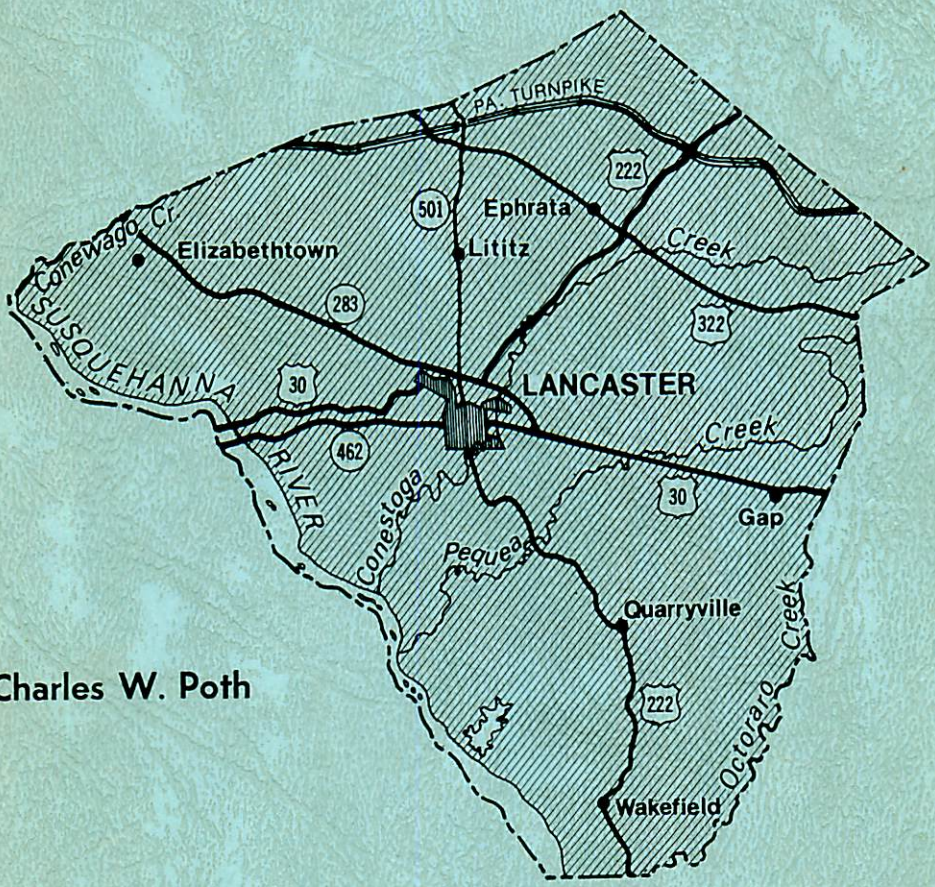
Water Resource Report 43

1977

SUMMARY GROUND-WATER RESOURCES OF LANCASTER COUNTY, PENNSYLVANIA



Charles W. Poth

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF
TOPOGRAPHIC AND GEOLOGIC SURVEY
Arthur A. Socolow, State Geologist

Water Resource Report 43

SUMMARY GROUND-WATER RESOURCES OF LANCASTER COUNTY, PENNSYLVANIA

by Charles W. Poth

U. S. Geological Survey

Prepared by the United States Geological Survey,
Water Resources Division, in cooperation
with the Pennsylvania Geological Survey

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PREFACE

This report is presented as a comprehensive description and inventory of the ground-water resources available in Lancaster County. With the continuing growth of our population and the expansion of our industries, there is an ever increasing rise in demand for quality water resources. Ground water, or subsurface water, constitutes one of the largest reserves of quality water remaining to be developed.

This report can be of assistance to anyone who is planning for future water needs. It will help to evaluate the quantity and quality of ground water available in any part of the county, and it will aid in choosing the locations, depths, and conditions most favorable for the desired ground-water yield.

While this publication has attempted to include all available ground-water data for the county, the Pennsylvania Topographic and Geologic Survey will continue to collect ground-water and water well data for the area; such data will be kept on open file at the Survey offices in Harrisburg, available to anyone who desires the very latest information.

We hope that this report will aid users of water in Lancaster County to develop and manage their water resources so as to accommodate their water needs.

ARTHUR A. SOCOLOW

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SUMMARY GROUND-WATER RESOURCES OF LANCASTER COUNTY, PENNSYLVANIA

by

Charles W. Poth

ABSTRACT

Lancaster County lies in the Piedmont physiographic province, which is divided into three sections. The Triassic Lowlands section occupies the northern tenth of the county and is underlain by sandstone and shale of the Gettysburg-Hammer Creek Formation and the underlying New Oxford-Stockton Formation,[1] and by diabase, which has intruded the other rocks. Median yields of wells in these three units are 16, 12, and 10 gpm (gallons per minute), or 1.01, 0.76, and 0.63 l/s (liters per second), but several hundred gallons per minute are sometimes obtained, especially in the brittle, baked rocks adjacent to the diabase bodies. The median specific capacity of the New Oxford-Stockton Formation is 0.83 gpm per foot (0.17 l/s per meter) of drawdown. The water is soft to moderately hard.

The Conestoga Valley section occupies the central half of the county and is underlain chiefly by carbonate rocks and shale, and by minor amounts of quartzite, phyllite, and schist. The rocks are of two geologic ages. Those of Ordovician age are, from youngest to oldest, the Cocalico Formation, a fissile shale; the Conestoga Formation, a crystalline limestone containing clayey, graphitic, and micaceous laminae, and a basal carbonate-rock conglomerate; and the Beekmantown Group, composed of limestone, interbedded limestone and dolomite, and dolomite.

The rocks of Cambrian age are divided into eight formations, from youngest to oldest: the Conococheague Group, and the Elbrook-Zooks Corner Formation, which are dominantly interbedded limestone and dolomite; the Ledger Formation, a dolomite; the Kinzers Formation, a shale containing beds of limestone and dolomite; the Vintage Formation, a dolomite; and the Antietam and Harpers Formations, undivided, and Chickies Formation, consisting of quartzite, and phyllite and schist.

The water in these rocks is very hard except in the Cocalico, where it is moderately hard, and in the Antietam, Harpers, and Chickies, where it is soft.

[1]Geologic nomenclature is that of the Pennsylvania Geological Survey and does not necessarily conform to usage of the U. S. Geological Survey.

Well yields range widely, and yields of several hundred gallons per minute have been reported from the Beekmantown Group and the Conestoga and Ledger Formations. The average specific capacity in these units is about 2 gpm/ft (0.41 (l/s)/m). In other units it is about 0.2 gpm/ft (0.04 (l/s)/m).

The Piedmont Uplands section is in the southern part of the county and is underlain by Precambrian to lower Paleozoic metamorphic rocks of the Peters Creek Schist and Wissahickon Formation, which consist of schist and quartzite, and schist. Water in these rocks is soft, and wells in them have a median yield of 10 gpm (0.63 l/s). The section is also underlain by serpentinite, an iron magnesium silicate containing soft water and having a median yield to wells of 5 gpm (0.32 l/s).

Also present, chiefly in the eastern or southern part of the county, are several types of igneous rocks containing soft water and having a median yield to wells of 10 gpm (0.63 l/s).

The water in the rocks in Lancaster County is contained in and moves through fractures that are discontinuous, small in areal extent, and therefore apt to be poorly interconnected hydraulically so that pumping effects are not distributed equally in all directions. In the noncarbonate rocks heavy pumping may produce overdrafts. In the carbonate rocks the fractures have been enlarged by solution so that much larger quantities of water may be stored and transmitted. However, water in carbonate rocks is much more liable to be contaminated.

INTRODUCTION

PURPOSE AND SCOPE

This report is the result of a program to summarize the ground-water resources of Pennsylvania in a series of county reports. It contains a general description of the aquifers in the county, a geologic and well-location map, and data on the depth and yield of wells and the chemical quality of ground water.

LOCATION, GENERAL GEOGRAPHIC FEATURES, AND LANDFORMS

Lancaster County encompasses an area of 945 square miles (2,450 km^2) in southeastern Pennsylvania (Figure 1). It lies in the Piedmont physiographic province, which is divided there into three sections (Pa. Geol. Survey, 1963). The northern tenth of the county is in the Triassic Lowlands section and is underlain by conglomerate, sandstone, shale, and diabase. The land is maturely dissected. About 5½ miles (9 km) north of Manheim, near the Lebanon County border, the altitude reaches 1,160 feet (355 m), but generally the altitude in the Triassic Lowlands section

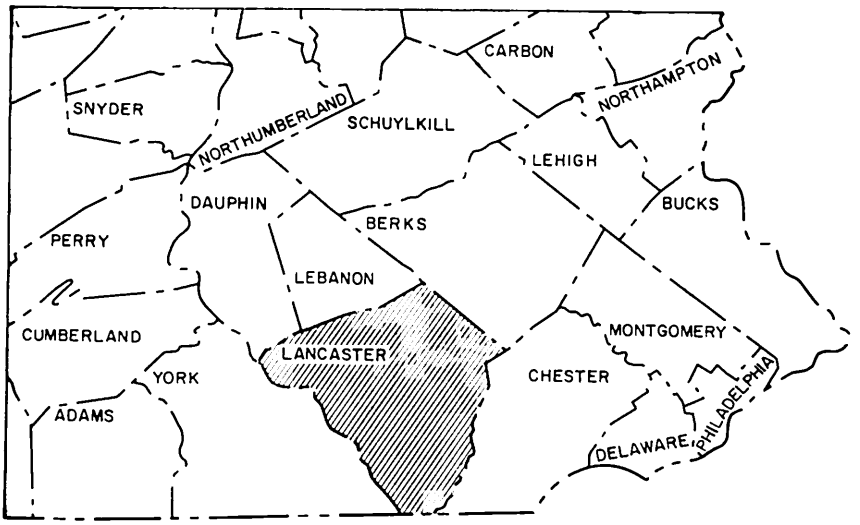


Figure 1. Map of southeastern Pennsylvania showing the location of Lancaster County.

ranges between 400 and 500 feet (120 and 150 m) above mean sea level and contains the highest altitudes in the county.

The central half of the county is in the Conestoga Valley section and is underlain chiefly by carbonate rocks and shale. The land is gently rolling, and the areas underlain by carbonates stand 200 to 300 feet (60 to 90 m) lower than the surrounding noncarbonate areas.

The southern part of the county lies in the Piedmont Uplands section and is underlain by metamorphic rocks. The topography is similar to that of the northern section. The altitude decreases sharply along the Susquehanna River and reaches its lowest point (about 120 feet, or about 37 m) at the Maryland border.

GEOLOGIC STRUCTURE

The rocks of the Conestoga Valley and Piedmont Uplands sections have been subjected to severe and recurring stress throughout geologic history. As a result they have been much faulted and folded. Large blocks have been thrust tens of miles, and the deformations have produced folds that may measure from a fraction of an inch to miles from trough to crest. In some repetitive folds of the Wissahickon Formation, the rocks have been so squeezed that the original thickness of the formation cannot be determined.

The rocks of the Triassic Lowlands section have been much less severely deformed than the rocks elsewhere in the county. They were deposited

in basins bounded on the north by active faults that produced a northerly tilt to the beds. As movement continued after deposition, an extensive network of joints was developed. The dip of the bedding averages about 30° in the western part of the county and increases eastward to between 40° and 60°.

The effect of the complex folding and faulting on the hydrology has not been evaluated to date, but the simpler fracturing, or development of joints, in the rocks forms the principal openings for the storage and transmission of water in the ground. The best aquifers are developed where these joints have been enlarged by solution of the rock along their sides, as in the carbonates.

POPULATION TRENDS

The population of Lancaster County has increased 84 percent during the past 50 years. In the past decade the population increased by 14.8 percent. Table 1 shows the results of the decennial census from 1920 to 1970. The 1970 population density in the county was 338 persons per square mile (130 persons per km^2).

Table 1. *Population of Lancaster County, 1920-70*

Year	*Population*
1920	173,797
1930	196,882
1940	212,504
1950	234,717
1960	278,359
1970	319,693

WHERE THE WATER COMES FROM

HYDROLOGIC CYCLE

Water is one of our most important resources, and it constitutes the major part of most living things. Man's existence depends upon it, yet water supplies are widely taken for granted. As shown in Figure 2, water evaporates from the oceans and is carried as vapor until it condenses and falls. Most of the precipitation on the land is either used by vegetation, evaporates back to the atmosphere, or runs overland as streamflow. Part enters the soil and bedrock to recharge water-bearing formations, called aquifers. The water moves at a varying pace, depending on its environment, but it eventually returns to the oceans.

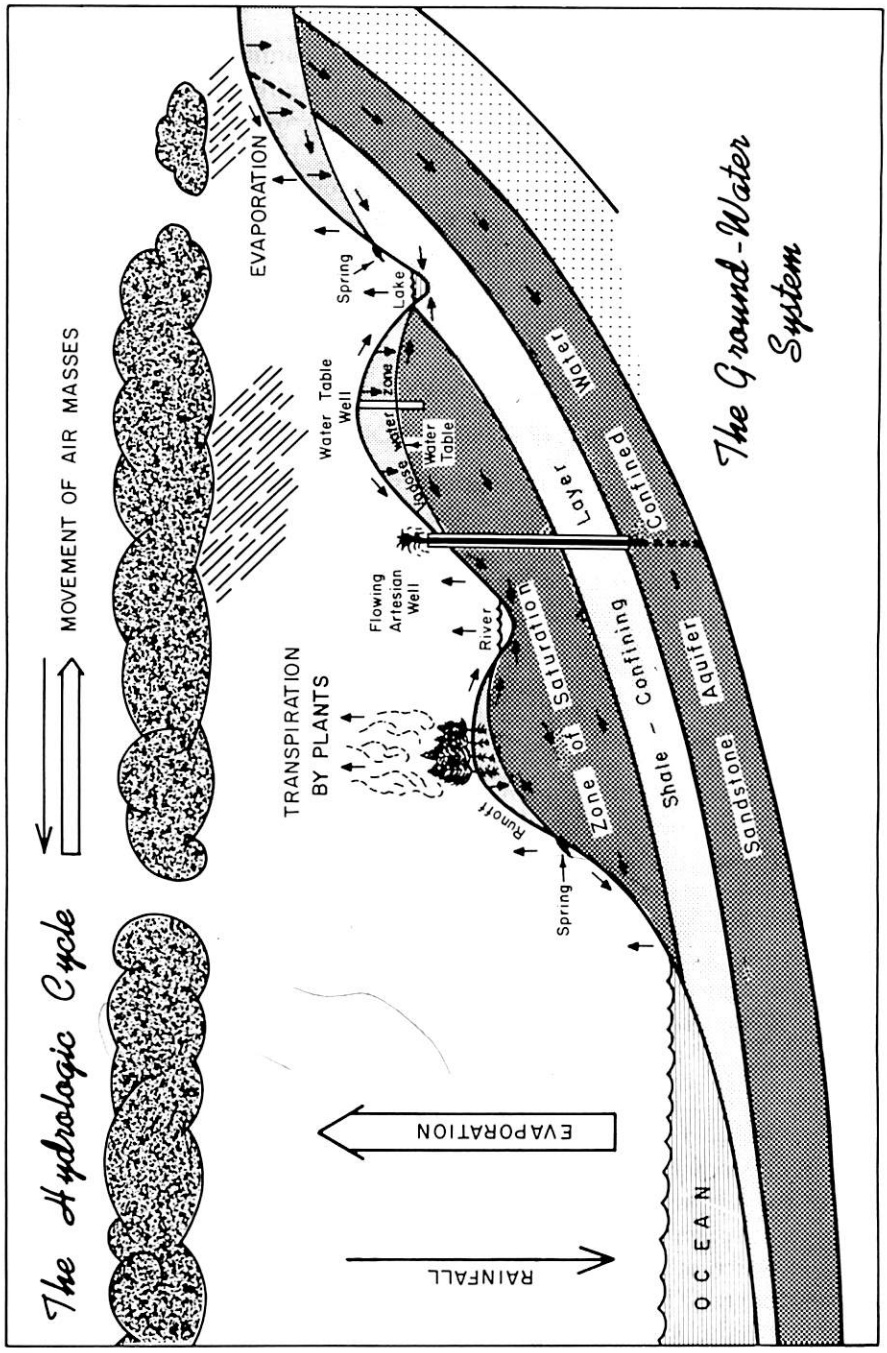


Figure 2. The hydrologic cycle.

PRECIPITATION

Precipitation is the source of all fresh water in the county. The average yearly precipitation at the U. S. Weather Bureau station, Lancaster 2 NE pumping station, based on more than 80 years of record, is 43.29 inches (110 cm) (U. S. Department of Commerce, 1970). Not all the water in the streams is derived from precipitation on the county, as some streams carry runoff from areas outside the political boundaries.

Precipitation is distributed evenly throughout the year, but the summer has a little more rainfall than the other seasons. Much of the summer rain falls during intense thunderstorms of short duration.

HOW AND WHERE THE WATER IS FOUND

EVAPOTRANSPIRATION

Evapotranspiration is a collective term describing the return of water to the atmosphere as vapor. In the process of transpiration, soil moisture returns to the atmosphere as a byproduct of plant growth. In the evaporation process, water changes directly from a liquid to a vapor.

About 25 inches (64 cm) of the water falling on the county annually is returned to the atmosphere by evapotranspiration.

STREAMFLOW

Most of the water not evaporated or transpired leaves the county as discharge from streams. This discharge accounts for 18 inches (46 cm) of the annual precipitation on the area. The larger streams and the locations of gaging stations where streamflow is measured in Lancaster County are shown on Plate 1. Identification numbers are those assigned by the U. S. Geological Survey. A summary of discharge data for the gaging stations is given in Table 2. More detailed information on streamflow can be obtained from *Water Resources Data for Pennsylvania, Part I: Surface Water Records,* published annually by the U. S. Geological Survey (1970).

GROUND WATER

Much of the precipitation on the county returns to the atmosphere or reaches the streams as overland runoff. Part infiltrates the soil and moves down through fractures and other void spaces in the underlying rock to the water table, below which all the interconnected voids are filled with water. This is illustrated in Figure 3. After reaching the saturated zone, the water moves downward and laterally toward lower altitudes and eventually returns to the land surface, either from springs or from wells.

Table 2. *Discharge Data for the Gaged Streams in Lancaster County*

Station number	Location	Period of record (years)	Average discharge (cfs)	Maximum discharge (cfs)	Date of maximum discharge	Minimum discharge (cfs)	Date of minimum discharge
1-5760	Susquehanna River at Marietta	1931 to present	34,850	1,100,000[a]	June 24, 1972	6.8[b]	Sept. 26, 1932
1-5765	Conestoga Creek at Lancaster	1928 to present	368	88,300[a]	June 23, 1972	0	
1-5784	Bowery Run near Quarryville	1962 to present	5.81	2,220	July 3, 1964	1.0	Sept. 1-4, 9-12, 1966

[a] Preliminary estimate

[b] Occurred when York Haven power plant was shut down in order to obtain current-meter measurements at low water

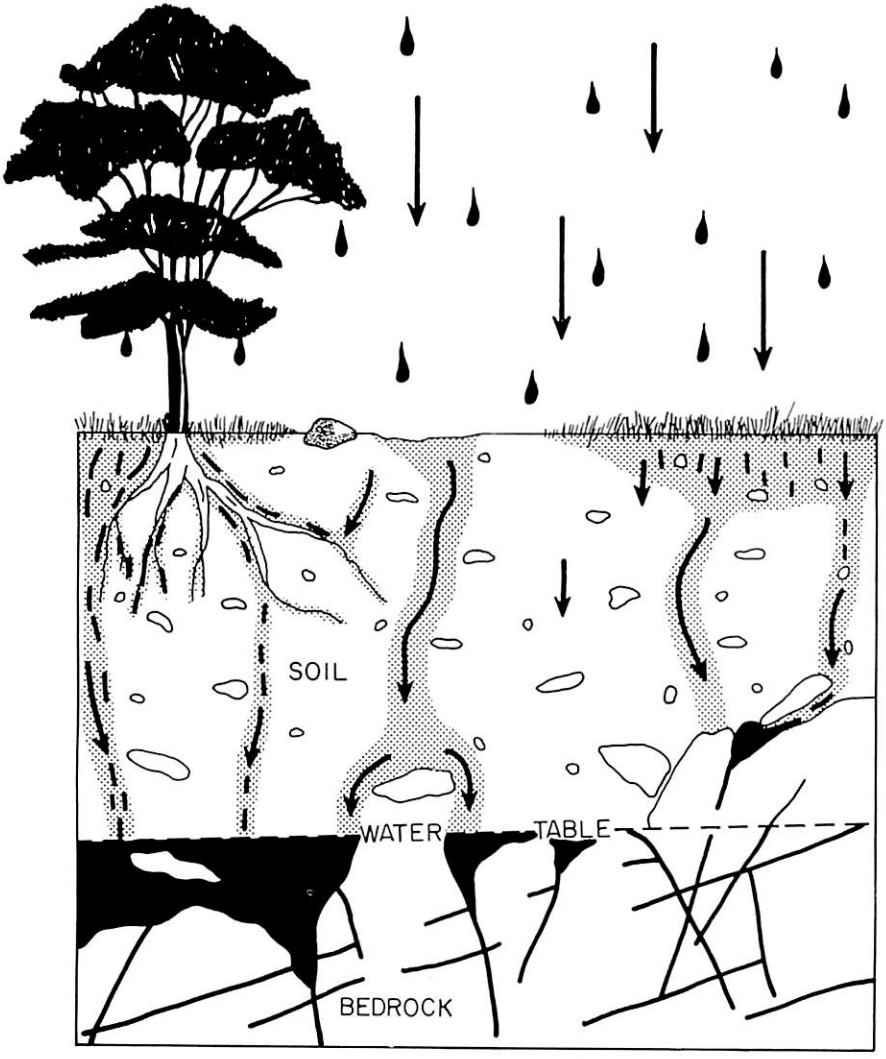


Figure 3. Downward movement of water through soil and rock to the water table.

The water table fluctuates according to the relative amounts of recharge (additions to the aquifer) and discharge (subtractions through springs and wells). Because evapotranspiration is great during the growing season (April to October), little recharge reaches the zone of saturation during that period, and water levels decline. Water levels generally rise throughout the rest of the year.

Water levels in the county are at or near the land surface in the valleys and rise under the hilltops. The rate of water-level rise, however, is less than that of the land surface; so depths to water at the higher elevations are greater than those in the valleys. The water table, therefore, is a subdued replica of the land surface. Because wells drilled in valleys generally encounter water at shallower depths than wells drilled on hills, they have more available drawdown than wells of the same depth drilled on hills and are less likely to go dry during droughts.

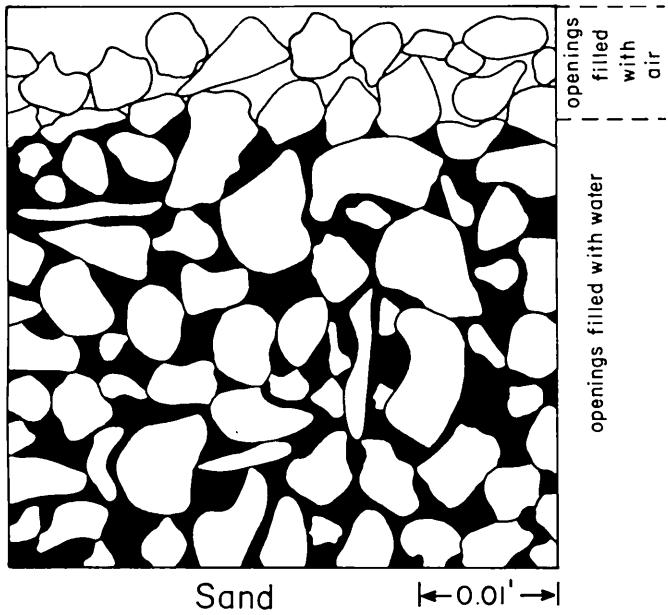
Ground water occurs in and moves through interconnected openings (Figure 4) of either primary or secondary origin. Primary openings are the spaces between individual grains (chiefly in unconsolidated material). Secondary openings are those formed after the consolidation and cementation of the sediments and generally result from the fracture or solution of the rock. Solution cavities are formed by the dissolving action of water in rocks such as limestone.

Well Yields

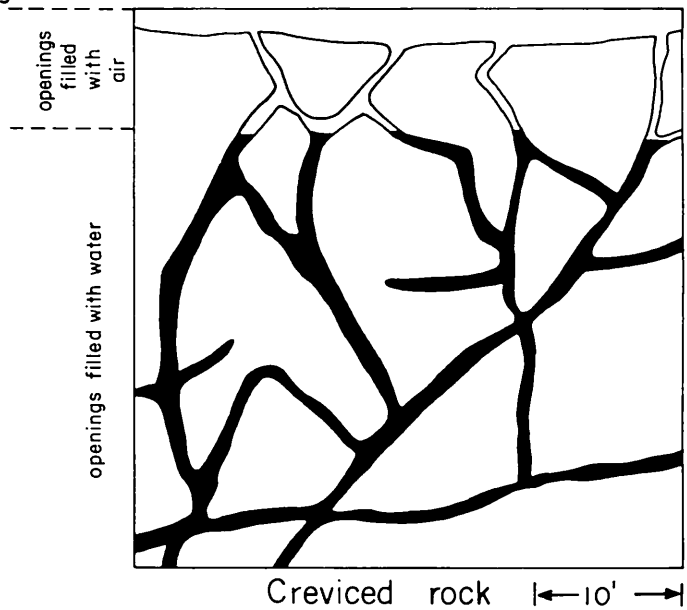
The ability of a well to yield water is generally estimated by the driller at the time the well is completed by measuring the quantity of water that must be removed from the well in a given time in order to maintain the water level near the bottom of the well. The value obtained is called the reported yield of the well in this report and is progressively less accurate as the yield increases because of the increasing difficulty in lowering the water level to the bottom of the well.

Another measure of a well's ability to yield water is often made by pumping the well at a constant rate and measuring the amount that the water level has been lowered after a given time. The value obtained by dividing the pumping rate by the drawdown is called the specific capacity of the well and is considered a more accurate appraisal of the productivity of the well than the reported yield because the drawdown is measured more accurately. The specific capacity is a more flexible value than the reported yield, as it may be multiplied by a given drawdown to obtain an estimate of how much the well would yield if it were pumped at a rate sufficient to lower the water level that much.

Reported well yields in Lancaster County range from less than 1 to 600 gpm (0.06 to 38 l/s). Data on about 1,275 wells drilled in geologic formations that underlie the county are listed in Table 5. Plate 1 shows the locations of the wells and the geologic units. A summary of the water-bearing characteristics of the geologic units in Lancaster County is given in Table 3.



Primary openings in unconsolidated material



Secondary openings in consolidated rock

Figure 4. Examples of how water occurs in rocks.

Table 3. *Composite Stratigraphic Section for Lancaster County*

System	Group or formation[1]	Approximate thickness (feet)	Character of rock	Water-bearing characteristics
Triassic	Diabase	0-250	Dark-colored fine- to coarse-grained igneous rock that was intruded into sedimentary rock, baking it for several feet on either side and making it hard and brittle.	Reported yields of wells range from 3 to 15 gpm; the median is 10 gpm. Large yields are sometimes obtained from the highly fractured, baked rock adjacent to diabase. The water is moderately hard.
	Gettysburg-Hammer Creek Formation	4,500	Red shale and soft red sandstone; lower unit, 0 to 2,500 feet thick, contains interbedded massive sandstone and conglomerate.	Reported yields range from 5 to 94 gpm; half are less than 16 gpm, though yields of several hundred gpm have been reported for industrial and public supply wells in counties farther east. The water is generally soft.
	New Oxford-Stockton Formation	4,500	Light-gray to grayish-yellow sandstone with interbedded thin red shale and conglomerate. Most conglomerate is in lower two thirds of formation.	Reported yields range from 1 to 450 gpm; half are 12 gpm or less. Specific capacities range from 0.1 to 21 gpm/ft and half are less than 0.83 gpm/ft. The water is generally soft to moderately hard.
Ordovician	Cocalico Formation	2,000	Bluish-black to dark-gray fissile shale; purple and green shale containing thin quartzite near base.	Reported yields range from 1 to 100 gpm; about half are less than 20 gpm. Specific capacities available are 0.58, 1.0, and 7.4 gpm/ft. The water is moderately hard.
	Conestoga Formation	1,000+	Gray fine- to coarse-crystalline limestone; commonly contains clayey, graphitic, and micaceous laminae. Contains basal beds of conglomerate in which the rounded fragments are carbonates and range in size from pebbles to boulders 5 feet in diameter.	Reported yields are 20 and 250 gpm. Specific capacities range from 0.02 to 130 gpm/ft and about half are less than 2.2 gpm/ft. The water is very hard.

Table 3. *(Continued)*

System	Group or formation[1]	Approximate thickness (feet)	Character of rock	Water-bearing characteristics
Ordovician	Beekmantown Group	2,900–4,400	Light- to dark-gray, very fine to coarse-crystalline limestone overlain by interbedded limestone and dolomite, very fine crystalline dolomite, and finally by limestone. Extensive pre-Cocalico erosion, increases southward.	Reported yields range from 1 to 600 gpm; half are 30 gpm or less. Specific capacities range from 0.03 to 600 gpm/ft and half are 1.5 gpm/ft or less. The water is very hard.
Cambrian	Conococheague Group	3,000–6,700	White to dark-gray, very fine to fine-crystalline interbedded limestone and dolomite; some thin dolomite pebble conglomerate lenses and chert stringers; much of dolomite is argillaceous to sandy.	Reported yields range from less than 2 to 30 gpm; about half are 12 gpm or less. Specific capacities range from 0.02 to 244 gpm/ft; about half are 0.2 gpm/ft or less. The water is very hard.
	Elbrook-Zooks Corner Formation	1,600	Medium-gray, very fine crystalline, thin- to thick-bedded dolomite; much silty to sandy dolomite interbedded with dolomitic sandstones. Small amounts of limestone.	Reported yields range from 3 to 105 gpm; about half are less than 20 gpm. Specific capacities range from 0.04 to 46 gpm/ft; about half are less than 0.1 gpm/ft. The water is very hard.
	Ledger Formation	1,000	Light-gray medium- to coarse-crystalline massive dolomite.	Reported yields range from 2 to 550 gpm; half are less than 30 gpm. Specific capacities range from 0.16 to 135 gpm/ft; half are less than 2.5 gpm/ft. The water is very hard.
	Kinzers Formation	300-600	Gray shale. Contains beds of limestone and dolomite that may be argillaceous to sandy or contain pyritiferous black shale partings.	Reported yields range from 2 to 30 gpm; half are less than 17 gpm. Specific capacities range from 0.05 to 38 gpm/ft; half are less than 1.8 gpm/ft. The water is very hard.

	Vintage Formation	350-550	Gray fine-crystalline massive dolomite; contains siliceous laminae or thin shale interbeds.	Reported yields range from 2 to 70 gpm; half are 6 gpm or less. Specific capacities range from 0.03 to 74 gpm/ft; half are 0.44 gpm/ft or less. The water is hard to very hard.
	Antietam and Harpers Formations, undivided	1,300	Gray quartzite overlying gray phyllite and schist.	Reported yields range from 1.5 to 40 gpm; about half are less than 5 gpm. The water is soft.
	Chickies Formation	600	Light-colored thick-bedded vitreous quartzite; thin bedded in upper part; contains basal conglomerate.	Reported yields range from 1 to 30 gpm; about half are less than 6 gpm. Specific capacities are available for only two wells and are 0.2 gpm/ft for both. The water is soft.
Lower Paleozoic to Precambrian	Peters Creek Schist (includes Peach Bottom Slate)	?	Greenish-gray chloritic, micaceous quartzite and schist. Weathers readily to yellow and brown soils.	Reported yields range from 1 to 40 gpm; half are 10 gpm or less. The water is soft.
	Wissahickon Formation	?	Gray to green albite-chlorite schist; weathers readily to yellow to brownish-red clay containing flakes of mica.	Reported yields range from 2 to 35 gpm; about half are 5 gpm or less. The water is soft.
	Serpentinite	?	Light- to dark-green, sometimes reddish, iron-magnesium silicate rock. Present generally in masses of small areal extent. Overlying soil is notoriously infertile.	Reported yields range from 3 to 10 gpm; about half are 5 gpm or less. The water is soft.
	Metamorphic and igneous rocks, undifferentiated	?	Includes several species of igneous rocks; present mostly in the eastern or southern part of the county.	Reported yields range from 2 to 70 gpm; half are 10 gpm or less. The water is soft.

[1]Geologic nomenclature is that of the Pennsylvania Geological Survey and does not necessarily conform to usage of the U.S. Geological Survey.

Ground-Water Quality

As precipitation enters the ground, it dissolves parts of the soil and the rock and, thus, picks up mineral constituents. Ground water generally contains more dissolved mineral matter than surface water, and occasionally may contain so much dissolved matter that it is not fit to drink. Water containing more than 500 mg/l (milligrams per liter) dissolved solids is not considered desirable for domestic supplies, though more highly mineralized water is used where better water is not available. The soil and rocks through which the ground water percolated tend to filter solid suspended materials and bacteria, so that ground water is generally clear and has fewer bacteria than surface water. However, solution openings in carbonate rocks are too large to allow filtration, and water in these rocks may travel for miles with little reduction in solids or bacteria.

Analyses of 106 samples of water from wells and 6 samples of water from springs are listed in Table 7. Twenty-eight samples are from Triassic rocks, 70 are from carbonate rocks, and 14 are from quartzite or other metamorphic and igneous rocks.

Most of the water sampled is of acceptable quality. However, the maximum concentrations for drinking water recommended by the U. S. Public Health Service (1962) are exceeded in 17 samples for iron (0.3 mg/l), in 16 samples for manganese (0.05 mg/l), in 28 samples for nitrate (45 mg/l), and in 10 samples for dissolved solids (500 mg/l). All of the excessive concentrations of dissolved solids and 24 of the 28 excessive nitrate concentrations are in samples of water from the carbonate rocks.

THE ROCKS AND THEIR WATER

Diabase

Distribution and Lithology

Diabase is present in sheets intruded between the beds of the sedimentary rock or along steeply dipping fractures, chiefly in the northern part of the county, where it has been intruded into the Gettysburg-Hammer Creek Formation and the underlying New Oxford-Stockton Formation. Elsewhere it occurs as thin stringers that dip steeply and generally strike northeastward. It is a dark-colored fine- to coarse-grained igneous rock. Heat emanating from the diabase intrusions has baked the adjacent sedimentary rocks for several feet on either side, causing them to be hard and brittle. The diabase commonly weathers to rust-covered spheroidal boulders. The intrusions are as thick as 250 feet (76 m).

Well Depths and Yields

Data are available for only nine wells in the diabase in Lancaster County. The wells range in depth from 27 to 400 feet (8 to 122 m); the median is 122 feet (37 m). The yields of these wells range from 3 to 15 gpm (0.19 to 0.95 l/s); the median is 10 gpm (0.63 l/s). The baked, brittle zones adjacent to the diabase may be well-fractured and offer large quantities of water to wells. A well owned by the Elizabethtown Water Company (Ln-151) that lies just north of a diabase intrusion may obtain its large yield from such a fractured, baked zone in the New Oxford Formation. The reported yield of the well is 440 gpm (28 l/s), or more than that of 99 percent of the wells in the New Oxford.

Water Quality

Water from diabase is moderately hard; the median hardness is about 6 gpg (grains per gallon) (100 mg/l). The principal dissolved constituents are calcium, magnesium, and bicarbonate.

Gettysburg-Hammer Creek Formation

Distribution and Lithology

The Gettysburg-Hammer Creek Formation lies along the northern border and along the northern part of the eastern border in the county. The large diabase intrusions in Lancaster County are all in these two formations. The part of the mapped unit that lies west of the diabase intrusion that straddles the eastern border of the county is called the Gettysburg; the part that lies to the east of the intrusion is called the Hammer Creek. Only a small area is underlain by the Hammer Creek in Lancaster County.

The units are lithologically similar and consist chiefly of layers of red shale and soft red sandstone. Some beds of gray, green, or black shale and gray to white sandstone are interbedded with the dominant red material. The lower bed, which ranges from 0 to 2,500 feet (760 m) in thickness, consists chiefly of sandstone and conglomerate interbedded with shale.

Well Depths and Yields

Data are available for only ten wells in the Gettysburg in Lancaster County. The wells range in depth from 43 to 235 feet (13 to 72 m); the median depth is 105 feet (32 m). The yields of these wells range from 5 to 94 gpm (0.32 to 5.9 l/s); the median is 16 gpm (1 l/s). Most of these data reflect the characteristics of wells that were drilled for domestic purposes. Therefore, they cannot be used to adequately appraise the

capacity of the aquifer, as drilling is usually halted when enough water for domestic use is obtained. A study of the Brunswick (Gettysburg equivalent) in Berks and Montgomery Counties (Longwill and Wood, 1965) shows that wells at least 200 feet (61 m) deep are necessary to obtain yields of more than 100 gpm (6.3 l/s), and wells 550 feet (168 m) deep are necessary for maximum yields.

Water Quality

Only a single analysis of water from the Gettysburg is available, plus a half dozen field determinations of hardness. These data show that the water has a median hardness of 3 gpg (50 mg/l), and the principal constituents are calcium and bicarbonate. Data from Longwill and Wood (1965) indicate that water in the eastern part of the Brunswick may be hard and that water from wells over 500 feet (150 m) deep is of the calcium sulfate type.

New Oxford-Stockton Formation

Distribution and Lithology

The New Oxford Formation is exposed south of the Gettysburg Formation in a wedge-shaped area that narrows eastward. Several smaller areas are also exposed in association with the Gettysburg in the northeastern part of the county. At the eastern border are two small areas of the unit; but there it is called the Stockton Formation, after more extensive exposures of the rock in counties east of Lancaster. The lithologic character is the same, however, regardless of which name is applied.

The New Oxford-Stockton Formation in Lancaster County is a complexly interbedded sequence of conglomerates, sandstones, siltstones, and shales that dip from 25° to 60° to the north or northwest. Overlying the bedrock is a layer of loosely consolidated, weathered material that ranges from 0 to 50 feet (15 m) in thickness and averages 23 feet (7 m).

Well Depths and Yields

Data are available on more than 400 wells drilled in the New Oxford in Lancaster County. These wells range in depth from 7 to 705 feet (2.1 to 215 m); the median depth is 95 feet (29 m). Yields range from 1 to 450 gpm (0.06 to 28.4 l/s); the median is 12 gpm (0.76 l/s). Specific capacities range from 0.1 to 21 gpm/ft (0.02 to 4.3 (l/s)/m); the median is 0.83 gpm/ft (0.17 (l/s)/m). The low median depth and yield of these wells reflect the halting of drilling when an adequate supply for domestic purposes was obtained.

The water is supplied to the wells from fractures in the rock and from bedding-plane openings. These openings are a maximum of a few inches wide and are generally separated by many feet of rock that yields no water. The principal water-bearing zones are hydraulically connected with each other and with the saturated weathered material that overlies the bedrock. The latter acts as a reservoir to the bedrock and supplies water to shallow wells.

Water Quality

Samples of water from about two dozen wells were analyzed in the laboratory, and more than 300 determinations of hardness were made in the field. The chief constituents are calcium, magnesium, and bicarbonate. Hardness values range from 1 to 30 gpg (17 to 510 mg/l); their median is only 6 gpg (100 mg/l), or that of a moderately soft water. Nitrate exceeded U. S. Public Health Service (1962) recommended standards (45 mg/l) in two samples. Excessive concentrations of iron (0.3 mg/l) were present in one sample; and of manganese (0.05 mg/l) in five samples. Most water contained less than 250 mg/l of dissolved solids.

Cocalico Formation

Distribution and Lithology

The Cocalico Formation is in the north-central part of the county south of the New Oxford Formation and in several smaller exposures about 2 miles (3.2 km) southeast of the main body. The formation is correlative with the Martinsburg Formation that is present elsewhere in southeastern Pennsylvania. It consists of bluish-black to dark-gray fissile shale, and purple and green shale that contains a thin quartzite bed near the base.

Well Depths and Yields

Data for 10 wells in the Cocalico are available. Their depths range from 30 to 500 feet (9 to 152 m) and their median depth is 85 feet (26 m). The reported yields of these wells range from 1 to 100 gpm (0.06 to 6.3 l/s); the median yield is 20 gpm (1.3 l/s). The specific capacities for the three available tests are 0.58, 1.0, and 7.4 gpm/ft (0.12, 0.21, and 1.5 (l/s)/m).

Water Quality

No data are available from the Cocalico in Lancaster County; however, the water in the Cocalico is probably of the calcium bicarbonate type.

Based on a study of the Martinsburg Formation in Dauphin County by Carswell and others (1968), the concentrations of dissolved solids are generally less than 200 mg/l. The water is moderately hard.

Conestoga Formation

Distribution and Lithology

The Conestoga Formation is present in a wedge-shaped band that zigzags and narrows eastward across the central part of the county. The city of Lancaster is on the north edge of the Conestoga. The formation is generally a gray finely to coarsely crystalline limestone that commonly contains clay laminae. Dolomite is present at the northeast end of Lancaster. Much of the formation has a schistose appearance due to thin graphitic and micaceous beds. Conglomerate beds in which the fragments may be as much as 5 feet (1.5 m) in diameter are present near the base. Silty and sandy limestones also occur near the base and may be interbedded with the conglomerate.

Well Depths and Yields

Wells in the Conestoga range in depth from 38 to 502 feet (11.6 to 153 m); the median depth is 105 feet (32 m). Only two yields were reported for wells in this unit: 20 and 250 gpm (1.3 and 15.8 l/s). However, 63 wells were tested for specific capacity, and the values obtained range from 0.02 to 130 gpm/ft (0.004 to 27 (l/s)/m). The median specific capacity is 2.2 gpm/ft (0.46 (l/s)/m).

Water Quality

Twenty analyses of water from 18 wells in the Conestoga are available. They show that the water is of the calcium bicarbonate type, but that many of the wells have high concentrations of nitrate, sulfate, and chloride—constituents that are commonly associated with contamination. Becher (oral commun., 1973) reports that the contaminated wells are concentrated in and around the city of Lancaster. The maximum concentrations recommended for drinking water by the U. S. Public Health Service (1962) were exceeded for nitrate (45 mg/l) in nine of the 18 wells, and for dissolved solids (500 mg/l) in six wells. The water is very hard; the median hardness is 16 gpg (270 mg/l).

Beekmantown Group

Distribution and Lithology

The Beekmantown Group underlies two extensive belts and several small areas in the northern part of the county. It is generally bordered

on the north by the New Oxford or Cocalico Formations and on the south by the Conococheague Group.

Recent detailed mapping has shown that the Beekmantown Group can be divided into several formations. From oldest to youngest, these are the Stonehenge, Rickenbach (present in Berks and Lebanon Counties, but apparently not in Lancaster), Epler, and Ontelaunee Formations. Two additional formations that directly overlie the Ontelaunee—the Annville and Myerstown Formations—are included with the Beekmantown for purposes of discussion in this report, as they are thin and unimportant as aquifers.

The Beekmantown consists of a lower gray crystalline limestone unit, a middle sequence of interbedded limestone and dolomite, and an upper dolomite unit. The upper two units included with the Beekmantown consist of finely crystalline limestone (Annville) and of dark coarsely crystalline thin-bedded limestone and dark shaly limestone (Myerstown). Shale laminae are present at several horizons throughout the group, especially the basal limestone. These laminae give the rock a ribbed appearance on weathering.

Well Depths and Yields

Wells in the Beekmantown range in depth from 11 to 600 feet (3.4 to 183 m); the median is 90 feet (27 m). The yields of 31 wells were reported and these range from 1 to 600 gpm (0.06 to 38 l/s); the median is 30 gpm (1.9 l/s). Specific-capacity tests were made on 77 wells. Their values range from 0.03 to 600 gpm/ft (0.01 to 125 (l/s)/m) and the median value is 1.5 gpm/ft (0.31 (l/s)/m). By far the best aquifer is the basal limestone unit (Stonehenge), which has a median specific capacity of 17.5 gpm/ft (3.62 (l/s)/m), based on 22 tests. The interbedded limestone-dolomite unit (Epler), on the other hand, has a median specific capacity of only 0.51 gpm/ft (0.11 (l/s)/m), based on 51 tests. The dolomite and overlying limestones are represented by only four tests; the specific-capacity values are 0.10, 0.16, 0.20, and 2.2 gpm/ft (0.02, 0.03, 0.04, and 0.46 (l/s)/m).

Water Quality

Water from the Beekmantown is of the calcium bicarbonate type and is very hard. Field determinations of 127 samples showed a median value of 14 gpg (240 mg/l). Of the 26 analyses of water from 20 wells, U. S. Public Health Service (1962) recommended standards for drinking water were exceeded in five samples for iron (0.3 mg/l), four samples for manganese (0.05 mg/l), and eight samples (7 wells) for nitrate (45 mg/l). Analysis of samples of the five wells having high iron concentrations and three of the four wells having high manganese concentrations, collected

at a later date, showed most values well within U. S. Public Health Service (1962) recommended standards. One high-manganese water was not resampled. High nitrate levels were still high on subsequent sampling.

Conococheague Group

Distribution and Lithology

The Conococheague Group is exposed in a band that extends eastward across the widest part of the county from the Susquehanna River to nearly the eastern border. A second large exposure of the group extends northeastward from the vicinity of Lititz. Both exposures are broken and offset in places by many large faults. Several small exposures are also present in the county.

Based on detailed mapping, the group is divided into four formations; from oldest to youngest, these are the Buffalo Springs, Snitz Creek, Millbach, and Richland Formations. The group as a whole consists of interbedded gray limestone and dolomite, which ranges from very finely to finely crystalline and may be clayey, silty, or sandy and appear shaly in outcrop. The lower (Buffalo Springs) and upper (Richland) formations have this lithology, though the clastic content of the Richland is quite minor. However, in the lower of the two middle formations of the group (Snitz Creek), dolomite predominates, and in the upper of the two middle formations (Millbach), limestone predominates.

Well Depths and Yields

Wells in the Conococheague range in depth from 9 to 545 feet (2.75 to 166 m); their median depth is 63 feet (19 m). Yields of only six wells were reported. These range from 2 to 30 gpm (0.13 to 1.9 l/s) and have a median of 12 gpm (0.76 l/s). Thirty-five specific-capacity tests have been run. The values range from 0.02 to 244 gpm/ft (0.004 to 50 (l/s)/m) and the median is 0.21 gpm/ft (0.04 (l/s)/m). The hydrologic properties of the group are fairly similar throughout the several formations.

Water Quality

Eight analyses of water from six wells in the Conococheague are available. Dissolved-solids concentrations range from 280 to 889 mg/l. Two samples exceed the U. S. Public Health Service (1962) recommended drinking water standards for dissolved solids (500 mg/l) and one sample exceeds the standard for nitrate (45 mg/l). Field determinations of hardness of water from 89 wells showed a median value of 16 gpg (270 mg/l).

Elbrook-Zooks Corner Formation

Distribution and Lithology

The Elbrook-Zooks Corner Formation is present in Lancaster County as several small, elongate, east-west-trending bodies lying in or just south of the Conococheague Group. Meisler and Becher (1971, p. 17-18) report that rock at the position of the Elbrook in northwestern Lancaster County consists of thin- to thick-bedded, very finely crystalline dolomite that contains much silty or sandy material. This composition differs from the shaly limestone and calcareous shale of the Elbrook at the type section farther west in Franklin County, where it is approximately twice as thick as in Lancaster County (Hall, 1934, p. 50). Meisler and Becher concluded that the differences in the formation in the two counties were so great that it should not be called by the same name. Accordingly, they have called it the Zooks Corner Formation. They have also correlated some of the rock mapped elsewhere in their area as Elbrook with the lower part of the Conococheague. Insufficient work has been done to determine if all the Elbrook in Lancaster County should be classified as Zooks Corner or Conococheague.

Well Depths and Yields

Wells in these rocks range in depth from 8 to 400 feet (2.4 to 122 m) and have a median depth of 76 feet (23 m). Only five yields were reported. These range from 3 to 105 gpm (0.19 to 6.6 l/s); their median is 20 gpm (1.3 l/s). Twenty-nine specific-capacity tests were run and the values range from 0.04 to 46 gpm/ft (0.01 to 9.5 (l/s)/m). The median value is 0.11 gpm/ft (0.02 (l/s)/m).

Water Quality

Eleven samples of water from eight wells in this formation were analyzed. Recommended maximum concentrations for drinking water by the U. S. Public Health Service (1962) are exceeded for manganese (0.05 mg/l), nitrate (45 mg/l) and dissolved solids (500 mg/l) in three wells, though not the same wells. The water throughout the formation is very hard.

Ledger Formation

Distribution and Lithology

The Ledger Formation is present in Lancaster County in a narrow, discontinuous band that widens eastward and becomes Y-shaped. It is

bounded on the north principally by the Elbrook-Zooks Corner and Conococheague and on the south by the Conestoga. The Ledger consists principally of light-gray, medium- to coarsely crystalline, sparkling dolomite.

Well Depths and Yields

Well depths range from 10 to 500 feet (3 to 150 m); the median is 78 feet (24 m). Reported yields range from 2 to 550 gpm (0.13 to 35 l/s); the median is 30 gpm (1.9 l/s). Specific capacities range from 0.16 to 135 gpm/ft (0.03 to 28 (l/s)/m); the median is 2.5 gpm/ft (0.52 (l/s)/m). The Ledger is one of the best aquifers in the county and is exceeded in its water-bearing capacity only by the Stonehenge Formation of the Beekmantown Group.

Water Quality

Nine analyses of water from six wells in the Ledger are available. U. S. Public Health Service (1962) recommended standards are exceeded for manganese (0.05 mg/l) in three wells and for nitrate (45 mg/l) in three wells. Two of these wells contained both excessive manganese and nitrate. The water in the Ledger is very hard.

Kinzers Formation

Distribution and Lithology

The Kinzers Formation is present in small crumpled bands in the county, where it is wrapped around the noses of many of the complex folds. The bands are generally a quarter of a mile (0.4 km) or less in width and a few miles in length. The formation is commonly associated with the Ledger. It consists of shale, limestone, and dolomite, the stratigraphic sequence of which is not clearly known. The shale, which apparently forms the basal unit, is gray and has rusty weathering streaks along partings. Several types of limestones are present, ranging from white to dark gray and from thin-bedded to massive, and containing clayey laminae and sandy beds. One type weathers so as to produce a distinctive irregular honeycomb effect. The dolomite is commonly thick bedded, gray to black, and very finely crystalline, and may contain laminae of limestone or disseminated pyrite.

Well Depths and Yields

Well depths range from 16 to 260 feet (4.9 to 79 m); the median depth of the 17 wells available is only 55 feet (17 m). The reported yields number only three: 2, 25, and 30 gpm (0.13, 1.6, and 1.9 l/s). The specific

capacities for ten tests range from 0.05 to 38 gpm/ft (0.01 to 7.9 (l/s)/m); the median is 1.75 gpm/ft (0.36 (l/s)/m). The formation, however, is unimportant as a source of water because of its small areal extent.

Water Quality

Based on the analysis of the single sample of the formation water, it is of good quality, though very hard. The hardness is confirmed by 13 determinations of hardness in the field.

Vintage Formation

Distribution and Lithology

The Vintage is present in many small, widely scattered areas in the county, generally bounded or cut by faults, and in contact with the Kinzers Formation. Most of the formation consists of gray, thick-bedded to massive, finely crystalline dolomite. In places the dolomite may be coarsely crystalline or contain siliceous or clayey laminae.

Well Depths and Yields

Depths of the 20 wells in the Vintage on which data are available range from 12 to 291 feet (3.7 to 89 m); the median depth is 60 feet (18 m). The three yields reported are 2, 7, and 70 gpm (0.13, 0.44, and 4.4 l/s). Specific capacities of nine wells range from 0.03 to 74 gpm/ft (0.01 to 15 (l/s)/m); the median is 0.44 gpm/ft (0.09 (l/s)/m). Because of its small areal extent, however, the Vintage is not important as an aquifer.

Water Quality

Based on a single sample (from well Ln-784), the water is of good quality and of the calcium magnesium bicarbonate type. The median hardness of 12 field determinations is 10 gpg (170 mg/l).

Antietam and Harpers Formations, Undivided

Distribution and Lithology

The Antietam and Harpers Formations are present in many small, fault-bordered exposures in the central part of the county, especially in the southern part of the outcrop area of the Conestoga Formation. The Antietam and Harpers are generally shown as one unit on maps, as in this report, because of the Antietam's narrow outcrop. The Harpers consists chiefly of a dark-bluish-gray shale that weathers to a light dirty greenish gray. Within short distances it may grade laterally into schist. It grades upward into the Antietam, which is a light-gray quartzitic sandstone with a calcareous cement that weathers to a dark-red ferruginous soil.

Well Depths and Yields

Twelve wells in the Harpers on which data are available range from 28 to 368 feet (8.5 to 112 m) deep and have a median depth of 175 feet (53 m). Their yields range from 1.5 to 10 gpm (0.09 to 0.63 l/s) and have a median value of about 5 gpm (0.32 l/s). Seventeen wells in the Antietam range in depth from 21 to 245 feet (6.4 to 75 m); their median depth is 113 feet (34 m). The yields of these wells range from 3 to 40 gpm (0.19 to 2.5 l/s) and have a median value of about 5 gpm (0.32 l/s). These formations appear capable of supplying adequate quantities of water only for domestic purposes.

Water Quality

Water in the Harpers and Antietam Formations is soft and low in dissolved solids. A single sample is available from the Harpers in Lancaster County. One sample is available from the Antietam in Cumberland County (Hall, 1934, p. 46), but none in Lancaster. The sample from the Harpers contains 1.5 mg/l iron, but that from the Antietam contains only 0.03 mg/l iron.

Chickies Formation

Distribution and Lithology

The Chickies Formation is present in three areas in the county: in the west-central part, where it consists of several small fault slices; in the east-central part, where it consists of a single exposure about 10 miles (16 km) long, broken or bordered by faults; and on the flanks of the anticlinal Mine Ridge, where it has a loop-shaped exposure and borders the Harpers and Antietam Formations, undivided. The Chickies is dominantly a thick-bedded light-colored vitreous quartzite that is thin bedded in the upper part and locally disintegrates into a fine white siliceous clay. In its basal part, the Hellam Conglomerate Member, the quartz grains are coarser and pebbles are present.

Well Depths and Yields

Data are available on 13 wells in the Chickies. The wells range in depth from 45 to 400 feet (14 to 122 m); their median depth is 127 feet (39 m). Well yields range from 1 to 30 gpm (0.06 to 1.9 l/s); their median is 6 gpm (0.38 l/s). Specific capacities determined on two wells were each about 0.2 gpm/ft (0.04 (l/s)/m). Thus the Chickies appears adequate only as a source of domestic supplies of water.

Water Quality

Based on a single analysis the water is very soft and has only 27 mg/l dissolved solids. It contained 0.53 mg/l iron.

Peters Creek Schist

Distribution and Lithology

The Peters Creek Schist occupies much of the southernmost part of the county. Extending about halfway across the northern third of the formation from the Susquehanna River in a narrow finger are two younger formations: the Cardiff Conglomerate (not mapped) and the overlying Peach Bottom Slate.

The Peters Creek is a gray to greenish, chloritic, sericitic quartzite interbedded with chlorite-muscovite schist. A few sandstone beds are present near the top. The formation generally appears yellow to brown due to the rapid weathering of its iron-bearing minerals. It grades upward into the Cardiff Conglomerate, which is characterized by elongated or deformed quartz pebbles in a schistose matrix. The Cardiff in turn grades upward through alternate beds of conglomerate and slate into the Peach Bottom Slate, which is a dark bluish gray.

Well Depths and Yields

Depths of wells in the Peters Creek range from 35 to 391 feet (11 to 119 m); the median depth is 100 feet (30 m). Reported yields range from 1 to 40 gpm (0.06 to 2.5 l/s). The median yield is 10 gpm (0.63 l/s). No specific-capacity tests have been run on wells in the Peters Creek in Lancaster County, but results of such tests in Chester County (Poth, 1968, p. 16) showed specific capacities ranging from 0.03 to 11 gpm/ft (0.01 to 2.3 (l/s)/m) and a median specific-capacity value of 1 gpm/ft (0.21 (l/s)/m). In York County (O. B. Lloyd, Jr., oral commun., 1973) specific capacities ranged from 0.07 to 3.3 gpm/ft (0.01 to 0.68 (l/s)/m), and the median value was 0.7 gpm/ft (0.14 (l/s)/m). Based on the tests in adjoining counties, therefore, the Peters Creek Schist should be capable of furnishing moderately large supplies of water to wells. No data are available on the Cardiff Conglomerate or Peach Bottom Slate, but, because of the small areal extent and reported imperviousness (Hall, 1934, p. 29), they may be considered unimportant as aquifers.

Water Quality

Water in the Peters Creek is soft and low in dissolved solids, but is liable to be high in iron. Two samples of water from the formation had 1.9 and 0.94 mg/l of iron.

Wissahickon Formation

Distribution and Lithology

The Wissahickon Formation occurs along the Susquehanna River for about 15 miles (24 km) except for a single break near the middle, where it is overlain by the Conestoga Formation. A short distance east of the river the strip north of the Conestoga break ends, and the band of Wissahickon is reduced to a breadth of 8 miles (13 km). Near Quarryville the band narrows sharply to 3 miles (5 km) and then tapers gradually to 2 miles (3 km) at the eastern boundary of the county. Throughout its extent it is bordered on the north by the Conestoga and on the south by the Peters Creek Schist. The Wissahickon consists of gray to green albite-chlorite schist, which weathers readily to a yellow to brownish-red clay containing flakes of mica.

Well Depths and Yields

Reported depths of wells range from 32 to 250 feet (10 to 76 m); the median depth is 110 feet (34 m). Reported yields range from 2 to 35 gpm (0.13 to 2.2 l/s), and half the wells yield 5 gpm (0.32 l/s) or less. No specific-capacity tests have been made on wells in the Wissahickon in Lancaster County, but 18 such tests in Chester County (Poth, 1968, p. 16) showed specific capacities ranging in value from 0.04 to 38 gpm/ft (0.01 to 7.9 (l/s)/m), and the median value was 2.4 gpm/ft (0.5 (l/s)/m). In York County O. B. Lloyd, Jr. (oral commun., 1973) conducted 73 specific-capacity tests. The specific capacities ranged from 0.03 to 173 gpm/ft (0.01 to 36 (l/s)/m), and the median value was 0.94 gpm/ft (0.19 (l/s)/m). Based on these data from adjoining counties, the Wissahickon should be capable of furnishing moderately large quantities of water to wells.

Water Quality

Water from the Wissahickon is soft and low in dissolved solids. In the four samples analyzed, concentrations of dissolved solids ranged from 50 to only 121 mg/l. The concentration of iron, on the other hand, was high and ranged from 0.28 to 4.1 mg/l.

Serpentinite

Distribution and Lithology

Serpentinite is present as large masses in the Peters Creek Schist, generally in the southern part of the formation near the county line, but also in three exposures elongated parallel to the bedding in the central

part of the formation. It ranges in color from white to green to reddish brown, but is dominantly green. It consists chiefly of hydrous magnesium silicate, is soft and well jointed, and generally forms low hills. Areas underlain by this rock are often called "the barrens" because of the infertility of soils, which is typical of soils developed on serpentinite.

Well Depths and Yields

Data are available on only six wells in the serpentinite. These are reported to range in depth from 40 to 100 feet (12 to 30 m); the median depth is 70 feet (21 m). Reported yields range from 3 to 10 gpm (0.19 to 0.63 l/s); the median is 5 gpm (0.32 l/s). The rock seems capable of furnishing small domestic supplies of water.

Water Quality

Water from the serpentinite ranges from soft to hard and is high in iron. Analyses of water from two wells in the serpentinite showed 1.2 and 0.6 mg/l iron and 87 and 288 mg/l dissolved solids.

Metamorphic and Igneous Rocks, Undifferentiated

Distribution and Lithology

The undifferentiated metamorphic and igneous rocks are present in the northernmost tip of the county (on South Mountain), along the eastern border, east of New Holland, and farther south, on Mine Ridge. The dominant rock is granite gneiss, but small amounts of several other species are also present: metagabbro, pegmatite, gabbroic gneiss and gabbro, granodiorite, graphitic gneiss, hornblende gneiss, and quartz monzonite. These rocks are essentially medium-grained crystalline aggregates of quartz, feldspar, and iron-bearing silicates in varying proportions.

Well Depths and Yields

Available data are all from the granite gneiss and were obtained from 21 wells. They range in depth from 30 to 308 feet (9 to 94 m); the median depth is 78 feet (24 m). Reported yields range from 2 to 70 gpm (0.13 to 4.4 l/s); the median is 10 gpm (0.63 l/s). No specific-capacity tests have been made on wells in these rocks in Lancaster County, but Poth (1968, p. 16) reports that specific capacities from 10 such tests in Chester County ranged from 0.2 to 8.9 gpm/ft (0.04 to 1.8 (l/s)/m) and the median was 0.9 gpm/ft (0.19 (l/s)/m). Moderate supplies of water are probably obtainable from this rock in Lancaster County.

Water Quality

No analyses of water from wells drilled in these rocks in Lancaster County are available. Data from the Baltimore Gneiss in Chester County (Poth, 1968, p. 84) indicate the water ranges from soft to moderately hard and may be high in iron.

DEVELOPMENT OF GROUND-WATER SUPPLIES

During the early settlement of the area, water needs of the people were easily satisfied by shallow dug wells. The shallowest wells failed during the late summer and fall and especially during droughts, so that the wells had to be deepened. Even so, the yield of a dug well was small because it could be dug only a short distance below the water table. Dug wells were easily contaminated because their sides were loosely lined with stone, permitting water to reach the well without the benefit of slow filtration; also, burrowing animals sometimes entered into dug wells and drowned.

As technology advanced, drilling supplanted the digging of wells. Drilled wells overcame both disadvantages of dug wells cited above. They could be drilled to nearly any depth, thus ensuring a perennial supply of water. Also, surface pollutants, discrete zones of undesirable water, and burrowing animals could be kept out by steel casing.

As the population increased and people settled closer to one another, the drilled well next to the owner's home could no longer be counted on to supply adequate quantities of pure water. In some places the proximity of many families discharging wastes into cesspools exceeded the ground's capacity to filter the water, and some or all of the wells became contaminated.

The latest step in the development of ground-water supplies is the construction of community supply wells. These wells are drilled in favorable locations, where adequate supplies may be obtained and where the sites can be protected from contamination.

PUBLIC WATER SUPPLIES

About 60 percent of the population of Lancaster County uses water from a public supply. The water is supplied by 33 water authorities or water companies in the county. Nineteen of the suppliers use water from wells and/or springs, four use surface-water sources, and ten use both ground-water and surface-water sources. Two supplement their supplies by purchasing water from one of the other suppliers. Table 4 shows the source of water of the public supplies.

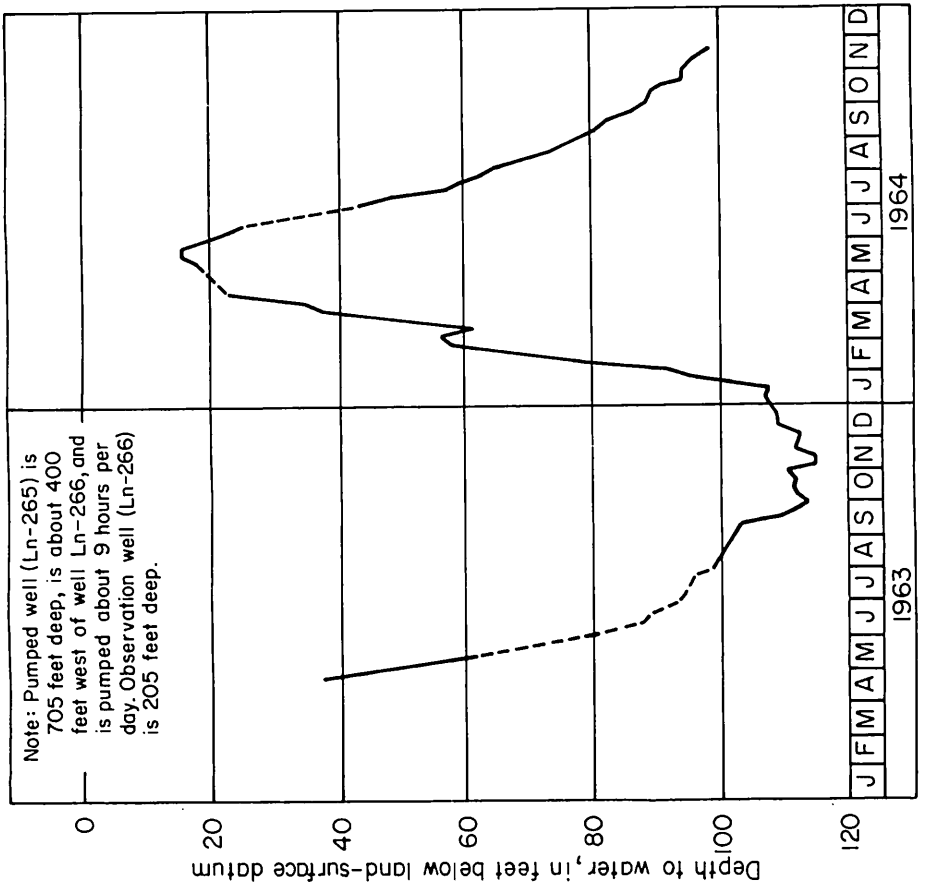
Table 4. *Public Water Supplies*

Supplier	*Source*
Adamstown Borough Water Dept.	Wells
Akron Borough Water Dept.	Wells, spring
Bainbridge Water Auth.	Wells
Blue Ball Water Co.	Wells
Chester Mun. Auth.	Susquehanna River, Octoraro Creek
Christiana Water Co.	Octoraro Water Co., wells, springs
Columbia Water Co.	Susquehanna River
Denver Borough Water Auth.	Springs, Cocalico Creek
E. Cocalico Twp. Mun. Auth.	Wells
E. Donegal Twp. Mun. Auth.	Spring
E. Hempfield Twp. Mun. Auth.	Wells, spring
E. Petersburg Borough Auth.	Spring, Little Conestoga Creek
Elizabethtown Water Co.	Wells, Conoy and Conewago Creeks
Ephrata Mun. Auth.	Springs, Cocalico Creek
Lancaster City Auth.	Susquehanna River, Conestoga Creek
Leola Water Auth.	Wells
Lititz Borough Water Dept.	Wells
Manheim Borough Water Auth.	Rife Run, quarry
Marietta Gravity Water Co.	Wells, Wildcat and Doogan Runs
Masonic Homes	Wells, springs
Millersville Borough Water Dept.	Wells
Millersville State College	Well
Mountville Borough Mun. Auth.	Lake Grubb, wells, springs
Mount Joy Borough Auth.	Spring, Little Chickies Creek
New Holland Borough Auth.	Wells, springs
Octoraro Water Co.	Octoraro Creek
Quarryville Borough Auth.	Octoraro Water Co., springs
Reinholds Area Auth.	Well
Rheems Water Co.	Wells
Rowenna Water Co.	Well
Strasburg Borough Auth.	Springs
Terre Hill Borough Water Dept.	Wells
West Earl Twp. Mun. Auth.	Spring

WATER PROBLEMS RESULTING FROM THE ACTIVITIES OF MAN

Inherent in man's use of an area are two potential effects on its water. His use of the water may produce overdrafts and the disposal of his wastes may contaminate the water.

In consolidated rocks, overdrafts are more likely to occur in the non-carbonate rocks than in the carbonate rocks. As Johnston (1966, p. 24-26) has pointed out in his study of the New Oxford Formation, the principal artesian zones "are discontinuous, limited in areal extent, and poorly interconnected hydraulically." For these reasons, pumping effects, though


Depth to water, in feet below land-surface datum
0
20
40
60
80
100
120
J F M A M J J A S O N D J F M A M J J A S O N D
1963
1964
Note: Pumped well (Ln-265) is 705 feet deep, is about 400 feet west of well Ln-266, and is pumped about 9 hours per day. Observation well (Ln-266) is 205 feet deep.

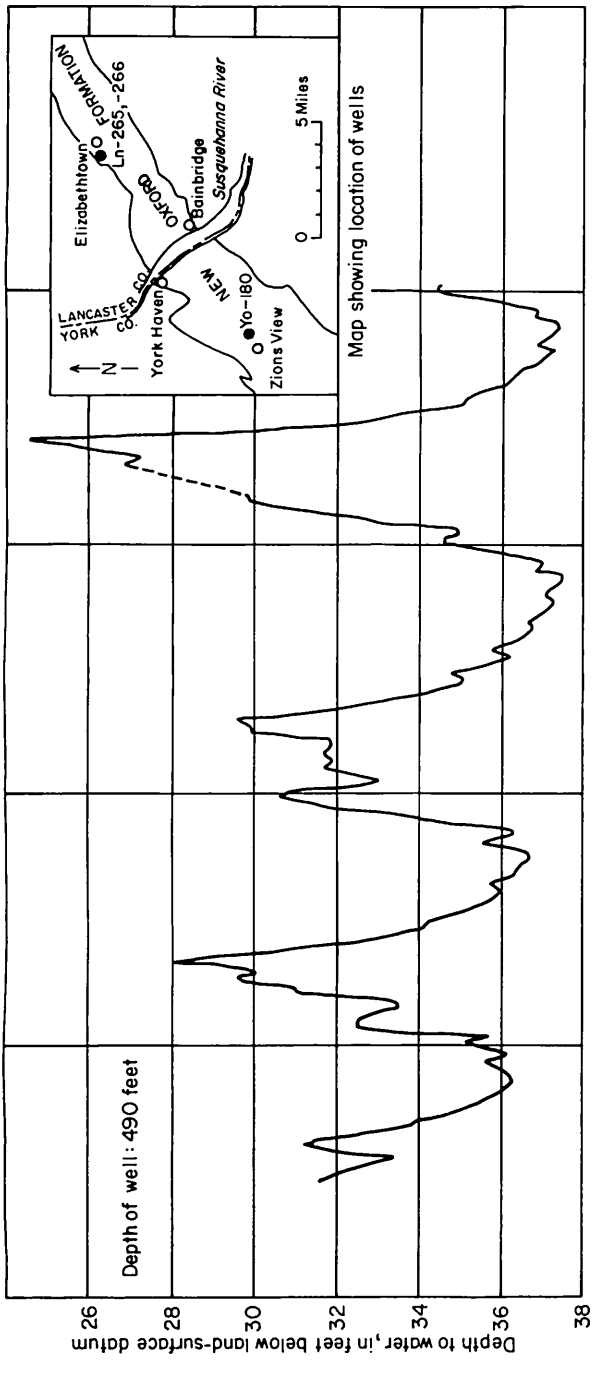


Figure 5. Hydrographs of wells Ln-266 and Yo-180, showing seasonal fluctuations under natural and pumping conditions (after Johnston, 1966).

transmitted rapidly in some directions, may not be transmitted in other directions, so that water levels in some wells near the pumped well may not be affected even after years of pumping. Because wells in such an environment are unable to draw water from storage over a large area, heavy pumping is necessary during periods of little recharge (as during the growing season), resulting in large drawdowns in the wells and dewatering of the adjacent bedrock. Recharge during the winter and spring months has been adequate so far to restore water levels to their natural levels so that there is at present no known overdraft. Figure 5 illustrates for a period of low recharge the greatly increased lowering of the water level that takes place adjacent to a pumping well in contrast to an area far from pumping.

Carbonate rocks are less susceptible to overdraft than noncarbonate rocks because solution has enlarged many of the fractures into large conduits which both store and transmit large quantities of water. However, this property makes the carbonate rocks generally more susceptible to pollution than the noncarbonate rocks because the water moves along these conduits rapidly without filtration, so that bacteria, which would normally be removed by the slow percolation of the water, are undiminished. The greater solubility of the carbonate rocks is reflected in greater dissolved solids concentrations and higher hardness levels of the water. The chief chemical contaminant is nitrate; it is derived from barnyard wastes, cesspools, and septic tanks, and from overfertilizing of fields. In noncarbonate rocks the generally slower movement of the water would confine much of this contamination to small, local areas; however, in the carbonate rocks, movement is rapid, and contamination is liable to be widespread.

WELL CONSTRUCTION

DRILLING METHODS

Dug wells are being replaced gradually by drilled wells. Two methods are used to drill most of the wells: the cable-tool percussion method and the rotary-drilling method.

In the cable-tool percussion method, wells are drilled by alternately lifting and dropping a heavy drill bit in the borehole. The drill bit breaks or crushes the rock into small fragments, which are then removed from the hole by bailing. In the rotary-drilling method, wells are drilled by a rotating bit, and the rock chips are removed by circulating water, drilling mud, or air under pressure in the borehole. Well diameters for drilled wells are smaller than those of dug wells, but depths and yields of drilled wells are generally much greater.

Steel casing is emplaced in the drilled wells to the bottom of the weathered rock, and a slurry of rock cuttings (in most domestic wells) or concrete (in public supply and industrial wells) is then poured in the annular space between the casing and the wall of the well to seal the space tightly and prevent contaminants from entering the well.

WELL DEVELOPMENT

The method commonly used to increase well yields consists of heavy pumping of the well for a short period of time to remove drill cuttings and fine material. Other less common techniques used to increase yields are mechanical surging and the addition of detergents.

Mechanical surging is similar to operating a piston in a cylinder, with the casing or well bore acting as the cylinder and the surge block as the piston. Alternately raising and lowering the block in the well forces water in and out of openings in the aquifer. Loose rock chips or fine sand grains are loosened and drawn into the well bore, from which they may be pumped after surging. This method is most successful in sandstone, conglomerate, and unconsolidated aquifers.

Detergents can be used in wells where clay and silty materials are plugging small fractures and other openings in the aquifer. The detergent helps break up these plugs into small particles so that they may be pumped out, leaving the aquifer openings clear to transmit more water to the borehole.

WHERE TO GET INFORMATION ABOUT WATER

A variety of information on water supplies is available from the several government agencies listed below. When requesting information it is important to give an accurate location of the site for which information is desired.

The Pennsylvania Topographic and Geologic Survey has information on the geology of Lancaster County and has published reports that describe in detail the rocks that underlie the county. Well-drillers' logs and reports on new wells that have been drilled in the county are also available at their office.

The Division of Water Quality, Bureau of Water Quality Management, Pennsylvania Department of Environmental Resources, can supply information on well construction requirements, biological reports on well water, and the chemical quality of ground water. The division, through various regional offices, tests water samples for bacterial pollution. They also can advise on effective corrective measures when pollution is reported.

The Division of Comprehensive Resources Programming and Technical Services, Bureau of Resources Programming, Pennsylvania Department of

Environmental Resources, has information on stream discharges, flood data, reservoir requirements, and power plant discharges.

The Public Utility Commission, Bureau of Rates and Research, has information on some municipal water supplies, including source, average daily use, total annual use, and estimated future needs.

The U. S. Geological Survey has data on wells, springs, and streams and on the chemical quality of water.

Local well drillers and pump installers can provide prices and suggest the type of equipment needed to develop a water supply. They can also suggest the proper well diameter for the necessary pumping equipment. Pump installers can supply information concerning the size of the pump, depth of the pump setting, and the pressure-tank capacity.

If the chemical analysis of the well water indicates treatment is necessary, commercial water-treatment companies can provide the necessary information and equipment. Equipment for water treatment can be purchased or rented, and it will generally be serviced by the supplier if desired.

GLOSSARY

Aquifer: A formation that yields significant quantities of water to wells and springs.

Artesian conditions: The occurrence of water under sufficient hydrostatic head to rise above the upper surface of the aquifer.

Base flow: Discharge entering stream channels as flow from the ground-water reservoir; the fair-weather flow of streams.

Carbonate rocks: Rocks composed dominantly of carbonate minerals. Limestone and dolomite are the most common rocks of this type.

Cone of depression: A conical depression, on a water table or other potentiometric surface, produced by a pumping well.

Cubic feet per second: The discharge of a stream of rectangular cross section, 1 foot wide and 1 foot deep, whose velocity is 1 foot per second; equivalent to 448.8 gallons per minute, or 0.02832 cubic meters per second.

Dip of beds: The angle at which the formation or bed is inclined from the horizontal, measured at a right angle to the strike or trend of the formation or bed.

Direct runoff: The water that moves over the land surface directly to streams promptly after rainfall or snowmelt.

Discharge, ground water: The process by which water is removed from the saturated zone; also the quantity of water removed.

Drawdown: The lowering of the water level in a well caused by pumping.

Evapotranspiration: Water withdrawn from a land area by direct

evaporation from water surfaces and moist soil and by plant transpiration.

Fault: A fracture or fracture zone along which there has been displacement of the two sides relative to each other. The displacement may be a few inches or many miles.

Formation: A fundamental unit in rock stratigraphic classification. It is a body of rock characterized by lithologic homogeneity; it is prevailingly tabular and is mappable at the earth's surface or traceable in the subsurface.

Fracture: A break in rocks.

Generalized geologic section: The description of the prominent features in a sequence of rocks. Minor features are neglected.

Ground-water reservoir: An aquifer or a group of related aquifers under a given area.

Hardness: A chemical property of water, caused mostly by the presence of calcium and magnesium, which increases the amount of soap needed to produce a lather. Water that has a hardness, calculated as grains per gallon of calcium carbonate, less than 3.5 is soft; between 3.5 and 7.0 is moderately hard; between 7.1 and 10.5 is hard; and greater than 10.5 is very hard. Values may be converted to milligrams per liter by multiplying by 17. Hardness values used in this report were determined in the field by use of a Calgon Speedy kit for testing water hardness. (Use of a brand name is for identification purposes only and does not imply endorsement by the U. S. Geological Survey.)

Head, static head: The height of a vertical column of water, the weight of which, in a unit cross section, is equal to the hydrostatic pressure at a point.

Hydraulic gradient: Change in static head per unit of distance in a given direction.

Igneous rock: A rock that solidified from molten material.

Metamorphic rock: A rock derived from preexisting rocks by change in mineral composition or texture caused by heat and(or) pressure.

Overdraft: An excessive lowering of the water level or artesian head in an aquifer caused by excessive withdrawal.

Perched ground water: Ground water separated from an underlying body of ground water by unsaturated deposits.

Permeability: The capacity of a material to transmit a fluid.

Porosity: The ratio of the volume of interstices in a rock to its total volume, expressed as a percentage.

Potentiometric surface: The surface that represents the static groundwater head; defined by the levels to which water will rise in tightly cased wells.

Primary openings: Openings or voids existing when the rock was formed. In sedimentary rocks, openings result from the shape and nature of the original sediment and the way the particles are fitted together.

Recharge, ground water: The process by which water is added to the saturated zone; also the quantity of water added.

Runoff: That part of the precipitation that appears in streams. It is the same as streamflow unaffected by diversions, dams, or other works of man.

Saturated zone: The zone in which interconnected interstices are saturated with water.

Secondary openings: Voids produced in rocks subsequent to their formation by solution, weathering, or breaks in the rock.

Soil tonal alinements: The arrangements of similar tones or shades of color in a particular direction on an aerial photograph, commonly due to a similarity in the properties of the soil.

Specific capacity: The yield of a well, in gallons per minute, divided by the drawdown of water level in the well, in feet.

Stream-gaging station: A gaging station where a record of discharge of a stream is obtained. Within the U. S. Geological Survey this term is used only for those gaging stations where a continuous record of discharge is obtained.

Surface water: Water on the surface of the earth.

Transpiration: The process by which vapor escapes from the living plant, principally the leaves, and enters the atmosphere.

Unconformity: A surface of erosion that separates younger strata from older rocks.

Vadose water: Water in the zone of aeration, or that zone above the water table.

Water table: The upper surface of the zone of saturation, or that zone in which openings in permeable rocks are filled with water.

CONVERSION FACTORS

Factors for converting English units to metric units are given below.

English	*Multiply by*	*Metric*
ft (feet)	0.305	m (meters)
ft^3/s (cubic feet per second)	.0283	m^3/s (cubic meters per second)
gpm (gallons per minute)	.0631	l/s (liters per second)
gpm/ft (gallons per minute per foot of drawdown)	.207	(l/s) /m (liters per second per meter)
grains per gallon	17	mg/l (milligrams per liter)
in. (inches)	2.54	cm (centimeters)
mi (miles)	1.61	km (kilometers)
mi^2 (square miles)	2.59	km^2 (square kilometers)

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TABLE 5. RECORD OF WELLS

Well location: The number is that assigned to identify the well. It is prefixed by a two-letter abbreviation of the county. The letter "S" following the number indicates the record was obtained from the Pennsylvania Geological Survey. The lat-long is the coordinates in degrees and minutes of the southeast corner of a 1-minute quadrangle within which the well is located.

Use: A, air conditioning; B, bottling; C, commercial; H, domestic; I, irrigation; N, industrial; P, public supply; R, recreation; S, stock; T, institution; U, unused.

Topographic setting: H, hilltop; S, slope; T, terrace; V, valley; W, hillside drainageway.

Aquifer: Trd, diabase; Trgh, Gettysburg-Hammer Creek Formation; Trns, New Oxford-Stockton Formation; Oco, Cocalico Formation; Ocs, Conestoga Formation; Ob, Beekmantown Group; €c, Conococheague Group; €ez, Elbrook-Zooks Corner Formation; €l, Ledger Formation; €k, Kinzers Formation; €v, Vintage Formation; €ah, Antietam and Harpers Formations, undivided; €ch, Chickies Formation; Xpc, Peters Creek schist; Xwc, Wissahickon Formation; Xs, serpentinite; Xmi, metamorphic and igneous rocks, undifferentiated.

Lithology: dol, dolomite; ls, limestone; ss, sandstone; sh, shale; shss, shaly sandstone.

Static water level: Depth--F, flowing; +, above land surface.

Reported yield: gpm, gallons per minute.

Specific capacity: gpm/ft, gallons per minute per foot of drawdown.

Hardness: gpg, grains per gallon.

Specific conductance: Deg C, degrees Celsius.

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Alti-tude of land surface (feet)	Topo-graphic setting	Aquifer/ lithology
Number	Lat-Long							
Ln- 1	3956-7623	Pa. Water and Power Co.	---	---	U	241	S	€v/---
1S	3954-7605	Veryl Kines	Maurice E. Brown	1967	H	670	S	Xwc/---
2	3953-7610	Pa. Water and Power Co.	---	---	H	500	S	Xwc/---
2S	3954-7605	Paul Armer	Maurice E. Brown	1967	H	660	S	Xwc/---
3	4009-7618	Bor. of Lititz	---	1894	P	376	V	Ob/ls
3S	3954-7604	David Jackson	Maurice E. Brown	1968	H	580	S	Xwc/---
4	4009-7618	Bor. of Lititz	---	1940	P	386	V	Ob/ls
5	4009-7618	do.	---	1940	P	368	V	Ob/ls
5S	3957-7605	William Keyes	Maurice E. Brown	1968	H	705	S	Xmi/ss
6	4009-7618	Bor. of Lititz	E. J. Myers & Sons	1943	P	386	V	Ob/ls
6S	3957-7606	Jacob King	Maurice E. Brown	1968	H	800	S	Xmi/ss
7	4009-7618	Suchard Chocolate Co.	Kohl Bros., Inc.	1941	N	372	S	Ob/ls
7S	3955-7604	Bart Twp. Supvr.	Maurice E. Brown	1968	H	600	V	€ah/ss
8	4009-7618	Suchard Chocolate Co.	Kohl Bros., Inc.	1951	N	372	S	Ob/ls
8S	3956-7605	Carl Feister	Maurice E. Brown	1967	H	685	S	Xmi/ss
9	4008-7618	Newton Buch	---	---	U	405	S	Ob/ls
10	4009-7619	A. R. Ober	---	---	H	395	W	Ob/ls
10S	3956-7605	Merle Weller	Maurice E. Brown	1967	H	670	S	Xmi/ss
11	4009-7619	Warren Bush	Myers Bros. Drlg. Contr.	1935	H	394	W	Ob/ls
12	4009-7618	Travis Mills Corp.	do.	1954	U	393	W	Ob/ls
12S	3954-7602	Jay Groff	Maurice E. Brown	1967	H	745	S	Xwc/---
13	4009-7618	Travis Mills Corp.	Myers Bros. Drlg. Contr.	1954	U	390	W	Ob/ls
13S	3956-7604	Leon Swisher	Maurice E. Brown	1967	H	640	S	Xmi/ss
14	4003-7633	Wyeth Laboratories	Myers Bros. Drlg. Contr.	1940	U	282	S	€v/---
14S	3954-7602	Russ Mendenhall	Maurice E. Brown	1966	H	720	S	Xwc/---
15	4003-7634	Wyeth Laboratories	Myers Bros. Drlg. Contr.	1942	U	280	S	€v/---
16	4003-7633	do.	do.	1955	U	300	S	€v/---
17	4003-7633	do.	do.	1955	U	282	S	€v/ls
19	4011-7610	Bor. of Ephrata	C. S. Garber & Sons, Inc.	1955	P	340	V	€ch/ls
19S	3956-7604	Leon Swisher	Maurice E. Brown	1966	H	660	S	Xmi/ss
20	4003-7631	Marietta Gravity Water Co.	Harrisburg's Kohl Bros.	1958	P	260	V	€l/---
21S	3956-7605	George Grumelli	Maurice E. Brown	1966	H	685	S	Xmi/---
22S	3953-7602	Ben Kauffman	do.	1969	H	650	S	Xwc/---
23S	3953-7604	George Reinhart	do.	1969	H	715	S	Xwc/ls
24S	3956-7603	Jacob Hoover, Jr.	do.	1969	H	670	S	Xmi/ss
25S	4013-7600	Al Walen	Richard H. Stanley	1969	H	600	S	Trd/---
31	3945-7608	E. E. Sheetz	---	1952	H	386	S	Xpc/---
32S	4011-7559	Raymond Spacht	Richard H. Stanley	1968	H	500	S	Trd/---
50	4005-7639	Guy Hoffman	---	---	H	400	S	Trns/---
51	4005-7639	do.	Myers Bros. Drlg. Contr.	1959	U	435	S	Trns/---
52	4005-7639	do.	do.	1959	H	415	V	Trns/---
54	4005-7639	Pierre Devitry	---	1776	H	360	S	Trns/ss
55	4005-7639	Bainbridge Water Auth.	Myers Bros. Drlg. Contr.	1963	P	335	S	Trns/---
56	4005-7639	do.	do.	1963	U	338	S	Trns/---
57	4005-7639	do.	do.	1963	P	344	S	Trns/---
58	4005-7640	Bainbridge Elem. Sch.	---	1933	T	323	T	Trns/---
59	4005-7640	Benjamin Myers	Myers Bros. Drlg. Contr.	1955	H	325	T	Trns/---
60	4005-7640	G. C. Rhodes, Jr.	H. K. Honberger & Sons	1960	H	320	T	Trns/shss
61	4005-7640	I. H. Holler	Myers Bros. Drlg. Contr.	1954	H	325	T	Trns/---
62	4005-7640	L. A. Rapp	do.	1959	H	315	T	Trns/sh
63	4005-7640	Martin Camp	H. K. Honberger & Sons	1946	H	310	T	Trns/---
64	4006-7638	David Shearer	Myers Bros. Drlg. Contr.	1958	H	465	S	Trns/---
65	4006-7638	James Meckley	---	---	H	435	W	Trns/---
66	4006-7638	Elmer Walters	Myers Bros. Drlg. Contr.	1953	H	460	H	Trns/---
67	4006-7638	B. L. Keener	---	---	H	475	H	Trns/---
68	4006-7638	J. L. Meckley	Myers Bros. Drlg. Contr.	1962	S	465	H	Trns/---
70	4006-7638	Raymond Nissley	---	1930	S	465	H	Trns/---
71	4006-7638	Sylvester Walters	H. K. Honberger & Sons	1963	H	400	S	Trns/---
73	4006-7639	Martin Good	---	1942	H	460	S	Trns/---
76	4006-7639	Abner Risser	H. K. Honberger & Sons	1955	H	460	S	Trns/---
77	4006-7639	M. J. Miller	---	1945	S	445	S	Trns/---
78	4006-7639	do.	---	---	U	445	S	Trns/---
78S	4007-7556	John King	Petersheim Bros.	1969	H	560	H	€ah/---
79	4006-7639	Alvin Nissley	H. K. Honberger & Sons	1954	H	450	S	Trns/---
80	4006-7639	do.	---	---	U	450	S	Trns/ss
81	4006-7639	Raymond Nissley	Myers Bros. Drlg. Contr.	1959	S	475	S	Trns/---
82	4006-7640	R. S. Miller	---	1945	S	355	S	Trns/ss
83	4006-7640	do.	Myers Bros. Drlg. Contr.	1961	H	400	H	Trns/---
84	4006-7641	R. O. Ebersole	Harrisburg's Kohl Bros.	1949	H	300	V	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
60	---	---	---	42	8/36	---	---	---	---	---	Ln- 1
153	41	6	93;145	60	9/67	3	---	---	---	---	1S
32	---	36	---	24	12/41	---	---	---	---	---	2
113	60	6	65;100	55	9/67	6	---	---	---	---	2S
25	23	7	---	17	---	350	---	---	---	---	3
83	20	6	60;80	30	10/68	18	---	---	---	---	3S
90	8	8	---	35	7/40	350	---	---	---	---	4
67	5	8	---	13	7/40	350	---	---	---	---	5
110	66	6	40;75	19	7/68	4	---	---	---	---	5S
118	7	10	---	30	9/43	325	46	---	---	---	6
123	40	6	95;120	30	4/68	4	---	---	---	---	6S
200	18	---	---	18	---	450	38	---	---	---	7
24	14	6	18;23	8	1/68	40	---	---	---	---	7S
97	18	10	---	26	1/55	600	19	---	---	---	8
52	32	6	45;48	22	10/67	11	---	---	---	---	8S
---	---	---	---	28	1/55	---	---	---	---	---	9
31	---	36	---	28	1/55	5	---	---	---	---	10
59	46	6	49;58	18	10/67	50	---	---	---	---	10S
215	---	---	---	38	1/55	---	---	---	---	---	11
505	25	8	---	36	2/55	20	---	---	---	---	12
205	20	6	120	60	10/67	2	---	---	---	---	12S
305	25	6	---	---	---	---	---	---	---	---	13
81	56	6	38;50;65	30	7/67	4	---	---	---	---	13S
113	112	6	50	---	---	---	---	---	---	---	14
198	24	6	110	45	10/66	2	---	---	---	---	14S
150	---	6	---	---	---	---	---	---	---	---	15
291	---	8	37	---	---	2	---	---	---	---	16
140	44	8	---	42	3/55	70	1.8	---	---	---	17
400	42	10	---	7	---	---	---	---	---	---	19
45	23	6	35;43	29	8/66	15	---	---	---	---	19S
210	104	8	---	---	---	550	---	12	---	7.5	20
108	92	6	45;60;106	30	7/66	15	---	---	---	---	21S
200	20	6	60;198	55	2/69	15	---	---	---	---	22S
103	40	6	60;80;101	56	5/69	20	---	---	---	---	23S
57	53	6	40;55	12	5/69	40	---	---	---	---	24S
27	---	---	12;25	4	6/69	6	---	---	---	---	25S
391	61	3	---	7	1952	---	---	---	---	---	31
108	63	6	70;80	15	3/68	6	---	---	---	---	32S
---	---	6	---	---	---	3	---	---	---	---	50
275	0	---	---	70	10/62	1	---	---	---	---	51
160	40	6	---	---	---	6	---	8	315	7.2	52
15	---	40	---	9	10/52	---	---	---	---	---	54
182	21	6	70;86;95; 105;130;140; 150	30	11/63	100	1.7	5	220	6.3	55
222	23	6	50;100;140; 180	32	---	35	---	---	---	---	56
242	23	6	85;147	46	11/63	85	1.7	6	255	---	57
250	---	6	---	45	7/63	10	.29	4	270	6.2	58
115	20	6	---	35	9/62	---	---	---	260	7.1	59
175	38	6	---	---	---	8	---	---	---	---	60
124	24	6	---	30	3/63	30	---	3	135	6.3	61
93	63	6	---	---	---	50	---	13	550	---	62
137	20	6	---	42	3/63	5	---	9	450	6.5	63
110	---	6	---	45	6/58	3	---	7	275	6.9	64
14	---	48	---	9	10/62	---	---	4	205	5.7	65
95	---	6	---	---	---	---	---	5	175	5.75	66
85	---	40	---	17	10/62	---	---	---	---	---	67
167	34	6	---	25	8/62	15	.86	6	250	7.2	68
100	---	48	---	20	3/59	5	---	7	360	6.5	70
285	60	6	---	62	12/63	3	---	---	---	---	71
90	---	6	---	---	---	---	---	5	250	6.55	73
57	---	6	---	20	1955	10	---	4	235	5.95	76
120	---	6	---	---	---	---	---	12	450	7.4	77
24	---	36	---	17	10/62	---	---	---	---	---	78
150	21	6	72;100;145	50	6/69	4	---	---	---	---	78S
110	20	6	---	37	10/62	---	---	7	335	6.4	79
53	13	60	---	33	10/62	3	---	---	---	---	80
65	23	6	---	17	10/62	5	.32	7	355	6.6	81
70	---	6	---	23	9/62	5	---	5	285	6.4	82
185	44	48	---	50	9/62	5	---	6	278	7.3	83
80	20	6	---	15	---	7	---	---	---	---	84

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln- 85	4006-7640	Natural Development Co.	Harrisburg's Kohl Bros.	1945	C	285	T	Trns/---
86	4006-7640	P. R. Lewis	---	1957	H	320	T	Trns/---
87	4006-7640	Henry Stauffer	---	1930	---	455	H	Trns/---
88	4006-7641	U. S. Geol. Survey	Chas. H. Eichelberger	1963	U	290	T	Trns/---
89	4006-7641	Ebersole Bros.	H. K. Honberger & Sons	1962	N	317	V	Trns/---
90	4006-7641	R. O. Ebersole	Harrisburg's Kohl Bros.	1954	H	300	V	Trns/---
91	4006-7641	Paul Garber	Myers Bros. Drlg. Contr.	1960	C	320	V	Trns/---
92	4006-7641	Ben Burkholder	---	---	H	280	T	---
93	4006-7641	do.	Myers Bros. Drlg. Contr.	---	H	270	T	Trns/---
94	4006-7641	do.	do.	---	H	265	T	Trns/---
95	4006-7641	C. R. Fink	do.	1961	H	320	T	Trns/---
96	4007-7634	Rheems Water Co.	H. K. Honberger & Sons	1912	P	460	W	Trns/---
97	4007-7635	Heisey Bros.	do.	1962	H	480	S	Trns/---
98	4007-7635	R. E. Helwig	Myers Bros. Drlg. Contr.	1955	H	500	H	Trns/---
98S	3950-7603	Union Sch.	Maurice E. Brown	1967	H	462	S	Xpc/---
99	4007-7635	Amos Gantz	H. K. Honberger & Sons	1958	H	520	H	Trns/---
99S	3951-7604	James Packer	Maurice E. Brown	1968	H	540	S	Xpc/---
100	4007-7635	Robert Tormo	Myers Bros. Drlg. Contr.	1962	H	440	V	Trns/ss
100S	3951-7604	Carl McFadden	Maurice E. Brown	1968	H	538	S	Xpc/---
101	4007-7635	Robert Tormo	---	---	U	440	V	Trns/---
101S	3951-7603	Henry Stoltzfus	Maurice E. Brown	1968	H	463	S	Xpc/---
102	4007-7635	Ruth Williams	Myers Bros. Drlg. Contr.	1962	H	460	S	Trns/ss
103	4007-7635	Harry Foreman	---	1927	H	510	H	Trns/---
103S	3948-7602	W. Faringer	Maurice E. Brown	1967	H	420	S	Xpc/---
104	4007-7635	Harry Foreman	Myers Bros. Drlg. Contr.	1957	N	505	S	Trns/---
105	4007-7635	R. S. Mason	H. K. Honberger & Sons	1945	H	500	H	Trns/---
106	4007-7635	J. S. Beamenderfer	do.	1950	H	480	S	Trns/---
107	4007-7635	John Wanger	Myers Bros. Drlg. Contr.	1963	H	480	H	Trns/ss
108	4007-7636	R. E. Keller	do.	1962	H	505	H	Trns/---
109	4007-7636	R. H. Chapman	H. K. Honberger & Sons	1952	H	520	H	Trns/---
110	4007-7636	Samuel Snyder	do.	1959	S	450	S	Trns/---
110S	3950-7605	Dean Lefever	Maurice E. Brown	1969	H	470	S	Xpc/ls
111S	3950-7605	Lewis Shoemaker	do.	1969	H	465	S	Xpc/ls
112	4007-7636	Ammon Snyder	Myers Bros. Drlg. Contr.	1931	H	470	S	Trns/---
112S	3950-7605	Lewis Shoemaker	Maurice E. Brown	1969	H	480	S	Xpc/ls
114	4007-7636	W. D. Nauman	Samuel I. Kaylor	1956	H	480	S	Trns/---
116	4007-7637	Richard Stone	Harrisburg's Kohl Bros.	1946	H	405	W	Trns/---
116S	3952-7603	Fisher Sch.	Maurice E. Brown	1968	H	515	S	Xpc/---
117	4007-7637	Raymond Appley	Harrisburg's Kohl Bros.	1948	H	405	W	Trns/---
117S	3951-7604	Salem Parochial	Maurice E. Brown	1968	H	560	S	Xpc/---
118	4007-7637	Earl Kreider	Myers Bros. Drlg. Contr.	1959	H	480	H	Trd/---
119	4007-7637	E. M. Heisey	do.	1960	H	390	V	Trns/---
120	4007-7637	do.	---	---	U	400	S	Trns/---
121S	3956-7621	Benjamin Kline	Martin T. Fischer	1968	H	320	S	€ah/---
123	4007-7637	Masonic Homes	---	---	U	395	V	Trns/---
123S	3956-7621	Paul Harnish	Maurice E. Brown	1969	H	480	S	€ah/---
124	4007-7637	Masonic Homes	---	---	T	400	V	Trns/---
124S	3956-7621	Warren Sickman	Maurice E. Brown	1969	H	480	S	€ah/---
125	4007-7637	Masonic Homes	Harrisburg's Kohl Bros.	1954	T	405	V	Trns/---
126	4007-7638	E. H. Nolt	---	---	S	420	H	Trns/---
127	4007-7638	do.	---	---	U	420	H	Trns/---
129	4007-7638	Leroy Martin	---	---	U	465	S	Trns/---
129S	4007-7642	George Stone, Jr.	Kohl Bros., Inc.	1969	H	280	C	Trd/---
130	4007-7639	Retherford	---	---	U	480	H	Trns/---
131	4007-7639	W. W. Ebersole	Edwin Gerlach & Sons	1952	H	455	W	Trns/---
133	4007-7639	do.	Myers Bros. Drlg. Contr.	1958	H	485	S	Trns/---
134	4007-7640	Andrew Stoner	---	---	H	380	S	Trns/---
135	4007-7640	S. H. Retherford	---	---	H	462	H	Trns/---
136	4007-7640	do.	---	---	U	450	W	Trns/---
137	4007-7640	do.	Myers Bros. Drlg. Contr.	1963	H	470	H	Trns/---
138	4007-7640	N. L. Zeagler, Jr.	do.	1958	H	370	S	Trns/---
139	4007-7641	Ebersole Bros.	H. K. Honberger & Sons	1959	N	365	S	Trns/---
140	4007-7641	Vernon Zimmerman	Myers Bros. Drlg. Contr.	1963	H	365	S	---
141	4008-7633	R. E. Garman	do.	1951	H	500	H	Trns/---
142	4008-7633	K. H. Eshleman	---	---	S	430	V	Trns/---
143	4008-7633	do.	---	---	I	430	V	Trns/---
143S	3949-7612	Wayne Byers	Maurice E. Brown	1966	H	620	H	Xpc/---
144	4008-7633	R. R. Mummau	Myers Bros. Drlg. Contr.	1962	H	440	S	Trns/---
145	4008-7634	M. D. Sechrist	do.	1961	H	500	H	Trns/ss
146	4008-7634	Elizabeth Longenecker	do.	1959	H	505	H	Trns/---
147	4008-7634	C. W. Pfaunmiller	---	---	H	515	S	Trns/---
148	4008-7634	J. Pfaunmiller	Myers Bros. Drlg. Contr.	1962	H	540	S	Trns/---
149	4008-7634	N. S. Good	---	---	H	495	S	Trns/---
150	4008-7634	Gerald Sager	Myers Bros. Drlg. Contr.	1962	H	525	H	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
318	---	8	---	28	3/63	25	.69	4	230	7.6	Ln- 85
100	30	6	50;60;93	24	1957	10	---	4	180	6.3	86
99	---	6	---	30	4/63	---	---	6	265	7.4	87
305	24	6	96;163	20	6/23	60	1.7	7	310	6.9	88
162	18	8	---	7	7/62	78	.6	6	500	6.6	89
75	40	6	---	---	---	7	---	5	260	7.6	90
95	22	6	---	---	---	12	---	3	145	6.6	91
23	23	40	---	20	3/63	---	---	6	325	6.9	92
65	---	6	---	13	4/63	1	.16	7	325	6.9	93
---	---	6	---	14	4/63	3	.8	8	290	6.9	94
100	33	6	---	18	---	5	---	---	---	---	95
120	---	10	---	---	---	50	---	11	425	7.7	96
102	23	6	---	21	10/62	40	1	10	470	7.1	97
118	---	6	---	---	---	---	---	---	355	7.1	98
72	20	6	65	36	8/67	12	---	---	---	---	98S
103	---	6	---	20	1959	5	---	5	230	5.5	99
124	67	6	69;110	40	7/68	5	---	---	---	---	99S
123	21	6	---	20	7/62	3	---	6	280	6.7	100
123	72	6	60;120	40	6/68	4	---	---	---	---	100S
18	18	60	---	15	10/62	---	---	---	---	---	101
165	43	6	65;145	60	6/68	4	---	---	---	---	101S
95	21	6	---	---	---	20	---	6	270	7.5	102
142	---	6	---	---	---	3	---	---	---	---	103
121	20	6	80;91	60	6/67	5	---	---	---	---	103S
252	21	6	---	70	11/62	40	.67	10	415	7.3	104
200	---	---	---	---	---	10	---	7	285	---	105
87	21	6	---	23	5/63	4	---	10	360	6.9	106
202	22	6	---	---	---	6	---	---	---	---	107
100	39	6	---	15	10/62	15	.22	6	230	6.6	108
72	---	6	---	40	6/52	20	---	2	125	6.1	109
175	---	6	130	25	1959	5	---	---	---	---	110
145	40	6	80;140	40	6/69	4	---	---	---	---	110S
173	128	6	160	78	7/69	2	---	---	---	---	111S
150	---	6	---	30	1931	---	---	10	510	6.9	112
140	20	6	50;124	10	---	1	---	---	---	---	112S
85	---	6	---	---	---	20	---	4	205	6.1	114
65	15	6	30;60	6	9/46	7	---	6	285	6.3	116
145	23	6	90;135	70	8/68	1	---	---	---	---	116S
90	---	6	---	---	---	---	---	5	220	6.6	117
146	43	6	90;120	---	8/68	1	---	---	---	---	117S
122	29	6	---	---	---	3	---	5	215	6.3	118
80	29	6	---	15	2/60	10	---	4	230	5.65	119
18	---	48	---	17	10/62	---	---	---	---	---	120
145	145	6	105	80	2/68	5	---	---	---	---	121S
148	14	8	---	11	10/63	---	2.8	7	285	---	123
187	79	6	100;123;175	70	2/69	3	---	---	---	---	123S
200	---	---	---	---	---	110	---	7	350	6.6	124
187	45	6	137;149;182	70	2/69	3	---	---	---	---	124S
500	33	10	---	35	9/54	400	3.5	8	380	7.2	125
125	---	6	---	---	---	---	---	9	425	6.95	126
30	---	48	---	24	10/62	---	---	---	---	---	127
33	30	40	---	31	9/63	---	---	---	---	---	129
140	21	6	53;131	28	6/69	10	---	---	---	---	129S
70	---	6	---	25	9/62	---	---	---	425	6.65	130
89	---	6	---	25	10/52	---	---	2	125	6.0	131
76	---	6	---	---	---	---	---	5	260	5.2	133
20	20	60	---	18	9/62	---	---	6	155	6.1	134
114	---	6	---	---	---	---	---	4	300	5.95	135
28	---	48	---	27	9/62	---	---	---	---	---	136
110	---	6	---	---	---	8	---	2	155	---	137
200	---	6	---	39	12/63	---	---	4	220	---	138
162	30	8	---	20	---	32	---	7	335	6.8	139
179	35	6	42;80;170	34	4/63	30	.43	6	250	7.3	140
123	73	6	43;92	45	5/51	6	.1	8	335	7.6	141
100	---	6	---	---	---	5	---	12	515	6.7	142
31	12	48	---	24	10/62	---	---	13	600	7.2	143
197	23	6	98	60	10/66	2	---	---	---	---	143S
165	21	6	---	---	---	25	---	7	240	6.7	144
110	21	6	---	---	---	4	---	9	365	7.0	145
103	25	6	---	---	---	10	---	---	---	---	146
20	---	40	---	19	10/62	---	---	2	140	6.0	147
95	21	6	---	---	---	6	---	---	---	---	148
24	---	36	---	21	6/63	---	---	4	205	5.9	149
96	39	6	---	---	---	12	---	8	360	6.1	150

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Alti-tude of land surface (feet)	Topo-graphic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-150S	3950-7609	Horace Jackson	Maurice E. Brown	1967	H	580	S	Xpc/---
151	4008-7635	Elizabethtown Water Co.	Harrisburg's Kohl Bros.	1958	P	570	S	Trns/---
152	4008-7635	R. H. Smith	Myers Bros. Drlg. Contr.	1956	C	495	S	Trns/---
153	4008-7635	R. E. Hershey	H. K. Honberger & Sons	1952	U	575	H	Trns/ss
154	4008-7635	do.	Myers Bros. Drlg. Contr.	1957	C	575	H	Trd/---
155	4008-7635	Paris Good	do.	---	H	545	S	Trns/---
156	4008-7635	do.	---	---	U	543	S	Trns/---
157	4008-7635	C. H. Simon	Harrisburg's Kohl Bros.	1942	N	510	S	Trns/---
158	4008-7635	C. S. Simon	H. K. Honberger & Sons	1941	U	505	S	Trns/---
159	4008-7635	Sadie Risser	Myers Bros. Drlg. Contr.	1961	H	510	S	Trns/---
160	4008-7635	Rheems Water Co.	---	---	U	520	H	Trns/---
160S	3947-7615	Harvey Blaughman	Maurice E. Brown	1969	H	300	S	Xpc/---
161	4008-7635	Rheems Water Co.	---	---	U	520	H	Trns/---
161S	3949-7612	Charles Booth	Maurice E. Brown	1968	H	615	S	Xpc/---
162	4008-7635	Rheems Water Co.	---	---	U	520	H	Trns/---
163	4008-7635	do.	H. K. Honberger & Sons	1954	U	520	H	Trns/---
164	4008-7635	do.	---	---	U	520	H	Trns/---
164S	3949-7612	David Henry	Maurice E. Brown	1969	H	560	S	Xpc/---
165	4008-7635	J. M. Smith	Myers Bros. Drlg. Contr.	1959	H	---	H	Trns/---
166	4008-7635	Mrs. C. H. Simon	---	---	H	505	S	Trns/---
167	4008-7635	Acme Market	Myers Bros. Drlg. Contr.	1959	U	470	S	Trns/---
168	4008-7635	do.	do.	1959	U	470	S	Trns/ss
169	4008-7635	do.	do.	1959	U	470	S	Trns/ss
170	4008-7635	Longenecker Hatchery	---	---	U	540	H	Trns/---
171	4008-7635	do.	Myers Bros. Drlg. Contr.	1950	U	540	H	Trns/---
172	4008-7635	do.	do.	---	S	540	H	Trns/---
173	4008-7635	do.	do.	1960	S	523	H	Trns/---
174	4008-7635	Harold Martin	do.	1963	H	540	H	Trns/---
175	4008-7635	do.	---	1954	U	540	H	Trns/---
176	4008-7635	Paul Hossler	Myers Bros. Drlg. Contr.	1961	H	570	H	Trns/---
177	4008-7635	Lester Garber	---	1948	H	570	H	Trns/---
177S	4005-7657	John Ewell	Petersheim Bros.	1967	H	855	S	€ch/ss
178	4008-7636	West Donegal Twp.	Myers Bros. Drlg. Contr.	1962	H	545	H	Trns/---
179	4008-7636	P. P. Metzger	do.	1960	H	405	V	Trns/---
180	4008-7636	do.	do.	1962	H	410	V	Trns/---
181	4008-7636	Henry Decker	H. K. Honberger & Sons	1962	H	520	H	Trns/---
182	4008-7636	Clyde Carter	do.	1961	H	520	W	Trns/---
183	4008-7636	Willowood Swim Club	do.	1956	R	425	S	Trns/---
184	4008-7636	Elizabethtown Garment Co.	---	1905	U	430	V	Trns/---
185	4008-7636	Daniel Reem	H. K. Honberger & Sons	---	H	530	H	Trd/---
186	4008-7636	Masonic Homes	---	1920	U	470	S	Trns/---
187	4008-7636	do.	---	1924	U	470	S	Trns/---
188	4008-7636	Klein Chocolate Co.	Myers Bros. Drlg. Contr.	---	N	440	S	Trns/---
189	4008-7636	do.	do.	---	N	420	S	Trns/---
190	4008-7636	R. L. Ebersole Ice and Coal Co.	do.	1945	U	420	V	Trns/---
191	4008-7636	P. H. Kauffman	---	---	H	420	S	Trns/---
192	4009-7601	P. R. Weaver	Myers Bros. Drlg. Contr.	1955	H	510	S	Trns/---
193	4009-7603	Isaac Zimmerman	---	---	---	440	S	Trns/---
194	4009-7604	R. M. Weaver	Titus Sensenig	1960	H	410	S	Trns/---
195	4009-7604	Lester Martin	do.	---	H	470	S	Trns/---
196	4009-7604	Susanna Herr	---	---	H	450	S	Trns/---
197	4009-7605	Horace Styer	Norman Zimmerman	1949	H	380	H	Trns/---
198	4009-7605	Ivan Stauffer	Myers Bros. Drlg. Contr.	---	H	440	S	Trns/---
199	4009-7608	I. H. Nolt	do.	1957	H	370	S	Trns/---
200	4009-7609	Ephrata Sand and Gravel Co.	H. K. Honberger & Sons	1959	N	480	H	Trns/---
201	4009-7609	do.	do.	1959	U	480	H	Trns/---
202	4009-7609	David Oberholtzer	Titus Sensenig	1962	P	420	S	Trns/---
203	4009-7609	Aaron Burkholder	---	---	H	450	S	Trns/---
204	4009-7609	do.	---	---	U	460	S	Trns/---
205	4009-7609	E. H. Martin	Myers Bros. Drlg. Contr.	1961	H	440	S	Trns/---
206	4009-7609	D. B. Stauffer	Aaron W. Martin	1950	H	440	S	Trns/---
207	4009-7609	do.	do.	1951	H	450	H	Trns/---
208	4009-7609	Justin Andrew	Edwin Gerlach & Sons	1964	H	420	S	Trns/---
209	4009-7610	Harold Brossman	---	---	H	380	V	Trns/---
210	4009-7610	M. W. Brossman	Myers Bros. Drlg. Contr.	1959	H	460	S	Trns/---
211	4009-7611	R. C. Sweigart	---	1929	H	403	V	Trns/---
212	4009-7611	Jonas Groff	Titus Sensenig	1957	H	400	V	Trns/---
213	4009-7611	Christian Sauder	do.	1962	H	405	S	Trns/---
214	4009-7611	Akron Bor.	Harrisburg's Kohl Bros.	1956	P	420	S	Trns/---
214S	4005-7601	James Law	Petersheim Bros.	1967	H	740	S	€ah/ss

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hard-ness (gpg)	Specific conduc-tance (micro-mhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
93	45	6	57;86	44	2/67	25	---	---	---	---	Ln-150S
500	51	10	65;180	47	3/58	440	2.7	8	270	7.1	151
112	21	6	6;9	---	---	20	---	10	410	7.1	152
68	30	6	30;50	59	11/62	16	---	---	---	---	153
240	80	6	160;220	---	---	9	---	6	290	6.8	154
130	---	6	---	58	10/62	---	---	8	410	7.5	155
30	---	48	---	30	10/62	---	---	---	---	---	156
505	---	8	---	60	3/49	120	1.2	5	250	6.7	157
108	---	6	---	10	11/62	13	1.1	---	180	---	158
100	22	6	---	39	11/62	20	---	6	300	7.1	159
300	---	6	---	30	11/62	---	---	---	---	---	160
36	20	6	30	9	8/69	6	---	---	---	---	160S
303	---	10	---	27	11/62	12	1.4	5	220	6.2	161
140	20	6	80;137	62	12/68	25	---	---	---	---	161S
---	---	6	---	---	---	---	---	---	---	---	162
200	20	6	100	---	---	---	---	8	340	---	163
64	---	6	---	26	11/62	---	---	---	---	---	164
180	---	4	70;170	65	1/69	3	---	---	---	---	164S
330	37	6	107;290	---	---	7	---	4	215	---	165
120	---	6	---	3	1963	40	---	---	---	---	166
300	20	---	---	3	1963	25	---	---	---	---	167
300	20	---	---	---	---	25	---	---	---	---	168
300	20	6	---	---	---	10	---	---	---	---	169
60	---	6	---	---	---	2	---	---	---	---	170
65	25	6	---	---	---	18	2	---	---	---	171
130	---	6	---	50	4/63	30	---	---	---	---	172
130	---	6	---	50	1/60	30	---	---	---	---	173
175	22	6	---	---	---	20	---	9	350	6.7	174
95	---	6	---	70	6/63	10	---	---	---	---	175
85	---	6	---	45	9/63	12	---	---	---	---	176
98	---	6	---	50	9/63	5	---	---	---	---	177
123	67	6	78;115	30	7/67	10	---	---	---	---	177S
86	23	6	35;60	46	10/62	50	5.3	9	400	6.0	178
65	21	6	---	2	1961	10	---	9	365	7.5	179
65	30	6	---	6	7/62	15	---	11	435	7.2	180
99	54	6	32;87	23	10/62	7	.3	6	290	6.7	181
75	59	6	68	19	1961	20	.4	9	375	6.5	182
93	35	6	---	21	11/62	30	1.1	6	300	6.6	183
140	---	6	---	---	---	---	---	---	---	---	184
120	58	6	---	30	---	12	---	---	---	---	185
100	---	8	---	26	5/63	---	---	---	---	---	186
306	---	10	---	---	---	110	---	---	---	---	187
500	---	---	---	---	---	40	---	---	---	---	188
230	---	---	---	---	---	140	---	---	---	---	189
379	---	8	---	13	---	100	5.1	8	365	---	190
183	---	6	---	5	5/63	---	---	8	320	6.8	191
50	---	6	---	17	---	---	---	5	240	---	192
108	---	---	---	---	---	---	---	7	425	---	193
60	---	6	---	F	---	25	---	10	450	---	194
65	---	6	---	10	---	12	---	9	390	---	195
20	---	60	---	14	5/64	---	---	7	320	---	196
93	---	6	90	35	---	---	---	5	---	---	197
50	---	6	---	---	---	15	---	7	230	---	198
86	---	6	---	20	---	12	---	9	360	---	199
175	20	6	---	17	4/64	55	---	---	---	---	200
140	---	6	---	21	4/64	---	---	---	---	---	201
128	42	6	110	---	---	---	---	12	415	---	202
30	---	6	---	---	---	10	---	11	485	---	203
26	---	60	---	10	4/64	---	---	---	---	---	204
118	55	6	115	4	8/61	4	---	13	380	---	205
296	70	6	---	55	1/51	1	---	11	345	---	206
100	25	6	---	18	1/51	30	2.5	7	325	---	207
122	67	6	90;105;109	---	---	12	---	---	---	---	208
27	---	6	---	8	4/64	10	---	11	345	---	209
78	25	6	---	---	---	13	---	8	280	---	210
60	---	6	---	12	1929	10	---	16	510	---	211
98	40	6	---	---	---	---	---	21	650	---	212
80	40	6	---	30	---	25	---	12	400	---	213
571	52	6	30;75;90; 220;335	72	9/56	50	.23	14	405	8.1	214
245	40	6	200;230	100	7/69	5	---	---	---	---	214S

TABLE 5.

Well location						Alti-tude of land surface (feet)	Topo-graphic setting	Aquifer/ lithology
Number	Lat-Long	Owner	Driller	Date completed	Use			
Ln-215	4009-7611	Akron Bor.	Norman E. Groff	1951	P	420	S	Trns/---
216	4009-7611	do.	---	---	U	430	S	Oco/sh
217	4009-7611	do.	---	---	U	440	S	---
218	4009-7611	do.	---	1954	U	360	S	Oco/sh
219	4009-7611	do.	H. K. Honberger & Sons	1959	P	390	S	---
220	4009-7611	do.	---	1951	U	450	S	Oco/sh
221	4009-7611	do.	Myers Bros. Drlg. Contr.	1963	---	390	V	Trns/---
222	4009-7611	do.	do.	1963	P	380	V	Trns/---
223	4009-7611	Raymond Knosp	do.	1964	H	400	S	Trns/---
224	4009-7630	Richard McCoy	do.	1950	H	410	S	Trns/---
225	4009-7631	Franklin Greiner	---	1944	S	480	H	Trns/---
226	4009-7631	Milton Grinder	Myers Bros. Drlg. Contr.	1961	S	420	V	Trns/---
227	4009-7632	Charles Bitner	H. K. Honberger & Sons	1950	H	510	S	Trns/---
228	4009-7632	Ralph Ginder	---	---	S	445	S	Trns/---
229	4009-7632	do.	Myers Bros. Drlg. Contr.	1961	U	520	H	Trns/---
230	4009-7632	Blaine Gantz	do.	1962	S	460	S	Trns/---
231	4009-7632	do.	---	---	U	460	S	Trns/---
232	4009-7632	Milton Ginder	---	1940	H	500	S	Trns/---
234	4009-7632	R. G. Herr	Myers Bros. Drlg. Contr.	1946	S	500	S	Trns/---
235	4009-7632	William Thome	do.	1961	S	500	S	Trns/---
236	4009-7632	do.	do.	1963	S	500	S	Trns/---
237	4009-7632	L. S. Hummer	---	---	H	590	S	Trns/---
238	4009-7632	Loy Trostle	H. K. Honberger & Sons	1963	S	560	S	Trns/---
239	4009-7633	H. J. Beck	---	---	H	615	H	Trns/---
240	4009-7633	Arthur Koser	Myers Bros. Drlg. Contr.	1962	H	500	H	Trns/---
241	4009-7633	Irvin Ruhl	---	---	H	500	S	Trns/---
242	4009-7633	U. S. Geol. Survey	Chas. H. Eichelberger	1963	U	565	S	Trns/---
243	4009-7633	Raymond Newgard	Myers Bros. Drlg. Contr.	1956	H	620	H	Trns/---
244	4009-7633	Edward Snavely	---	---	H	610	H	Trns/---
245	4009-7633	West Greentree Ch. of the Brethren	---	---	H	540	H	Trns/---
246	4009-7634	Robert Zeigler	Myers Bros. Drlg. Contr.	1962	H	595	H	Trd/---
249	4009-7634	Guido Clauss	do.	1956	H	505	S	Trns/---
250	4009-7634	do.	---	---	U	505	S	Trns/---
250S	3956-7608	William Hoffman	Maurice E. Brown	1968	H	830	S	€ch/ss
251	4009-7634	A. E. Musser	---	---	S	550	S	Trns/---
252	4009-7634	do.	---	---	H	560	S	Trns/---
253	4009-7634	Baum's Bologna Co.	H. K. Honberger & Sons	1961	N	525	S	Trns/---
254	4009-7634	do.	---	---	U	525	S	Trns/---
255	4009-7634	Moyer's Potato Chip Co.	---	---	N	520	H	Trns/---
256	4009-7634	do.	---	---	U	520	H	Trns/---
256S	3957-7605	Daniel Baughman	Maurice E. Brown	1966	H	760	S	Xmi/ss
257	4009-7634	Russel Eisenbise	Myers Bros. Drlg. Contr.	1963	H	610	H	Trns/---
258	4009-7635	J. D. Reinhold	---	1952	H	530	S	Trns/---
258S	3955-7610	Paul Rincer	Maurice E. Brown	1966	H	740	S	€ch/ss
259	4009-7635	Ray Swanger	---	---	H	480	S	Trns/---
260	4009-7635	P. K. Zook	Myers Bros. Drlg. Contr.	1956	H	455	S	Trns/---
261	4009-7635	Chester Landis	do.	1952	H	500	S	Trns/---
261S	3955-7608	Mt. Eden Evangelical Ch.	Maurice E. Brown	1969	H	850	S	€ch/ss
262	4009-7635	Chester Landis	---	---	U	500	S	Trns/---
263	4009-7635	John Chapman	Myers Bros. Drlg. Contr.	1961	H	460	V	Trns/---
264	4009-7635	Lester Hess	do.	1964	H	460	S	Trns/---
265	4009-7636	Elizabethtown Water Co.	Harrisburg's Kohl Bros.	1954	P	465	H	Trns/---
266	4009-7636	do.	---	1915	U	430	V	Trns/---
267	4009-7636	do.	Harrisburg's Kohl Bros.	1942	U	433	V	Trns/---
267S	4013-7619	Ivan Fasnacht	Kohl Bros., Inc.	1968	H	525	S	Oco/---
268	4009-7636	Elizabethtown Water Co.	---	---	U	425	S	Trns/---
269	4009-7636	do.	---	---	U	440	S	Trns/---
270	4009-7636	Mumpers Dairy, Inc.	Myers Bros. Drlg. Contr.	1950	N	475	S	Trns/---
271	4009-7636	do.	do.	1932	N	475	S	Trns/---
272	4009-7637	Aaron Hollinger	---	1924	H	510	S	Trns/---
273	4010-7604	Lloyd Martin	Titus Sensenig	1961	S	410	S	Trns/---
274	4010-7604	W. M. Martin	do.	1957	S	480	H	Trns/---
275	4010-7605	E. S. Zimmerman	do.	1963	H	350	V	Trns/---
275S	3948-7609	GSB Project	Harrisburg's Kohl Bros.	1969	P	401	S·	Xpc/ss
276	4010-7605	Richard Kern	Titus Sensenig	1962	H	360	S	Trns/---
277	4010-7606	C. H. Zimmerman	Aaron W. Martin	1962	H	390	S	Trns/---
277S	3945-7609	Lester King	Maurice E. Brown	1968	H	375	S	Xpc/---
278	4010-7606	H. O. Martin	Myers Bros. Drlg. Contr.	1960	H	440	S	Trns/---
279	4010-7606	Lemon Werntz	do.	1963	H	400	S	Trns/ss
279S	3946-7611	Donald Gehran	Maurice E. Brown	1968	H	380	S	Xpc/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
339	63	8	55;65;75; 105;137	45	7/51	175	1.2	---	---	---	Ln-215
200	---	---	---	---	---	1	---	---	---	---	216
136	---	10	---	76	4/64	19	---	---	---	---	217
---	---	8	---	---	---	18	---	---	---	---	218
82	62	8	---	30	8/59	---	6	15	435	7.5	219
64	13	10	---	F	---	20	1	---	---	---	220
126	---	6	58;116	11	4/64	250	21	19	585	7.30	221
135	38	10	60;110	5	4/64	250	14	13	490	7.35	222
65	35	6	---	21	4/64	10	---	---	---	---	223
74	28	6	---	21	10/6	10	---	5	285	6.95	224
85	---	6	---	19	---	---	---	14	500	6.9	225
88	84	6	86	25	4/61	20	---	9	400	6.5	226
185	180	6	---	80	1950	10	---	8	315	6.5	227
149	---	6	---	---	---	---	---	11	380	---	228
230	---	6	---	27	6/63	2	---	---	---	---	229
200	---	6	---	---	---	11	---	11	390	6.9	230
17	---	40	---	12	6/63	---	---	4	170	6.6	231
122	---	6	---	29	6/63	---	---	5	250	6.2	232
94	21	6	---	15	4/46	---	---	5	185	6.3	234
80	---	6	65	27	7/63	12	---	6	285	7.6	235
182	15	6	85;124;138; 177	42	10/63	10	.41	6	300	7.6	236
130	---	6	---	40	---	5	---	8	285	6.8	237
154	---	6	96;147	---	---	10	.3	3	125	6.1	238
110	60	6	---	40	---	20	---	2	85	5.7	239
185	---	6	---	10	6/63	6	---	11	385	6.7	240
20	---	36	---	15	1963	---	---	5	220	5.9	241
300	39	6	---	12	6/63	110	1.3	2	90	5.8	242
173	70	6	---	56	6/63	25	---	---	---	---	243
103	---	---	---	48	6/63	---	---	3	170	6.0	244
47	---	40	---	42	6/63	---	---	8	120	5.7	245
123	24	6	123	83	10/62	10	---	---	---	---	246
106	80	6	---	11	11/62	12	---	4	195	6.5	249
19	---	36	---	9	11/62	---	---	---	---	---	250
155	22	6	90;150	57	2/68	4	---	---	---	---	250S
34	---	6	---	8	11/62	10	---	7	355	6.4	251
40	---	6	---	16	11/62	---	---	---	---	---	252
198	80	6	---	15	2/61	60	---	7	325	7.3	253
154	20	6	---	12	11/62	---	---	---	---	---	254
87	---	6	---	31	11/62	15	---	5	330	6.8	255
32	---	48	---	27	11/62	---	---	---	---	---	256
30	21	6	25;28	15	8/66	20	---	---	---	---	256S
121	24	6	102;113	70	5/63	6	.3	6	270	6.4	257
90	---	6	---	3	9/52	10	---	6	270	6.9	258
90	14	6	60	40	8/66	3	---	---	---	---	258S
24	---	48	---	19	11/62	---	---	7	415	6.2	259
60	---	6	---	12	9/56	20	---	7	300	7.3	260
110	---	6	---	12	11/62	10	---	5	225	5.8	261
146	60	6	90;144	60	5/69	30	---	---	---	---	261S
14	---	36	---	10	11/62	---	---	7	345	6.4	262
65	20	6	60;65	10	1961	18	---	8	415	---	263
80	22	6	---	21	4/64	15	---	12	490	7.55	264
705	24	10	---	55	4/54	450	2.9	10	415	7.3	265
205	---	8	---	26	2/61	---	---	---	---	---	266
476	20	10	---	9	1942	115	.7	---	---	---	267
445	47	6	203	32	6/68	1	---	---	---	---	267S
200	---	6	---	---	---	---	---	---	---	---	268
168	---	8	---	65	9/63	---	---	---	---	---	269
330	50	8	290	39	11/63	65	---	9	405	---	270
165	20	6	---	20	---	---	---	9	450	---	271
100	20	6	---	40	---	5	---	---	---	---	272
90	30	6	45;60;85	30	1961	30	---	6	245	---	273
140	20	6	50;80;140	38	5/64	20	.45	8	315	7.68	274
90	---	6	---	---	---	---	---	3	240	---	275
150	70	6	100;145	25	1/69	40	---	---	---	---	275S
95	45	6	---	10	1963	45	---	8	300	---	276
112	30	6	110	8	---	---	---	3	220	---	277
83	61	6	35;75	21	8/68	10	---	---	---	---	277S
128	40	6	---	15	---	22	---	4	210	---	278
80	33	6	72	4	12/63	20	---	6	245	---	279
103	44	6	60;92	32	5/68	30	---	---	---	---	279S

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-280	4010-7607	M. Brubacker	Moser Zimmerman	---	H	480	S	Trns/---
281	4010-7607	H. Kofroth	Myers Bros. Drlg. Contr.	1963	H	423	S	Trns/ss
282	4010-7607	Paul Fox	Aaron W. Martin	---	H	400	S	Trns/---
282S	3945-7610	Clifford Halloway	Maurice E. Brown	1967	H	315	S	Xpc/---
283	4010-7607	A. W. Martin	Aaron W. Martin	---	H	430	S	Trns/---
284	4010-7607	M. H. Weaver	do.	1963	S	420	S	Trns/ss
285	4010-7607	Wayne Zeist	Titus Sensenig	1955	H	420	S	Trns/---
285S	3943-7611	William Weciner	Maurice E. Brown	1967	H	370	S	Xpc/---
286	4010-7607	H. M. Zimmerman	Aaron W. Martin	1959	H	410	S	Trns/---
286S	3946-7610	Gerald Fits	Maurice E. Brown	1967	H	445	S	Xpc/sh
287	4010-7608	Leroy Sensenig	Aaron W. Martin	1948	S	580	S	Trns/---
289	4010-7608	F. C. Riddle	---	---	H	450	S	Trns/---
290	4010-7608	Harvey Stauffer	---	1953	H	490	S	Trns/---
290S	3945-7609	Dean Killey	Maurice E. Brown	1966	H	370	S	Xpc/---
291	4010-7608	S. H. Gehr	Aaron W. Martin	1955	H	270	S	Trns/---
291S	3947-7610	Mary Goss	Maurice E. Brown	1966	H	370	S	Xpc/---
292	4010-7608	William Bauman	Titus Sensenig	1964	H	450	S	Trns/---
293	4010-7608	J. L. Weber	Myers Bros. Drlg. Contr.	1963	H	400	S	Trns/---
293S	3944-7609	Charles Lewis	Maurice E. Brown	1966	H	390	S	Xpc/---
294	4010-7608	WGSA Radio Sta.	Myers Bros. Drlg. Contr.	---	H	600	S	Trgh/---
295	4010-7608	Eva Wingenroth	---	1944	H	580	S	Trns/---
296	4010-7608	I. S. Horst	Myers Bros. Drlg. Contr.	1963	H	390	S	Trns/---
297	4010-7609	E. W. Hagy	Aaron W. Martin	1940	C	480	S	Trns/---
297S	3946-7608	Samuel Groff	Maurice E. Brown	1966	H	380	S	Xpc/---
298	4010-7609	Arthur Sell	Aaron W. Martin	1962	H	460	S	Trns/---
298S	3946-7610	Ray Simmons	Maurice E. Brown	1966	H	360	S	Xpc/---
299	4010-7609	Donald Nelson, Jr.	Myers Bros. Drlg. Contr.	1962	H	640	S	Trns/---
300	4010-7609	Lester Carpenter	Aaron W. Martin	1964	H	600	S	Trns/---
300S	3946-7610	Lewis Bradly	Maurice E. Brown	1969	H	403	S	Xpc/---
301	4010-7610	Eugene Leaman	Aaron W. Martin	1954	C	450	V	Trns/---
302	4010-7610	Frand Livengood	Titus Sensenig	1959	H	400	S	Trns/---
303	4010-7611	George Mohler	Myers Bros. Drlg. Contr.	1964	H	400	T	Trns/ss
304	4010-7629	Jack Bowersox	do.	1959	H	400	V	Trns/---
305	4010-7629	J. S. Shaffer	do.	1955	H	415	S	Trns/---
306S	3946-7610	John Church	Maurice E. Brown	1969	H	390	S	Xpc/sh
307	4010-7630	Chiquies Ch.	Myers Bros. Drlg. Contr.	1957	T	525	H	Trns/---
308	4010-7630	J. S. Ginder	do.	1960	H	510	T	Trns/---
308S	3948-7607	Stanley Grill	Maurice E. Brown	1967	H	500	S	Xpc/---
309	4010-7630	L. A. J. Loose	Myers Bros. Drlg. Contr.	1963	S	500	S	Trns/---
310	4010-7631	David Heistand	do.	1959	H	405	S	Trns/---
311	4010-7631	Willis Christ	do.	1962	H	410	V	Trns/---
312	4010-7631	Galen Shenk	---	1959	H	440	T	Trns/---
312S	3945-7605	Seth Lapp	Maurice E. Brown	1966	H	340	S	Xpc/---
313	4010-7631	Milton Grove Sand Co.	H. K. Honberger & Sons	1958	N	450	S	Trns/---
314	4010-7632	Alvin Risser	---	---	H	460	S	Trns/---
315	4010-7632	Risser's Ch.	---	---	T	480	S	Trns/---
316	4010-7632	J. K. Martin	---	---	S	460	S	Trns/---
317	4010-7632	Gerald Neidig	---	---	H	500	H	Trns/---
317S	3947-7603	Earl Cole, Sr.	Maurice E. Brown	1967	H	440	S	Xpc/---
318	4010-7632	Robert Hostetter	Samuel I. Kaylor	1959	H	510	S	Trns/ss
318S	3946-7607	Alan Monk	Maurice E. Brown	1967	H	475	S	Xpc/---
319	4010-7633	Dean Koppenhaver	Myers Bros. Drlg. Contr.	1957	H	520	T	Trns/---
319S	3946-7604	Anne Faunce	Maurice E. Brown	1967	H	320	S	Xpc/---
320	4010-7633	Raymond Longenecker	---	---	U	510	S	Trns/---
320S	3946-7607	Howard Coates	Maurice E. Brown	1967	H	442	S	Xpc/---
321	4010-7633	Raymond Longenecker	Myers Bros. Drlg. Contr.	1961	S	510	S	Trns/---
322	4010-7633	L. S. Hummer	H. K. Honberger & Sons	---	S	530	S	Trns/---
323	4010-7634	Jonathan Smith, Jr.	do.	1961	H	500	S	Trns/---
324	4010-7634	Paul Brubaker	do.	1958	H	510	S	Trns/---
325	4010-7634	C. S. Hollinger	do.	1959	H	510	S	Trns/---
325S	3947-7603	Lena Satham	Maurice E. Brown	1966	H	335	C	Xpc/---
326	4010-7634	C. H. Smith	H. K. Honberger & Sons	1960	H	500	S	Trns/---
326S	3946-7605	Harold Lowner	Maurice E. Brown	1966	H	445	S	Xpc/---
327	4010-7634	Bruce Halk	H. K. Honberger & Sons	1962	H	500	S	Trns/---
328	4010-7634	Mrs. Ralph Mummert	do.	1961	H	500	S	Trns/---
329	4010-7634	A. J. Munchan	do.	1961	H	515	S	Trns/---
329S	3947-7604	Gerlard Hansen	R. Walter Slauch & Sons	1966	H	440	S	Xpc/---
330	4010-7634	Ralph Greenly	---	1959	H	480	S	Trns/---
331	4010-7634	Charles Rife	H. K. Honberger & Sons	1960	H	520	T	Trns/---
331S	3948-7605	Richard Gregg	Maurice E. Brown	1969	H	435	S	Xpc/---
333	4010-7635	Mrs. Mark Berrier	---	---	H	500	S	Trns/---
335	4010-7635	Samuel Myers	---	1944	H	475	S	Trns/---
336	4011-7605	John Slaback	---	---	H	400	S	Trns/---
337	4011-7605	R. D. Nelson	---	1963	H	400	S	Trns/---
338	4011-7606	Eva Gehman	Aaron W. Martin	1964	H	470	S	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
75	25	6	---	---	---	---	---	6	300	---	Ln-280
102	23	6	---	30	---	7	---	4	260	---	281
100	---	6	---	10	1964	---	---	2	180	---	282
59	40	6	45;55	8	10/67	20	---	---	---	---	282S
---	---	6	---	---	---	---	---	13	560	---	283
127	44	6	85	13	6/63	18	.25	11	495	---	284
69	25	6	8;24;60	8	10/55	15	3.8	7	300	---	285
74	23	6	50;57;63	15	4/67	6	---	---	---	---	285S
150	25	6	100	40	6/59	30	7.5	10	370	---	286
125	96	6	188;123	40	4/67	30	---	---	---	---	286S
154	---	6	30	20	1948	20	---	3	90	---	287
75	---	6	---	---	---	---	---	14	465	---	289
76	---	6	---	---	---	---	---	8	285	---	290
99	40	6	60;96	14	9/66	30	---	---	---	---	290S
---	---	6	---	---	---	20	---	7	220	---	291
71	51	6	60;70	20	9/66	20	---	---	---	---	291S
87	38	6	75	29	4/64	20	---	---	570	---	292
60	20	6	---	---	---	20	---	8	290	---	293
72	57	6	50;60;65	35	9/66	12	---	---	---	---	293S
96	39	6	---	---	---	20	---	---	---	---	294
110	---	6	---	---	---	---	---	1	60	---	295
82	40	6	---	20	---	10	---	7	295	---	296
107	55	6	---	40	1940	15	---	---	---	---	297
74	61	6	39;70	24	7/66	40	---	---	---	---	297S
55	20	6	---	---	---	20	---	4	125	---	298
51	28	6	15;45;49	7	6/66	20	---	---	---	---	298S
100	25	6	---	58	4/64	6	---	.3	100	---	299
148	40	6	100;140	67	4/64	---	---	---	---	---	300
121	59	6	46;80	22	1/69	5	---	---	---	---	300S
186	170	6	80;184	---	1954	---	---	20	570	---	301
83	---	6	---	---	---	25	---	7	225	---	302
65	33	6	---	24	4/64	10	---	14	425	---	303
104	25	6	---	---	---	4	---	10	350	---	304
107	---	6	75	+1	1955	20	---	8	305	---	305
175	87	6	40;140	30	8/69	---	---	---	---	---	306S
128	---	6	---	---	---	4	---	---	---	---	307
95	---	6	60	11	8/63	4	---	4	210	---	308
131	99	6	110;124	31	8/67	7	---	---	---	---	308S
130	---	6	---	15	8/63	---	---	6	235	---	309
108	50	6	---	---	---	20	---	8	330	---	310
---	16	6	15;22	4	7/63	7	7.1	4	205	5.6	311
86	---	6	---	---	---	25	---	9	385	6.9	312
71	31	6	50;65	30	9/66	20	---	---	---	---	312S
115	---	6	---	---	---	10	---	---	---	---	313
25	---	40	---	---	---	---	---	8	340	6.7	314
25	---	40	---	---	---	---	---	6	275	5.9	315
32	28	40	---	28	6/63	---	---	4	205	5.5	316
37	---	---	---	24	7/63	---	---	6	350	5.9	317
89	65	6	74;80	40	5/67	30	---	---	---	---	317S
118	17	6	---	30	7/63	7	.34	11	450	6.6	318
91	74	6	40;86;90	35	5/67	15	---	---	---	---	318S
127	10	6	---	10	6/57	12	---	6	235	7.0	319
108	75	6	60;105	40	4/67	8	---	---	---	---	319S
58	---	6	---	32	7/63	---	---	---	---	---	320
63	24	6	45;60	30	3/67	30	---	---	---	---	320S
125	44	6	---	---	---	---	---	7	290	---	321
90	---	6	70;80	---	---	9	---	9	365	6.8	322
90	27	6	---	8	2/61	15	.18	---	---	---	323
100	---	6	---	25	11/62	---	---	5	260	6.9	324
95	22	6	---	24	11/62	7	---	5	255	7.3	325
66	55	6	40;64	25	8/66	20	---	---	---	---	325S
---	---	6	---	---	---	---	---	5	235	6.2	326
126	61	6	80;124	50	7/66	30	---	---	---	---	326S
120	23	6	---	25	10/62	6	---	---	---	---	327
90	22	6	---	---	---	---	---	21	900	6.9	328
75	21	6	---	5	---	---	---	30	1225	7.7	329
100	45	6	24;85	42	6/66	25	---	---	---	---	329S
77	20	6	---	---	---	7	---	8	400	7.1	330
109	19	6	---	12	4/60	4	---	3	220	5.9	331
90	51	6	56;61;86	50	2/69	13	---	---	---	---	331S
32	---	40	---	12	11/62	---	---	5	180	6.0	333
80	---	6	---	---	---	10	---	14	600	6.6	335
120	40	6	---	---	---	---	---	7	375	---	336
80	---	6	---	---	---	---	---	9	380	---	337
90	---	6	---	2	4/64	---	---	---	---	---	338

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-339	4011-7606	Martin Herr	Titus Sensenig	1956	H	420	S	Trns/---
340	4011-7606	G. R. Weaver	do.	---	H	400	S	Trns/---
341	4011-7606	Elwood Lees	---	---	H	4605	S	Trns/---
342	4011-7629	Robert Hess	---	---	C	520	S	Trns/---
343	4011-7629	W. W. Bosey	---	---	H	525	T	Trns/---
344	4011-7629	Raymond Shelly	H. K. Honberger & Sons	1948	H	510	S	Trns/---
345	4011-7629	Elmer Shelly	Myers Bros. Drlg. Contr.	1960	H	540	S	Trns/---
346	4011-7629	H. E. Grube	do.	1950	H	500	S	Trns/---
347	4011-7629	Henry Gingrich	do.	1955	U	477	S	Trns/---
348	4011-7629	do.	do.	1956	H	480	S	Trns/---
349	4011-7629	Paul Wolgemuth	do.	1964	H	560	H	Trns/---
350	4011-7630	Eugene Shenk	do.	1962	H	480	S	Trns/---
351	4011-7630	Elam Ginder	do.	1961	H	450	S	Trns/---
352	4011-7630	Roy Hess	do.	1959	H	450	S	Trns/---
353	4011-7630	B. S. Hollinger	---	---	H	530	S	Trns/---
353S	3958-7604	Robert Arban	Maurice E. Brown	1967	H	730	S	€ch/ss
354	4011-7631	Lloyd Weidman	E. J. Myers & Sons	1950	H	430	S	Trns/---
355	4010-7631	Omer Hostetter	Myers Bros. Drlg. Contr.	1961	H	462	S	Trns/---
356	4010-7631	do.	---	---	U	462	S	Trns/---
356S	3958-7604	John Heish	Maurice E. Brown	1968	H	500	S	€ah/ss
357	4011-7631	John Wolgemuth	Myers Bros. Drlg. Contr.	1954	S	460	S	Trns/---
357S	3957-7607	David Anderson	Martin T. Fischer	1969	H	590	S	€ah/---
358	4011-7631	John Wolgemuth	---	---	H	460	S	Trns/---
359	4011-7631	Elizabeth Thompson	Myers Bros. Drlg. Contr.	1963	H	465	S	Trns/---
360	4011-7631	S. S. Ginder	do.	1957	H	460	V	Trns/---
361	4011-7631	do.	---	---	H	460	V	Trns/---
362	4011-7631	Dale Kreiner	---	---	H	470	S	Trns/---
363	4011-7631	Raymond Miller	Kerr Bros.	---	H	470	S	Trns/---
364	4011-7632	W. B. Saylor	---	---	H	480	S	Trns/---
364S	3958-7604	Victor Wasson	Maurice E. Brown	1969	H	490	S	€ah/ss
365	4011-7632	Jacob Forry	---	---	U	470	S	Trns/sh
365S	3957-7605	C. J. Kauffman	Maurice E. Brown	1969	H	840	S	€ch/---
366	4011-7632	Paul Good	---	---	H	470	S	Trns/---
367	4012-7622	C. W. Nestleroth	---	---	H	480	V	Trns/---
368	4012-7623	A. G. Galbreath	---	1929	H	460	S	Trns/---
369	4012-7623	Percy Tshudy, Jr.	---	---	H	440	S	Trns/---
370	4012-7623	---	Samuel I. Kaylor	1957	H	438	S	Trns/---
371	4012-7624	C. E. Martin	Myers Bros. Drlg. Contr.	1957	H	450	S	Trns/---
371S	3957-7616	Roy Probst	Martin T. Fischer	---	H	480	S	€ah/---
372	4012-7624	Elmer Fahnestock	Myers Bros. Drlg. Contr.	1956	H	560	H	Trns/---
373	4012-7624	Glen Barnes	do.	1962	H	480	W	Trns/---
374	4012-7625	Rufus Waltz	do.	1948	H	510	H	Trns/---
375	4012-7625	Willoughby Kline	---	1948	H	450	V	Trns/---
376	4012-7625	do.	---	---	H	470	S	Trns/---
377	4012-7625	L. A. Wolf	---	---	S	490	S	Trns/ss
378	4012-7625	Raymond Ebersole	---	---	H	550	S	Trns/---
378S	3954-7616	H. H. Martin	Martin T. Fischer	1969	H	520	S	Xwc/---
379	4012-7625	Raymond Ebersole	---	---	U	553	S	Trns/---
380	4012-7626	Carl Miller	---	---	H	610	S	Trns/---
381	4012-7626	Kenneth Hoffer	---	---	H	540	S	Trns/---
382	4012-7626	Samuel Wanner	---	---	---	530	S	Trns/---
383	4012-7626	W. F. Hornberger	---	---	H	518	S	Trns/---
383S	3954-7610	Charles Day	Maurice E. Brown	1967	H	460	S	€ah/---
384	4012-7626	Jacob Byers	---	---	U	470	V	Trns/---
385	4012-7626	J. H. Balmer	Myers Bros. Drlg. Contr.	1956	H	565	H	Trns/---
386	4012-7627	Wilbur Weaver	do.	1955	H	560	S	Trns/---
387	4012-7627	Silas Long	---	---	H	478	S	Trns/---
388	4012-7627	Paul Geib	H. K. Honberger & Sons	1953	H	520	T	Trns/---
389	4012-7627	John Potts	do.	1959	H	590	H	Trns/---
390	4012-7628	M. L. Jefferies	---	---	H	558	S	Trns/---
391	4012-7627	Raymond Groft	Myers Bros. Drlg. Contr.	1954	H	580	S	Trns/---
392	4012-7629	Abram Siegrist	do.	1962	I	530	W	Trns/---
393	4012-7629	do.	do.	1956	H	350	S	Trns/---
394	4012-7629	do.	---	---	U	550	S	Trns/---
395	4012-7629	J. H. Shelly	Myers Bros. Drlg. Contr.	1963	H	535	S	Trns/---
396	4012-7629	Paul Webber	do.	1950	H	537	S	Trns/---
397	4012-7629	Clayton Hess	do.	1963	I	590	T	Trns/---
398	4012-7629	R. E. Suydan	---	---	H	570	S	Trns/---
399	4012-7629	Aaron Whitcomb	---	---	H	520	S	Trns/---
400	4012-7630	Homer Ginder	Myers Bros. Drlg. Contr.	1955	H	500	H	Trns/---
401	4012-7630	Roy Hess	do.	---	H	485	S	Trns/---
402	4012-7630	K. F. Shenk	do.	1962	H	440	S	Trns/---
403	4012-7630	George Greiner	do.	1960	H	450	S	Trns/---
404	4012-7630	Abner Hollinger	do.	1962	H	505	T	Trns/---
405	4012-7630	E. A. Moore	H. K. Honberger & Sons	1963	H	470	S	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
65	---	---	---	8	---	---	---	10	375	---	Ln-339
103	50	---	---	18	---	---	---	10	550	---	340
40	27	6	---	F	5/64	10	---	4	175	6.7	341
17	---	48	---	11	5/63	---	---	5	335	5.9	342
120	---	6	---	24	---	---	---	7	485	6.4	343
95	22	6	---	---	---	4	---	10	420	6.5	344
90	---	6	---	23	5/63	---	---	4	165	6.0	345
63	24	6	---	19	5/63	3	---	11	385	6.5	346
110	25	6	---	17	8/63	15	---	---	---	---	347
104	54	6	---	50	8/63	---	---	6	225	---	348
102	46	6	---	28	5/64	8	---	---	---	---	349
110	90	6	30;77;100	15	9/62	12	---	4	200	---	350
87	21	6	---	3	7/63	8	1.1	---	155	---	351
100	20	6	---	---	---	12	---	---	---	---	352
16	---	40	---	13	8/63	---	---	4	170	---	353
114	18	6	65;112	48	7/67	26	---	---	-----	---	353S
93	31	6	87;90	12	1950	25	8.3	7	315	---	354
95	---	6	---	---	---	8	---	3	185	5.6	355
52	---	40	---	42	7/63	---	---	---	---	---	356
93	20	6	50;85	45	3/68	8	---	---	---	---	356S
100	21	6	---	13	7/63	---	---	7	315	6.8	357
80	29	6	75	40	9/69	11	---	---	---	---	357S
11	---	40	---	8	7/63	---	---	4	220	5.7	358
93	24	6	---	15	4/63	9	---	4	195	6.2	359
115	21	6	40;100	6	---	---	---	7	295	6.8	360
26	24	40	---	15	7/63	---	---	---	---	---	361
64	---	6	---	15	7/63	---	---	6	240	7.0	362
44	20	6	20;42	21	7/63	---	---	5	220	5.7	363
16	15	42	16	11	7/63	---	---	3	160	5.7	364
103	20	6	60;95	47	1/69	3	---	---	---	---	364S
28	---	40	---	10	7/63	---	---	---	---	---	365
207	27	6	---	30	2/69	1	---	---	---	---	365S
63	---	---	---	23	7/63	3	---	9	415	5.9	366
70	---	60	---	57	---	---	---	12	530	---	367
117	---	6	---	24	11/63	5	---	6	410	---	368
---	---	6	---	---	---	5	---	9	375	---	369
122	---	6	---	30	1957	---	---	---	---	---	370
87	---	6	---	22	11/63	2	---	9	450	---	371
83	12	6	60	50	---	15	---	---	---	---	371S
110	---	6	---	---	---	30	---	9	460	---	372
125	---	6	---	20	11/63	---	---	3	150	---	373
82	20	6	---	---	---	6	---	6	175	5.8	374
200	---	6	---	9	11/63	---	---	14	660	---	375
200	---	6	---	---	---	---	---	---	---	---	376
7	7	40	---	2	11/63	---	---	7	410	---	377
77	---	6	---	51	11/63	---	---	6	340	---	378
80	16	6	40;78	---	3/69	6	---	---	---	---	378S
18	---	48	---	9	11/63	---	---	---	1000	---	379
70	20	6	---	41	10/63	---	---	3	200	---	380
100	---	6	---	---	---	---	---	4	255	---	381
65	---	6	---	5	---	---	---	5	340	---	382
120	---	6	---	---	10/63	5	---	9	405	---	383
113	108	6	60;110	30	4/67	12	---	---	---	---	383S
82	---	6	---	6	11/63	---	---	---	---	---	384
119	---	6	---	22	11/63	5	---	6	280	---	385
227	---	6	---	---	---	4	---	10	485	---	386
80	---	---	---	---	10/63	20	---	14	715	---	387
76	---	6	---	19	10/63	---	---	4	350	---	388
110	30	6	---	30	1960	8	---	4	155	---	389
25	24	48	---	24	8/63	---	---	---	---	---	390
112	22	6	---	---	---	---	---	11	650	---	391
87	14	6	60	7	7/63	37	.3	9	345	6.8	392
75	20	6	---	22	5/63	7	---	8	315	6.5	393
19	---	40	---	12	5/63	---	---	---	---	---	394
110	23	6	62	29	8/63	10	.70	6	265	---	395
119	20	6	---	5	1950	20	---	7	275	---	396
102	22	6	45;67	17	5/63	32	---	---	---	---	397
55	---	6	---	20	8/63	---	---	2	60	---	398
100	---	6	---	---	---	---	---	5	225	---	399
62	21	6	---	20	11/55	12	---	5	265	---	400
122	20	6	90	---	---	13	---	9	425	---	401
88	21	6	---	---	---	12	---	18	700	6.8	402
127	---	6	---	---	---	---	---	8	350	---	403
102	---	6	60;100	---	---	10	---	3	185	---	404
122	27	6	65;110;122	---	---	8	---	9	410	---	405

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-406	4012-7631	John Ebersole	Myers Bros. Drlg. Contr.	1953	H	500	T	Trns/---
407	4012-7632	J. R. Hostetter	---	---	H	620	S	Trgh/---
408	4013-7605	Marcus Martin	Titus Sensenig	1958	H	483	S	Trd/---
409	4013-7605	Cedar Crest Motel	---	---	C	550	S	Trns/---
410	4013-7605	Adam Hahn	Robert D. Grant	1956	C	500	S	Trns/---
411	4013-7605	Cedar Crest Motel	do.	---	C	550	S	Trns/---
412	4013-7605	Howard Johnson's Motel & Restaurant	do.	1958	C	480	S	Trgh/---
413	4013-7606	D. H. Martin	Aaron W. Martin	1958	H	430	S	Trns/---
414	4013-7606	James Shober, Sr.	Robert D. Grant	1959	H	438	S	Trns/---
415	4013-7606	Robert Grant	do.	1955	H	430	S	Trns/---
416	4014-7615	Evangelical United Brethren Ch.	do.	1962	T	395	V	Oco/---
417	4013-7616	Max Elser, Jr., Estate	Myers Bros. Drlg. Contr.	1953	H	400	V	Trns/---
418	4014-7616	Raymond Fidler	---	1935	H	480	H	Trns/---
419	4013-7618	Helen Hinkle	Aaron W. Martin	1956	H	525	S	Trns/---
420	4013-7618	Ammon Hammer	Myers Bros. Drlg. Contr.	1956	H	550	S	Trns/---
421	4013-7619	Donald Steffy	---	1952	H	522	S	Trns/---
422	4013-7619	C. R. Snader	Myers Bros. Drlg. Contr.	1952	H	580	H	Trns/---
423	4013-7619	do.	do.	1954	H	580	H	Trns/---
424	4013-7620	Galen Eberley	---	---	H	525	S	Trns/---
425	4013-7620	Amos Sauder	---	---	H	500	S	Trns/---
426	4013-7620	L. W. Greenfield	---	1957	H	420	W	Trns/---
427	4013-7620	C. G. Keller	---	1949	S	430	V	Trns/---
428	4013-7621	Richard Decker	---	1957	H	530	S	Trns/---
429	4013-7621	Mervin Heisey	---	---	H	490	S	Trns/---
430	4013-7621	Alvin Martin	---	---	H	500	H	Trns/---
431	4013-7621	Walter Schreiner	---	---	H	470	V	Trns/---
432	4013-7621	C. R. Hess	Myers Bros. Drlg. Contr.	1954	S	500	T	Trns/---
433	4013-7622	John Oberholtzer	do.	1962	H	540	S	Trns/sh
434	4013-7622	Elwood Bradley	---	---	S	480	V	Trns/---
435	4013-7622	Roy Groff	Samuel I. Kaylor	1963	H	495	V	Trns/---
436	4013-7623	Rufus Fahnestock	do.	1958	H	465	S	Trns/---
437	4013-7623	G. H. Haldeman	do.	1961	H	500	S	Trns/---
438	4013-7623	do.	---	---	U	500	S	Trns/---
439	4013-7623	Wayne Shenberger	---	1962	H	490	V	Trns/---
440	4013-7623	H. I. Miller	Samuel I. Kaylor	1958	H	535	S	Trns/---
441	4013-7624	Paul Heagy	---	1933	S	460	W	Trns/---
442	4013-7624	Roman Mosaic Tile Co. Inc.	Kohl Bros., Inc.	1957	N	477	T	Trns/---
443	4013-7625	O. N. McGee	Myers Bros. Drlg. Contr.	---	H	535	S	Trns/---
444	4013-7625	Mark Wolgemuth	---	---	H	503	S	Trns/---
445	4013-7625	Earnest Weaver	Samuel I. Kaylor	1959	H	490	S	Trns/---
446	4013-7625	H. W. Weaver	---	1949	H	520	S	Trns/---
447	4013-7625	Roy Gordon	Myers Bros. Drlg. Contr.	1959	H	535	T	Trns/---
448	4013-7625	Cleve Montgomery	---	1964	H	500	S	Trns/---
449	4013-7625	Edwin Eby	Myers Bros. Drlg. Contr.	1964	H	510	S	Trns/---
450	4013-7626	Harry Leipold	do.	1960	H	525	S	Trns/---
450S	3959-7601	Lee Stoltzfus	Maurice E. Brown	1969	H	560	S	Tch/---
452	4013-7626	W. L. Moyer	---	---	H	490	V	Trns/---
453	4013-7628	J. W. Fry	---	---	H	540	S	Trns/---
454	4013-7628	United Zion Ch.	---	---	T	600	S	Trgh/ss
456	4014-7608	Chester Steuber	Robert D. Grant	1963	H	440	S	Trns/---
457	4014-7608	Harry Roseboro	do.	1964	H	440	S	Trns/---
458	4014-7608	Eugene Trostle	do.	1962	H	460	S	Trns/---
459	4014-7609	R. S. Hain, Sr.	---	---	H	480	S	Trns/---
460	4014-7609	Mrs. Lewis Yingst	---	---	H	570	S	Trns/---
461	4014-7609	I. E. Stauffer	Aaron W. Martin	1956	H	530	H	Trns/---
462	4014-7609	Paul Schell	Robert D. Grant	1960	H	480	S	Trns/---
463	4014-7610	W. W. Gerhart	do.	1950	H	565	S	Trns/---
464	4014-7610	Schoeneck Elem. Sch.	Kohl Bros., Inc.	1955	T	570	H	Trns/---
465	4014-7610	Lester Pannebecker	---	1945	H	540	S	Trns/---
466	4014-7610	Robert Brehm	Myers Bros. Drlg. Contr.	---	C	540	S	Trns/---
467	4014-7610	Rufus Bollinger	do.	1959	H	540	S	Trns/---
468	4014-7610	Paul Dinger	Robert D. Grant	1952	H	562	S	Trns/---
469	4014-7610	Elmer Yost	do.	1962	H	570	H	Trns/---
470	4014-7610	Frank Usner	do.	1963	H	580	H	Trns/---
471	4014-7611	Mahlon Eberly	do.	1956	S	490	S	Trns/sh
472	4014-7611	Harvey Eberly	do.	1949	H	480	S	Trns/---
473	4014-7611	Gulf Oil Corp.	Harrisburg's Kohl Bros.	1950	C	478	T	Trns/---
474	4014-7611	do.	do.	1950	C	478	T	Trns/---
475	4014-7611	C. A. Wealand	Robert D. Grant	1949	H	542	S	Trns/---
476	4014-7611	Levi Eberly	---	1960	H	550	S	Trns/---
477	4014-7611	Walter Sweigert	Robert D. Grant	1959	C	540	S	Trns/---
478	4014-7612	Perry Copenhaver	do.	1959	H	460	S	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
131	16	6	---	23	7/63	---	---	5	280	---	Ln-406
43	---	60	---	17	5/64	---	---	5	230	---	407
86	28	6	---	---	4/64	10	---	14	400	---	408
142	---	6	---	48	4/64	---	---	13	410	---	409
115	22	6	---	35	4/56	10	.12	13	435	---	410
100	48	6	52;90;98	25	1/58	10	.13	---	---	---	411
200	31	6	58;111	38	7/58	94	1.2	---	---	---	412
90	---	6	---	---	---	---	---	8	340	---	413
68	---	6	---	15	1959	15	---	---	195	---	414
66	32	6	---	---	---	32	---	---	---	---	415
94	40	6	20;45;82	5	6/63	10	.58	6	245	7.1	416
137	40	6	---	20	1953	---	---	---	---	---	417
95	40	6	75	35	---	---	---	7	370	---	418
97	---	6	---	---	---	---	---	5	220	---	419
66	---	6	---	19	---	---	---	1	90	---	420
190	---	6	---	7	1963	---	---	4	255	---	421
92	---	6	---	---	---	4	---	---	---	---	422
94	21	6	---	---	---	3	---	---	---	---	423
12	12	48	---	9	12/63	---	---	4	280	---	424
30	---	48	---	24	1963	---	---	4	270	---	425
175	---	6	---	---	---	---	---	4	215	---	426
160	---	6	---	20	12/63	---	---	6	365	---	427
75	---	6	---	---	---	---	---	4	215	---	428
14	13	36	---	10	12/63	---	---	6	365	---	429
---	---	6	---	---	---	---	---	15	800	---	430
25	---	48	---	11	12/63	---	---	8	400	---	431
75	20	6	65	---	---	---	---	5	320	---	432
120	21	6	---	---	---	20	---	3	165	---	433
---	---	6	---	---	---	---	---	4	255	---	434
31	30	6	---	10	1963	30	---	5	420	---	435
55	20	6	---	---	---	6	---	4	225	---	436
60	40	6	---	32	1961	8	---	2	105	---	437
26	---	60	---	25	11/63	---	---	---	---	---	438
100	---	6	---	---	---	---	---	5	275	---	439
125	---	6	---	---	---	8	---	6	340	---	440
113	30	6	---	9	5/63	7	.66	9	425	6.5	441
157	31	6	50;130	25	5/57	25	---	10	400	6.9	442
210	---	6	---	60	1958	---	---	7	350	---	443
87	---	6	---	10	11/63	---	---	5	280	---	444
70	62	6	20	9	11/63	---	---	5	290	---	445
85	---	6	---	---	---	---	---	3	220	---	446
65	40	6	30;50	10	1959	9	---	6	300	---	447
136	---	6	---	---	---	---	---	---	---	---	448
110	32	6	---	22	5/64	6	---	10	380	7.70	449
80	21	6	---	21	5/63	5	.24	8	320	6.9	450
130	18	6	40;128	29	6/69	12	---	---	---	---	450S
24	18	48	---	18	10/63	---	---	3	200	---	452
20	20	40	---	19	10/63	---	---	2	140	---	453
110	---	6	---	---	---	---	---	1	125	6.9	454
95	42	6	---	40	11/63	6	---	4	220	---	456
89	60	6	---	19	3/64	20	.91	---	---	---	457
80	20	---	18;50;70	18	1962	---	---	12	450	---	458
20	---	36	---	14	3/64	---	---	4	230	---	459
24	---	60	---	17	3/64	---	---	3	120	---	460
137	13	6	137	8	---	10	---	9	265	---	461
102	69	6	---	18	4/64	10	---	5	195	---	462
64	27	6	---	---	---	---	---	10	380	---	463
140	50	6	---	45	6/55	40	---	10	350	---	464
100	20	6	75;100	30	1945	---	---	5	250	---	465
65	---	6	---	---	---	8	---	4	220	---	466
144	60	6	80	26	3/69	3	---	5	290	---	467
85	32	6	30;80	20	1963	24	1.2	3	155	---	468
100	84	6	95	55	6/62	20	.67	11	510	---	469
117	80	6	115	50	12/63	30	---	---	---	---	470
68	43	6	---	25	4/56	9	---	6	275	---	471
71	24	6	---	---	---	---	---	---	---	---	472
151	47	6	---	7	7/50	110	1.2	6	290	---	473
252	36	6	---	15	3/64	110	---	7	345	---	474
90	40	6	30;88	16	3/64	---	---	5	220	---	475
65	58	6	62	---	---	7	---	4	185	---	476
63	49	6	20;55	18	6/59	20	.62	---	---	---	477
68	55	6	---	8	3/64	9	---	5	255	---	478

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-479	4014-7612	Clyde Burkholder	---	---	H	450	S	Trns/---
480	4014-7612	Robert Loose	---	---	H	440	V	Trns/---
481	4014-7612	Ralph Wingenroth	---	---	H	420	V	Trns/---
482	4014-7612	J. F. Martin	---	1945	C	460	T	Trns/---
483	4014-7613	Walter Henly	---	---	H	518	T	Trns/---
484	4014-7613	C. W. Zimmerman	Titus Sensenig	1960	H	490	S	Trns/---
485	4014-7613	A. N. Onemus	---	---	H	480	S	Trns/---
486	4014-7614	Stephen Grosteffon	Myers Bros. Drlg. Contr.	1963	H	410	V	Trns/---
487	4014-7614	Dean Grosteffon	do.	1959	H	410	V	Trns/---
488	4014-7614	D. E. Wenger	do.	1963	H	480	S	Trns/---
489	4014-7614	Gilbert Paul	---	---	H	440	S	Trns/---
490	4014-7615	Ralph Bingeman	---	1920	H	440	S	Trns/---
491	4014-7615	Howard Farlow	---	---	H	383	S	Trns/---
491S	4011-7615	Warwick Schools	Kohl Bros., Inc.	1966	T	530	S	Oco/sh
492	4014-7615	James Steininger	Myers Bros. Drlg. Contr.	1961	H	400	S	Trns/---
493	4014-7615	William Womer	Kerr Bros.	1957	H	410	S	Trns/---
494	4014-7615	Leon Martin	Myers Bros. Drlg. Contr.	1963	H	470	S	Trns/---
495	4014-7615	E. F. Smoker	Robert D. Grant	1957	H	440	S	Trns/---
496	4014-7615	Maurice Carter	---	1958	H	415	S	Trns/---
497	4014-7615	Grant Schwendemann	---	1950	H	458	H	Trns/---
498	4014-7615	Irvin Leisey	Myers Bros. Drlg. Contr.	1952	H	420	S	Trns/---
499	4014-7615	Ephrata Diamond Spring Water Co.	do.	1962	B	530	S	Trgh/---
500	4014-7616	Fred Wiegand	H. K. Honberger & Sons	1961	H	460	S	Trns/---
501	4014-7616	Vernon Bucher	do.	1962	H	460	S	Trns/---
502	4014-7616	L. M. Miller	do.	1962	H	460	S	Trns/---
503	4014-7615	Ephrata Diamond Spring Water Co.	Myers Bros. Drlg. Contr.	1960	B	490	S	Trns/---
504	4014-7616	J. D. Miller	---	---	H	545	S	Trns/---
505	4014-7616	G. W. Carvell	Summers	1958	H	482	S	Trns/---
506	4014-7617	G. D. Coleman Estate	---	---	H	423	S	Trns/---
507	4014-7617	do.	Myers Bros. Drlg. Contr.	1961	H	470	S	Trns/---
508	4014-7619	W. J. Packard	H. K. Honberger & Sons	1960	H	480	W	Trns/---
509	4014-7619	J. D. Snader	do.	1960	H	535	S	Trgh/---
510	4014-7619	J. R. Ruhl	do.	1960	H	600	S	Trgh/---
511	4014-7620	Dr. A. M. Yoder	---	1938	H	458	S	Trgh/---
512	4014-7620	Avid Sherpf	Jacob G. Wentzel Estate	1956	H	565	S	Trgh/---
513	4014-7620	Robert Claus	---	1953	H	530	S	Trgh/---
514	4005-7623	Benjamin Landis	H. K. Honberger & Sons	1962	U	430	H	€k/---
515	4002-7627	William Dellet	Martin T. Fischer	1959	C	380	S	Ocs/ls
516	4002-7626	Maurice Roth	---	---	C	390	S	Ocs/ls
517	4002-7626	Mountville Bor.	---	1920	P	540	S	€ah/---
518	4002-7624	Martin Fischer	Martin T. Fischer	1953	H	380	V	€v/dol
519	4002-7624	Amos Burkhart	---	1935	H	430	S	€k/sh
520	4002-7624	Garden Spot Air Park Inc.	---	---	C	430	H	€v/dol
521	4002-7623	B. E. Mann Estate	---	---	S	380	S	Ocs/ls
522	4002-7623	Frank Henne	---	1946	H	420	S	Ocs/ls
523	4002-7622	Gulf Oil Corp.	---	---	C	390	S	Ocs/ls
524	4002-7621	A. D. Medsger	---	1926	H	400	H	Ocs/---
525	4002-7621	H. L. Overton	---	1933	H	340	S	Ocs/ls
526	4002-7621	Harry Kreidy	Myers Bros. Drlg. Contr.	---	H	380	S	Ocs/ls
527	4002-7619	Robert McMurtrie	---	1958	R	350	S	Ocs/ls
528	4002-7619	Charles Spidle	Ben Miller	1934	C	350	S	Ocs/ls
529	4002-7618	Watt and Shand	---	1924	A	360	H	Ocs/ls
530	4002-7618	do.	---	1936	A	360	H	Ocs/ls
531	4002-7617	Eber Reese	---	---	N	370	S	Ocs/ls
532	4002-7616	J. G. Fetter	---	1949	H	290	S	Ocs/ls
533	4002-7615	J. R. Landis	Norman E. Groff	1948	H	340	S	€l/dol
534	4002-7615	Permutit Co.	do.	1954	N	360	S	Ocs/---
535	4002-7615	C. B. Hess	do.	1947	S	380	S	Ocs/---
536	4001-7628	R. P. Williams	---	---	H	350	S	Ocs/ls
537	4001-7628	Morris Kauffman	---	1900	H	300	V	Ocs/---
538	4001-7625	Jacob Siegrist	Myers Bros. Drlg. Contr.	1952	I	450	S	€k/sh
539	4001-7625	C. S. Habecker	---	1900	H	420	H	Ocs/ls
540	4001-7625	R. W. Gibble	Myers Bros. Drlg. Contr.	1952	H	440	S	Ocs/ls
541	4001-7624	Harold Wilkinson	---	---	H	410	S	€v/dol
542	4001-7623	Ivan Charles, Sr.	Martin T. Fischer	1958	S	400	H	Ocs/ls
543	4001-7622	H. H. Haverstick, Jr.	---	---	S	350	S	Ocs/ls
544	4001-7622	L. H. Martin	Myers Bros. Drlg. Contr.	1961	H	360	S	Ocs/ls
545	4001-7621	J. M. Kilheffer	do.	1959	H	300	S	Ocs/ls
546	4001-7620	Robert Hudson	William C. Myers	1959	H	320	S	Ocs/ls
547	4001-7620	J. H. Hartlieb	---	---	H	380	S	Ocs/ls
548	4001-7619	Richard Fitzgerald	Norman E. Groff	1949	H	350	S	Ocs/ls
549	4001-7619	David Copenhafer	---	---	H	400	S	Ocs/ls
550	4001-7619	Maynard Southard	---	---	H	390	S	Ocs/ls

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
---	---	6	---	16	3/64	60	---	3	160	---	Ln-479
71	---	6	---	17	3/64	---	---	4	205	---	480
17	---	---	---	10	3/64	---	---	8	495	---	481
40	16	6	35;40	F	---	---	---	6	360	---	482
---	38	---	---	22	3/64	---	---	9	455	---	483
67	66	6	15	6	3/64	---	---	5	240	---	484
50	---	6	---	---	---	---	---	6	255	---	485
65	35	6	---	---	---	12	---	2	145	---	486
50	17	6	---	6	12/63	9	---	2	180	---	487
170	21	6	---	---	---	1	---	3	155	---	488
50	---	6	---	---	1960	---	---	5	240	---	489
80	---	6	---	---	---	---	---	---	---	---	490
13	13	40	---	11	6/63	---	---	6	440	5.5	491
220	38	6	---	---	6/66	0	---	---	---	---	491S
100	76	6	45;60	38	11/61	15	---	11	475	6.1	492
59	27	6	38	41	1961	10	---	8	350	---	493
93	51	6	---	30	7/63	20	---	3	150	---	494
92	16	6	92	20	1957	---	---	7	440	---	495
82	30	6	---	---	---	---	---	5	305	---	496
100	4	6	30;60;100	30	---	8	---	6	355	---	497
---	---	6	---	---	---	---	---	11	475	---	498
170	54	6	---	---	---	28	---	---	---	6.3	499
82	52	6	---	18	12/61	25	---	3	160	6.1	500
135	25	6	40;90	41	10/62	7	---	6	220	6.5	501
218	25	6	180	42	5/63	5	---	---	---	---	502
110	23	6	---	---	---	42	---	---	---	6.6	503
38	---	48	---	32	12/63	---	---	2	155	---	504
85	35	6	---	30	1950	6	---	3	160	---	505
19	---	40	---	12	6/63	---	---	7	395	6.1	506
200	---	6	40	---	---	30	---	5	290	---	507
75	62	6	28;66	4	8/63	---	---	2	115	---	508
128	---	6	---	66	12/63	12	---	3	155	---	509
90	---	6	---	---	---	5	---	---	215	---	510
96	---	6	---	---	---	---	---	4	225	6.3	511
100	30	6	100	15	1956	---	---	2	85	---	512
235	---	6	---	---	---	---	---	---	---	---	513
260	---	6	---	33	10/62	2	.05	---	---	---	514
170	---	---	---	20	6/63	20	20	26	800	---	515
155	---	6	---	24	6/63	---	.06	16	560	---	516
200	---	8	---	12	6/63	22	2.8	4	110	---	517
100	---	6	---	7	6/63	---	.12	9	340	---	518
80	---	6	---	9	5/63	---	31	11	370	---	519
76	---	6	---	17	5/63	---	1.4	12	450	---	520
100	---	6	---	8	5/63	---	3.8	14	481	7.32	521
129	---	6	---	46	5/63	---	.06	15	440	---	522
---	---	6	---	14	6/63	---	.92	18	550	---	523
74	---	6	---	42	9/63	---	.03	---	---	---	524
290	---	6	---	44	9/63	---	.26	17	900	---	525
136	---	6	---	38	8/63	---	8	11	540	---	526
180	---	6	---	17	9/63	---	.41	21	780	7.14	527
90	---	6	---	20	8/63	---	4.5	21	950	7.05	528
265	160	6	---	41	9/63	250	---	---	---	---	529
155	60	6	---	23	9/63	---	3.2	---	---	---	530
57	---	6	---	22	8/63	---	30	24	1100	---	531
152	---	6	---	51	8/63	---	.21	20	1210	---	532
79	---	6	---	44	8/63	8	16	25	1130	---	533
125	---	8	---	31	8/63	---	23	16	690	---	534
400	---	6	---	91	8/63	---	.02	29	1390	7.21	535
---	---	6	---	---	---	---	2	20	700	---	536
---	---	6	---	6	6/63	---	.59	18	590	---	537
155	---	6	---	---	---	---	1.6	5	220	---	538
65	---	6	---	44	5/63	---	.37	10	380	---	539
90	---	6	---	38	5/63	---	1.2	---	---	---	540
---	---	---	---	10	8/63	---	.44	10	---	---	541
50	18	6	---	22	5/63	---	3.2	24	950	7.14	542
---	---	6	---	12	8/63	---	13	12	540	---	543
---	---	6	---	48	5/63	---	.51	22	720	7.23	544
90	30	6	---	40	8/63	---	.43	15	750	7.47	545
110	---	6	---	70	8/63	---	.8	19	850	---	546
125	---	---	---	32	8/63	---	---	---	---	---	547
108	35	6	---	24	8/63	---	16	14	640	---	548
---	---	---	---	43	9/63	---	.66	9	400	---	549
80	---	6	---	30	8/63	---	.09	16	750	---	550

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-551	4001-7617	Rockford Museum	Herr the Pump Man	---	C	300	W	Ocs/ls
552	4001-7617	Sam Sinopoli	Norman E. Groff	1948	C	310	S	Ocs/ls
553	4001-7616	H. R. Albright	Myers Bros. Drlg. Contr.	1963	H	310	S	Ocs/ls
554	4001-7616	Lee Brenner	---	---	N	250	V	Ocs/ls
555	4001-7615	R. D. Shoff	Norman E. Groff	1949	H	340	S	Ocs/ls
556	4001-7615	J. J. Fritz	do.	1963	S	380	S	Ocs/ls
557	4000-7628	Edward Broomer	---	---	H	250	V	Ocs/ls
558	4000-7627	Mrs. Elmer Charles	---	1900	H	340	S	Ocs/ls
559	4000-7627	R. H. Rohrer	---	---	H	360	H	Ocs/---
560	4000-7625	D. K. Miller	Martin T. Fischer	1960	H	420	S	Ocs/ls
561	4000-7625	J. L. Hess	---	---	H	350	V	Ocs/ls
562	4000-7624	P. H. Rohrer	---	1945	H	330	V	Ocs/ls
563	4000-7624	Howard Shaub, Jr.	E. E. Miller & Sons	1961	H	350	H	Ocs/ls
564	4000-7623	Paul Moseman	do.	1952	H	400	H	Ocs/ls
565	4000-7623	Willis Hess	---	1958	H	370	S	Ocs/ls
566	4000-7622	Elton Hostetter	---	1954	S	370	H	Ocs/ls
567	4000-7622	Abram Kilheffer	---	---	H	320	S	Ocs/ls
568	4000-7621	Cameron Hawley	---	1950	H	300	S	Ocs/ls
569	4000-7621	Millersville Bor. Auth.	---	---	P	370	S	Ocs/ls
570	4000-7621	do.	Myers Bros. Drlg. Contr.	1953	P	370	S	Ocs/ls
571	4000-7620	do.	Norman E. Groff	---	P	300	S	Ocs/ls
572	4000-7620	J. M. Hoffman	E. E. Miller & Sons	1950	H	270	V	Ocs/ls
573	4000-7619	Barry McComsey	Myers Bros. Drlg. Contr.	1960	H	300	H	Ocs/ls
574	4000-7619	Theodore Eastridge	---	---	H	310	V	Ocs/ls
575	4000-7618	M. M. Groff	Myers Bros. Drlg. Contr.	1963	H	270	S	Ocs/ls
576	4000-7618	Sterling Elmer	do.	1955	H	310	S	Ocs/ls
577	4000-7618	R. S. Shenk	Martin T. Fischer	1952	H	290	S	Ocs/ls
578	4000-7617	R. H. Witmer	Norman E. Groff	1960	H	340	S	Ocs/ls
579	4000-7617	L. R. Frey	---	1949	H	320	S	Ocs/ls
580	4000-7616	Stewart Grim	William C. Myers	---	H	330	S	Ocs/---
581	4000-7616	H. E. Davis	---	1953	H	320	S	Ocs/ls
582	4000-7616	A. O. Brubaker	Myers Bros. Drlg. Contr.	1959	H	320	S	Ocs/ls
583	4000-7615	C. K. Keener	---	1953	H	330	S	Ocs/ls
584	4000-7615	P. W. Livengood	William C. Myers	1957	H	340	S	Ocs/ls
585	4000-7615	Roy Eshelman	---	1953	H	420	H	Ocs/ls
588	4004-7629	Cyrus Graybill	H. K. Honberger & Sons	---	H	340	S	€l/dol
589	4004-7629	Clyde Mumma	---	---	H	300	S	€l/dol
590	4004-7629	C. S. Loechner	---	---	H	380	H	€ez/dol
591	4004-7629	D. L. Miller	---	---	H	390	H	€ez/dol
592	4004-7629	do.	---	---	H	390	H	€ez/dol
593	4004-7629	Warren Fletcher	---	1950	H	390	H	€ez/dol
594	4004-7629	Charles Fogie	---	---	H	390	S	€ez/dol
595	4004-7629	Charles Gantz	---	---	H	390	H	€ez/dol
596	4004-7629	W. K. Fogie	Myers Bros. Drlg. Contr.	1940	H	390	H	€ez/dol
597	4004-7629	Lloyd Derr	---	---	H	390	H	€ez/dol
598	4004-7629	Kenneth Alexander	Myers Bros. Drlg. Contr.	---	H	390	H	€ez/dol
599	4004-7629	Henry Mellinger	---	---	S	360	S	€c/---
600	4004-7628	Lloyd Miller	H. K. Honberger & Sons	1957	P	340	S	€l/dol
601	4004-7628	do.	do.	1958	P	340	S	€l/dol
602	4004-7628	Robert Lichty	---	---	H	300	V	€l/dol
603	4004-7628	Nissley Estate	Myers Bros. Drlg. Contr.	---	H	325	S	€l/dol
604	4004-7628	Chris Nolt, Sr.	do.	1956	H	400	H	€ez/dol
605	4004-7628	Amos Martin	---	---	H	340	V	€ez/dol
606	4004-7628	Henry Miller	---	---	U	370	H	€c/dol
607	4004-7628	do.	Myers Bros. Drlg. Contr.	---	H	385	H	€c/dol
608	4004-7627	Emma Musser	---	---	U	380	S	€c/---
609	4004-7627	Howard Musser	---	---	H	370	S	€ez/dol
610	4004-7627	Paul Conley	---	---	H	340	S	€ez/dol
611	4004-7627	Herbert Hilkemeir	---	---	H	350	S	€ez/dol
612	4004-7627	Paul Conley	---	---	H	340	V	€c/---
613	4004-7627	John Melhorn	---	---	U	340	S	€c/dol
614	4004-7626	E. R. Nolt	---	---	H	380	V	€c/---
615	4004-7626	J. H. Burkhart	---	1954	H	380	V	€c/---
616	4004-7626	R. B. Nolt	---	---	H	380	V	€ez/dol
617	4004-7626	L. W. Nolt	---	---	U	380	V	€ez/dol
618	4004-7626	do.	Myers Bros. Drlg. Contr.	1936	H	390	V	€ez/dol
619	4004-7626	do.	do.	---	H	380	V	€l/dol
620	4004-7626	E. J. Saunder	---	---	U	400	V	€c/---
621	4004-7626	do.	Petersheim Bros.	1936	U	400	V	€c/---
622	4004-7626	do.	Martin T. Fischer	1953	H	400	V	€c/---
623	4004-7626	R. J. Kline	---	---	U	360	V	€ez/dol
624	4004-7626	do.	Samuel I. Kaylor	1960	H	370	V	€ez/---
625	4004-7626	D. H. Fox	---	---	H	380	V	€ez/dol
626	4004-7626	P. E. McKinney	H. K. Honberger & Sons	1960	U	360	V	€c/---
627	4004-7626	do.	---	---	H	360	V	€c/---
628	4004-7625	Amherst Industries	---	1947	N	390	S	€c/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
---	---	6	---	32	9/63	---	2.6	---	---	---	Ln-551
85	---	6	---	41	8/63	---	2	22	940	---	552
102	---	6	---	26	9/63	---	.52	17	690	---	553
50	---	6	---	8	9/63	---	4.7	24	1090	---	554
70	---	6	---	12	9/63	---	.04	17	800	---	555
200	---	6	---	7	9/63	---	.1	14	650	---	556
---	---	6	---	19	6/63	---	49	13	490	---	557
---	---	6	---	43	6/63	---	4.8	16	610	7.29	558
185	---	6	---	48	5/63	---	34	18	710	7.17	559
75	---	6	---	35	8/63	---	4.6	10	440	---	560
---	---	6	---	30	5/63	---	130	11	380	7.47	561
80	---	6	---	19	5/63	---	---	14	430	---	562
230	---	6	---	54	5/63	---	.05	10	425	---	563
110	---	6	---	52	8/63	---	2.6	8	375	---	564
---	---	6	---	56	8/63	---	18	9	380	---	565
180	---	6	---	40	9/63	---	.1	15	700	---	566
38	---	6	---	29	5/63	---	110	15	550	7.46	567
150	---	6	---	13	9/63	---	2.2	13	500	---	568
120	---	---	---	53	8/63	---	3.1	17	750	---	569
300	---	6	---	63	8/63	---	.14	15	690	---	570
502	---	6	---	217	8/63	---	8.7	17	750	7.24	571
45	---	6	---	30	8/63	---	4.8	9	440	---	572
---	---	6	---	79	9/63	---	2.6	18	1300	---	573
44	---	6	---	37	8/63	---	3.7	11	480	---	574
82	---	6	---	56	9/63	---	50	15	650	---	575
65	40	6	---	55	9/63	---	11	19	920	---	576
206	---	6	---	89	8/63	---	.11	24	1000	---	577
---	---	6	---	33	9/63	---	.43	13	530	---	578
120	---	6	---	36	9/63	---	.17	16	620	---	579
60	---	6	---	26	9/63	---	3.9	17	800	---	580
---	---	6	---	32	9/63	---	8.5	16	600	---	581
94	20	6	---	20	9/63	---	2.9	17	800	7.53	582
---	---	6	---	12	9/63	---	.2	---	660	---	583
153	12	6	---	35	9/63	---	4.4	18	800	7.26	584
55	---	6	50	48	9/63	---	.2	---	---	---	585
79	---	6	---	54	9/62	---	---	16	600	---	588
36	---	---	---	26	9/62	---	---	16	620	---	589
---	---	6	---	86	9/62	---	---	20	740	---	590
123	---	6	---	108	9/62	---	.15	19	760	---	591
60	---	---	---	50	---	---	---	7	375	---	592
200	---	6	---	---	---	---	---	15	590	---	593
31	---	---	---	30	9/62	---	---	11	580	---	594
41	---	---	---	37	---	---	---	11	650	---	595
72	---	6	---	41	9/62	---	---	15	750	---	596
---	---	---	---	48	9/62	---	---	22	980	---	597
143	16	6	---	52	9/62	---	---	29	1200	---	598
---	---	---	---	42	9/62	---	---	20	900	---	599
290	60	6	---	36	10/62	20	---	---	---	---	600
425	60	6	---	64	10/62	45	---	13	580	---	601
58	---	6	---	29	9/62	---	2.4	22	1040	---	602
90	---	6	---	59	9/62	---	---	18	650	---	603
140	---	6	---	34	9/62	---	---	16	740	---	604
87	---	6	---	25	9/62	---	.96	17	700	---	605
16	---	---	---	13	9/62	---	---	19	650	---	606
---	---	6	---	78	9/62	---	---	17	600	---	607
15	---	---	---	14	10/62	---	---	---	---	---	608
---	---	---	---	30	10/62	---	---	13	560	---	609
150	---	---	---	24	9/62	---	---	19	700	---	610
30	---	6	---	26	9/62	---	---	27	750	---	611
---	---	---	---	7	9/62	---	.62	16	450	---	612
20	---	---	---	18	9/62	---	---	---	---	---	613
12	---	---	---	8	10/62	---	---	13	500	---	614
---	---	6	---	13	10/62	---	.22	14	500	---	615
21	---	54	---	15	10/62	---	---	17	850	---	616
19	---	---	---	15	10/62	---	---	---	---	---	617
105	---	6	---	36	10/62	17	---	15	590	---	618
19	---	6	---	10	10/62	---	---	12	440	---	619
19	---	---	---	16	10/62	---	---	---	---	---	620
90	---	---	---	7	10/62	---	---	19	750	---	621
200	---	6	---	49	10/62	---	.05	20	750	---	622
30	---	---	---	25	10/62	---	---	12	410	---	623
79	---	6	---	38	10/62	---	.1	14	540	---	624
33	---	---	---	28	10/62	---	---	15	500	---	625
63	10	6	---	37	10/62	---	244	---	---	---	626
36	---	---	---	32	10/62	---	---	14	450	---	627
175	---	6	---	11	10/62	---	---	17	650	---	628

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-629	4004-7625	Robert Bender	---	---	H	390	S	€c/---
629S	4014-7603	Hope Hosiery Mill	Kohl Bros., Inc.	1967	H	470	S	€d/---
630	4004-7625	Robert Musser	---	---	H	430	H	€ez/dol
631	4004-7625	D. G. Forry	---	---	H	420	H	€l/dol
632	4004-7625	E. S. Musser	---	---	H	430	H	€ez/dol
633	4004-7625	Lester Charles	---	---	H	420	H	€ez/dol
634	4004-7625	Clarence Nolt	Myers Bros. Drlg. Contr.	---	S	630	H	€ez/dol
635	4004-7625	do.	---	---	H	420	H	€ez/dol
636	4004-7625	Elizabeth Young	---	---	S	410	S	€c/---
637	4004-7625	S. B. Nolt	Myers Bros. Drlg. Contr.	1915	H	400	S	€ez/dol
638	4004-7624	J. H. Kaufman	---	---	H	430	S	€ez/dol
639	4004-7624	David Miller	---	---	H	440	S	€ez/dol
640	4004-7624	D. B. Kauffman	---	---	S	390	V	€c/---
641	4004-7624	D. M. Heisey	---	---	U	380	V	€v/dol
642	4004-7624	do.	E. J. Myers & Sons	1955	H	380	V	€v/dol
643	4004-7624	E. Hempfield Munic. Water Auth.	H. K. Honberger & Sons	1935	P	410	V	€l/ls
644	4004-7624	C. R. Kauffman	---	---	S	400	V	€ez/dol
645	4004-7624	Isaac Stoner	---	---	H	400	V	€ez/dol
646	4004-7623	Richard Shotzberger	---	---	H	370	S	€v/dol
647	4004-7623	Robert Havenstein	---	---	U	400	S	€v/dol
648	4004-7622	H. C. Leary	---	1948	H	310	S	€v/dol
648S	3955-7604	Thomas Caldwell	Maurice E. Brown	1971	H	650	S	€ah/---
649	4004-7622	Harry Swarr	---	---	H	340	V	€v/dol
649S	3956-7605	Alfred Erb	Maurice E. Brown	1971	H	680	S	Xmi/---
650	4004-7622	Moses Stoltzfuss	---	---	U	340	V	€v/dol
650S	3956-7605	Georgetown Paroch. Sch.	Maurice E. Brown	1971	T	680	S	Xmi/---
651	4004-7622	Boyd Abbott, Jr.	---	---	H	340	V	€v/dol
652	4004-7622	---	---	---	---	400	S	€ah/---
653	4004-7621	Roy Moscmann	Martin T. Fischer	1953	H	340	S	€l/dol
654	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	---	N	320	V	€l/dol
654S	3954-7605	Ann Gillum	Maurice E. Brown	1971	H	670	S	Xwc/---
655	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	---	U	320	V	€l/dol
656	4004-7620	do.	do.	---	U	320	V	€l/dol
656S	3953-7604	Walter Parks	Maurice E. Brown	1970	H	550	S	Xwc/---
657	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	---	N	320	V	€l/dol
657S	3953-7604	Frank Miller	Maurice E. Brown	1970	H	570	S	Xwc/---
658	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	---	N	320	V	€l/dol
658S	3954-7605	William Crandall, Jr.	Maurice E. Brown	1970	H	660	S	Xwc/---
659	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	---	N	320	V	€l/dol
659S	3953-7604	Richard Keene	Maurice E. Brown	1970	H	720	S	Xwc/---
660	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	1962	U	320	V	€l/dol
660S	3955-7605	Richard Ressel	Maurice E. Brown	1970	H	620	S	€ah/---
661	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	1962	U	320	V	€l/dol
661S	3954-7502	D. Gilemlurdini	Maurice E. Brown	1970	H	750	---	Xwc/---
662	4004-7620	Quaker State Metals Co.	Myers Bros. Drlg. Contr.	1962	U	320	V	€l/dol
663	4004-7620	do.	do.	1962	U	320	V	€l/dol
664	4004-7620	do.	do.	1962	U	320	V	€l/dol
665	4004-7620	do.	do.	1962	U	320	V	€l/dol
666	4004-7620	do.	do.	1962	U	320	S	€l/dol
667	4004-7620	do.	do.	1962	U	320	V	€l/dol
668	4004-7620	do.	do.	1962	U	320	V	€l/dol
669	4004-7620	do.	do.	1962	U	320	V	€l/dol
670	4004-7620	do.	do.	1962	N	320	V	€l/dol
671	4004-7620	Clair Benton	---	---	C	320	S	€k/sh
672	4004-7620	Fildor Realty	Myers Bros. Drlg. Contr.	1959	C	340	S	€k/dol
673	4005-7619	William Schwartz	William C. Myers	1938	H	350	S	€l/dol
674	4004-7619	Edgar Sterrett	---	---	H	360	H	€l/dol
675	4004-7618	Erb Bros. Inc.	---	1930	C	395	S	€ez/dol
676	4004-7617	Humble Oil Co.	---	---	C	390	V	€ez/dol
677	4004-7617	E. R. Royer Estate	Norman E. Groff	1960	H	360	V	€ez/dol
678	4004-7617	Floyd Moore	H. K. Honberger & Sons	1947	H	380	H	€ez/dol
679	4004-7616	H. C. Burrichter	---	---	H	330	V	€ez/dol
680	4004-7615	Ralph Hubley	H. K. Honberger & Sons	1963	C	360	H	€ez/dol
681	4004-7615	Shoab	---	---	H	300	S	€ez/dol
682	4004-7615	C. L. Heller	---	---	H	325	S	€c/---
683	4003-7629	J. H. Conrad	---	---	P	340	S	€c/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
20	---	---	---	13	10/62	---	---	---	---	---	Ln-629
400	34	6	70;315;327; 380	26	1/67	15	---	---	---	---	629S
23	---	---	---	22	10/62	---	---	13	510	---	630
20	---	---	---	17	10/62	---	---	11	470	---	631
30	---	---	---	27	10/62	---	---	12	500	---	632
88	---	6	---	20	10/62	---	---	15	630	---	633
165	65	6	---	38	10/62	---	---	11	500	---	634
43	---	---	---	40	10/62	---	---	14	575	---	635
24	---	---	---	23	---	---	---	---	---	---	636
68	---	6	---	18	10/62	---	---	12	470	---	637
---	---	6	---	24	10/62	---	---	9	450	---	638
52	---	---	---	50	10/62	---	---	16	800	---	639
19	---	---	---	11	10/62	---	---	16	690	---	640
21	---	---	---	17	10/62	---	---	---	---	---	641
60	---	6	---	16	10/62	---	---	15	600	---	642
265	---	6	---	20	10/62	180	30	10	410	---	643
---	---	6	---	6	10/62	---	0.04	11	450	---	644
8	---	---	---	7	10/62	---	---	13	520	---	645
35	---	---	---	31	10/62	---	---	7	350	---	646
49	---	---	---	46	10/62	---	---	---	---	---	647
26	13	6	---	8	8/63	---	8.8	9	450	---	648
125	37	6	25;70;120	14	7/71	5	---	---	---	---	648S
12	---	---	---	10	10/62	---	---	8	400	---	649
95	81	6	85;93	20	9/71	7	---	---	---	---	649S
18	---	---	---	15	10/62	---	---	---	---	---	650
56	50	6	30;50	14	5/71	3	---	---	---	---	650S
16	---	---	---	13	10/62	---	---	10	480	---	651
44	---	---	---	42	10/62	---	---	---	---	---	652
65	---	---	---	29	6/63	20	1.2	18	725	---	653
110	22	6	---	---	---	300	---	---	---	---	654
83	36	6	---	35	4/71	15	---	---	---	---	654S
142	42	6	---	---	---	10	---	---	---	---	655
122	42	6	---	---	---	30	---	---	---	---	656
167	22	6	40;150	16	12/70	2	---	---	---	---	656S
58	---	12	---	---	---	200	---	---	---	---	657
167	24	6	45;150	20	12/70	3	---	---	---	---	657S
	---	6	---	---	---	200	---	---	---	---	658
187	70	6	120;172	45	9/70	10	---	---	---	---	658S
117	20	6	---	---	---	300	---	---	---	---	659
208	21	6	90;180	60	8/70	2	---	---	---	---	659S
102	20	6	---	---	---	5	---	---	---	---	660
21	6	6	16;20	6	6/70	25	---	---	---	---	660S
222	22	6	---	---	---	5	---	---	---	---	661
187	50	7	150;180	60	3/70	4	---	---	---	---	661S
202	43	6	---	17	7/63	2	---	---	---	---	662
27	26	6	---	17	7/63	50	2.9	---	---	---	663
202	41	6	---	21	7/63	8	---	---	---	---	664
90	42	6	---	28	7/63	30	1.5	17	1250	---	665
67	60	6	---	32	7/63	50	11	20	690	---	666
262	41	6	---	26	7/63	12	---	---	---	---	667
70	43	6	---	40	7/63	---	2.9	18	590	---	668
222	43	6	---	43	7/63	5	---	---	---	---	669
82	---	6	---	42	7/63	300	85	15	500	---	670
---	---	6	---	---	6/63	---	.16	19	960	---	671
---	---	---	---	14	6/63	---	1.9	23	1040	---	672
70	---	6	---	13	7/63	---	.37	15	650	---	673
---	---	---	---	34	6/63	---	2.5	---	---	---	674
218	---	6	---	29	7/63	---	.06	22	980	---	675
101	---	6	---	9	9/63	---	.53	16	640	---	676
160	12	6	---	16	7/63	---	.52	---	---	---	677
118	---	6	---	61	7/63	---	.06	24	1090	---	678
228	---	---	---	87	---	---	.06	16	490	---	679
142	9	6	---	21	9/63	---	.09	26	1350	---	680
111	---	6	---	19	8/63	---	.14	---	---	---	681
200	---	6	---	147	8/63	---	.03	---	---	---	682
---	---	6	---	51	10/62	---	---	11	450	---	683

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-684	4003-7629	Howard Witmer	H. K. Honberger & Sons	---	H	330	S	€c/---
685	4003-7629	J. A. Swarr	R. R. Hornberger	1948	H	340	S	€c/---
686	4003-7628	Margaret Ness	D. B. Kauffman	1958	H	320	S	€l/dol
687	4003-7628	Dr. G. J. Brett	---	---	H	340	S	€c/---
688	4003-7627	Lloyd Miller	H. K. Honberger & Sons	1962	H	480	S	€ez/dol
689	4003-7627	Minnie Habacker	---	---	H	400	S	€c/---
690	4003-7627	W. Hempfield Farmdale Elem. Sch.	H. K. Honberger & Sons	1958	T	435	S	€c/---
691	4003-7626	Edward Getz	---	1942	H	540	S	€ez/dol
692	4003-7626	Joseph Forrest	---	---	H	430	V	€l/dol
693	4003-7626	Jacob Bowers	---	---	H	450	S	€l/dol
694	4003-7626	Joseph Forrest	---	---	U	440	S	€l/dol
695	4003-7626	Carl Slinkman	---	---	H	420	V	€l/dol
696	4003-7626	Moses Shirk	---	---	H	420	S	€ez/dol
697	4003-7626	Alma Ditzler	---	---	H	420	S	€l/dol
698	4003-7626	Clayton Diffenderfer	---	---	U	420	S	€l/dol
699	4003-7625	J. C. Butzer	---	---	H	430	S	€l/dol
700	4003-7625	J. L. Charles	---	---	H	430	S	€l/dol
701	4003-7625	A. K. Mellinger	---	---	U	440	S	€l/dol
702	4003-7625	do.	---	1959	H	440	S	€l/dol
703	4003-7625	Joseph Sebelist	---	1961	H	440	S	€l/dol
704	4003-7625	D. H. Hubley	---	---	H	440	S	€l/dol
705	4003-7625	Musser Potato Chips, Inc.	---	1962	N	420	S	€l/dol
706	4003-7624	Eugene Hinerdeer	---	---	S	440	S	€l/dol
707	4003-7624	do.	---	---	H	460	S	€l/dol
708	4003-7624	Sander Machine Co.	Aaron W. Martin	1951	N	440	S	€l/dol
709	4003-7624	Dave Hostetter	---	---	H	425	V	€l/dol
710	4003-7624	Miller Estate	---	---	H	425	V	€l/dol
711	4003-7622	R. M. Steffy	---	---	H	360	H	€k/sh
712	4003-7622	Haldy Becker	H. K. Honberger & Sons	1946	H	440	S	€v/---
713	4003-7621	Mrs. Lewis Lockwood	---	---	H	360	H	Ocs/ls
714	4003-7621	Glenn Huber	---	---	H	365	H	€l/dol
715	4003-7621	Brubaker	---	---	H	340	S	€k/ls
716	4003-7621	Jesse Epps	---	---	H	340	H	€k/ls
717	4003-7620	J. B. Resch	Myers Bros. Drlg. Contr.	1953	H	300	V	€l/dol
718	4003-7619	Calder Manuf. Co.	---	---	H	320	V	€l/dol
719	4003-7618	Julia Hagan	Myers Bros. Drlg. Contr.	1956	H	360	V	€l/dol
720	4003-7617	Esbenshade	---	---	H	340	V	€l/dol
721	4003-7617	Consumer Packing Co.	---	---	N	330	V	€l/dol
722	4003-7617	do.	Myers Bros. Drlg. Contr.	1957	N	330	V	€l/dol
723	4003-7616	A. S. Keene	Miller	1934	H	340	H	€ez/dol
724	4003-7617	H. Eshelman	Norman E. Groff	---	H	310	H	€l/dol
725	4003-7615	Robert Glass	do.	1963	S	305	V	€l/dol
726	4003-7615	B. F. Haun	William C. Myers	1950	H	325	V	€l/dol
728	4005-7629	Daniel Stoltzfus	---	---	H	420	H	€c/---
729	4005-7629	do.	---	---	U	420	H	€c/---
730	4005-7629	Paul Erb	Myers Bros. Drlg. Contr.	1959	H	405	H	€c/---
731	4005-7629	Benjamin Ginder	---	---	H	340	S	€c/---
732	4005-7629	Jacob Ginder	---	---	H	340	S	€c/ls
733	4005-7629	Lloyd Swarr	---	1923	H	370	S	€c/ls
734	4005-7628	Albert Habecker	---	---	U	400	S	€c/---
735	4005-7628	do.	Myers Bros. Drlg. Contr.	1937	H	400	S	€c/---
736	4005-7628	John Newcomer	---	---	H	340	S	€c/ls
737	4005-7628	Paul Newcomer	---	---	U	350	S	€c/ls
738	4005-7628	do.	Myers Bros. Drlg. Contr.	1932	H	350	S	€c/ls
739	4005-7628	Mrs. Henry Engel	Herr the Pump Man	---	H	370	S	€c/ls
740	4005-7628	R. S. Martin	---	---	H	370	H	€c/ls
741	4005-7628	Engel Bros.	---	1850	U	380	H	€c/ls
742	4005-7628	do.	E. J. Myers & Sons	1957	H	385	H	€c/ls
743	4005-7627	Eshelman's Quarry	---	---	H	340	V	€c/---
744	4005-7627	---	---	---	U	340	S	€c/---
745	4005-7627	J. Newcomer	---	---	H	320	V	€c/ls
746	4005-7627	E. W. Wissler	---	---	U	385	H	€c/---
747	4005-7627	do.	O. B. Gill	1930	H	385	H	€c/---
748	4005-7627	Henry Eby	---	---	U	340	S	€c/---
749	4005-7627	J. A. Hook	---	1941	H	350	S	€c/ls
750	4005-7627	do.	---	1870	H	345	S	€c/ls
751	4005-7626	Mrs. Elizabeth Newcomer	---	---	S	320	V	€c/---
752	4005-7627	do.	---	---	H	320	V	€c/---
753	4005-7627	Mrs. Amos Newcombe	---	---	H	330	V	€c/---
754	4005-7627	John Nissley	---	---	H	320	V	€c/ls
755	4005-7627	J. H. Nissley	---	---	H	320	V	€c/ls
756	4005-7627	do.	---	---	H	340	T	€c/ls
757	4005-7626	J. H. Burkhart	Myers Bros. Drlg. Contr.	1960	H	400	T	€c/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
85	---	6	---	48	10/62	---	---	10	450	---	Ln-684
127	---	6	---	63	10/62	---	0.17	19	840	---	685
78	32	6	---	36	10/62	10	---	26	925	---	686
---	---	6	---	49	10/62	---	---	2	140	---	687
400	---	6	---	62	6/63	105	1.5	11	450	---	688
27	---	---	---	11	10/62	---	---	18	900	---	689
500	---	---	---	38	10/62	---	---	---	---	---	690
52	---	6	---	27	---	---	---	9	400	---	691
42	---	---	---	21	10/62	---	---	9	370	---	692
50	---	---	---	47	10/62	---	---	7	315	---	693
55	---	---	---	29	10/62	---	---	---	---	---	694
---	---	---	---	17	10/62	---	---	7	320	---	695
---	---	---	---	27	10/62	---	---	10	470	---	696
---	---	---	---	18	10/62	---	---	18	955	---	697
18	---	---	---	12	10/62	---	---	9	375	---	698
25	---	---	---	24	10/62	---	---	15	700	---	699
28	---	---	---	24	10/62	---	---	7	325	---	700
42	---	---	---	36	10/62	---	---	---	---	---	701
180	---	6	---	40	10/62	---	0.16	13	640	---	702
80	---	6	---	31	10/62	---	135	---	---	---	703
23	---	---	---	20	10/62	---	---	12	520	---	704
90	---	8	---	14	10/62	50	17	11	550	---	705
---	---	---	---	40	10/62	---	---	10	450	---	706
---	---	---	---	45	10/62	---	---	9	370	---	707
195	---	6	---	37	10/62	---	---	8	310	---	708
29	---	---	---	27	10/62	---	---	8	320	---	709
---	---	---	---	23	10/62	---	---	9	330	---	710
65	---	6	---	29	6/63	---	3.4	8	360	---	711
144	69	6	---	49	8/63	---	.03	15	750	---	712
80	---	6	---	30	8/63	---	.12	18	775	---	713
200	---	6	---	33	8/63	---	.57	26	1225	---	714
50	---	6	---	35	8/63	---	38	13	550	---	715
55	---	6	---	34	8/63	---	0.6	---	---	---	716
50	---	---	---	8	8/63	---	0.9	12	475	---	717
31	---	6	---	12	8/63	---	1.4	15	580	---	718
65	---	6	---	32	8/63	---	14	16	700	---	719
60	---	6	---	17	8/63	---	8	16	610	---	720
500	---	6	---	---	---	125	---	---	---	---	721
150	50	8	---	20	---	150	40	---	---	---	722
92	5	6	---	46	8/63	---	2.6	20	860	---	723
289	1	6	---	27	8/63	30	.67	16	590	---	724
145	4	6	---	20	8/63	10	.42	14	590	---	725
80	---	6	---	24	8/63	---	.58	19	---	---	726
---	---	---	---	64	9/62	---	.08	26	840	---	728
47	---	60	---	28	9/62	---	---	---	---	---	729
141	12	7	---	65	9/62	---	---	28	1000	---	730
45	---	72	---	39	9/62	---	---	15	460	---	731
55	---	---	---	20	9/62	---	---	21	800	---	732
160	---	6	---	---	---	---	---	14	750	---	733
63	---	---	---	47	9/62	---	---	---	---	---	734
205	---	6	---	91	9/62	---	.07	23	750	---	735
37	---	48	---	34	9/62	---	---	20	690	---	736
60	---	---	---	33	9/62	---	---	---	---	---	737
189	20	6	---	62	9/62	---	.12	18	780	---	738
---	---	6	---	47	9/62	---	---	14	480	---	739
---	---	6	---	48	9/62	---	---	11	450	---	740
35	---	---	---	19	9/62	---	---	---	---	---	741
190	20	6	---	42	9/62	---	.21	18	600	---	742
---	---	6	---	22	10/62	---	---	16	610	---	743
---	---	6	---	32	10/62	---	---	17	625	---	744
---	---	---	---	16	10/62	---	---	17	640	---	745
35	---	---	---	24	10/62	---	---	---	---	---	746
150	---	6	---	67	10/62	---	.1	18	710	---	747
29	---	---	---	28	10/62	---	---	---	---	---	748
120	---	---	---	26	9/62	10	1.6	13	525	---	749
34	---	---	---	32	9/62	---	1.6	13	550	---	750
46	---	6	---	19	9/62	---	1.2	11	450	---	751
36	---	---	---	26	9/62	---	---	30	1200	---	752
---	---	---	---	36	9/62	---	---	18	625	---	753
12	---	60	---	11	9/62	---	---	14	530	---	754
26	---	---	---	19	9/62	---	---	14	640	---	755
40	---	---	---	34	---	---	---	17	640	---	756
300	---	6	---	23	10/62	---	---	20	800	---	757

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-758	4005-7626	Minnie Gantz	---	---	H	360	V	€c/---
759	4005-7626	J. L. Charles	---	---	U	350	V	€c/dol
760	4005-7626	do.	Samuel I. Kaylor	---	H	350	S	€c/dol
761	4005-7626	J. Miller Eshelman & Son Inc.	---	---	U	410	T	€c/---
762	4005-7625	Ben Hess	---	---	S	420	T	€ez/dol
763	4005-7625	J. L. Charles	M. A. Stoltzfus	1950	H	420	T	€k/---
764	4005-7625	J. C. Bender	Myers Bros. Drlg. Contr.	1959	H	430	T	€ez/dol
765	4005-7625	do.	---	---	U	430	T	€ez/dol
766	4005-7625	Edward Wissler	---	---	S	430	T	€ez/dol
767	4005-7625	do.	---	---	U	430	T	€ez/dol
768	4005-7625	Raymond Hess	---	---	I	380	V	€l/dol
769	4005-7624	H. S. Mumma	---	---	S	400	T	€ez/dol
770	4005-7624	do.	---	---	H	410	T	€ez/dol
771	4005-7624	H. J. Wickenheiser	---	---	U	410	T	€k/---
771S	3957-7620	Evcor Develop. Co.	Maurice E. Brown	1971	H	470	---	€ah/---
772	4005-7624	W. C. Doerr	---	---	U	410	T	€ez/dol
773	4005-7624	---	---	---	---	380	V	€l/dol
774	4005-7624	Barton Gehman	---	---	U	380	T	€ez/dol
775	4005-7624	J. H. Kauffman	---	---	H	380	V	€v/dol
776	4005-7624	J. B. Mumma Estate	---	---	H	380	V	€k/sh
776S	3950-7614	Benjamin Miller	Maurice E. Brown	1971	H	540	S	Xwc/---
777	4005-7624	J. B. Mumma Estate	----	---	U	380	V	€k/sh
778	4005-7624	Arthur Miller	---	1937	H	380	V	€k/sh
778S	3952-7613	William Hollinger	Maurice E. Brown	1970	H	680	S	Xwc/---
779	4005-7623	D. G. Nelson	Myers Bros. Drlg. Contr.	---	H	380	V	€l/dol
780	4005-7623	Leroy Bricker	do.	---	C	370	T	€ez/dol
781	4005-7623	Warren Witmer	---	---	U	400	T	€ez/dol
781S	3947-7616	Clair Shearer	Maurice E. Brown	1970	H	420	S	Xpc/---
782	4005-7623	Warren Witmer	---	---	S	400	T	€ez/dol
783	4005-7623	J. B. Gochnauer	---	---	H	370	V	€ez/dol
784	4005-7623	do.	Myers Bros. Drlg. Contr.	1956	P	380	V	€v/dol
784S	3948-7615	Jessie Cutler	Maurice E. Brown	1970	H	420	S	Xpc/---
785	4005-7623	Earl Landis	---	---	H	370	V	€ez/dol
786	4005-7623	do.	Samuel I. Kaylor	1959	H	370	V	€ez/dol
787	4005-7623	M. B. Thomas	---	---	H	360	V	€l/dol
788	4005-7623	W. E. Alexander	Myers Bros. Drlg. Contr.	1954	H	370	V	€ez/dol
789	4005-7623	John Hartman	---	---	U	360	T	€k/sh
790	4005-7623	do.	H. K. Honberger & Sons	1947	H	360	T	€k/sh
791	4005-7623	Lloyd Denlinger	---	---	H	360	V	€k/---
792	4005-7623	Anna Bowers	---	---	H	360	V	€l/dol
793	4005-7623	Benjamin Landis	H. K. Honberger & Sons	1962	H	380	T	€k/sh
794	4005-7623	do.	---	---	U	380	T	€k/sh
795	4005-7623	W. S. Nissley	---	---	U	360	V	€l/dol
796	4005-7622	Suburban Propane Co.	---	1953	N	360	T	€l/dol
797	4005-7622	P. L. Neff	---	1943	H	380	T	€ez/dol
798	4005-7622	Landis Metzler	Myers Bros. Drlg. Contr.	---	S	380	T	€ez/dol
799	4005-7622	do.	---	---	H	380	T	€ez/dol
800	4005-7622	J. M. Swarr	---	---	H	360	V	€k/---
801	4005-7622	Wayne Hottenstein	---	---	H	390	T	€ez/dol
802	4005-7622	J. S. Landis	---	---	H	390	T	€ez/dol
803	4005-7622	do.	Myers Bros. Drlg. Contr.	1957	S	380	S	€ez/dol
804	4005-7622	Selana Landis	do.	---	H	380	T	€l/dol
805	4005-7621	P. G. Gingrich	---	1953	H	350	T	€l/dol
806	4005-7621	E. K. Kreider	Myers Bros. Drlg. Contr.	1961	S	350	T	€l/dol
807	4005-7620	W. E. Evans	do.	1946	H	320	V	€l/dol
808	4005-7620	S. Clyde Weaver Inc.	do.	1960	C	360	H	€l/dol
809	4005-7619	Bell Telephone Co.	Ernst	1956	C	340	---	€l/dol
810	4005-7619	Mrs. M. L. Smith	Myers Bros. Drlg. Contr.	1949	H	400	S	€v/dol
811	4005-7618	R. T. Campbell	---	1955	H	390	S	€l/dol
812	4005-7618	C. C. Dombach	---	---	H	370	W	€ez/dol
813	4005-7617	E. J. Danz	Myers Bros. Drlg. Contr.	1950	H	370	S	€v/dol
814	4005-7616	Elmer Landis	---	1948	H	360	S	€ez/dol
815	4005-7615	E. E. Murry	---	1961	H	320	V	€ez/---
816	4005-7615	C. Sinz	Myers Bros. Drlg. Contr.	1963	H	320	S	€ez/dol
819	4006-7629	H. E. Shenk	---	---	H	360	V	Ob/---
820	4007-7629	Richard Oldwiler	Myers Bros. Drlg. Contr.	1957	H	350	V	Ob/---
821	4006-7629	J. Sherk	---	---	U	340	V	Ob/---
822	4006-7629	Joseph Wolgemuth, Jr.	---	---	H	340	V	€c/ls
823	4006-7628	Arthur Horner	---	---	H	370	T	Ob/---
824	4006-7628	J. B. Hostetter	---	---	H	370	V	Ob/---
825	4006-7628	Bruce Hiett	Myers Bros. Drlg. Contr.	1950	H	380	T	Ob/ls
826	4006-7628	J. S. Haines	---	---	C	350	T	Ob/ls
827	4006-7628	Donald Newcomer	---	---	H	370	T	Ob/ls
828	4006-7628	Harold Long	H. K. Honberger & Sons	1956	H	370	T	€c/ls

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
159	---	6	---	44	10/62	---	---	18	650	---	Ln-758
42	---	6	---	30	10/62	---	---	---	---	---	759
192	50	6	---	29	10/62	---	1.7	18	640	---	760
193	---	6	---	21	10/62	---	---	---	---	---	761
25	---	---	---	22	10/62	---	---	---	---	---	762
88	---	6	---	24	10/62	---	.64	23	960	---	763
230	35	6	---	23	10/62	3	---	17	740	---	764
37	---	---	---	24	10/62	---	---	---	---	---	765
27	---	---	---	23	10/62	---	---	12	480	---	766
180	---	---	---	24	10/62	---	---	---	---	---	767
67	---	6	---	3	10/62	---	---	---	---	---	768
21	---	---	---	16	9/62	---	---	20	745	---	769
95	---	6	---	26	---	---	---	21	810	---	770
26	---	---	---	12	10/62	---	---	---	---	---	771
234	230	6	50;234	50	8/71	5	---	---	---	---	771S
16	---	---	---	12	10/62	---	---	---	---	---	772
10	---	---	---	8	10/62	---	---	---	---	---	773
19	---	---	---	13	10/62	---	---	---	---	---	774
22	---	---	---	18	10/62	---	---	8	350	---	775
117	---	7	---	11	10/62	---	---	12	480	---	776
125	63	6	80;115	60	9/71	8	---	---	---	---	776S
17	---	---	---	15	10/62	---	---	---	---	---	777
170	---	---	---	16	10/62	---	2.2	9	350	---	778
167	28	6	80;163	40	9/70	---	---	---	---	---	778S
200	---	---	---	9	11/62	6	---	17	790	---	779
120	---	5	---	41	11/62	---	---	16	625	---	780
47	---	6	---	15	11/62	---	---	22	1100	---	781
208	31	6	200	60	7/70	2	---	---	---	---	781S
125	---	6	---	122	11/62	---	---	16	710	---	782
11	---	---	---	5	11/62	---	---	14	650	---	783
129	---	6	---	17	11/62	7	.17	---	545	---	784
71	20	6	35;60	15	2/70	15	---	---	---	---	784S
14	---	---	---	11	11/62	---	---	9	655	---	785
102	---	6	---	23	11/62	23	---	13	740	---	786
19	---	---	---	14	10/62	---	---	16	650	---	787
180	---	6	---	33	10/62	---	.06	---	---	---	788
28	---	---	---	22	10/62	---	---	---	---	---	789
60	---	6	---	22	10/62	25	---	---	---	---	790
16	---	---	---	14	10/62	---	---	14	580	---	791
16	---	---	---	12	10/62	---	---	15	600	---	792
52	---	5	---	29	10/62	30	---	9	370	---	793
36	---	---	---	32	10/62	---	---	9	345	---	794
51	---	---	---	9	10/62	---	---	---	---	---	795
60	---	6	---	22	6/63	---	28	13	520	---	796
147	90	---	---	24	6/63	---	.91	18	690	---	797
25	---	7	---	5	11/62	---	---	15	605	---	798
12	---	---	---	7	11/62	---	---	14	560	---	799
21	---	---	---	17	10/62	---	---	15	670	---	800
20	---	---	---	19	11/62	20	---	19	950	---	801
---	---	---	---	20	11/62	---	---	22	925	---	802
232	23	6	---	19	11/62	---	.09	28	1700	---	803
14	---	---	---	10	11/62	---	---	15	605	---	804
81	---	6	---	23	6/63	---	6.8	14	700	---	805
175	20	6	---	19	6/63	---	.65	13	480	---	806
69	---	6	---	21	6/63	---	2.6	11	630	---	807
143	---	6	---	42	6/63	---	.59	17	640	---	808
96	40	6	---	---	---	---	.38	10	---	---	809
60	---	6	---	52	6/63	---	74	9	360	---	810
76	---	6	---	39	8/63	---	3.8	13	520	---	811
---	---	5	---	18	7/63	---	6	15	---	---	812
51	---	6	---	30	7/63	---	.36	14	540	---	813
160	---	6	---	32	7/63	---	5.1	14	550	---	814
221	---	---	---	56	7/63	---	.1	18	650	---	815
160	20	6	---	31	7/63	---	.1	15	590	---	816
31	---	---	---	26	11/62	---	---	14	550	---	819
127	---	8	---	42	11/62	---	.05	20	730	---	820
86	---	---	---	27	11/62	---	---	---	---	---	821
---	---	6	---	45	9/62	---	---	22	370	---	822
53	---	---	---	51	11/62	---	---	10	420	---	823
---	---	6	---	53	11/62	---	58	13	550	---	824
233	23	6	---	57	11/62	40	---	12	590	---	825
---	---	---	---	41	10/62	---	---	15	880	---	826
62	---	---	---	58	10/62	---	---	11	400	---	827
200	---	6	---	33	9/62	---	---	15	600	---	828

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-829	4006-7628	Londa Zurin	---	---	U	360	T	€c/ls
830	4006-7628	Donald Newcomer	---	---	H	370	T	Ob/ls
831	4006-7628	do.	---	---	U	370	T	Ob/ls
832	4006-7628	Mark Newcomer	---	1800	H	340	V	Ob/ls
832S	3951-7612	Walbert Graybeal	Maurice E. Brown	1971	H	590	S	Xwc/---
833	4006-7627	J. R. Breneman	Myers Bros. Drlg. Contr.	1957	H	360	T	Ob/ls
833S	3952-7609	Aaron Glick	Maurice E. Brown	1971	H	630	S	Xwc/---
834	4006-7627	J. R. Breneman	Myers Bros. Drlg. Contr.	---	H	380	T	Ob/ls
835	4006-7627	H. W. Wert	---	---	H	350	T	Ob/ls
836	4006-7627	Norman Shenk	Myers Bros. Drlg. Contr.	1961	U	850	T	Ob/ls
837	4006-7627	do.	do.	1961	P	350	T	Ob/ls
837S	3953-7610	Ellis Hassel	Maurice E. Brown	1971	H	610	S	Xwc/---
838	4006-7627	Mrs. P. L. Weiser	---	---	H	360	T	€c/ls
839	4006-7627	Hiram Strickler	---	---	U	340	V	€c/---
840	4006-7627	do.	Myers Bros. Drlg. Contr.	1959	H	360	T	€c/---
841	4006-7627	do.	---	---	H	370	T	€c/ls
841S	3952-7613	Pearl Boya	---	1969	H	660	S	Xwc/---
842	4006-7627	Hiram Strickler	---	---	H	370	T	€c/---
842S	3953-7609	David Thompson	Maurice E. Brown	1970	H	665	S	Xwc/---
843	4006-7627	Hiram Strickler	Myers Bros. Drlg. Contr.	1952	H	380	T	€c/ls
843S	3953-7609	Quarryville Presb. Home	Maurice E. Brown	1970	H	630	S	Xwc/---
844	4006-7627	D. S. Will	---	---	H	380	T	€c/ls
845	4006-7627	P. S. Miller	---	---	H	360	T	€c/ls
845S	3949-7612	Lester Blivius	Maurice E. Brown	1970	H	620	S	Xpc/---
846	4006-7626	---	---	---	H	340	V	Ob/ls
847	4006-7626	I. J. Metzler	---	---	U	360	V	Ob/ls
848	4006-7626	P. E. Young	H. K. Honberger & Sons	1961	H	350	S	€c/dol
849	4006-7626	E. W. Witmer	---	---	H	360	S	€c/---
850	4006-7626	R. C. Steinmetz	---	---	H	340	S	€c/---
851	4006-7626	W. B. Hall	---	---	H	340	V	€c/dol
852	4006-7626	Bear Creek Const. Co.	---	---	C	380	T	€c/dol
853	4006-7625	Elam Longenecker	---	---	H	360	T	Ob/ls
854	4006-7625	Weidler Grube	---	---	---	360	V	€c/dol
855	4006-7625	J. R. Nissley	---	---	U	360	V	€c/dol
856	4006-7625	Ira Williams	---	---	H	380	V	€c/---
857	4006-7625	J. R. Smith	Samuel I. Kaylor	1959	---	380	V	€c/---
858	4006-7625	Frank Eshelman	---	---	H	400	T	€c/dol
859	4006-7625	do.	---	---	S	360	V	Ob/ls
860	4006-7625	---	---	---	---	390	V	€c/---
861	4006-7625	Verne Hiestand	H. K. Honberger & Sons	1936	H	410	T	€c/---
862	4006-7625	Howard Peifer	E. J. Myers & Sons	---	P	400	T	€c/dol
863	4006-7624	M. W. Heisey	---	---	H	380	V	€c/---
864	4006-7624	William Dyer	---	---	U	400	T	€c/---
865	4006-7624	do.	---	---	H	400	T	€c/dol
866	4006-7624	G. E. Malmborg	---	---	I	380	T	€c/---
867	4007-7624	Henry Rohrer	---	---	H	400	T	€c/dol
868	4006-7624	Mrs. Marie Reineare	---	1960	H	440	T	€ez/dol
869	4006-7624	do.	---	---	U	440	T	€ez/dol
870	4006-7624	Charles Sload	Myers Bros. Drlg. Contr.	1958	H	440	T	€ez/dol
871	4006-7624	W. C. Burkhardt	do.	1947	H	440	T	€ez/dol
872	4006-7624	J. R. Eshelman	---	---	H	400	T	€c/---
873	4006-7624	Kendig Rohrer	---	---	H	380	T	€c/---
874	4006-7624	do.	Myers Bros. Drlg. Contr.	1962	S	380	T	€c/---
875	4006-7624	Mylin Good	---	---	S	420	T	€ez/dol
876	4006-7624	do.	---	---	H	420	T	€ez/dol
877	4006-7624	Albert Nissley	---	---	H	430	S	€ez/dol
878	4006-7624	Amos Roland	---	---	S	400	T	€ez/dol
879	4006-7624	do.	---	---	H	400	T	€ez/dol
880	4006-7624	Emma Gaul	---	---	H	400	T	€ez/dol
881	4006-7624	Willis Weaver	---	---	H	410	T	€ez/dol
882	4006-7624	do.	---	---	H	420	T	€ez/dol
883	4006-7624	J. G. Weidler	---	---	U	440	T	€ez/dol
884	4006-7624	do.	---	---	U	420	T	€ez/dol
885	4006-7624	do.	---	---	H	420	T	€ez/dol
886	4006-7623	A. J. Ulrich	---	1942	H	430	T	€ez/dol
887	4006-7623	Leroy Hottenstein	---	---	U	410	S	€ez/dol
888	4006-7623	do.	Martin T. Fischer	1958	H	410	S	€ez/dol
889	4006-7623	Daniel Lehman	---	---	H	410	S	€ez/dol
890	4006-7623	D. H. Rohrer	---	---	H	430	T	€ez/dol
891	4006-7623	Elam Bollinger	---	---	H	420	W	€ez/dol
892	4006-7623	J. F. Cope	Myers Bros. Drlg. Contr.	---	U	410	S	€c/---
893	4006-7623	do.	do.	---	U	410	S	€c/---
894	4006-7623	do.	do.	---	U	410	S	€c/---
895	4006-7623	do.	---	---	U	420	S	€c/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
---	---	---	---	52	9/62	---	---	8	425	---	Ln-829
82	---	6	---	63	9/62	---	4.8	20	695	---	830
65	---	---	---	59	9/62	---	---	---	---	---	831
38	---	---	---	36	9/62	---	---	15	750	---	832
207	21	6	90;125;200	50	8/71	3	---	---	---	---	832S
150	---	6	---	29	11/62	---	74	13	570	---	833
103	82	6	60;90	40	8/71	6	---	---	---	---	833S
500	---	---	---	40	11/62	---	---	12	550	---	834
38	---	---	---	34	11/62	---	---	15	650	---	835
125	---	---	---	17	11/62	1	---	---	---	---	836
120	---	---	---	15	11/62	10	---	---	---	---	837
124	43	6	60;80;95; 120	40	5/71	35	---	---	---	---	837S
42	---	---	---	41	10/62	---	---	13	600	---	838
29	---	---	---	9	10/62	---	---	---	---	---	839
243	20	6	---	27	10/62	15	---	11	500	---	840
---	---	6	---	62	9/62	---	---	16	740	---	841
145	71	6	85;120	50	9/69	3	---	---	---	---	841S
---	---	6	---	63	9/62	---	.02	---	---	---	842
208	30	6	85;125	50	5/70	3	---	---	---	---	842S
102	20	---	---	19	9/62	10	---	20	900	---	843
250	54	6	125;214	45	5/70	20	---	---	---	---	843S
---	---	---	---	17	9/62	---	---	15	700	---	844
49	---	60	---	39	9/62	---	---	14	725	---	845
187	21	6	125;155	50	9/70	7	---	---	---	---	845S
15	---	---	---	13	11/62	---	---	14	640	---	846
31	---	---	---	30	---	---	---	---	---	---	847
65	---	---	---	24	10/62	30	22	15	600	---	848
---	---	---	---	19	10/62	---	---	17	700	---	849
240	---	---	---	69	10/62	---	---	---	---	---	850
---	---	---	---	27	10/62	---	.04	18	640	---	851
---	---	6	---	41	10/62	---	---	15	580	---	852
38	---	---	---	29	11/62	---	---	15	640	---	853
16	---	---	---	12	11/62	---	---	17	690	---	854
30	---	---	---	21	11/62	---	---	---	1300	---	855
---	---	---	---	14	11/62	---	---	25	1275	---	856
92	---	6	---	11	11/62	2	---	14	525	---	857
175	---	---	---	37	11/62	---	---	19	680	---	858
45	---	6	---	12	11/62	---	---	18	900	---	859
12	---	---	---	8	10/62	---	---	16	710	---	860
190	---	6	---	19	10/62	---	.51	19	980	---	861
200	---	---	---	74	10/62	---	.03	24	980	---	862
9	---	---	---	5	11/62	---	---	17	715	---	863
37	---	---	---	10	11/62	---	---	---	---	---	864
170	---	---	---	27	11/62	---	.03	21	770	---	865
16	---	54	---	8	11/62	---	---	15	570	---	866
37	---	54	---	35	11/62	---	---	16	775	---	867
---	---	6	---	25	9/62	---	---	17	640	---	868
163	---	---	---	15	9/62	---	---	---	---	---	869
160	15	6	---	27	9/62	---	---	---	---	---	870
225	---	6	---	23	9/62	---	.05	16	655	---	871
24	---	---	---	22	9/62	---	---	16	605	---	872
16	---	---	---	13	9/62	---	---	17	615	---	873
300	---	---	175	14	9/62	---	---	17	555	---	874
122	---	---	---	22	9/62	---	---	31	1070	---	875
120	---	---	---	28	9/62	---	---	19	755	---	876
24	---	---	---	22	---	---	---	21	305	---	877
15	---	---	---	12	9/62	---	---	15	570	---	878
26	---	---	---	21	9/62	---	---	19	700	---	879
11	---	---	---	10	9/62	---	---	14	535	---	880
---	---	---	---	7	9/62	---	---	17	710	---	881
16	---	---	---	12	9/62	---	---	16	625	---	882
40	---	---	---	21	9/62	---	---	28	995	---	883
22	---	---	---	18	9/62	---	---	---	---	---	884
204	---	---	---	16	9/62	---	---	28	1110	---	885
---	---	6	---	25	10/62	---	---	14	630	---	886
27	---	72	---	18	10/62	---	---	23	1000	---	887
142	---	6	---	22	10/62	---	.11	11	440	---	888
15	---	---	---	11	---	---	---	16	274	---	889
28	---	---	---	26	10/62	---	---	15	600	---	890
18	---	---	---	11	10/62	---	---	26	1120	---	891
450	---	---	---	31	10/62	---	---	---	---	---	892
400	---	---	---	29	10/62	---	---	---	---	---	893
63	---	---	---	32	10/62	---	---	---	---	---	894
27	---	---	---	31	10/62	---	---	---	---	---	895

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-896	4006-7623	J. B. Noll	---	---	U	390	T	€c/---
897	4006-7623	do.	---	---	H	390	T	€c/---
898	4006-7623	do.	---	---	U	390	T	€c/---
899	4006-7623	Edwin Sauder	Myers Bros. Drlg. Contr.	1957	U	400	T	€c/---
900	4006-7623	Clyde Hottenstein	---	1932	S	440	T	€ez/dol
901	4006-7623	Mrs. Clyde Kreider	---	---	H	400	S	€ez/dol
902	4006-7623	Henry Kettering	---	---	U	420	T	€ez/dol
903	4006-7623	do.	---	---	H	420	T	€ez/dol
904	4006-7623	do.	---	1957	H	420	T	€ez/dol
905	4006-7623	do.	---	---	U	420	T	€ez/dol
906	4006-7623	Nelson Cooper	---	---	H	410	S	€ez/dol
907	4006-7623	H. S. Lehman	---	---	---	410	T	€c/---
908	4006-7623	D. G. Wenger	---	---	H	420	T	€ez/---
909	4006-7623	do.	---	---	H	420	T	€ez/---
910	4006-7622	Nora Landis	---	---	H	380	V	€c/---
911	4006-7622	Willis Kilheffer	Myers Bros. Drlg. Contr.	1951	H	400	S	€ez/dol
912	4006-7622	Marvin Hollinger	---	---	H	390	T	€c/---
913	4006-7622	C. H. Hummer	---	---	H	390	T	€c/---
914	4006-7622	A. S. Root	---	---	H	400	T	€c/---
915	4006-7622	Clarence Metzler	---	---	H	400	V	€ez/dol
916	4006-7622	do.	---	---	U	400	V	€ez/dol
916S	3945-7613	George Fregok	Maurice E. Brown	1971	H	120	T	Xpc/---
917	4006-7622	Leroy Hottenstein	---	---	H	410	T	€ez/dol
918	4006-7621	McMinn Asphalt	Myers Bros. Drlg. Contr.	1961	C	360	V	€c/---
919	4006-7620	L. R. Vogel	do.	1941	H	360	S	€ez/dol
920	4006-7619	C. J. Doerr	---	---	H	360	T	€c/---
921	4006-7619	L. H. Groff	---	1942	H	340	T	€c/---
922	4006-7618	Martin Erb	Myers Bros. Drlg. Contr.	1941	H	420	H	€ez/dol
923	4006-7618	Halbert Brubaker	---	1929	H	400	T	€l/dol
924	4006-7617	Sensennich Corp.	---	1939	N	380	T	Ob/ls
925	4006-7617	Witmer Bros.	---	---	H	380	W	€l/dol
926	4006-7617	Sanford Leaman	Myers Bros. Drlg. Contr.	1958	H	400	T	€ez/dol
927	4006-7616	I. D. Landis	do.	1958	H	350	V	€ez/dol
928	4006-7615	Mennonite Mission Bd.	do.	1963	P	320	V	Ob/ls
929	4006-7615	J. H. Shirk	---	1926	H	330	S	€ez/dol
931	4008-7624	Ralph Gibble	---	---	H	380	V	Ob/---
932	4008-7627	Andrew Siegrist	---	---	H	440	S	Oco/---
933	4008-7626	Norman Kready	---	---	U	500	S	Oco/sh
934	4008-7626	Katie Hoover	---	---	H	420	T	Ob/---
935	4008-7626	Isaac Garman	---	---	U	400	V	Ob/---
936	4008-7626	do.	---	---	H	400	V	Ob/---
937	4008-7626	A. N. Miller	---	---	U	420	T	Ob/---
938	4008-7626	do.	Myers Bros. Drlg. Contr.	1957	H	420	T	Ob/---
939	4008-7625	Joseph Zakny	---	---	H	460	S	Oco/sh
940	4008-7624	J. K. Cassell	---	---	I	380	V	Ob/---
941	4008-7624	do.	---	---	U	400	V	Ob/---
942	4008-7624	do.	Myers Bros. Drlg. Contr.	---	H	400	V	Ob/---
943	4008-7623	P. G. Brubaker	---	---	H	420	S	Ob/---
944	4008-7623	Kauffman Mennonite Ch.	---	---	H	400	T	Ob/---
945	4008-7623	do.	---	---	H	400	T	Ob/---
946	4008-7623	Manheim Auto Auction	---	---	C	400	S	Ob/---
947	4008-7623	A. H. Weidman	---	---	U	420	S	Ob/---
948	4008-7623	do.	Myers Bros. Drlg. Contr.	1924	H	420	S	Ob/---
949	4008-7623	J. K. Cassel	---	---	U	420	S	Ob/---
950	4008-7622	Ivan Hoover	---	---	H	390	V	Ob/---
951	4008-7620	Alfred Longer	---	1951	H	390	V	Ob/---
952	4008-7620	J. D. Burkholder	Myers Bros. Drlg. Contr.	1959	H	420	T	€c/---
953	4008-7619	Earl Minnich	do.	1955	H	420	T	€c/ls
954	4008-7619	Lanco	---	1945	C	380	V	Ob/---
955	4008-7618	Paul Coble	---	1959	H	450	S	€c/---
956	4008-7616	C. P. Wenger	---	---	H	360	V	€c/---
957	4007-7629	Mr. Thomas	---	---	U	340	T	Ob/---
958	4007-7629	J. B. Hostetter	---	---	H	340	V	Ob/---
959	4007-7629	do.	---	---	H	360	T	Ob/---
960	4007-7629	James Garber	---	---	S	350	T	Ob/---
961	4007-7629	D. G. Miller	---	---	H	360	T	Ob/---
962	4007-7628	Roy Sauder	---	---	U	370	V	Ob/---
963	4007-7628	Gruber Bros.	---	---	H	370	V	Ob/---
964	4007-7628	Clarence Douple	Myers Bros. Drlg. Contr.	1948	H	400	S	Ob/---
965	4007-7628	Clarence Greider	---	---	U	420	S	---
966	4007-7628	do.	---	---	H	440	S	---
967	4007-7628	A. N. Shelley	---	---	U	390	T	Ob/---
968	4007-7628	do.	Myers Bros. Drlg. Contr.	---	H	380	T	Ob/---
969	4007-7628	W. S. Carter	H. K. Honberger & Sons	---	H	380	V	Ob/---
970	4007-7628	J. B. Brubaker	---	---	U	980	V	Ob/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
36	---	---	---	28	10/62	---	---	---	---	---	Ln-896
96	---	6	---	33	---	---	29	22	1480	---	897
220	---	---	---	36	10/62	---	---	24	1230	---	898
125	---	6	---	17	10/62	---	---	---	---	---	899
151	---	---	---	34	9/62	---	---	17	555	---	900
125	---	---	---	11	9/62	---	---	---	---	---	901
26	---	---	---	18	9/62	---	---	---	---	---	902
---	---	---	---	---	---	---	---	28	1150	---	903
---	---	6	---	21	9/62	---	.05	22	945	---	904
26	---	---	---	21	9/62	---	---	18	790	---	905
15	---	---	---	14	9/62	---	---	13	490	---	906
---	---	---	---	30	9/62	---	---	16	655	---	907
---	---	---	---	19	9/62	---	---	14	620	---	908
24	---	---	---	18	9/62	---	---	---	---	---	909
80	---	6	---	21	9/63	---	.07	36	3000	---	910
160	---	6	---	39	6/63	---	.09	23	990	---	911
23	---	---	---	14	11/62	---	---	15	675	---	912
28	---	---	---	23	11/62	---	---	12	640	---	913
27	---	---	---	20	11/62	---	---	18	950	---	914
34	---	---	---	16	10/62	---	---	13	535	---	915
---	---	---	---	14	10/62	---	---	---	---	---	916
83	---	---	22;48;80	6	6/71	18	---	---	---	---	916S
92	---	---	---	28	10/62	---	---	27	1410	---	917
80	---	6	---	33	6/63	---	8	16	525	---	918
144	13	6	---	22	9/63	---	1.3	14	680	---	919
34	---	10	---	28	7/63	---	.5	16	700	---	920
80	---	---	---	28	6/63	---	.07	---	---	---	921
84	---	6	---	13	7/63	---	.7	13	550	---	922
57	---	6	---	34	7/63	---	1.4	21	900	---	923
265	---	8	---	50	8/63	---	.5	19	980	---	924
126	---	6	---	11	7/63	---	.17	18	760	---	925
---	---	6	---	38	7/63	---	46	18	900	---	926
200	---	6	---	13	7/63	---	.06	18	650	---	927
110	22	8	---	17	7/63	200	7.3	16	600	---	928
73	---	5	---	39	7/63	---	1.1	15	700	---	929
66	---	6	---	3	11/62	---	---	16	600	---	931
56	---	---	---	44	11/62	---	---	8	360	---	932
13	---	---	---	8	11/62	---	---	5	265	---	933
---	---	6	---	25	11/62	---	.15	14	600	---	934
44	---	---	---	34	11/62	---	---	---	---	---	935
59	---	---	---	32	11/62	---	---	11	520	---	936
56	---	---	---	42	11/62	---	---	---	---	---	937
150	12	6	---	39	11/62	30	13	16	575	---	938
30	---	6	---	10	11/62	---	---	13	490	---	939
11	---	---	---	6	11/62	---	---	19	690	---	940
14	---	---	---	5	11/62	---	---	---	---	---	941
180	20	6	---	10	11/62	---	1.7	13	570	---	942
23	---	---	---	14	11/62	---	---	9	370	---	943
100	---	6	---	27	11/62	---	---	18	710	---	944
35	---	---	---	23	11/62	---	---	18	800	---	945
160	---	6	---	23	11/62	---	---	13	490	---	946
26	---	---	---	24	11/62	---	---	---	---	---	947
98	---	6	---	21	11/62	---	---	15	525	---	948
29	---	---	---	26	11/62	---	---	---	---	---	949
---	---	6	---	42	7/63	---	.05	14	520	---	950
---	---	6	---	38	7/63	---	1.2	16	670	---	951
100	---	6	---	44	6/63	14	.97	15	550	---	952
180	---	6	---	39	8/63	---	.5	15	700	---	953
135	---	6	---	37	7/63	---	.1	18	630	---	954
200	---	6	---	41	6/63	---	.05	15	510	---	955
---	---	---	---	28	7/63	---	.05	15	630	---	956
39	---	---	---	29	11/62	---	---	21	850	---	957
25	---	---	---	11	11/62	---	1.6	12	505	---	958
---	---	6	---	20	11/62	---	---	---	---	---	959
168	---	---	---	28	11/62	---	.04	20	810	---	960
22	---	---	---	21	11/62	---	---	12	500	---	961
54	---	---	---	49	11/62	---	---	---	---	---	962
64	---	84	---	50	11/62	---	---	16	690	---	963
120	---	---	---	37	11/62	1	---	13	705	---	964
75	---	---	---	68	11/62	---	---	---	---	---	965
96	---	---	---	43	11/62	---	---	8	350	---	966
59	---	---	---	37	11/62	---	---	---	---	---	967
80	---	6	---	37	11/62	---	---	14	555	---	968
---	---	6	---	35	11/62	---	---	10	400	---	969
216	---	---	---	49	11/62	---	---	6	280	---	970

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-971	4007-7628	B. S. Ebersole	---	---	H	390	T	Ob/---
972	4007-7628	Levi Snyder	---	---	H	400	T	Ob/---
973	4007-7628	Harry Musser, Jr.	Myers Bros. Drlg. Contr.	1962	S	390	T	Ob/---
974	4007-7628	do.	---	1958	H	380	T	Ob/---
975	4007-7628	do.	H. K. Honberger & Sons	---	S	380	T	Ob/---
976	4007-7627	H. K. Shenk	---	---	U	380	T	Ob/---
977	4007-7627	Henry Miller	---	---	H	400	T	Ob/---
978	4007-7627	Leroy Kopp	---	---	U	380	T	Ob/---
979	4007-7627	J. H. Esbenshade	Myers Bros. Drlg. Contr.	---	H	390	S	Ob/ls
980	4007-7627	H. E. Shenk	---	---	H	380	T	Ob/---
981	4007-7627	H. L. Shelley	---	---	S	420	T	Ob/---
982	4007-7627	L. W. Gehman	---	---	U	410	T	Ob/---
983	4007-7627	Roy Henny	Myers Bros. Drlg. Contr.	---	U	400	T	Ob/---
984	4007-7627	do.	---	---	U	400	T	Ob/---
984S	4008-7628	Arthur Hess	Robert D. Grant	1971	H	460	S	Oco/---
985	4007-7626	H. H. Martin	---	---	H	400	T	Ob/---
986	4007-7626	C. R. Fry	Myers Bros. Drlg. Contr.	1957	N	380	V	Ob/---
987	4007-7626	Nissley Erb	---	1907	H	430	S	Ob/ls
988	4007-7626	J. H. Harnish	---	1907	U	400	T	Ob/---
989	4007-7626	Earl Witmer	---	---	H	380	S	Ob/---
990	4007-7626	E. Witmer	---	---	U	380	T	Ob/---
991	4007-7626	J. E. Witmer	Myers Bros. Drlg. Contr.	1961	H	380	T	Ob/ls
992	4007-7625	Pa. State Univ.	---	---	I	360	V	Ob/ls
993	4007-7625	do.	---	---	H	360	V	Ob/ls
994	4007-7625	Howard Brubaker	Myers Bros. Drlg. Contr.	---	H	380	T	Ob/ls
995	4007-7625	Harold Witmer	---	---	H	360	T	Ob/ls
996	4007-7625	J. N. Metzler	---	---	H	380	V	Ob/---
997	4007-7625	Wilmer Esbenshade	---	---	U	400	T	Ob/---
998	4007-7625	do.	---	---	I	400	T	Ob/---
999	4007-7625	do.	Myers Bros. Drlg. Contr.	---	H	400	T	Ob/---
1000	4007-7625	Leon Schnupp	---	---	U	390	V	Ob/---
1001	4007-7625	Mrs. John Eby	Myers Bros. Drlg. Contr.	1957	I	390	V	Ob/---
1002	4007-7625	do.	do.	1943	H	400	V	Ob/---
1003	4007-7625	J. N. Metzler	---	1945	H	370	V	Ob/ls
1004	4007-7624	Harry Becker	---	---	U	370	V	Ob/---
1005	4007-7624	L. C. Gross Trust Estate	---	---	S	360	V	Ob/---
1006	4007-7624	do.	---	---	U	370	V	Ob/---
1007	4007-7624	do.	Myers Bros. Drlg. Contr.	---	H	370	V	Ob/---
1008	4007-7624	Leroy Esbenshade	---	---	S	380	V	Ob/---
1009	4007-7624	C. R. Nissley	---	---	H	370	V	Ob/ls
1010	4007-7624	W. Z. Esbenshade	---	---	U	370	V	Ob/ls
1011	4007-7624	do.	Myers Bros. Drlg. Contr.	1961	H	380	V	Ob/ls
1012	4007-7624	J. M. Becker	---	---	H	390	T	Ob/---
1013	4007-7624	Amos Sauder	---	---	H	380	V	€c/---
1014	4007-7624	Mervin Hess	---	---	H	360	V	Ob/ls
1015	4007-7624	H. W. Stauffer	---	---	H	370	V	Ob/ls
1016	4007-7624	John Cope	---	---	H	380	V	€c/---
1017	4007-7623	J. L. Cassel	---	---	H	380	V	Ob/---
1018	4007-7623	do.	Myers Bros. Drlg. Contr.	1946	C	380	V	Ob/---
1019	4007-7623	R. N. Miller	---	---	H	370	V	Ob/---
1020	4007-7623	Titus Nolt	---	---	I	380	V	Ob/---
1021	4007-7623	Annamae Hausman	Myers Bros. Drlg. Contr.	1914	H	380	V	Ob/ls
1022	4007-7623	do.	---	---	H	380	V	Ob/ls
1023	4007-7623	Clarence Keener, Jr.	---	---	H	390	T	Ob/ls
1024	4007-7622	Edward Nixdorf	---	---	I	380	T	Ob/---
1025	4007-7622	M. W. Hoffer	---	---	H	380	V	Ob/---
1026	4007-7622	A. L. Martin	---	---	U	380	T	Ob/---
1027	4007-7622	do.	Myers Bros. Drlg. Contr.	1961	H	380	T	Ob/---
1028	4007-7622	A. H. Whistler	do.	---	I	390	T	Ob/---
1029	4007-7622	Mary Grayle	---	---	U	390	T	Ob/---
1030	4007-7622	do.	Samuel I. Kaylor	---	H	390	T	Ob/---
1031	4007-7622	G. Longenecker	Myers Bros. Drlg. Contr.	1952	H	380	T	Ob/ls
1032	4007-7622	do.	---	---	U	380	T	Ob/ls
1033	4007-7622	Clarence Landis	---	---	H	390	T	Ob/ls
1034	4007-7622	Elam Landis	---	---	H	390	T	Ob/ls
1035	4007-7621	Daniel Martin	H. K. Honberger & Sons	1958	H	380	T	Ob/---
1036	4007-7621	Willis Peifer	Myers Bros. Drlg. Contr.	1958	H	370	V	Ob/---
1037	4007-7620	Ivan Snyder	do.	1956	H	380	T	Ob/---
1038	4007-7620	D. L. Landis	---	1962	H	380	T	Ob/ls
1039	4007-7620	Henry Delp	Samuel I. Kaylor	1959	H	380	T	Ob/---
1040	4007-7619	Enos Good	H. K. Honberger & Sons	1962	H	380	V	Ob/---
1050	4007-7618	Mrs. Helen Thomas	Myers Bros. Drlg. Contr.	1963	H	360	T	Ob/---
1051	4007-7618	R. D. Buckwalter	do.	1948	H	400	S	Ob/---
1052	4007-7618	do.	do.	1952	H	410	S	Ob/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hard-ness (gpg)	Specific conduc-tance (micro-mhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
94	---	6	---	65	11/62	---	---	14	580	---	Ln-971
62	---	---	---	60	11/62	---	---	10	460	---	972
203	---	5	---	58	11/62	6	.18	---	500	---	973
---	---	6	---	62	11/62	---	---	12	515	---	974
100	---	---	---	47	11/62	---	---	---	---	---	975
44	---	---	---	33	11/62	---	---	---	---	---	976
42	---	---	---	38	11/62	---	---	12	500	---	977
42	---	---	---	25	11/62	---	---	---	---	---	978
180	---	6	---	56	11/62	---	600	16	549	---	979
44	---	---	---	39	11/62	---	---	13	625	---	980
156	---	---	---	49	11/62	---	.05	12	550	---	981
48	---	---	---	37	11/62	---	---	---	---	---	982
238	---	---	---	26	11/62	---	---	---	---	---	983
40	---	---	---	33	11/62	---	---	---	---	---	984
209	20	6	28	12	3/71	---	---	---	---	---	984S
42	---	---	---	42	11/62	---	---	22	1140	---	985
150	---	6	---	44	11/62	---	---	15	630	---	986
180	---	6	---	37	11/62	---	8.7	16	565	---	987
180	---	6	---	34	11/62	---	---	---	---	---	988
---	---	---	---	47	11/62	---	---	14	660	---	989
34	---	---	---	30	11/62	---	---	11	540	---	990
160	---	6	---	24	11/62	---	---	22	790	---	991
---	---	---	---	20	11/62	---	---	14	620	---	992
25	---	---	---	20	11/62	---	---	---	---	---	993
60	---	6	---	44	11/62	---	---	9	400	---	994
20	---	---	---	16	11/62	---	---	13	500	---	995
35	---	---	---	32	11/62	---	---	12	500	---	996
---	---	---	---	39	11/62	---	---	---	---	---	997
54	---	---	---	40	11/62	---	---	19	945	---	998
600	200	6	---	105	11/62	---	---	17	740	---	999
32	---	54	---	26	11/62	---	---	14	740	---	1000
67	---	6	---	23	11/62	35	8.5	13	570	---	1001
98	---	---	---	26	11/62	35	---	13	590	---	1002
306	---	---	---	22	11/62	---	---	14	525	---	1003
18	---	---	---	15	11/62	---	---	---	---	---	1004
23	---	---	---	20	11/62	---	---	16	650	---	1005
22	---	---	---	16	11/62	---	---	---	---	---	1006
170	---	6	---	18	11/62	---	---	15	640	---	1007
180	---	6	---	20	11/62	---	.93	---	2300	---	1008
16	---	---	---	13	11/62	---	---	15	600	---	1009
17	---	---	---	14	11/62	---	---	---	---	---	1010
250	30	6	---	26	11/62	2	---	13	590	---	1011
27	---	---	---	24	11/62	---	---	13	550	---	1012
26	---	---	---	23	11/62	---	---	16	890	---	1013
59	---	6	---	11	11/62	---	---	13	700	---	1014
15	---	---	---	12	11/62	---	---	15	610	---	1015
21	---	---	---	19	11/62	---	---	9	380	---	1016
22	---	---	---	15	11/62	---	---	15	655	---	1017
128	---	6	---	14	11/62	---	2.5	18	690	---	1018
18	---	---	---	16	11/62	---	---	15	570	---	1019
22	---	---	---	17	11/62	---	---	17	680	---	1020
75	---	6	---	8	11/62	---	---	15	650	---	1021
21	---	---	---	18	11/62	---	---	13	660	---	1022
---	---	---	---	32	11/62	---	.07	14	575	---	1023
125	---	6	---	28	6/63	---	.33	15	600	---	1024
27	---	---	---	21	11/62	---	---	18	735	---	1025
58	---	6	---	27	11/62	---	---	---	---	---	1026
120	---	6	---	28	11/62	---	1.5	---	---	---	1027
---	---	6	---	44	11/62	---	.3	14	840	---	1028
34	---	---	---	30	11/62	---	---	---	---	---	1029
200	---	6	---	34	11/62	---	---	13	525	---	1030
120	---	6	---	38	11/62	---	12	12	540	---	1031
74	---	---	---	35	11/62	---	---	---	---	---	1032
50	---	6	---	37	11/62	---	---	12	550	---	1033
36	---	---	---	33	11/62	---	---	8	325	---	1034
140	---	6	---	31	7/63	30	.51	12	600	---	1035
122	20	6	---	19	7/63	---	65	13	500	---	1036
195	---	6	---	56	5/63	---	---	16	625	---	1037
60	---	6	---	37	6/63	---	1.7	16	525	---	1038
143	17	6	---	40	---	2	---	18	950	---	1039
140	20	6	---	26	7/63	35	2.8	16	600	---	1040
101	30	8	---	25	7/63	---	.98	14	560	---	1050
275	---	6	---	26	7/63	---	6	---	---	---	1051
550	---	6	---	33	7/63	---	.1	25	730	---	1052

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-1053	4007-7618	Jacob Toews	Myers Bros. Drlg. Contr.	1962	S	390	V	Ob/---
1054	4007-7616	Warren Snyder	H. K. Honberger & Sons	1957	H	370	S	Ob/---
1055	4007-7616	D. M. Zimmerman	---	1962	H	340	S	Ob/---
1056	4007-7615	Maurice Young	---	1950	H	340	V	Ob/---
1057	4007-7615	Edward Hess	---	1952	H	310	V	Ob/---
1060	4006-7622	M. H. Martzall	---	---	U	380	T	€c/---
1061	4013-7615	Edward Stahl	John H. Mays	1960	N	360	V	Ob/dol
1062	4012-7617	C. W. Loose	---	---	H	380	V	Ob/dol
1063	4012-7616	Elam Shirk	Robert D. Grant	1959	H	400	T	Ob/---
1064	4012-7616	Melvin Brumbach	---	1925	H	380	V	Ob/---
1065	4012-7615	Irwin Martin	---	---	H	400	T	Ob/---
1066	4012-7615	Titus Martin	Myers Bros. Drlg. Contr.	1960	H	350	V	Ob/---
1067	4012-7615	A. W. Adams	do.	1959	H	410	T	Ob/---
1068	4011-7616	Jacob Holsinger	---	1962	U	360	V	Ob/ls
1069	4011-7616	P. B. Martin	Myers Bros. Drlg. Contr.	1963	H	350	V	Ob/---
1070	4011-7615	E. K. Bollinger	---	---	H	410	H	Ob/---
1071	4011-7615	Melvin Oberholtzer	Samuel I. Kaylor	1962	H	380	T	Ob/---
1072	4010-7622	Noah Kreider and Sons	---	1957	I	410	V	Ob/---
1073	4010-7621	do.	Myers Bros. Drlg. Contr.	1963	H	440	S	Oco/sh
1074	4010-7621	J. R. Shenk	---	---	H	410	V	Ob/---
1075	4010-7620	Erbs Mennonite Ch.	M. A. Stoltzfus	---	T	460	T	Ob/---
1076	4010-7619	Ira Hess	---	1955	H	410	T	Ob/---
1077	4010-7618	R. W. Sauder	---	---	N	400	V	Ob/---
1077S	3955-7602	Jacob Flaud	Petersheim Bros.	1969	H	640	S	Xmi/---
1078	4010-7615	Ira Good	---	---	H	340	V	Ob/---
1079	4010-7615	Adam Oberholtzer	Myers Bros. Drlg. Contr.	1954	H	340	V	Ob/ls
1080	4009-7623	U. S. Asbestos Co.	do.	1961	N	400	V	Ob/ls
1080S	3958-7601	E. Weatherholtz	Maurice E. Brown	1970	H	630	---	Xmi/---
1081	4009-7623	U. S. Asbestos Co.	---	---	N	400	V	Ob/ls
1082	4009-7623	do.	---	1954	N	400	V	Ob/ls
1083	4009-7623	David Moseman	Myers Bros. Drlg. Contr.	1956	C	400	V	Ob/ls
1084	4009-7622	Clarence Keener	do.	1956	I	420	H	Ob/---
1085	4009-7622	do.	---	1937	H	420	H	Ob/---
1086	4009-7621	Paul Sauder	---	1957	H	430	T	Ob/ls
1087	4009-7620	Frank Earhart	---	---	S	420	T	Ob/---
1088	4009-7620	P. E. Balmer	Myers Bros. Drlg. Contr.	1953	H	410	T	Ob/ls
1089	4009-7620	Carl Longenecker	---	1943	H	400	T	Ob/ls
1090	4009-7619	Joseph Burkholder	---	---	H	400	T	Ob/---
1091	4009-7619	J. B. Kendig, Jr.	---	---	I	420	T	€c/ls
1092	4009-7618	Scott Garman	Myers Bros. Drlg. Contr.	1960	H	420	H	Ob/---
1093	4009-7618	Paul Enck, Jr.	do.	1962	H	410	T	Ob/---
1098	4009-7618	Morgan Paper Co.	do.	1942	N	380	V	Ob/ls
1099	4009-7618	do.	---	---	N	380	V	Ob/ls
1100	4009-7618	Robert Risser	Myers Bros. Drlg. Contr.	1961	H	380	S	Ob/ls
1101	4009-7617	Animal Trap Co.	---	---	N	360	V	Ob/ls
1102	4009-7617	Samuel Kulp	Myers Bros. Drlg. Contr.	1950	P	360	V	€c/---
1103	4009-7617	George Miles	---	1951	H	400	V	Ob/---
1104	4009-7616	T. B. Martin	---	---	H	400	T	€c/---
1105	4009-7616	Richard Hess	Aaron W. Martin	1953	S	410	T	Ob/---
1106	4009-7615	Harold Spangler	---	1941	H	340	S	€c/---
1107	4009-7615	Alan Balmer	Myers Bros. Drlg. Contr.	1948	H	360	S	€c/---
1108	3958-7558	Andrew Gilbert	---	---	H	635	S	Xmi/---
1109	3959-7558	G. B. H. Stern	---	1963	H	790	S	€ch/---
1109S	4000-7600	Daniel Farley	Maurice E. Brown	1970	H	480	S	€ah/---
1110	3959-7558	W. A. Hanna	---	---	---	790	S	€ch/---
1111	3952-7559	Charles Huckins	---	---	H	470	S	Xpc/---
1112	3953-7559	R. W. Jones	Edward H. Rankin	1951	H	400	S	Xpc/---
1113	3956-7559	John Metzler	---	---	H	460	V	Ocs/---
1114	3956-7559	do.	Myers Bros. Drlg. Contr.	1961	H	460	V	Ocs/---
1115	3956-7559	John Wishner	---	---	---	---	S	Xwc/---
1116	---	Amos Yoder	---	---	---	635	---	Xmi/---
1117	3958-7559	Bor. of Christiana	Petersheim Bros.	1960	P	640	W	Xmi/---
1118	3958-7559	do.	---	1954	P	660	W	Xmi/---
1119	3959-7559	George Killinger	---	---	H	630	S	€ah/---
1120	3959-7559	E. J. Kennel	Petersheim Bros.	1959	H	750	S	€ch/ss
1121	4005-7626	J. Miller Eshelman and Son, Inc.	---	---	H	420	H	€c/---
1122	4012-7607	Walter Cigar Co.	---	---	N	390	S	€c/ls
1123	4015-7607	Rheinholds Station	---	---	P	460	S	Trgh/---
1124	4015-7606	Canning Factory	---	---	N	470	S	Trgh/---
1125	4006-7557	J. Miller	---	---	H	930	S	€ch/---
1126	4007-7557	Ben Hoffert	---	---	H	520	S	€l/ls
1127	4006-7600	George Boley	---	---	H	560	S	€ch/---
1128	4006-7605	New Holland Ice Co.	---	---	N	490	S	€ez/ls
1129	4006-7601	Wood Worfel	---	---	H	518	---	€ez/ls

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
80	30	6	---	27	7/63	10	.69	14	580	---	Ln-1053
240	---	6	---	43	7/63	7	.06	18	710	---	1054
110	---	5	---	32	7/63	---	.3	16	730	---	1055
---	---	6	---	32	7/63	---	14	14	560	---	1056
110	---	6	---	28	7/63	---	130	16	650	---	1057
27	---	---	---	27	11/62	---	---	---	---	---	1060
62	23	6	---	10	7/63	24	2.2	13	520	---	1061
---	---	6	---	9	8/63	---	.1	---	---	---	1062
260	40	6	---	52	8/63	3	.04	11	540	---	1063
102	---	6	---	23	7/63	---	.2	12	480	---	1064
240	---	6	---	76	8/63	---	.27	15	660	---	1065
42	---	6	---	12	8/63	---	74	10	500	---	1066
156	---	6	---	57	7/63	---	.04	11	550	---	1067
95	---	6	---	12	8/63	---	.2	15	660	---	1068
142	21	6	---	20	8/63	---	.16	13	560	---	1069
---	---	---	---	83	8/63	---	.03	12	530	---	1070
270	30	6	---	---	---	2	.06	14	550	---	1071
300	23	8	---	17	---	600	---	16	600	---	1072
85	42	---	---	30	8/63	100	7.4	6	250	---	1073
150	---	6	---	47	6/63	---	1.6	---	---	---	1074
120	---	8	---	55	6/63	---	1.9	18	550	---	1075
145	---	6	---	49	6/63	---	.20	17	510	---	1076
100	---	6	---	42	7/63	---	.48	17	730	---	1077
78	40	6	55;72	38	6/69	45	---	---	---	---	1077S
---	---	6	---	12	8/63	---	3.8	13	600	---	1078
81	6	6	---	21	7/63	30	1.9	23	1100	---	1079
42	24	8	---	---	---	300	150	---	---	---	1080
140	20	6	78;137	40	5/70	5	---	---	---	---	1080S
312	---	---	---	---	---	---	---	---	---	---	1081
300	32	8	---	---	---	500	27	---	---	---	1082
200	---	6	---	30	7/63	---	6	---	---	---	1083
265	---	7	---	35	1956	50	1.2	22	1100	---	1084
145	---	6	---	27	7/63	---	.06	19	830	---	1085
97	---	6	---	38	6/63	---	30	---	---	---	1086
---	---	6	---	61	7/63	---	.07	17	600	---	1087
90	20	6	---	42	6/63	---	16	20	800	---	1088
90	---	6	---	33	6/63	---	.15	19	690	---	1089
---	---	6	---	42	7/63	---	.4	14	500	---	1090
---	---	6	---	44	6/63	---	.54	16	650	---	1091
62	---	6	---	49	8/63	40	72	11	500	---	1092
86	---	6	---	44	8/63	10	.05	11	480	---	1093
123	12	10	---	6	---	500	---	13	550	---	1098
42	---	---	---	---	---	250	---	12	550	---	1099
132	---	6	---	19	7/63	---	.14	15	537	---	1100
27	---	8	---	6	8/63	---	350	13	620	---	1101
135	---	6	---	9	8/63	---	.14	12	530	---	1102
70	---	6	---	29	7/63	---	1.8	17	900	---	1103
---	---	6	---	39	7/63	---	6.3	10	450	---	1104
240	---	6	---	72	7/63	---	.05	14	600	---	1105
101	---	6	---	22	7/63	---	.35	17	650	---	1106
265	35	6	---	48	7/63	---	.03	---	---	---	1107
---	---	30	---	13	7/63	---	---	5	220	6.1	1108
119	13	6	95	82	8/63	6	.21	1	20	5.6	1109
83	49	6	60;80	32	6/70	8	---	---	---	---	1109S
45	---	6	---	34	---	---	---	2	150	5.4	1110
70	---	6	---	36	8/63	---	---	7	120	6.1	1111
120	---	---	---	40	---	---	---	3	100	5.8	1112
90	---	---	---	---	---	---	---	14	540	7.0	1113
70	---	6	40	16	7/63	---	.4	14	520	7.4	1114
135	---	---	---	85	7/63	---	---	2	110	5.8	1115
---	---	---	---	---	---	---	---	---	---	---	1116
308	---	8	---	10	---	70	---	---	---	---	1117
225	25	8	100	---	---	---	---	---	---	6.6	1118
28	28	---	---	12	---	---	---	1	50	5.4	1119
222	30	6	170;215	71	6/63	15	.2	3	150	5.8	1120
545	---	6	---	178	10/62	---	---	17	640	---	1121
50	---	6	---	---	---	16	---	---	---	---	1122
80	---	6	---	---	---	15	---	---	---	---	1123
90	---	6	---	---	---	50	---	---	---	---	1124
127	---	6	---	---	---	3	---	---	---	---	1125
65	---	6	---	53	---	10	---	---	---	---	1126
75	---	6	---	---	---	5	---	---	---	---	1127
38	---	6	---	---	---	21	---	---	---	---	1128
84	---	6	---	---	---	3	---	---	---	---	1129

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Alti-tude of land surface (feet)	Topo-graphic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-1130	4006-7601	George Weaver	---	---	H	483	S	€ez/ls
1131	4007-7603	P. E. Shirk	---	---	H	480	---	€ez/ls
1132	4007-7607	David Zimmerman	---	---	H	400	---	Ob/ls
1133	4008-7606	John Sensenig	---	---	H	380	---	Ocs/ls
1134	4007-7612	---	---	---	H	310	---	Ob/---
1135	4009-7602	John Eschelman	---	---	H	480	S	Trgh/---
1136	4002-7609	Henry King	---	---	H	453	---	€k/---
1137	4002-7606	Chris Peterscheim	---	---	H	425	---	€l/dol
1138	4001-7606	Jason Eby	---	---	H	420	---	€l/---
1139	4004-7610	Jacob Stolzfuss	---	---	H	385	---	€ez/ls
1140	4005-7609	Bareville Concrete Block Co.	---	---	N	440	---	€ez/ls
1141	4005-7609	---	---	---	H	440	---	€ez/---
1145	4005-7610	Elmer Groff	---	---	H	460	---	€ez/ls
1146	4005-7610	Scott-Powell Creamery Co.	---	---	N	400	---	€ez/ls
1147	4005-7612	Harry Mellinger	---	---	H	400	---	€ez/---
1148	4005-7612	do.	---	---	H	400	---	€ez/ls
1149	4005-7612	do.	---	---	H	400	---	€ez/ls
1150	4000-7608	Kistler and Winger	---	---	N	370	---	Ocs/ls
1151	4000-7608	Park Seed Co.	---	---	N	370	---	Ocs/ls
1152	4000-7607	L. L. Hutchinson	---	---	H	350	---	Ocs/ls
1153	4000-7608	M. E. Cochrane	---	---	H	370	---	Ocs/ls
1154	4003-7558	---	---	---	H	660	W	Xmi/sh
1155	3956-7602	Russell Polk	---	---	H	650	S	Xmi/---
1156	3959-7600	Isaac McGinnis	---	---	H	680	S	€ch/---
1157	3959-7603	John Eschelman	---	---	H	475	---	€k/---
1158	3959-7602	M. R. Evans	---	---	H	500	---	€v/dol
1159	3959-7601	Scott-Powell Creamery Co.	---	---	N	460	---	€v/dol
1160	3959-7601	David Hartzler Ice Plant	---	---	N	463	---	€v/dol
1161	3059-7601	John Kaufman	---	---	H	480	---	€v/dol
1162	4002-7559	Dr. Holstelter	---	---	H	490	---	€l/dol
1163	4001-7557	Baptist Ch.	---	---	H	485	---	€l/dol
1164	4001-7556	Arthur Burt	---	---	H	470	---	€l/dol
1165	4003-7557	Samuel Resser	---	---	H	530	---	€l/dol
1166	4003-7556	E. Mast	---	---	H	570	---	€l/dol
1167	4000-7604	C. P. W. Specialty Co., Inc.	---	---	N	430	----	€v/dol
1168	3959-7608	Harry Metzler	---	---	H	479	---	€v/dol
1169	4000-7606	---	---	---	H	---	---	€v/dol
1170	3952-7608	---	---	---	H	600	S	Xwc/---
1171	3954-7603	Chris Lamparter	---	---	H	700	---	Xwc/sh
1172	3954-7602	---	---	---	H	720	S	Xwc/---
1173	3956-7605	Georgetown Creamery	---	---	N	670	S	Xmi/---
1174	3956-7605	Amos Pickle	---	---	H	670	S	Xmi/---
1175	3955-7604	Robert McClure	---	---	H	640	S	€ah/---
1176	3953-7609	Levi McAllister	---	---	H	510	---	Ocs/ls
1177	3953-7609	do.	---	---	H	---	---	Ocs/ls
1178	3954-7610	Ross Rohrer	---	---	H	420	---	Ocs/ls
1179	4014-7619	Jacob Shirk	---	---	H	500	---	Trns/---
1184	4009-7617	Animal Trap Co.	---	---	N	390	---	Ocs/ls
1185	4009-7614	E. H. Kroft	---	---	H	490	H	Oco/sh
1188	4001-7609	H. C. Smeltz	---	---	H	370	---	Ocs/ls
1189	4001-7610	Charles Weaver	---	---	H	380	---	€l/---
1192	4001-7612	J. P. Brennaman	---	---	H	365	---	Ocs/ls
1194	4001-7616	H. B. Griffith	---	---	H	---	---	Ocs/---
1195	4001-7616	do.	---	---	H	---	V	Ocs/---
1204	3953-7613	Isaac Doulin	---	---	H	880	H	Xwc/---
1205	3953-7613	J. W. Doulin	---	---	H	880	H	Xwc/---
1206	3950-7108	Lancaster Security Co.	---	---	C	590	W	Xpc/sh
1207	3950-7609	Wesley Book	---	---	H	620	H	Xwc/---
1208	3950-7609	Ezra Eschelman	---	---	H	620	S	Xwc/---
1209	3950-7609	---	---	---	---	---	---	Xwc/---
1210	3948-7608	Elmer Collins	---	---	H	540	H	Xpc/sh
1211	3948-7606	---	---	---	H	500	H	Xpc/sh
1212	3946-7608	Ellsworth Carter	---	---	H	420	H	Xpc/---
1213	3946-7608	Presbyterian Ch. Parsonage	---	---	H	420	H	Xpc/---
1214	3946-7611	Westbrook Creamery	---	---	U	660	S	Xpc/---
1215	3946-7610	Earl Platt	---	---	H	390	S	Xpc/---
1216	3943-7612	Fred Carl	---	---	H	390	S	Xs/---
1217	3943-7612	do.	---	---	H	390	S	Xs/---
1218	3943-7612	---	---	---	H	---	---	Xs/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
70	---	6	---	---	---	10	---	---	---	---	Ln-1130
250	---	6	---	50	---	40	---	---	---	---	1131
46	---	6	---	---	---	5	---	---	---	---	1132
80	---	6	---	---	---	10	---	---	---	---	1133
60	---	6	---	---	---	10	---	---	---	---	1134
65	---	6	---	---	---	10	---	---	---	---	1135
75	---	6	---	---	---	25	---	---	---	---	1136
60	---	6	---	---	---	20	---	---	---	---	1137
65	---	6	---	---	---	15	---	---	---	---	1138
35	---	6	---	---	---	2	---	---	---	---	1139
100	---	6	---	---	---	40	---	---	---	---	1140
100	---	6	---	---	---	10	---	---	---	---	1141
60	---	6	---	---	---	5	---	---	---	---	1145
300	---	6	---	50	---	60	---	---	---	---	1146
63	---	6	---	---	---	2	---	---	---	---	1147
50	---	6	---	---	---	20	---	---	---	---	1148
69	---	6	---	---	---	2	---	---	---	---	1149
130	---	6	---	---	---	2	---	---	---	---	1150
385	---	6	---	---	---	2	---	---	---	---	1151
89	---	6	---	---	---	2	---	---	---	---	1152
82	---	6	---	---	---	20	---	---	---	---	1153
70	---	6	---	54	---	8	---	---	---	---	1154
46	---	6	---	---	---	2	---	---	---	---	1155
65	---	6	---	---	---	2	---	---	---	---	1156
99	---	6	---	---	---	7	---	---	---	---	1157
125	---	6	---	---	---	20	---	---	---	---	1158
125	---	6	---	---	---	60	---	---	---	---	1159
49	---	6	---	---	---	25	---	---	---	---	1160
40	---	6	---	---	---	10	---	---	---	---	1161
73	---	6	---	---	---	10	---	---	---	---	1162
75	---	6	---	---	---	2	---	---	---	---	1163
90	---	6	---	---	---	20	---	---	---	---	1164
80	---	6	---	---	---	8	---	---	---	---	1165
60	---	6	---	---	---	4	---	---	---	---	1166
71	---	6	---	---	---	50	---	---	---	---	1167
162	---	6	---	---	---	5	---	---	---	---	1168
80	---	6	---	---	---	40	---	---	---	---	1169
45	---	6	---	---	---	5	---	---	---	---	1170
96	---	6	---	---	---	2	---	---	---	---	1171
94	---	6	---	---	---	3	---	---	---	---	1172
58	---	6	---	---	---	10	---	---	---	---	1173
80	---	6	---	---	---	10	---	---	---	---	1174
137	25	6	---	---	---	8	---	---	---	---	1175
100	---	6	---	---	---	25	---	---	---	---	1176
210	---	6	---	---	---	1	---	---	---	---	1177
169	---	6	---	---	---	20	---	---	---	---	1178
100	---	6	---	---	---	10	---	---	---	---	1179
50	---	6	---	1	---	300	---	---	---	---	1184
72	---	6	---	---	---	20	---	---	---	---	1185
48	---	6	---	---	---	20	---	---	---	---	1188
100	---	6	---	---	---	60	---	---	---	---	1189
105	---	6	---	---	---	20	---	---	---	---	1192
135	---	6	---	---	---	35	---	---	---	---	1194
135	---	6	---	---	---	35	---	---	---	---	1195
72	---	6	---	27	---	5	---	---	---	---	1204
79	---	6	---	F	---	8	---	---	---	---	1205
80	---	6	---	---	---	10	---	---	---	---	1206
94	---	6	---	---	---	5	---	---	---	---	1207
90	60	6	---	---	---	12	---	---	---	---	1208
80	---	6	---	---	---	5	---	---	---	---	1209
100	---	6	---	---	---	10	---	---	---	---	1210
40	---	6	---	---	---	3	---	---	---	---	1211
63	60	6	---	16	---	8	---	---	---	---	1212
100	---	6	---	---	---	8	---	---	---	---	1213
46	---	6	---	---	---	30	---	---	---	---	1214
35	---	48	---	30	---	5	---	---	---	---	1215
69	60	6	---	---	---	10	---	---	---	---	1216
70	60	6	---	---	---	10	---	---	---	---	1217
100	---	6	---	---	---	3	---	---	---	---	1218

TABLE 5.

Well location		Owner	Driller	Date completed	Use	Altitude of land surface (feet)	Topographic setting	Aquifer/ lithology
Number	Lat-Long							
Ln-1219	3944-7609	H. E. Brown	---	---	H	370	S	Xs/---
1220	3944-7608	V. W. Phipps	---	---	H	410	S	Xs/---
1221	3943-7605	Jesse Wood	---	---	H	260	S	Xs/---
1222	3953-7610	Harry Groff	---	---	H	493	---	Ocs/ls
1223	3953-7610	Aaron Groff	---	---	H	493	---	Ocs/ls
1225	4010-7627	Old Line Creamery	---	---	N	590	H	Oco/---
1226	4008-7625	Frank Long	---	---	H	500	S	Oco/---
1227	4002-7626	Bor. of Mountville	---	---	U	---	---	€ah/---
1228	4002-7626	do.	---	---	U	---	---	€ah/---
1229	4002-7626	do.	---	---	P	---	---	€ah/---
1230	4002-7626	do.	---	---	P	---	---	€ah/---
1231	4002-7626	do.	---	---	U	---	---	€ah/---
1232	4002-7626	do.	---	---	P	---	---	€ah/---
1233	4002-7626	do.	---	---	P	---	---	€ah/---
1234	4002-7626	do.	---	---	P	---	---	€ah/---
1235	4003-7623	Daniel Brandt	---	---	H	550	H	€ah/---
1249	3957-7626	R. S. Kline	---	---	H	530	S	Xwc/sh
1253	3959-7627	A. F. Stauffer	---	---	H	280	---	Ocs/ls
1254	3959-7627	do.	---	---	H	280	---	Ocs/ls
1255	3952-7621	J. W. Miller	---	---	H	600	S	Xwc/---
1256	3952-7621	do.	---	---	H	600	S	Xwc/---
1257	3952-7621	Howard Campbell	---	---	H	600	S	Xwc/---
1258	3953-7619	Enos Hill	---	---	H	700	S	Xwc/---
1259	3953-7619	---	---	---	H	---	S	Xwc/---
1260	3953-7618	J. H. Steinman	---	---	H	680	S	Xwc/---
1261	3952-7616	C. E. Wentz	---	---	H	890	S	Xwc/---
1262	3950-7619	Benjamin Douts	---	---	H	500	S	Xwc/---
1263	3950-7616	do.	---	---	H	500	S	Xwc/---
1264	3955-7618	---	---	---	---	420	---	Ocs/ls
1265	4006-7630	Magnesia Works	---	---	H	380	---	Ocs/ls
1266	4007-7631	Bachman Chocolate Co.	---	---	N	463	---	Ocs/ls
1267	4007-7631	do.	---	---	N	463	---	Ocs/ls
1268	4007-7631	Florin Water Co.	---	---	N	480	---	Ocs/ls
1269	4007-7631	do.	---	---	N	480	---	Ocs/ls
1270	4008-7634	Rheems Waterworks	---	---	---	445	---	Ocs/ls
1271	4009-7636	Masonic Home	---	---	H	450	V	Trns/---
1272	4009-7636	Kline Chocolate Co.	---	---	N	450	V	Trns/---
1273	4009-7635	Hershey Chocolate Co.	---	---	N	470	V	Trns/---
1274	4005-7639	---	---	---	---	400	S	Trns/---

(CONTINUED)

Total depth below land surface (feet)	Casing		Depth(s) to water-bearing zone(s) (feet)	Static water level		Reported yield (gpm)	Specific capacity (gpm/ft)	Hardness (gpg)	Specific conductance (micromhos at 25°C)	pH	Well number
	Depth (feet)	Diameter (inches)		Depth below land surface (feet)	Date measured (mo/yr)						
40	---	6	---	---	---	5	---	---	---	---	Ln-1219
70	---	6	---	---	---	5	---	---	---	---	1220
60	---	6	---	---	---	3	---	---	---	---	1221
120	---	6	---	---	---	8	---	---	---	---	1222
172	---	6	---	---	---	10	---	---	---	---	1223
500	---	6	---	---	---	20	---	---	---	---	1225
88	---	6	---	---	---	20	---	---	---	---	1226
209	20	8	---	18	---	2	---	---	---	---	1227
360	---	8	---	---	---	10	---	---	---	---	1228
368	---	8	---	---	---	4	---	---	---	---	1229
341	---	8	---	---	---	5	---	---	---	---	1230
140	---	8	---	---	---	---	---	---	---	---	1231
278	---	8	---	---	---	8	---	---	---	---	1232
277	---	8	---	---	---	2	---	---	---	---	1233
138	---	8	---	---	---	8	---	---	---	---	1234
146	---	6	---	---	---	20	---	---	---	---	1235
85	---	6	---	---	---	20	---	---	---	---	1249
71	---	6	---	---	---	20	---	---	---	---	1253
78	---	6	---	---	---	20	---	---	---	---	1254
204	---	6	---	45	---	5	---	---	---	---	1255
70	---	---	---	---	---	2	---	---	---	---	1256
147	---	6	---	---	---	8	---	---	---	---	1257
100	24	6	---	---	---	12	---	---	---	---	1258
100	---	6	---	---	---	5	---	---	---	---	1259
110	---	6	---	---	---	12	---	---	---	---	1260
55	---	6	---	---	---	12	---	---	---	---	1261
104	---	6	---	---	---	0.5	---	---	---	---	1262
63	---	6	---	---	---	6	---	---	---	---	1263
100	---	6	---	---	---	5	---	---	---	---	1264
150	---	6	---	---	---	60	---	---	---	---	1265
515	---	6	---	---	---	30	---	---	---	---	1266
350	---	6	---	---	---	45	---	---	---	---	1267
600	---	8	---	---	---	5	---	---	---	---	1268
237	---	8	---	---	---	65	---	---	---	---	1269
200	---	6	---	---	---	15	---	---	---	---	1270
306	---	10	---	---	---	70	---	---	---	---	1271
380	---	6	---	---	---	60	---	---	---	---	1272
350	---	8	---	25	---	100	---	---	---	---	1273
80	---	6	---	25	---	1	---	---	---	---	1274

TABLE 6. RECORD OF SPRINGS

Spring number	Latitude-Longitude	Owner	Use	Aquifer
Ln-Sp 49	39°59'-75°59'	Christiana Gravity Water Co.	Public supply	Gneiss
Sp 50	39°57'-76°07'	Strasburg Borough	Public supply	Gneiss
Sp 51	39°57'-76°07'	Strasburg Borough	Public supply	Gneiss
Sp 52	39°53'-76°09'	Quarryville Borough	Public supply	Wissahickon Formation
Sp 54	40°02'-76°26'	Mountville Borough	Public supply	Harpers Formation

TABLE 7. CHEMICAL ANALYSES OF GROUND WATER

(Results in milligrams per liter except as indicated)

Aquifer: Trgh, Gettysburg-Hammer Creek Formation; Trns, New Oxford-Stockton Formation; Ocs, Conestoga Formation; Ob, Beekmantown Group; €c, Conococheague Group; €ez, Elbrook-Zooks Corner Formation; €l, Ledger Formation; €k, Kinzers Formation; €v, Vintage Formation; €ah, Antietam and Harpers Formations; Xpc, Peters Creek Schist; Xwc, Wissahickon Formation, Xs, Serpentinite; Xmi, Metamorphic and igneous rocks, undifferentiated.

Well number	Aquifer	Date of sampling	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Dissolved solids		Hardness as $CaCO_3$		Specific conductance (micromhos/cm at 25°C)
														Residue at 180°C	Sum	Calcium, magnesium	Non-carbonate	
Ln- 5	Ob	10-23-65	8.7	.11	.05	83	13	6.0	1.5	251	16	13	34	301	299	260	59	515
5	Ob	5-11-65	8.2	.03	.00	86	12	9.9	1.9	245	23	22	38	316	322	265	63	543
6	Ob	4-18-55	9.9	.13	.00	78	9.8	2.6	1.8	236	19	7.3	25	280	270	235	42	---
6	Ob	5-11-65	8.7	.00	.00	85	12	6.0	1.7	249	24	14	34	310	308	260	60	523
58	Trns	2-27-61	21	.05	.03	27	5.8	10	.8	62	8.2	16	42	184	161	92	41	251
85	Trns	3-04-63	19	.18	.09	20	5.4	9.6	1.0	52	14	9.4	27	149	131	72	30	213
88	Trns	6-04-63	16	.12	.12	48	4.4	11	1.2	152	22	14	1.6	192	193	138	14	331
97	Trns	5-01-64	5.8	.00	.00	61	18	.8	.0	200	22	8.6	42	263	257	226	62	441
114	Trns	1-31-63	16	.19	.08	9.6	4.9	9.0	1.5	19	21	7.4	18	107	97	44	29	156
125	Trns	5-17-63	17	.08	.00	52	6.0	15	.8	140	45	11	14	238	230	154	40	358
151	Trns	7-19-63	21	.14	.03	30	7.8	13	1.1	130	24	6.0	2.0	166	169	107	1	269
222	Trns	5-05-64	7.3	.00	.01	84	7.4	3.5	.0	215	26	9.8	44	316	288	240	64	478
224	Trns	5-13-64	11	.06	.00	27	7.3	4.0	1.2	94	18	2.9	12	126	130	98	21	219
227	Trns	6-07-63	17	.15	.00	42	8.5	7.2	1.5	132	12	9.3	32	208	194	140	32	321
242	Trns	6-25-63	16	.19	.01	6.0	2.7	3.9	1.4	36	4.0	2.1	1.6	63	56	26	0	75
264	Trns	5-01-64	12	.04	.02	73	11	16	.0	198	61	15	16	317	302	227	65	508
265	Trns	2-27-61	26	.07	.03	60	6.2	14	1.3	154	67	7.5	7.2	270	265	175	49	399
274	Trns	10-16-63	8.2	.06	.01	67	32	5.0	1.6	296	46	13	9.8	330	329	300	58	570
274	Trns	5-14-64	18	.09	.00	46	5.8	5.8	.2	142	8.4	5.5	26	184	186	139	23	305
301	Trns	5-13-64	28	.25	.01	90	12	15	.0	268	31	23	29	371	360	274	55	584
311	Trns	5-18-64	15	.04	.00	32	6.6	9.4	1.2	116	10	5.3	21	159	158	107	12	250
341	Trns	5-16-64	18	.04	.00	19	3.9	6.9	.2	74	10	3.2	6.1	106	104	64	3	165
342	Trns	5-23-63	12	.04	.00	20	12	15	4.0	18	37	18	73	222	200	100	85	317
374	Trns	3-01-61	16	.12	.07	12	6.2	8.3	2.2	36	26	5.5	15	118	109	56	26	166
392	Trns	5-01-64	15	.13	.00	38	9.7	11	2.5	100	32	8.4	39	210	205	135	53	331
405	Trns	5-15-64	16	.04	.01	50	9.4	15	.0	123	49	17	28	253	245	164	63	402
442	Trns	5-24-63	16	.08	.00	56	8.4	4.5	.2	135	23	9.4	38	242	222	174	64	367

TABLE 7. (CONTINUED)

Well number	Aquifer	Date of sampling	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Dissolved solids		Hardness as $CaCO_3$		Specific conductance (micromhos/cm at 25°C)
														Residue at 180°C	Sum	Calcium, magnesium	Non-carbonate	
Ln-449	Tns	5-04-64	13	.39	.24	45	13	8.0	.5	189	14	3.8	15	211	205	166	11	347
464	Tns	3-26-64	5.2	.03	.01	48	12	2.6	.0	152	20	7.2	29	200	199	170	45	349
474	Tns	3-24-64	15	.05	.00	43	7.3	12	1.5	123	20	26	9.2	205	195	138	37	333
492	Tns	6-06-62	5.9	.20	.03	56	8.1	15	[illegible]	60	39	32	84	303	270	173	124	449
511	Tgh	3-01-61	20	.10	.00	23	7.1	10		78	13	10	23	150	147	87	23	223
514	Ck	4-04-63	7.7	.05	.00	58	24	5.6	1.8	236	28	11	22	298	271	241	53	520
521	Ocs	6-20-63	12	.13	.00	75	11	3.4	3.0	210	39	9.2	18	277	274	232	60	467
521	Ocs	5-13-65	12	.00	.00	80	11	4.0	3.0	231	32	12	20	290	279	244	55	481
527	Ocs	10-18-63	10	.14	.03	133	21	16	2.2	396	84	20	17	505	495	420	98	810
528	Ocs	10-17-63	14	.06	.03	142	18	32	4.3	347	93	44	62	586	577	430	148	941
535	Ocs	10-24-63	8.2	.23	.03	164	54	26	34	351	167	59	212	919	892	630	346	1,380
542	Ocs	6-19-63	13	.16	.00	136	22	17	6.0	250	77	46	142	601	580	430	229	926
544	Ocs	6-20-63	13	.18	.00	128	17	7.8	1.5	286	85	17	59	494	470	387	157	758
545	Ocs	5-14-65	12	.05	.00	107	26	27	2.7	191	89	70	60	501	488	375	218	793
558	Ocs	6-19-63	12	.10	.00	91	12	5.6	1.5	157	52	24	95	398	371	274	146	588
559	Ocs	5-10-65	12	.08	.00	128	17	26	19	338	44	62	92	608	567	390	113	944
561	Ocs	5-14-65	9.8	.01	.00	68	7.9	5.5	1.9	187	12	11	38	260	246	202	49	416
567	Ocs	5-06-65	11	.02	.00	96	9.4	4.5	1.0	224	40	14	37	331	323	278	95	528
571	Ocs	10-17-63	11	.08	.00	118	29	18	3.2	376	77	29	11	496	482	415	109	804
582	Ocs	10-16-63	9.6	.04	.01	94	16	29	2.4	224	32	62	73	459	428	300	117	741
582	Ocs	4-23-64	8.5	.02	.00	94	16	14	1.5	213	40	36	85	425	400	301	127	688
584	Ocs	10-16-63	10	1.20	.00	117	19	9.1	2.4	253	78	26	78	481	464	370	163	742
601	Cl	4-18-63	8.2	.07	.00	66	39	18	1.0	298	32	34	48	394	393	321	88	732
626	Cc	4-03-63	9.6	.05	.03	60	25	2.4	1.5	243	26	6.4	26	280	277	257	55	525
643	Cl	3-25-63	7.8	.00	.00	45	22	5.4	1.5	193	11	16	22	253	226	204	48	410
643	Cl	5-13-65	8.8	.08	.00	59	32	44	2.8	233	14	114	11	408	401	280	88	760
675	Cez	10-23-63	6.3	.09	.11	95	51	24	5.0	408	98	36	28	554	545	448	118	925
675	Cez	4-15-64	7.9	.04	.00	94	49	22	7.0	402	95	35	36	556	544	436	111	923
676	Cez	10-15-63	7.9	.25	.11	72	40	6.2	2.0	311	64	19	.5	363	391	344	90	650
679	Cez	10-24-63	9.3	.10	.03	60	35	2.6	2.1	331	23	4.2	.3	305	300	294	23	523
679	Cez	4-23-64	8.8	.12	.00	59	33	3.5	2.0	330	25	3.3	1.2	299	299	283	14	545
723	Cez	10-15-63	8.5	.10	.01	83	54	19	4.1	403	50	27	39	476	483	430	100	815
724	Cl	10-16-63	8.2	.06	.01	67	32	5.0	1.6	296	46	13	9.8	330	328	300	58	570
725	Cl	10-16-63	7.1	.07	.13	62	37	4.3	3.4	294	22	9.8	57	342	348	306	69	582

760	€c	5-13-65	7.9	.00	.00	69	36	4.8	4.5	304	49	11	29	363	361	320	71	607
784	€v	4-03-63	8.2	.27	.02	58	39	1.4	6.0	291	28	4.6	26	325	315	293	73	545
803	€ez	5-18-65	9.0	.01	.00	114	72	36	100	594	77	102	127	1,020	930	580	94	1,510
806	€l	10-09-63	7.3	.09	.13	48	22	3.0	1.0	189	6	7.2	39	234	227	212	55	425
806	€l	4-16-64	6.6	.02	.00	42	21	3.0	4.0	188	7.6	7.4	39	240	223	192	38	413
808	€l	10-09-63	8.2	.08	.11	72	39	4.0	2.0	279	51	16	46	379	376	340	114	675
808	€l	4-15-64	7.6	.02	.00	72	39	6.7	7.0	306	61	18	35	412	397	340	90	670
824	Ob	5-12-65	7.9	.01	.01	77	9.7	4.9	1.5	224	18	15	27	275	272	232	49	466
830	Ob	5-12-65	11	.05	.00	118	15	13	2.3	359	14	17	56	432	424	355	62	695
833	Ob	5-10-65	8.2	.00	.00	96	12	3.8	2.0	257	20	9.2	34	305	312	290	79	513
842	€c	4-17-63	7.7	.03	.00	87	33	5.6	14	338	61	14	14	424	404	352	80	742
842	€c	5-17-65	9.2	.11	.00	96	33	7.2	15	368	67	20	25	---	454	376	74	840
865	€c	4-18-63	11	.13	.02	79	37	12	7.0	321	80	17	13	409	414	343	91	732
865	€c	5-18-65	11	.02	.00	80	38	9.8	6.1	346	75	17	8.0	405	416	360	73	689
926	€ez	10-03-63	8.8	.07	.06	80	45	12	32	309	60	33	102	568	525	384	134	900
926	€ez	4-16-64	7.3	.02	.00	59	32	7.0	24	245	40	24	69	414	383	279	79	658
938	Ob	4-16-63	8.5	.14	.00	83	33	22	6.0	306	21	34	100	465	458	343	97	766
942	Ob	4-17-63	19	.23	.21	83	15	11	2.2	179	105	17	3.8	391	345	269	126	566
954	Ob	10-21-63	15	.24	.08	101	23	6.5	2.5	354	56	8.0	.2	399	387	348	59	660
954	Ob	4-17-64	14	.32	.00	96	24	8.0	2.0	359	57	8.4	.2	395	387	338	45	665
973	Ob	4-04-63	8.5	.68	.03	84	11	2.9	1.5	236	21	9.3	33	282	288	248	66	518
973	Ob	5-17-65	8.5	.09	.00	82	13	4.5	2.2	247	19	9.6	34	288	295	256	56	485
979	Ob	6-20-63	8.5	.16	.00	80	16	8.4	1.0	256	7.4	14	46	309	308	266	58	536
979	Ob	5-06-65	7.9	.01	.01	85	18	8.5	1.0	252	8	15	56	323	324	284	80	549
987	Ob	5-13-65	9.2	.00	.00	88	18	5.0	4.0	269	16	13	50	332	336	292	73	565
1028	Ob	4-12-63	10	.08	.04	88	13	39	2.5	227	24	70	39	424	397	269	86	713
1038	Ob	10-03-63	7.7	.48	.43	107	12	4.0	4.2	338	22	9.8	28	360	362	316	47	655
1038	Ob	4-16-64	5.8	.02	.00	101	9.2	3.5	7.0	268	25	12	58	379	354	290	70	612
1050	Ob	5-14-65	7.7	.00	.00	93	17	4.8	2.0	271	35	11	39	---	343	300	80	590
1057	Ob	5-05-65	7.9	.02	.00	98	22	4.5	2.0	288	44	16	47	---	383	334	99	645
1066	Ob	10-21-63	7.9	.83	.04	69	18	3.8	1.5	242	9	8.0	37	270	274	244	49	500
1066	Ob	4-17-64	7.0	.02	.00	72	19	4.0	2.0	253	21	10	38	303	298	258	50	523
1088	Ob	5-11-65	10	.02	.02	122	12	9.3	14	320	29	28	78	499	460	355	92	763
1100	Ob	5-18-65	8.5	.08	.01	82	16	5.7	2.2	247	40	12	36	325	324	272	68	537
1101	Ob	5-11-65	8.7	.02	.00	92	12	7.2	2.5	255	32	16	36	335	332	280	70	720
1105	Ob	10-23-63	11	1.78	.07	75	29	4.5	1.0	276	54	13	21	370	346	308	81	680
1105	Ob	4-23-64	10	.07	.00	74	31	6.0	2.0	273	55	19	30	389	362	312	92	628
1114	Ocs	5-27-64	6.5	.10	.00	85	9.4	3.0	2.0	182	47	17	53	357	313	251	102	515
1125	€ch	9-15-27	4.1	.53	---	2.0	1.4	.6	.6	24	1.6	1.5	.0	27	24	19	0	---
1128	€ez	10-01-25	12	.12	---	90	36	24	3.1	337	66	56	.80	483	454	373	97	---
1131	€ez	9-15-27	13	.15	---	66	32	2.0	3.2	259	31	12	47	332	334	296	84	---
1188	Ocs	9-24-25	10	.15	---	67	26	7.9		265	32	19	5.6	311	298	274	57	---
1190	Ocs	9-24-25	15	.09	---	107	39	2.0		388	72	58	1.7	547	486	427	109	---
1192	Ocs	9-24-25	7.9	.10	---	72	9.4	11	7.1	217	30	22	1.0	290	267	219	41	---
1204	Xwc	9-22-25	4.4	4.10	---	2.5	2.4	13		30	4.0	7.0	7.7	50	60	16	0	---
1212	Xpc	9-22-25	11	1.90	---	4.6	1.7	6.4		24	4.2	4.0	6.0	55	52	18	0	---
1215	Xpc	9-22-25	14	.94	---	35	24	44		9.8	12	105	175	406	415	186	178	---
1219	Xs	9-22-25	13	1.20	---	9.0	5.1	6.1		18	3.0	12	28	87	86	43	28	---
1220	Xs	9-15-27	9.4	.60	---	30	15	24	2.1	15	6.4	72	89	288	264	136	124	---

TABLE 7. (CONTINUED)

Well number	Aquifer	Date of sampling	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Dissolved solids		Hardness as $CaCO_3$		Specific conductance (micromhos/cm at 25°C)
														Residue at 180°C	Sum	Calcium, magnesium	Non-carbonate	
Ln-1227	€ah	9-23-25	18	1.50	---	10	8.1	5.3		56	11	7.0	Trace	83	89	58	12	---
1238	€c	9-23-25	13	.19	---	96	40	24		357	81	40	22	541	492	404	112	---
1244	€c	9-21-25	14	.24	---	118	52	76		331	56	127	216	889	822	508	237	---
1250	Ocs	9-23-25	11	.07	---	63	6.9	7.2		163	5.4	30	33	243	237	186	0	---
1261	Xwc	9-22-25	4.1	.38	---	6.9	7.9	21		17	5.4	30	33	121	117	50	36	---
1263	Xwc	9-22-25	9.7	1.60	---	15	5.7	6.4		28	6.2	10	35	104	103	61	38	---
Ln-Sp 49	Xmi	9-24-25	7.4	.10	---	---	---	3.7	1.5	7.3	2.6	4.0	4.2	34	25	9	3	---
Sp 50	Xmi	9-23-25	5.0	.07	---	1.7	1.8	2.6	1.0	11	2.1	5.0	.27	19	25	12	3	---
Sp 51	Xmi	9-24-25	4.2	.07	---	2.6	2.5	3.0		8.5	4.7	6.0	3.9	27	32	17	10	---
Sp 52	Xwc	9-23-25	11	.28	---	22	3.5	3.9		57	15	6.0	4.5	100	94	69	23	---
Sp 54	€ah	9-23-25	6.5	5.10	---	5.5	4.8	8.9		7.3	5.2	13	21	80	74	33	27	---