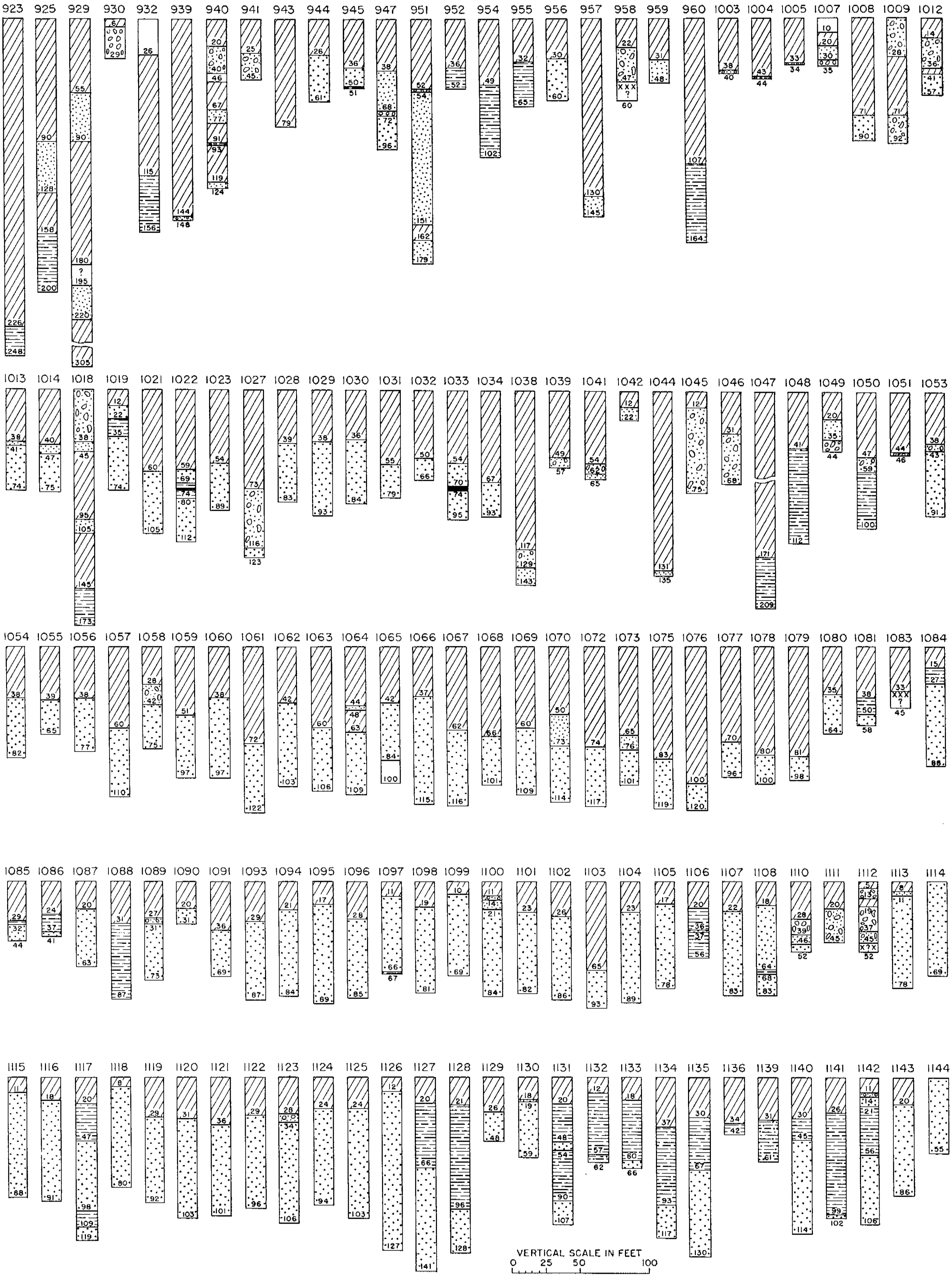


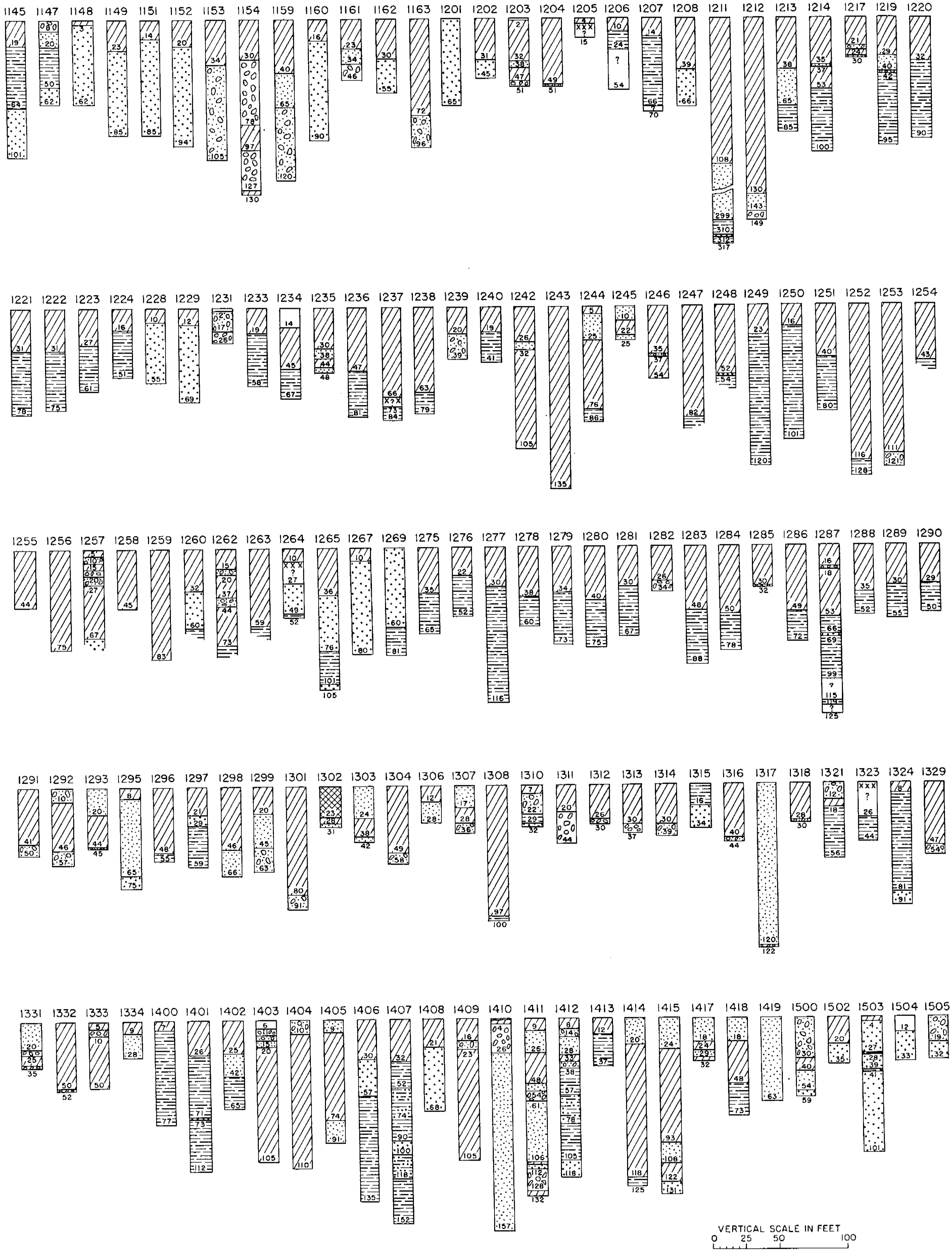

Plate 22D.-Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.




Note: Figures within log diagrams denote depth, in feet, below land surface.

Legend on Plate 22A

Plate 22E.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.




Note Figures within log diagrams denote depth, in feet, below land surface.

Legend on Plate 22A

Plate 22F.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

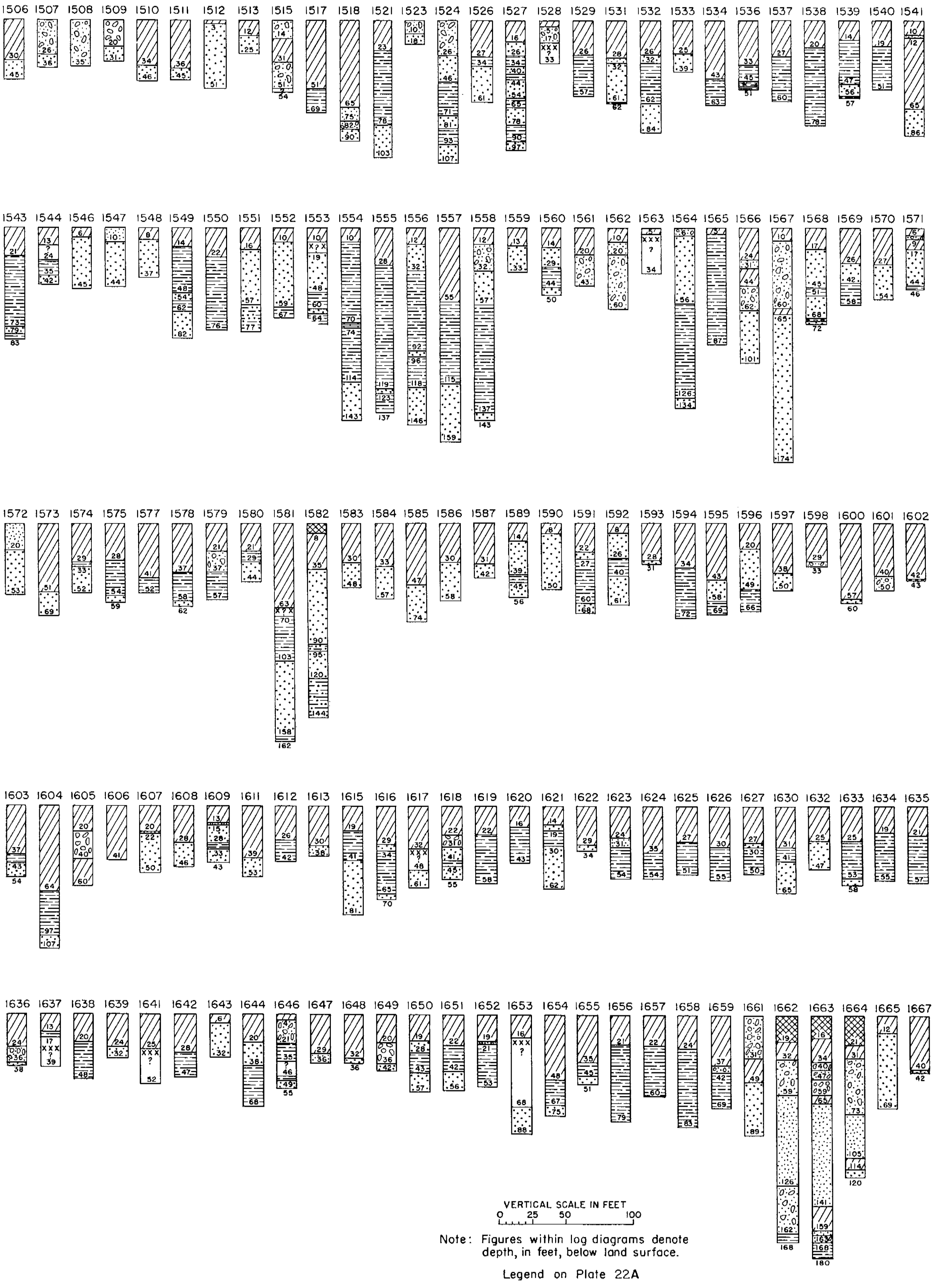



Plate 22G.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

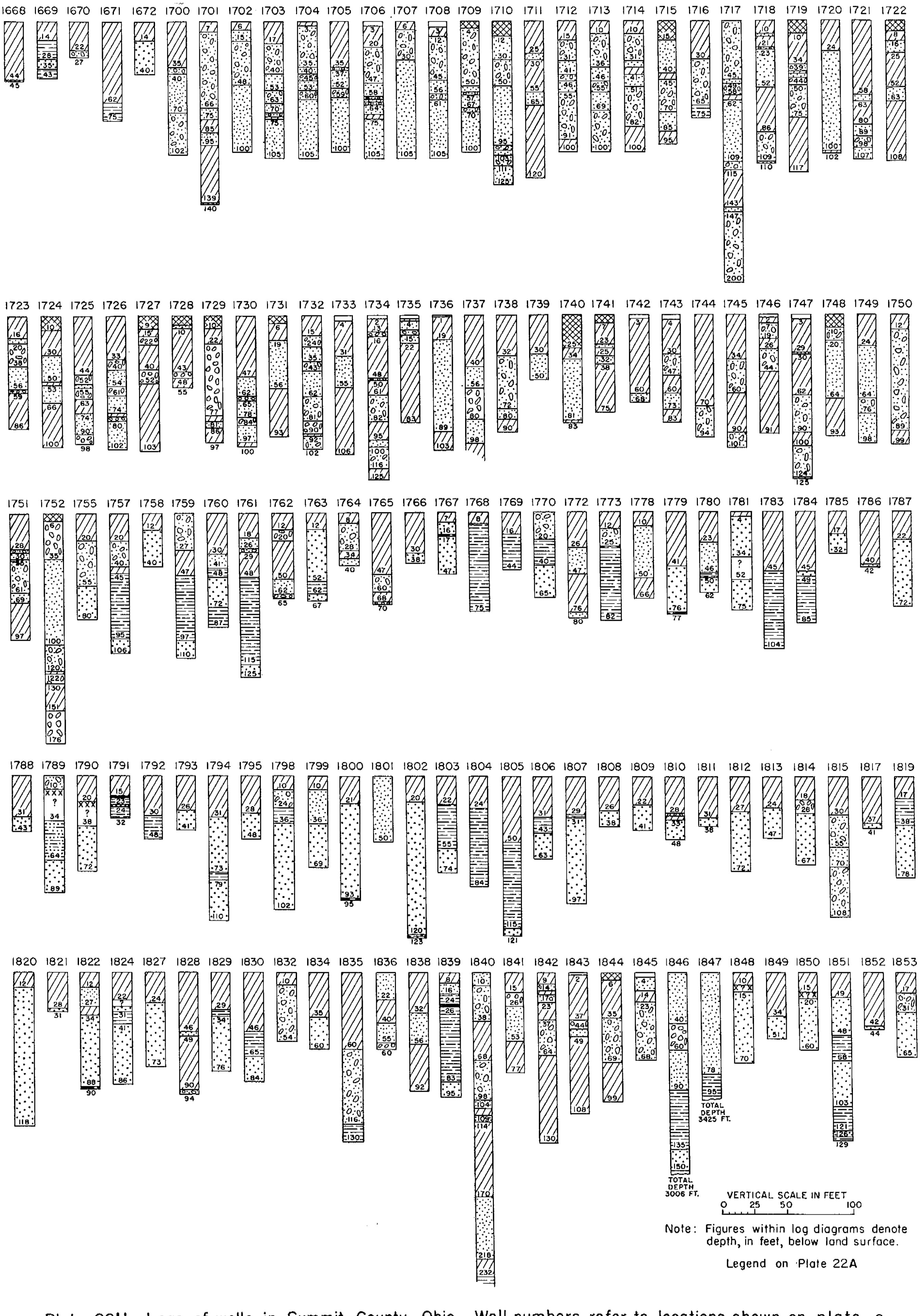



Plate 22H.-Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

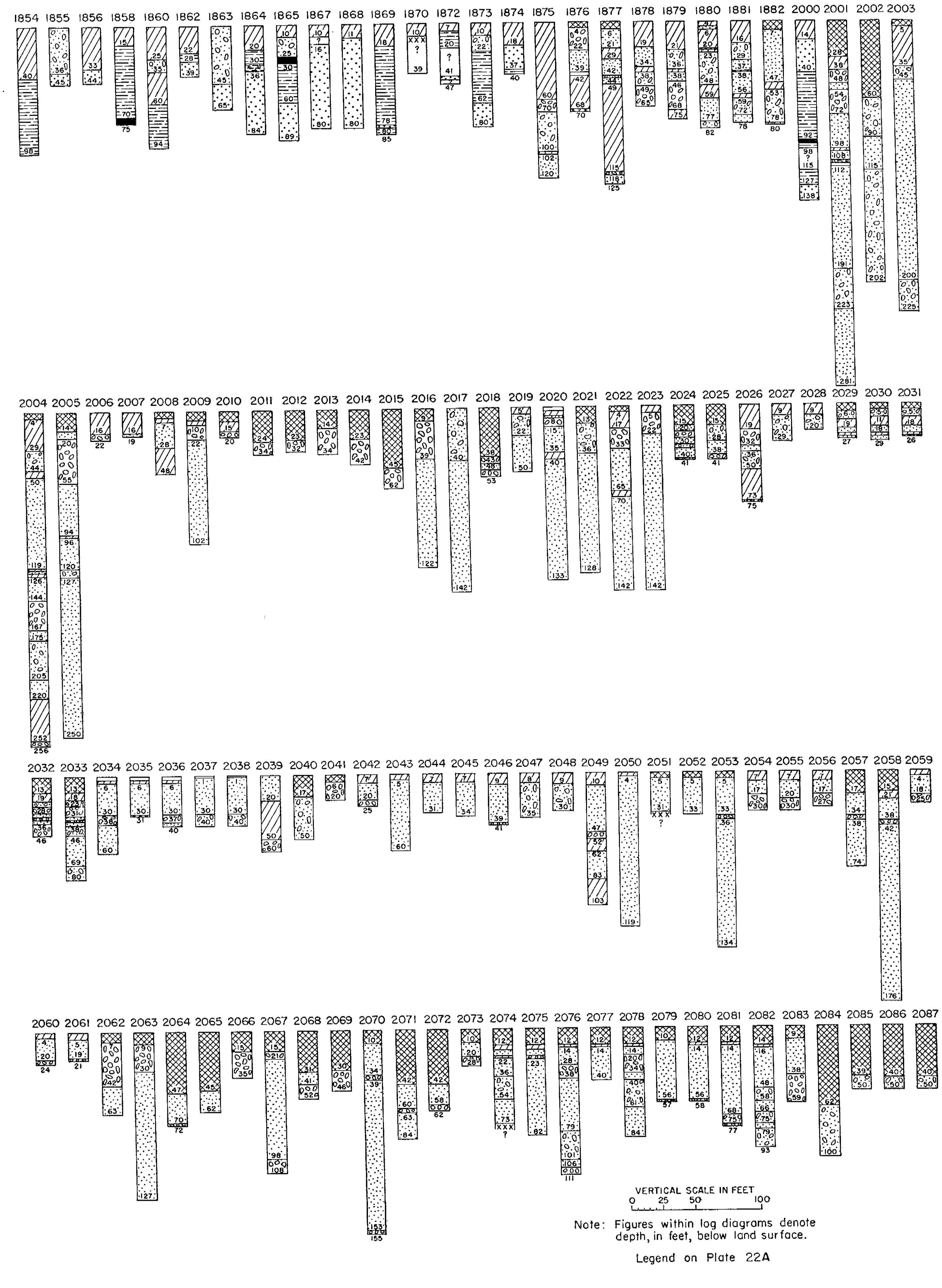



Plate 22 I.-Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

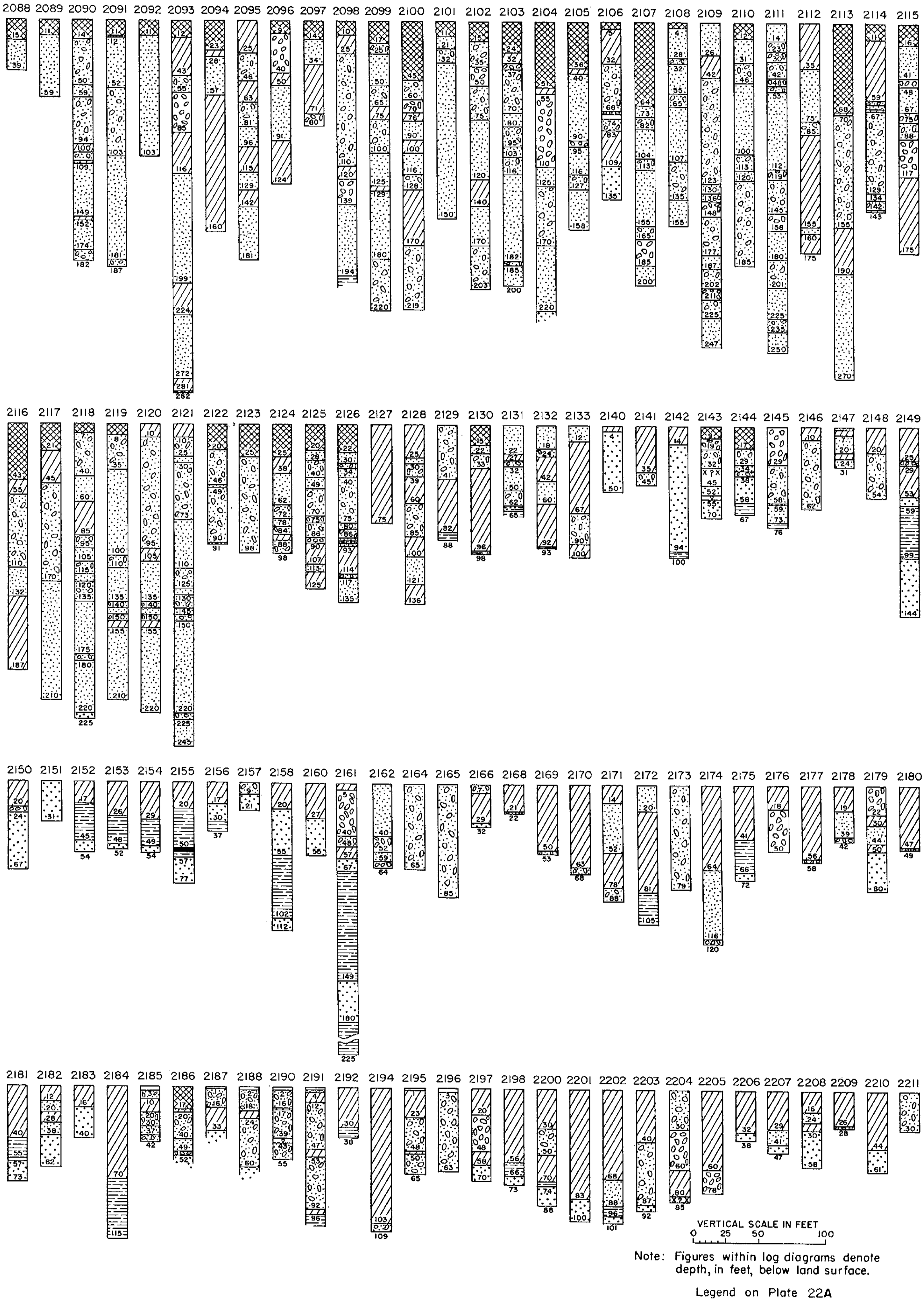
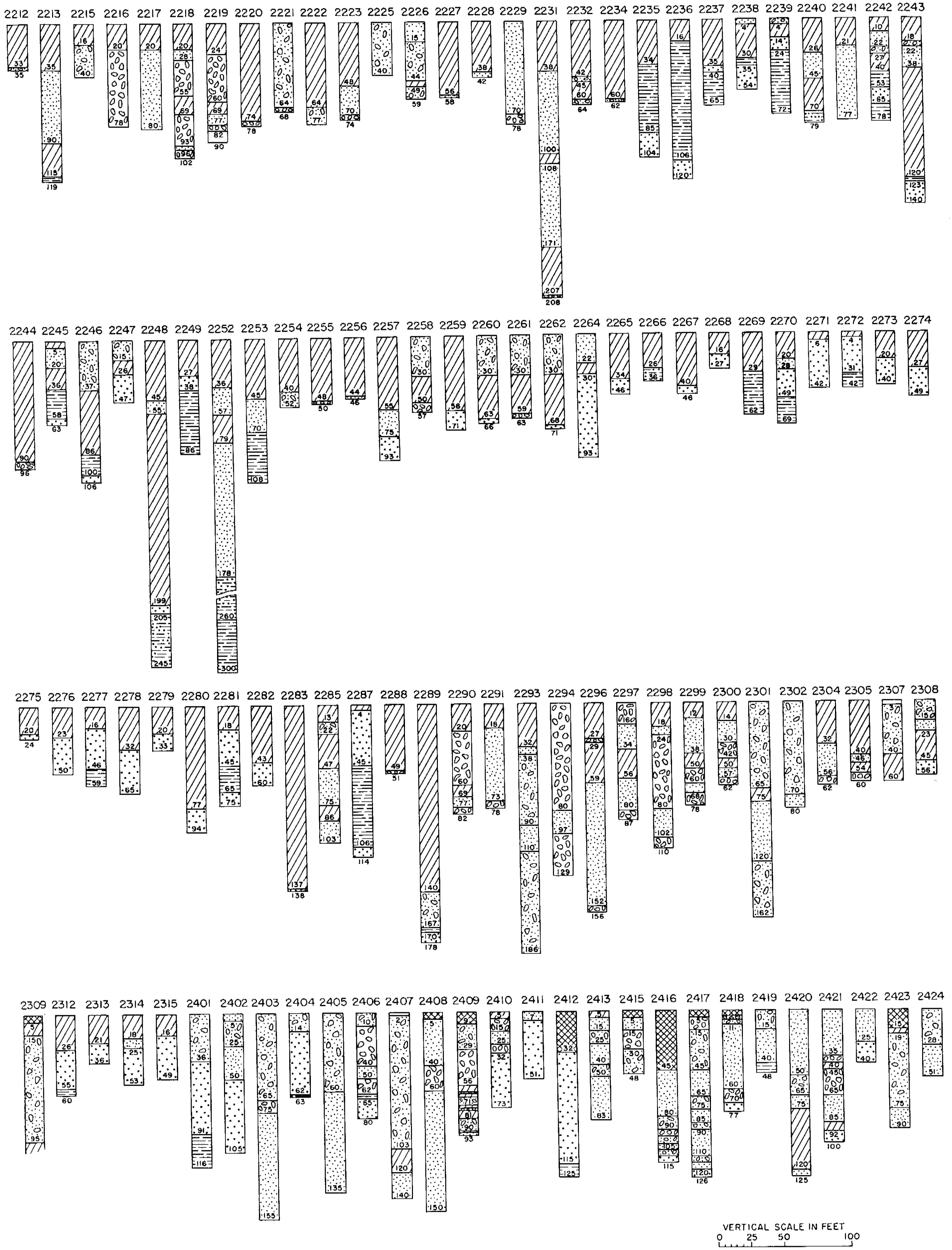



Plate 22J.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.




Note: Figures within log diagrams denote depth, in feet, below land surface.

Legend on Plate 22A

Plate 22K. - Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

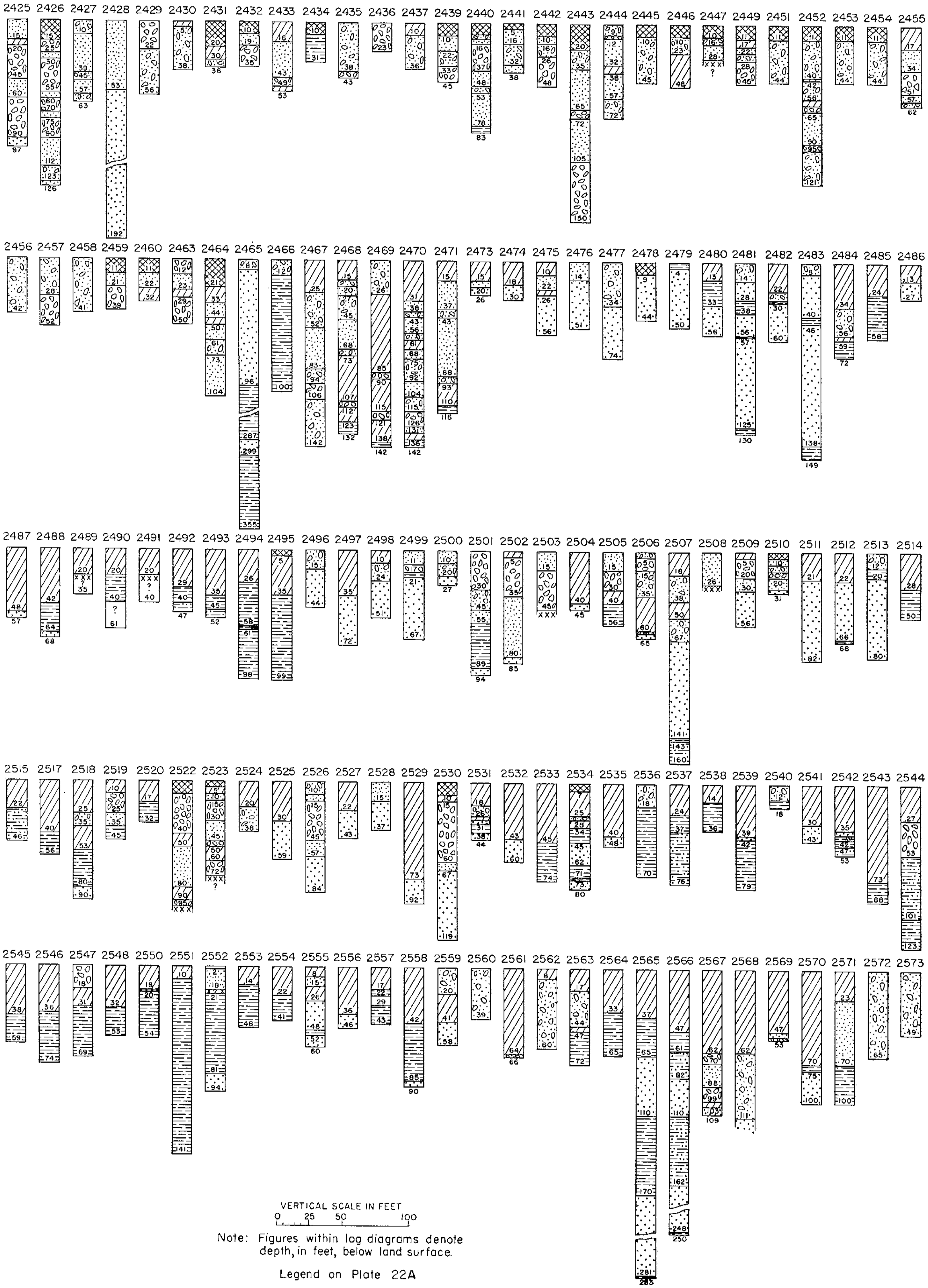



Plate 22L.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

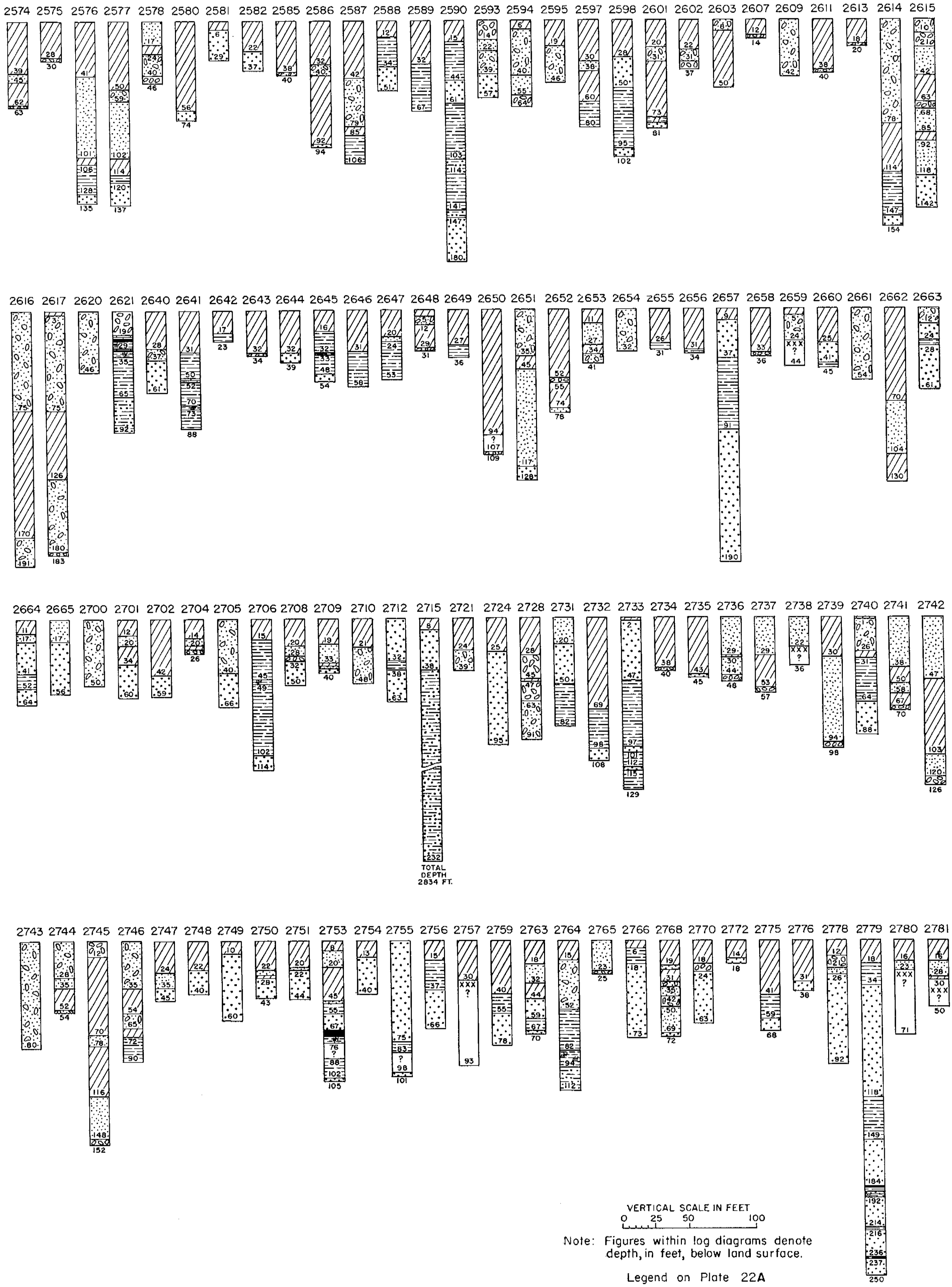



Plate 22M.- Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

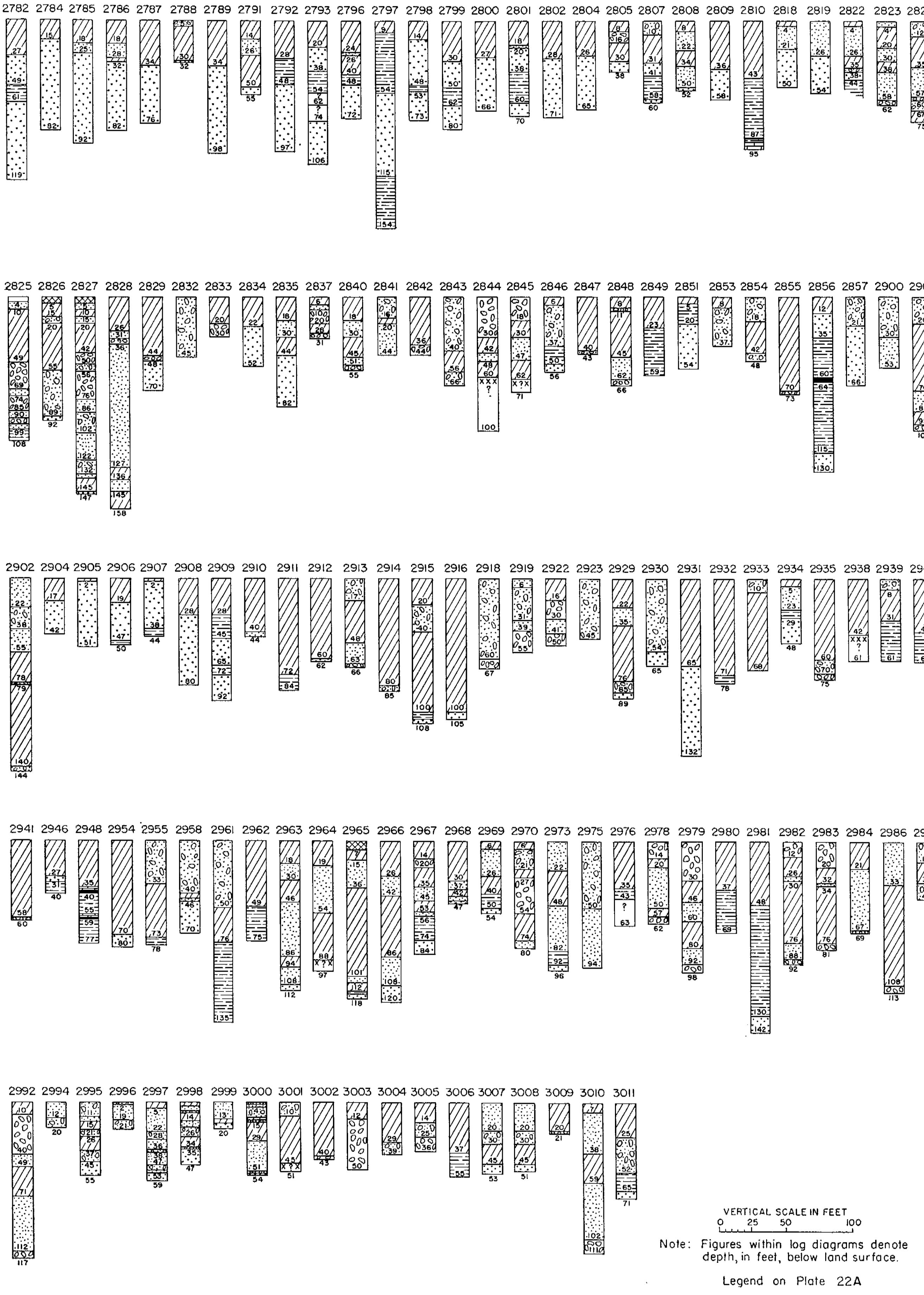



Plate 22N. - Logs of wells in Summit County, Ohio. Well numbers refer to locations shown on plate 2.

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## EXPLANATION

### AREAS IN WHICH WELLS YIELDING MORE THAN 100 GALLONS A MINUTE CAN BE DEVELOPED

BEST GROUND-WATER AREAS IN SUMMIT COUNTY. PERMEABLE SAND AND GRAVEL DEPOSITS TRAVERSED BY THE LARGER STREAMS. WELLS YIELD MORE THAN 1,000 GALLONS A MINUTE. LARGE SUSTAINED YIELDS FROM STREAM INFILTRATION.

GOOD GROUND-WATER AREAS. PERMEABLE SAND AND GRAVEL DEPOSITS NOT TRAVERSED BY THE LARGER STREAMS. INFILTRATION SUPPLIES CANNOT BE DEVELOPED AND, CONSEQUENTLY, SUSTAINED YIELDS ARE SOMEWHAT LESS THAN IN AREAS WHERE INFILTRATION CAN TAKE PLACE. LARGE SEASONAL YIELDS ARE AVAILABLE AS, FOR EXAMPLE, FROM THE BURIED VALLEY IN SOUTH-CENTRAL AKRON.

INTERBEDDED AND INTERLENSING SAND, GRAVEL, SILT, AND CLAY OR TILL IN BURIED VALLEYS. FARM AND DOMESTIC SUPPLIES READILY OBTAINED FROM SHALLOW DRILLED WELLS. DRIVE POINT WELLS ARE FAIRLY COMMON. LARGE INDUSTRIAL SUPPLIES MAY BE MORE DIFFICULT TO FIND AND EXTENSIVE DRILLING IS USUALLY NECESSARY TO LOCATE SUFFICIENT COARSE MATERIAL. WHERE SUCH MATERIAL IS FOUND WELLS MAY YIELD UP TO 1,000 GALLONS A MINUTE.

SAND AND GRAVEL BENEATH CLAY OR TILL IN DEEP BURIED VALLEYS. FLOWING WELLS NOT UNCOMMON. ADEQUATE FARM AND DOMESTIC SUPPLIES. DATA INSUFFICIENT TO MAP ACCURATELY DEPTH AND EXTENT OF THE WATER-BEARING SAND AND GRAVEL AND TO DETERMINE MAXIMUM YIELD, BUT WELLS YIELDING 500 GALLONS A MINUTE HAVE BEEN REPORTED.

### AREAS IN WHICH LESS THAN 100 BUT MORE THAN 20 GALLONS A MINUTE CAN BE DEVELOPED

(ADEQUATE FARM AND DOMESTIC SUPPLIES AND SMALL INDUSTRIAL OR MUNICIPAL SUPPLIES)

GROUND WATER OBTAINED FROM THE SHARON CONGLOMERATE MEMBER OF THE POTTSVILLE FORMATION CAPPING BEDROCK HILLS OR BENEATH OTHER CONSOLIDATED ROCKS OF THE POTTSVILLE FORMATION BUT LESS THAN 100 FEET BELOW LAND SURFACE. WELLS YIELD UP TO 50 GALLONS A MINUTE. LARGER YIELDS, UP TO 50 GALLONS A MINUTE, MAY BE AVAILABLE DURING SHORT PERIODS OF INTERMITTENT PUMPING.

GROUND WATER OBTAINED FROM SANDSTONE AND SHALE IN THE POTTSVILLE FORMATION. SHARON CONGLOMERATE MEMBER IS MORE THAN 100 FEET BELOW LAND SURFACE. ADEQUATE FARM AND DOMESTIC SUPPLIES GENERALLY AVAILABLE ABOVE THE SHARON. SLIGHTLY LARGER YIELDS AVAILABLE FROM THE SHARON. WELLS YIELD FROM 5 TO 50 GALLONS A MINUTE, DEPENDING UPON DEPTH DRILLED.

GROUND WATER OBTAINED FROM LAYERED ALLUVIUM, COARSE AND FINE, USUALLY COVERED BY SILT AND FINE SAND. ADEQUATE FARM AND DOMESTIC SUPPLIES READILY OBTAINED, USUALLY FROM SHALLOW WELLS. YIELDS OF MORE THAN 20 GALLONS A MINUTE HAVE BEEN REPORTED, BUT DATA ARE INSUFFICIENT TO DETERMINE WHETHER EXTENSIVE COARSE PERMEABLE DEPOSITS OF SAND AND GRAVEL OCCUR AT DEPTH.

### AREAS IN WHICH LESS THAN 20 GALLONS A MINUTE CAN BE DEVELOPED; GENERALLY ADEQUATE FOR FARM AND DOMESTIC SUPPLIES

GROUND WATER OBTAINED FROM THE BEREA SANDSTONE. WELLS YIELD 10 TO 20 GALLONS A MINUTE.

GROUND WATER OBTAINED FROM SANDSTONE OF THE CUYAHOGA GROUP. WELLS YIELD 5 TO 10 GALLONS A MINUTE.

GROUND WATER OBTAINED FROM SCATTERED GRAVEL LENSES CONTAINED IN THICK DEPOSITS OF GLACIAL TILL. WELLS YIELD 5 TO 10 GALLONS A MINUTE. IN THESE AREAS WELLS THAT DO NOT ENCOUNTER A GRAVEL LENSE MUST BE DRILLED INTO THE BEDROCK TO OBTAIN GROUND WATER.

HIGH-LEVEL GRAVEL DEPOSITS, GENERALLY KAMES, OR THIN, NOT EXTENSIVE SAND AND GRAVEL DEPOSITS. WELLS MUST BE DRILLED BELOW THE LEVEL OF THE ADJACENT DRAINAGE TO OBTAIN GROUND WATER. GENERALLY YIELDS ARE ADEQUATE FOR FARM AND DOMESTIC USES.

### AREAS CONTAINING LITTLE OR NO GROUND WATER

FINE SAND AND SILT IN DEEP BURIED VALLEYS. MATERIAL GENERALLY CONTAINS MUCH WATER BUT IT CANNOT BE RECOVERED EXCEPT WITH DIFFICULTY. WELLS ARE USUALLY DRILLED INTO THE UNDERLYING CONSOLIDATED ROCK AT DEPTH.

OHIO AND BEDFORD SHALES FORM BEDROCK SURFACE. GROUND WATER OCCURS ONLY IN FLAT UPLAND AREAS AND THEN IT IS IN THE WEATHERED TOP FEW FEET OF ROCK. SUCCESSFUL WELLS RARELY YIELD MORE THAN 2 GALLONS A MINUTE.

LACUSTRINE CLAY AND VERY THICK CLAY TILL DEPOSITS ON TOP OF SHALE BEDROCK. NOT A SOURCE OF GROUND WATER. HOME OWNERS ARE FORCED TO RELY ON CISTERNS.

### OTHER AREAS

BURIED VALLEY BENEATH THE LITTLE CUYAHOGA RIVER AND THE CUYAHOGA RIVER. SHALLOW DUG OR DRILLED WELLS GENERALLY OBTAIN SUFFICIENT GROUND WATER FOR FARM OR DOMESTIC USE FROM PERMEABLE SAND AND GRAVEL BENEATH LACUSTRINE CLAY. WELL DATA ARE MEAGER. ONLY DEEP WELLS IN THE VALLEY ARE AT JAITE IN NORTHFIELD TOWNSHIP. THESE WELLS HAD A REPORTED FLOW OF 1 MILLION GALLONS A DAY, INDICATING THAT LARGE GROUND-WATER SUPPLIES MAY BE AVAILABLE.

AREAS IN WHICH GROUND WATER CONTAINS A LARGE AMOUNT OF SALT

### LOCATION OF BEDROCK DATA

167°

WELLS FROM WHICH BEDROCK DATA WERE OBTAINED. NUMBER SHOWS DEPTH IN FEET TO BEDROCK. NUMBER FOLLOWED BY A + SIGN INDICATES WELL FINISHED IN UNCONSOLIDATED FORMATIONS AND DID NOT REACH BEDROCK.

OUTCROP OR QUARRY IN CONSOLIDATED ROCK

# MAP SHOWING THE GROUND-WATER RESOURCES IN SUMMIT COUNTY, OHIO AND THE APPROXIMATE CONTOURS ON THE BEDROCK SURFACE

ELEVATIONS IN FEET ABOVE SEA LEVEL
BEDROCK CONTOUR INTERVAL 50 FEET

BY R. C. SMITH

SCALE IN MILES
0 1 2 3 4

TOPOGRAPHY (PRINTED IN BROWN) FROM U. S. GEOLOGICAL SURVEY TOPOGRAPHIC MAPS OF THE AKRON, CANTON, CHAGRIN FALLS, CLEVELAND, KENT, AND MASSILLON QUADRANGLES. CONTOUR INTERVAL 20 FEET.

DRAFTING BY J. C. KROLCZYK

# SUMMIT COUNTY, OHIO

## MAP SHOWING LOCATIONS OF WELLS DESCRIBED IN TABLE 6 AND PLATE 22


## EXPLANATION

- 802 WATER WELL
- 803 WATER WELL, LOG SHOWN ON PLATE 22
- OR OBSERVATION WELL
- OR BRINE WELL

NUMBER REFERS TO WELL DATA SHOWN IN TABLE 6

NUMBER UNDERLINED REFERS TO WATER ANALYSIS SHOWN IN TABLES 3 OR 4

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