STATE OF NEW JERSEY

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

DIVISION OF WATER POLICY AND SUPPLY

SUMMARY OF GROUND-WATER RESOURCES OF ATLANTIC COUNTY, NEW JERSEY WITH SPECIAL REFERENCE TO PUBLIC WATER SUPPLIES

WATER RESOURCES CIRCULAR NO. 18

Prepared in cooperation with

United States Department of the Interior

Geological Survey

1968

SUMMARY OF GROUND-WATER RESOURCES OF ATLANTIC COUNTY, NEW JERSEY

With Special Reference to Public Water Supplies

By

Glenn A. Clark
Harold Meisler
Edward C. Rhodehamel
Harold E. Gill

U. S. Geological Survey

Prepared by the U. S. Geological Survey in cooperation with the State of New Jersey

STATE OF NEW JERSEY

Department of Conservation
and Economic Development

Robert A. Roe, *Commissioner*

Division of Water Policy and Supply

George R. Shanklin, Director and Chief Engineer

Water Policy and Supply Council

Mrs. Lillian M. Schwartz, Chairman ..... Highland Park
William G. Bank ..... Colts Neck
I. Ralph Fox ..... Rumson
Frederick J. Kaiser ..... Passaic
Herman A. Klenner ..... Rahway
Mrs. Hermia Lechner ..... Clinton
J. Duncan Pitney ..... Mendham
August C. Schultes, Sr. ..... Woodbury
David I. Stepacoff ..... Perth Amboy

Mrs. Martha H. Brenna, Secretary

CONTENTS

	Page
Abstract	1
Introduction	3
Purpose and scope	3
Location and general features	3
Previous ground-water investigations	5
Acknowledgments	5
Geology and ground-water	6
General features of the Coastal Plain	6
Kirkwood Formation	9
Water-bearing properties	9
Cohansey Formation	11
Water-bearing properties	11
Pleistocene and Recent Series	11
Water-bearing properties	12
Quality of water	13
Public Water Supplies	15
Hammonton Water Department	15
Egg Harbor City Water Department	15
Atlantic City Water Department	15
Atlantic County Water Company	15
Brigantine Water Department	18
Margate City Water Department	18
Ventnor City Water Department	18
Longport Water Department	18
Hamilton Township Water Department	18
Seaview Water Company	18
References	19
Appendix	21
Well-numbering system	23

ILLUSTRATIONS

Page

Figure 1. Map of New Jersey showing the location of Atlantic County 4

Figure 2. Map showing the generalized piezometric surface of the Kirkwood Formation before 1900 in southern New Jersey 8

Figure 3. Map showing the generalized piezometric surface of the Kirkwood Formation in 1963 in southern New Jersey 10

Figure 4. Map showing locations of selected wells in Atlantic County, New Jersey ..... in pocket

Figure 5. Map showing the method of numbering wells according to the New Jersey grid system 24

TABLES

Page

Table 1. Uppermost part of the stratigraphic section of the Coastal Plain in Atlantic County, New Jersey 7

Table 2. Summary of chemical quality of ground water 14

Table 3. Use of ground water for public supplies in Atlantic County (1955-1964) 16

Table 4. Monthly use of ground water for public supplies in Atlantic County during 1964 17

Table 5. Records of selected wells in Atlantic County 25

Table 6. Chemical analyses of water from wells in Atlantic County 35

Table 7. Logs of selected wells in Atlantic County 37

ABSTRACT

Atlantic County is located in southeastern New Jersey in the Coastal Plain physiographic province. The county is underlain by unconsolidated sediments consisting of gravel, sand, silt, and clay of Quaternary, Tertiary, and Cretaceous age.

The principal fresh-water aquifers are in the Kirkwood Formation of Miocene age and the Cohansey Sand of Miocene(?) and Pliocene(?) age. In Atlantic County, aquifers below the Kirkwood generally contain brackish or saline water.

The Kirkwood Formation is tapped primarily by industrial and public-supply wells. Reported yields of such wells range from 250 to 1,200 gpm (gallons per minute). The median yield is 700 gpm. Specific capacities of these wells range from 2.5 to 34 gpm per foot of drawdown and the median is 15 gpm per foot drawdown.

The Cohansey Sand is tapped widely by wells for domestic and poultry-farm use as well as for industrial use, public supply, air conditioning, and irrigation. Reported yields of industrial, public-supply, and air-conditioning wells range from 30 to 1,440 gpm and the median yield is 720 gpm. Specific capacities of these wells range from 2.4 to 43 gpm per foot drawdown and the median is 22 gpm per foot drawdown.

Water from both the Kirkwood and Cohansey is generally low in dissolved solids and in total hardness. The pH of water from the Cohansey Sand is generally acidic. In the Kirkwood Formation, the pH of the water is generally alkaline along the coast and acidic in the northern part of the county. Water from some Cohansey wells along the coast is very high in dissolved solids, chlorides, and other constituents, indicating salt-water encroachment.

Ten public water-supply systems in Atlantic County pumped an average of 16.2 mgd (million gallons per day) of ground water in 1964. Because of a summer influx of tourists, water use is considerably higher during the summer months. In 1964, pumpage during July, the peak month, was more than twice that during February, the lowest month.

INTRODUCTION

Purpose and Scope

The study of the ground-water resources of Atlantic County is part of a program of studies of the water resources of New Jersey conducted by the U. S. Geological Survey in cooperation with the New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply. The purpose and scope of these studies are to assemble the available data on the geologic and hydrologic factors relating to the occurrence, movement, availability, and chemical quality of ground water in New Jersey; to evaluate and interpret the data; and to make the results of the investigation available to the public. This investigation was made under the general supervision of Allen Sinnott, former District Geologist.

This report presents a general summary of the ground-water geology and the chemical quality of ground water in Atlantic County. It includes selected well data (table 5), chemical analyses of ground water (table 6), well logs (table 7), and a comprehensive tabulation of ground-water pumpage for public supply in Atlantic County (tables 3 and 4). Locations of wells used in this report are shown in figure 5.

Location and General Features

Atlantic County is in the southeastern part of New Jersey (see fig. 1). It is bounded on the north by Ocean and Burlington Counties, on the west by Camden and Gloucester Counties, on the south by Cumberland and Cape May Counties, and on the east by the Atlantic Ocean. Atlantic County has a total area of 610 square miles, of which 44.4 square miles are water surface.

The county lies in the Coastal Plain physiographic province which in New Jersey extends eastward and southeastward from the Fall Line. The Fall Line, which forms the boundary between the Coastal Plain and the Piedmont Province, extends roughly northeastward from Wilmington, Delaware through Philadelphia, Pennsylvania and Trenton, New Jersey to Staten Island, New York.

The surface of Atlantic County is that of a low-lying dissected plain sloping toward the coast. Altitudes of this plain range from 152 feet above mean sea level north of Hammonton (fig. 4) to mean sea level along the coast. Near the coast, the plain slopes about five feet per mile and it is continuous with the eastward slope of the submerged Atlantic Plain. Inland, the slope increases several fold. The Coastal Plain has a gently undulating surface on which sluggish streams flow in shallow, relatively broad valleys. Owing to a major rise in sea level during the last 11,000 years, the lower reaches of major streams are drowned and they now form prominent bays and estuaries such as Great Egg Harbor and Great Bay in Atlantic County.

The climate of Atlantic County is mild and humid. The average annual temperature for the period 1931 to 1960 was 54.4°F at Atlantic City and 54.7°F at Hammonton. The average monthly temperature ranged from a low of 35.7°F in February to a high of 74.4°F in July at Atlantic City. Inland at Hammonton, temperature extremes are greater, ranging from a low of 34.2°F in January to a high of 76.1°F in July. Average annual precipitation for the period 1931 to 1960 was 43.78 inches at Atlantic City and 47.68 inches at Hammonton.

According to the U. S. Bureau of Census, the population of Atlantic County increased from 132,399 in 1950 to 160,880 in 1960, a rise of 21.5 percent. In 1960, approximately 73 percent of the population was located east of the Garden State Parkway. (See fig. 4).

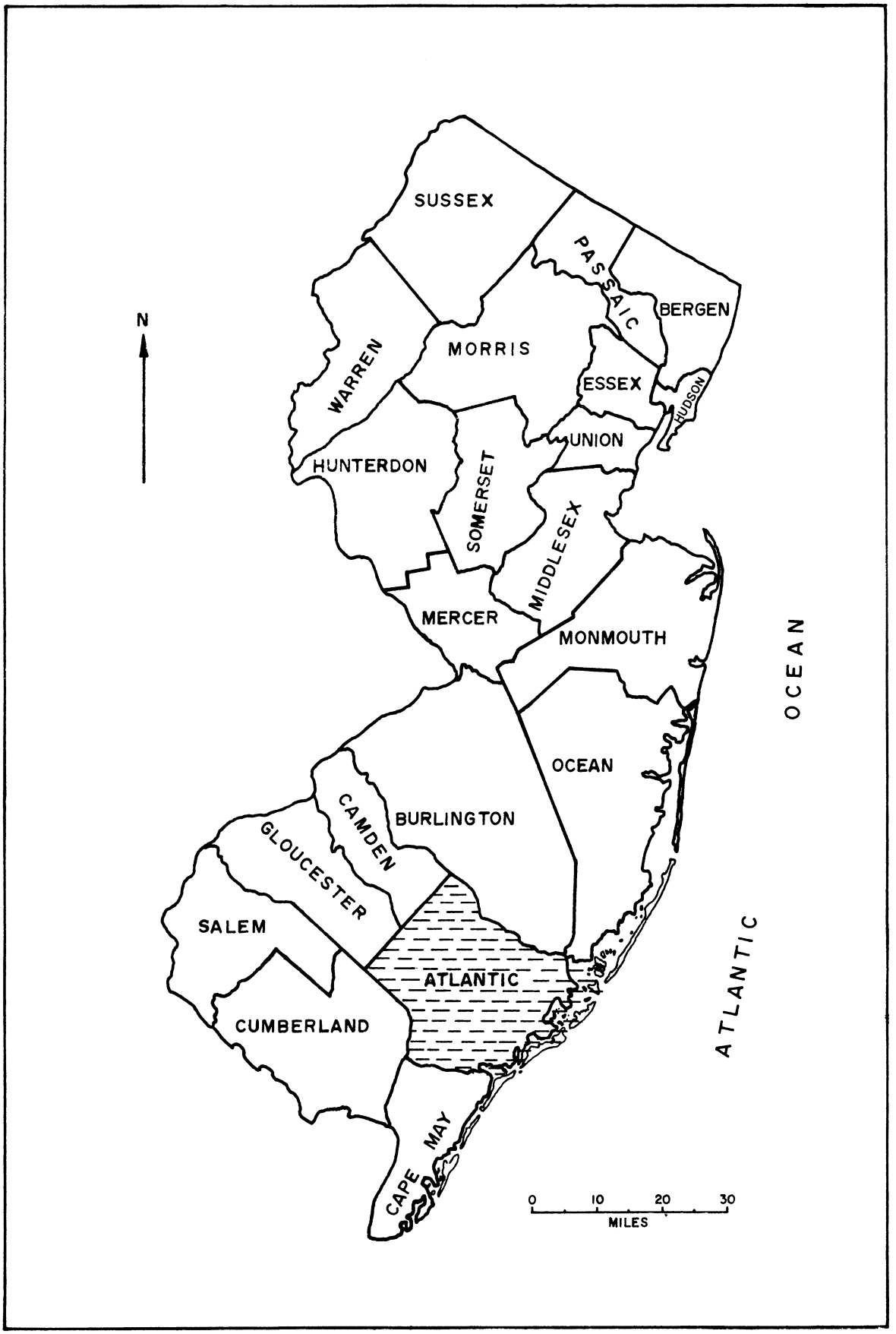

Figure 1.—Map of New Jersey showing the location of Atlantic County.

Although there is some industrial growth in the county, the chief industries are hotels, entertainment, and commercial fishing. The principal farm products are fruits, berries, and poultry.

Previous Ground-Water Investigations

Reports on artesian wells in New Jersey by Woolman (1890-1902) contain much of the earliest subsurface geologic and hydrologic information pertaining to Atlantic County. Woolman correlated water-bearing zones penetrated by wells in the Atlantic Coastal Plain of New Jersey and Delaware.

A report by Thompson (1928) on the ground-water supplies of the Atlantic City area, New Jersey, outlined the hydrology of the various aquifers and discussed the problem of potential salt-water encroachment in the Atlantic City 800-foot sand of the Kirkwood Formation. In 1936, a supplementary report was published on the ground-water supplies of the Atlantic City region (Barksdale, Sundstrom, and Brunstein, 1936). This report discussed the extent of salt-water encroachment in the shallow aquifers underlying the salt-water tidal marshes and the extent of pumpage from the deeper aquifers.

Acknowledgments

Cooperation by the New Jersey Division of Water Policy and Supply, and the office of the New Jersey State Geologist, in allowing access to their files, is greatly appreciated. The authors wish also to thank the many water departments and water companies, industrial and private well owners, and well drillers who supplied information and water samples.

GEOLOGY AND GROUND-WATER

General Features of the Coastal Plain

The Atlantic Coastal Plain in New Jersey is composed of a southeastward thickening wedge of essentially unconsolidated quartz gravel, sand, and silt, and clay of Cretaceous and Tertiary age overlain by a discontinuous veneer of fluviatile sand, gravel, silt, and some clay of Quaternary and Recent age. Unconformably below the Coastal-Plain sediments are dense, relatively impermeable metamorphic rocks of Precambrian to early Paleozoic(?) age that form the basement complex of the Atlantic Coastal Plain.

The Coastal-Plain sediments range in thickness from 0 feet at the Fall Line along the Delaware River to as much as 6,500 feet in Cape May County in southeastern New Jersey. In Atlantic County, their thickness probably ranges from about 2,000 to 5,000 feet. The various formations composing the wedge dip southeastward at from about 11 to 100 or more feet per mile. The deepest and therefore oldest sediments have the steepest dips and the youngest sediments have the gentlest dips.

Ground water is the subsurface water in that part of the zone of saturation in which the interconnected pores, crevices and other openings in the rock are filled with water under pressure equal to or greater than atmospheric. Rocks or sediments that are capable of yielding usable supplies of ground water to wells or springs are called aquifers. The aquifers in Atlantic County are the sands and gravels of the Coastal-Plain formations. The interstitial openings, or pore spaces, in sand and gravel are sufficiently large and interconnected to readily transmit water; thus these sediments are said to be permeable. Although clay and silt contain considerable amounts of interstitial waters, their pore spaces are small and these sediments do not readily yield water to wells. Clays and silts are therefore not considered aquifers and are said to be relatively impermeable.

The principal aquifers in Atlantic County are the beds of sand in the Kirkwood Formation and the beds of sand and gravel in the Cohansey Sand. Sand beds below the Kirkwood in Atlantic County generally contain brackish or saline water, which is unsuitable for present-day uses. In the inland parts of the county, some units below the Kirkwood may contain fresh water and should be considered for future water supplies. However, as specific hydrologic information in Atlantic County is not available on these older sediments, they are not discussed further. The sequence of Coastal-Plain formations in New Jersey from the Kirkwood Formation upward is given in table 1.

Ground water may occur under either water-table or artesian conditions. Under water-table conditions, ground water is not confined and the upper surface of the zone of saturation is called the water table. Water-table conditions occur in the Cohansey Sand and in the Pleistocene and Recent deposits throughout most of their extent in Atlantic County. Where ground water is confined under hydrostatic pressure within permeable sediments by relatively impermeable overlying and underlying materials, the water occurs under artesian conditions. When an artesian aquifer is penetrated by a well, the water will rise in the well above the upper surface of the aquifer to a level called the piezometric surface. Artesian conditions occur everywhere in Atlantic County in the Kirkwood Formation and in parts of the Cohansey Sand where the latter is locally overlain by impermeable clays of Pleistocene age.

Precipitation is the source of all ground water in Atlantic County. The precipitation infiltrates downward through the soil and other surficial materials to the water table. Within the zone of saturation, ground water moves through the pore spaces in the sediments from areas of recharge (where hydraulic potentials are high) to points of discharge (where hydraulic potentials are low).

Table 1.—Uppermost part of the stratigraphic section of the Coastal Plain in Atlantic County, New Jersey

System	Series	Formation	Lithology	Thickness (in feet)	Water-bearing properties
Quaternary	Recent	Undifferentiated beach and dune deposits, tidal marsh and swamp deposits, and alluvium.	Mud, clay, silt, sand, gravel, and peat.	0- 40	No drilled wells tap this unit.
		Unconformity			
	Pleistocene	Cape May Formation	Clay, silt, sand, and gravel.	0-110	Yield of three wells, 30, 400, and 525 gpm.
		Unconformity			
		Bridgeton Formation	Silt, sand, and gravel.	0- 30	No drilled wells reported to tap this unit.
		Unconformity			
Tertiary	Pliocene(?) and Miocene(?)	Cohansey Sand	Sand with gravel and clay.	70-211	Yields 30-1,440 gpm to industrial and public-supply wells. Median yield 720 gpm.
		Unconformity			
	Miocene	Kirkwood Formation	Sand, silt, and clay.	100-700	Yields 250-1,200 gpm to industrial and public-supply wells. Median yield, 700 gpm.
		Unconformity			
	Eocene	Piney Point(?) Formation	Sand and clay.	?-290	No drilled wells reported to tap this unit.
		Unconformity			

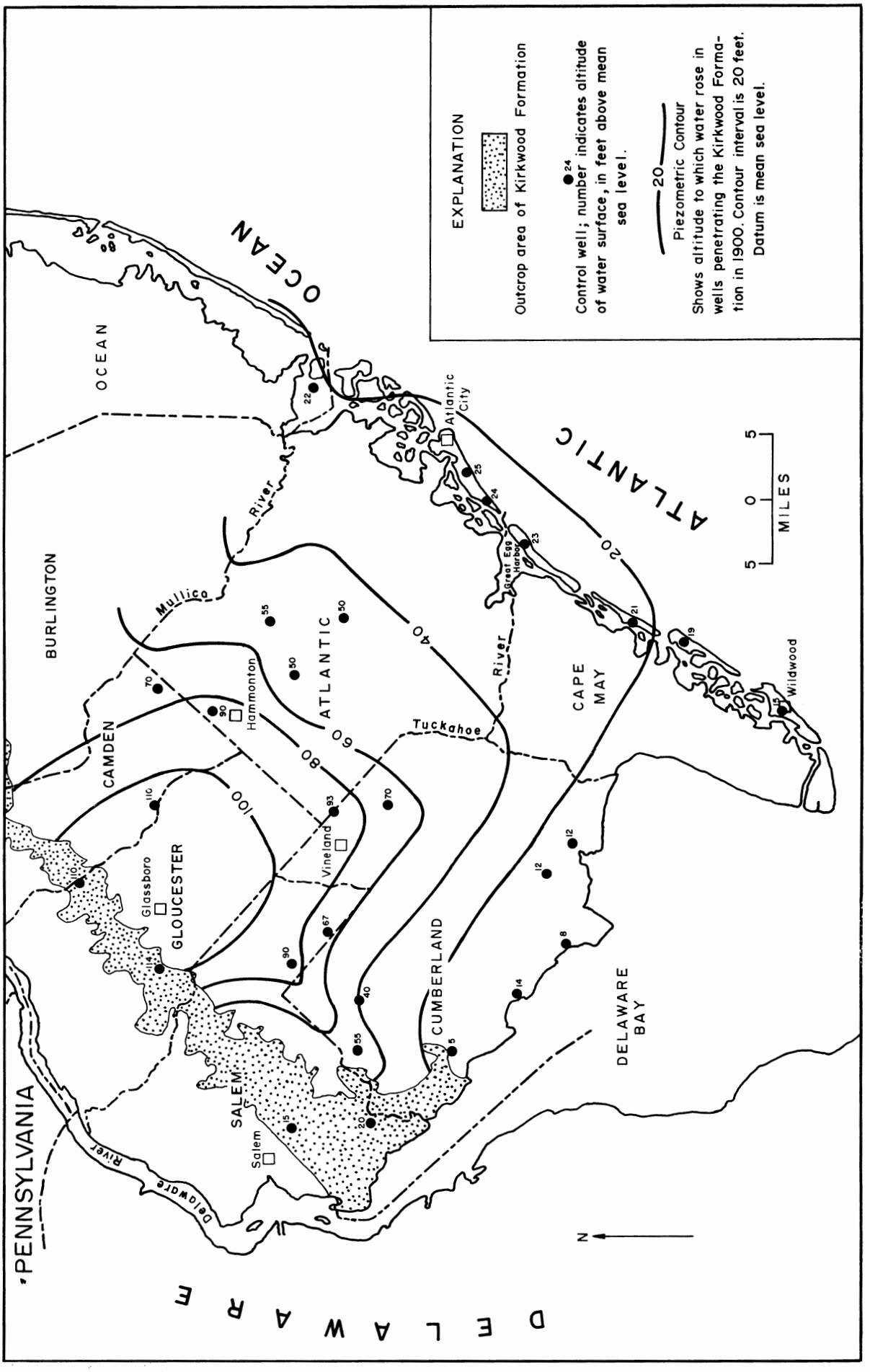

Figure 2.—Map showing the generalized piezometric surface of the Kirkwood Formation before 1900 in southern New Jersey.

Aquifers of the Kirkwood Formation are recharged at their outcrop area. Recharge probably occurs also in the piezometric-high area immediately southeast of the outcrop area in southern Gloucester and Camden Counties (see figures 2 and 3). In this area, which coincides with a topographically high area, the top of the Kirkwood Formation has been eroded off, permitting hydraulic continuity between the permeable sediments of the Kirkwood and the overlying Cohansey Sand.

In Atlantic County, prior to intensive development along the coast, natural groundwater discharge from the Kirkwood Formation probably occurred along the Mullica River, upward to overlying sediments, and into the Atlantic Ocean. Pumpage from the Kirkwood has developed a regional cone of depression in the Atlantic City area, which has intercepted water previously discharged into the Atlantic Ocean. (see fig. 3).

Movement of ground water in the Cohansey Sand is largely local as this unit is a water-table aquifer. Recharge occurs throughout much of its areal extent. The aquifer discharges locally to the Mullica, Great Egg Harbor, and Tuckahoe Rivers and their tributaries.

Kirkwood Formation

The Kirkwood Formation, of middle Miocene age, is the lowest Miocene formation exposed in New Jersey. The formation consists chiefly of sand, silt, and clay.

The Kirkwood Formation comprises a complex series of sediments that have been deposited in a number of different environments that have shifted with marine regression and transgression. Studies by Owens and Minard (1962), Minard and Owens (1962), Gill (1962), and Richards (1945) show the diverse lithologic nature of the Kirkwood. Locally, the Kirkwood Formation may be characterized by diatomaceous clay, by carbonaceous and micaceous dark silty sand, or by red, yellow, and gray sand. These diverse lithologies are products of one or more episodes of marine transgression and regression or subaerial weathering during Miocene time.

The Kirkwood Formation unconformably overlies the Piney Point(?) Formation of Eocene age. Evidence for the unconformity is the local weathering of the contact surface. The slight relief of the surface, together with the updip truncation of the Piney Point(?), suggests considerable planation of sediments between the Miocene, Kirkwood, and the upper Eocene Piney Point(?) Formation.

Toward the inner margin of the Coastal Plain, the Kirkwood Formation is unconformably overlain by the Cohansey Sand of Miocene(?) and Pliocene(?) age. Locally along the coast and generally farther seaward, conformable relations between these units may occur.

The thickness of the Kirkwood Formation increases downdip to the southeast. It is about 100 feet thick at a site 1 mile north of the northern tip of Atlantic County. In Atlantic County, the Kirkwood Formation is 570 feet thick in Galloway Township well number 1 and 528 feet thick in Somers Point well number 1 (see table 7). Richards (1945, p. 896) reports a thickness of more than 700 feet at Atlantic City. The southeastward dip of the Kirkwood in the county varies from 18 feet per mile inland to 35 feet per mile along the coast.

Water-bearing properties

The Kirkwood Formation in Atlantic County is tapped primarily by industrial and public-supply wells. Reported yields of 27 such wells tapping the Kirkwood Formation in Atlantic County range from 250 to 1,200 gpm (gallons per minute). The median reported yield is 700 gpm.

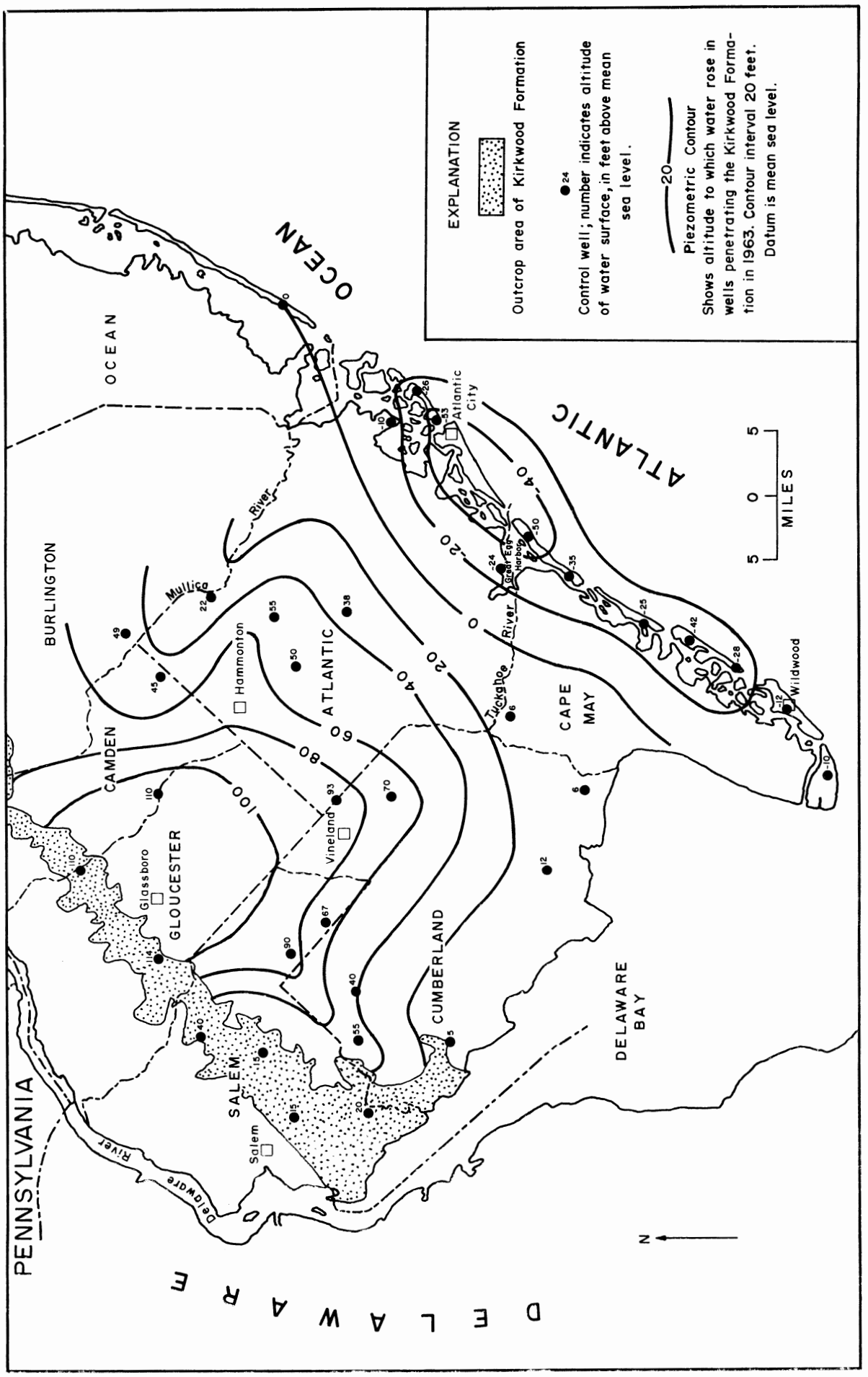

Figure 3.—Map showing the generalized piezometric surface of the Kirkwood Formation in 1963 in southern New Jersey

The specific capacity of a well is defined as the yield of the well per unit decline in water level; it is expressed as gallons per minute per foot of drawdown. Specific capacity is, in general, a function of the water-bearing properties of the aquifer, the radius and efficiency of the well, and the duration of pumping. The greater the permeability of the aquifer and the greater the radius and efficiency of the well, the greater will be the specific capacity. Generally, the specific capacity of a well decreases as the duration of pumping increases but commonly after several hours of pumping the change in specific capacity may be too small to be detected. Data on the duration of pumping tests are not available from Atlantic County.

Reported specific capacities for 25 industrial and public-supply wells tapping the Kirkwood Formation range from 2.5 to 34 gpm per ft drawdown. The median specific capacity is 15 gpm per ft drawdown.

Cohansey Sand

The Cohansey Sand is the uppermost major unit of Tertiary age in New Jersey. Its age is uncertain but its classification as Pliocene(?) and Miocene(?) is based upon its stratigraphic position, extremely rare but well-preserved plant fossils (Hollick, 1900, p. 197-199), and its orientation which is compatible with other Tertiary deposits.

The Cohansey Sand is an unconsolidated deposit of quartz sand that contains some gravel and notable amounts of clay. Grain size of the macroscopic material ranges from very fine sand to well-rounded pebbles of quartz and quartzite up to 2 inches in diameter. Locally, the sand contains 1 to 3 percent dark heavy minerals (mainly ilmenite). Sand grains are angular to well-rounded and have an iron oxide surface stain which imparts an orange or reddish color to the beds. Some sand beds are, however, light gray to white. Gravel beds are generally less than one-foot thick but may be up to several feet thick.

The Cohansey Sand contains many beds and lenses of clay that usually range in thickness from a few inches to 20 feet. Clay beds as much as 40 feet thick occur locally. Individual clay beds may extend over several hundred acres; collectively several clay beds may extend over several square miles.

The Cohansey Sand is exposed at the surface at many places in Atlantic County but at other places it is overlain by thin deposits of Quaternary age.

The thickness of the Cohansey Sand in Atlantic County, as reported in nine well logs in table 7, ranges from 70 to 211 feet and the average is 156 feet. The thickness varies because of the irregularity of the surface upon which the unit was deposited and because of erosion which has taken place during and after the period of deposition. In general, however, the unit thickens to the southeast.

Water-bearing properties

The Cohansey Sand is tapped widely by wells for domestic and poultry-farm use as well as for industrial use, public supply, air conditioning, and irrigation. Reported yields of 29 industrial, public-supply, and air-conditioning wells tapping the Cohansey Sand range from 30 to 1,440 gpm. The median yield is 720 gpm. Reported specific capacities of these wells range from 2.4 to 43 gpm per ft. drawdown. The median specific capacity is 22 gpm per ft. drawdown.

Pleistocene and Recent Series

Deposits of Pleistocene age occur as veneers that uncomformably overlie the Cohansey Sand. These deposits have been divided in New Jersey into three formations. From oldest to youngest these are: Bridgeton Formation, Pensauken Formation, and

Cape May Formation. The nature and occurrence of these units in the Coastal Plain of New Jersey have been described in detail by Salisbury and Knapp (1917). As far as is known, the Pensauken does not occur in Atlantic County.

The Bridgeton Formation consists of deeply weathered, yellow to red alluvial gravel, sand, and silt that cap the higher hills and divides in Atlantic County. The sediments are commonly cemented by interstitial iron oxide.

The Cape May Formation consists of interbedded gravel, sand, and silt and clay rich in organic material. It occurs on low terraces and plains. The thickness of the Cape May Formation in Atlantic County, as reported in 10 well logs in table 7, ranges from 48 to 106 feet and averages 78 feet.

Deposits of Recent age include: beach and dune sand and gravel; stream gravel, sand, and silt; and peat and black mud containing organic material. The thickness of Recent deposits, as reported in 10 well logs in table 7, ranges from 14 to 40 feet and averages 30 feet.

Water-bearing properties

The water-bearing properties of the Pleistocene sediments cannot be fully evaluated because of insufficient data. Reported yields of three wells tapping the Cape May Formation are 30, 400, and 525 gpm. Specific capacities of these wells are 5, 11.7, and 18.2 gpm per ft. drawdown.

Reported yields of four domestic wells tapping undifferentiated Pleistocene sediments are 10, 10, 15, and 25 gpm. Specific capacities of these wells are 1.7, 2.5, 3.0 and 12.5 gpm per ft. drawdown.

QUALITY OF WATER

Water is a natural solvent and as such is a carrier for numerous mineral and organic substances acquired during its circulation. Rain during its descent to earth picks up carbon dioxide, bacteria, dust particles, and industrial contaminants such as sulfur dioxide and carbon monoxide.

As water flows across and under the ground, mineral matter is dissolved. The amount and nature of the material dissolved are directly related to the initial character of the water, the length of time the water is in contact with soil and sediments, the nature of the soil and sediments, and human activities such as the disposal of waste and the use of fertilizer and insecticides.

Most of the dissolved substances in water exist as electrically charged particles, called ions. These ions are either cations, as calcium, magnesium, and sodium; or anions, as chloride, sulfate, and bicarbonate.

Concentrations of dissolved substances are expressed in parts per million, and the recommended concentrations in potable water are distinct for each substance. The major dissolved constituents in ground water generally are calcium, magnesium, sodium, bicarbonate, chloride, and sulfate. Commonly present, but usually in smaller amounts are silica, manganese, iron, fluoride, nitrate, phosphate, boron, heavy metals, hydrogen sulfide, carbon dioxide and other constituents.

The maximum recommended concentrations, according to the New Jersey Department of Health, for certain chemical constituents are as follows. Their presence in excess of these standards may constitute grounds for rejection of the supply.

Constituent	*Concentration (ppm)*
Iron	0.3
Manganese	.05
Chloride	250
Sulfate	250
Nitrate (NO_3)	20
Dissolved solids	500

The range and median concentrations of chemical constituents and chemical properties of ground-water samples from the Kirkwood Formation and Cohansey Sand are given in table 2. Chemical analyses of water from selected wells in Atlantic County are given in table 6.

Water from the Kirkwood Formation is generally low in dissolved solids and in total hardness. The pH is generally alkaline in the aquifer of the Kirkwood Formation ("Atlantic City 800-foot sand") in the coastal communities from Brigantine to Longport Boro 1, whereas the pH is generally acidic in and north of Egg Harbor City and Hamilton Township.

Water from the Cohansey Sand is generally low in dissolved solids and total hardness. The pH is generally acidic. Analyses from three wells (Somers Point 4, Atlantic City 3 and 4) tapping the Cohansey Sand are high in iron, calcium, magnesium, sodium, potassium, bicarbonate, sulfate, and chloride. These analyses indicate that salt-water encroachment has occurred in these coastal areas.

Table 2.—Summary of chemical quality of ground water

Concentration in ppm, except for pH

Constituent or property	Kirkwood Formation[1]		Cohansey Sand[2]	
	Range	Median	Range	Median
Iron (Fe)	0.07- 4.6	0.44	0.02- 1.6	0.35
Manganese (Mn)	.00- .26	.03	.00- .10	.00
Calcium (Ca)	2.0 - 13	6.8	.8 - 8.8	1.6
Magnesium (Mg)	.2 - 2.9	1.7	.2 - 7.3	1.0
Sodium (Na)	1.5 - 27	18	.9 - 11	5.4
Potassium (K)	.7 - 3.6	2.1	.0 - 1.5	1.0
Bicarbonate (HCO_3)	1 - 82	65	0 - 7	3
Sulfate (So_4)	6 - 14	11	.6 - 12	4.4
Chloride (Cl)	1.9 - 11	3.4	2.8 - 34	8.2
Nitrate (NO_3)	0 - 1.3	.2	.0 - 37	1.4
Fluoride (F)	.0 - .3	.2	.0 - .3	.0
Dissolved Solids	51 -127	100	16 -135	46
Total hardness (as $CaCO_3$)	6 - 42	24	3 - 22	8
pH	5.0 - 7.6	7.0	4.5 - 6.0	5.4

[1]Based on samples from 17 wells.

[2]Based on samples from 15 wells. Analyses from the following three wells tapping the Cohansey Sand were not used in this summary because of their vastly different chemical quality: Somers Point 4, Atlantic City 3 and 4.

PUBLIC WATER SUPPLIES

There are ten public water-supply systems in Atlantic County that service primarily residential and small business establishments. These systems pumped an average of 16.2 mgd (million gallons per day) of ground water in 1964. Ground water use for public water supplies in Atlantic County from 1955 to 1964 is summarized in table 3. In addition, large industries, hotels, and farms obtain water from privately owned wells; however, pumpage data from these wells is not available.

Water use in Atlantic County varies seasonally as shown in table 4. The greatest use of water occurs during June, July, and August. This is a result of the large tourist influx in the summer. The smallest use of water generally occurs in February.

Presented below for each of the public supply systems (1964) in the county are data regarding the population served, source of the water, and amount of water pumped.

Hammonton Water Department

The Hammonton Water Department was founded in 1902 by the Town of Hammonton and serves approximately 7,380 people. The department has three wells in operation that pumped an average of 0.838 mgd in 1964 from the Kirkwood Formation. The greatest use of water in 1964 occurred in June and the smallest use occurred in November. Water use in June was more than 2½ times that in November.

Egg Harbor City Water Department

The Egg Harbor City Water Department was founded in 1896. It serves approximately 4,416 people. The department has three wells in operation, the most recent having been completed in November 1964. Pumpage from these wells averaged 0.376 mgd from the Kirkwood Formation in 1964. The greatest use of water in 1964 occurred in June, when total pumpage was approximately 1¾ times that of February, the lowest month.

Atlantic City Water Department

Originally, there were two water companies servicing the Atlantic City area. The Atlantic City Water Company, founded in 1880, supplied water from Pleasantville on the mainland, and the Consumers Water Company, founded in 1888, supplied water from artesian wells within the city limits of Atlantic City. In 1893, the two franchises were consolidated. In 1895, the city was authorized to purchase the property and rights and has since operated the department as a municipal utility, using their Pleasantville-Absecon well field. Pumpage from both the Cohansey Sand and the Kirkwood Formation averaged 8.097 mgd in 1964 and diversions of surface water from Absecon Creek averaged 5.35 mgd in 1964. This amount of water served a permanent population of about 60,000 and a summer population of about 125,000. Ground water used during August 1964, the peak month, was twice that used during February 1964, the month of minimum pumpage.

Atlantic County Water Company

The Atlantic County Water Company was originally formed as the Pleasantville Water Company in 1901 and incorporated under its present name in October 1915. The company has seven wells in its system which service approximately 34,500 people in Absecon, Pleasantville, Northfield, Linwood, and Somers Point. Pumpage from six wells tapping the Cohansey Sand and one well tapping the Cape May Formation averaged 2,380 mgd in 1964.

Water use in July 1964, the month of maximum pumpage, was approximately 2¼ times that of February 1964, the month of minimum pumpage.

Table 3.—Use of ground water for public supplies in Atlantic County, (1955-1964)

TABLE 3.—USE OF GROUND WATER FOR PUBLIC SUPPLIES IN ATLANTIC COUNTY, (1955-1964)
(Average daily pumpage, in million gallons)

Name	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	Population served (1964)	Aquifer
Hammonton Water Dept.	0.841	0.727	0.800	0.695	0.702	0.732	0.761	0.820	0.867	0.838	7,380	Kirkwood
Egg Harbor City Water Dept.	.278	.272	.292	.286	.312	.312	.324	.331	.408	.376	4,416	Kirkwood
Atlantic City Water Dept.	4.232	3.444	2.904	5.478	4.119	2.803	4.292	5.689	5.570 2.595	5.375 2.722	60,000-125,000	Cohansey Kirkwood
Atlantic County Water Dept.	1.385	1.383	1.639	1.557	1.707	1.764	1.811	1.757	1.903	2.380	34,500	Cape May Cohansey
Brigantine Water Dept.	.743	.614	.637	.648	.687	.559	.565	.727	.701	.613	4,500-16,000	Kirkwood
Margate City Water Dept.	1.659	1.506	1.777	1.461	1.644	1.632	1.721	1.844	1.746	1.703	9,500-25,000	Kirkwood
Ventnor City Water Dept.	1.283	1.189	1.338	1.265	1.376	1.412	1.351	1.404	1.441	1.582	8,700-20,000	Kirkwood
Longport Water Dept.	.266	.246	.264	.245	.290	.310	.276	.294	.311	.315	600-5,000	Kirkwood
Hamilton Township Water Dept. (Mays Landing)	.253	.228	.266	.224	.255	.254	.274	.312	.272	.271	2,100	Cape May Cohansey
Seaview Harbor Water Co.							.003[1]	--	--	--	30	Kirkwood
Total	10.940	9.609	9.917	11.859	11.092	9.778	11.378	13.178	15.814	16.175	131,726-239,426	

[1] estimated

Table 4.—Monthly use of ground water for public supplies in Atlantic County during 1964 (in millions of gallons)

TABLE 4.—MONTHLY USE OF GROUND WATER FOR PUBLIC SUPPLIES IN ATLANTIC COUNTY DURING 1964
(in millions of gallons)

Name	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Aquifer
Hammonton Water Dept.	21.079	20.167	20.033	19.483	33.929	44.164	30.127	34.066	30.931	18.862	16.368	17.578	306.787	Kirkwood
Egg Harbor City Water Dept.	8.567	7.928	8.965	10.085	12.287	13.636	13.269	13.660	12.798	10.657	11.339	14.339	137.530	Kirkwood
Atlantic City Water Dept.	94.184	98.130	109.232	132.412	125.584	141.550	268.604	271.485	230.370	176.392	170.879	143.226	1962.048	Cohansey
	85.378	78.482	83.105	80.038	84.807	83.361	85.019	84.075	81.216	83.694	80.912	83.437	993.524	Kirkwood
Atlantic County Water Dept.	49.213	48.201	52.248	50.878	85.575	97.001	107.231	102.093	85.814	66.572	62.733	63.712	871.271	Cape May Cohansey
Brigantine Water Dept.	9.766	8.567	9.084	10.889	23.595	27.354	29.528	33.564	26.516	14.307	15.998	15.235	224.403	Kirkwood
Margate City Water Dept.	34.433	30.482	34.622	35.296	68.088	77.662	83.739	80.008	63.543	41.995	37.601	35.804	623.273	Kirkwood
Ventnor City Water Dept.	44.055	31.827	34.396	34.410	58.392	61.546	78.499	73.710	57.423	38.474	34.420	32.010	579.162	Kirkwood
Longport Water Dept.	5.100	4.340	4.860	5.250	14.800	13.210	18.000	18.750	14.070	6.720	5.610	4.610	115.320	Kirkwood
Hamilton Township Water Dept.	6.146	5.368	5.277	5.710	7.204	15.493	14.308	10.507	9.014	6.878	7.229	5.951	99.085	Cape May Cohansey
Total	357.921	333.492	361.822	384.451	514.261	574.977	728.324	721.918	611.695	464.551	443.089	415.902	5912.403	

Brigantine Water Department

The Brigantine Water Department was formed in 1924. After the completion of well number 1 in 1925, the department served approximately 300 residents. The city of Brigantine has grown steadily and at the present time, pumpage from three wells serves approximately 4,500 permanent residents and a summer tourist peak of nearly 16,000. Pumpage from these wells averaged 0.613 mgd from the Kirkwood Formation in 1964. Water use in August 1964, the month of maximum pumpage, was almost four times that of February 1964, the month of minimum pumpage.

Margate City Water Department

The Margate City Water Department was formed in 1902 and now has four wells in operation which draw water from the Kirkwood Formation. The Department pumped an average of 1.703 mgd in 1964 to supply nearly 9,500 permanent residents and an estimated summer population of 25,000. Water use during July 1964, the peak month was approximately 2¾ times that of February 1964, the lowest month.

Ventnor City Water Department

Originally formed as the Ventnor Water and Light Company in 1897, the company was purchased in 1907 by Ventnor City. The department now has five wells in operation which draw water from the Kirkwood Formation. The Ventnor City Water Department pumped an average of 1.582 mgd to serve 8,700 permanent residents and an estimated 20,000 people during the summer months. Water use during July 1964, the peak month, was approximately 2½ times that of February 1964, the lowest month.

Longport Water Department

Originally formed under private ownership in 1894, the Longport Water Department was incorporated by the Borough of Longport in 1900 to serve approximately 200 residents. The department in 1964 pumped an average of 0.315 mgd from the Kirkwood Formation to serve 600 winter residents and 5,000 residents during the summer season. Water use during August 1964, the peak month, was more than 4¼ times that of February 1964, the lowest month.

Hamilton Township Water Department (Mays Landing)

The Hamilton Township Water Department, formed in 1906, has two wells in operation which pumped an average of 0.271 mgd from the Cohansey Sand and Cape May Formation in 1964 to serve a population of approximately 2,100. Water use in June 1964, the highest month, was approximately three times that of March 1964, the lowest month.

Seaview Harbor Water Company

The Seaview Harbor Water Company, the newest one in Atlantic County, was formed in the spring of 1957 to service a newly developed island community known as Seaview Harbor in Egg Harbor Township. Pumpage from the Kirkwood Formation was approximately 3,000 gpd in 1961 to serve 30 people.

REFERENCES

Barksdale, H. C., Sundstrom, R. W., and Brunstein, M. S., 1936, Supplementary report on the ground-water supplies of the Atlantic City region: New Jersey State Water Policy Comm. Spec. Rept. 6, 139 p.

Gill, H. E., 1962, Ground-water resources of Cape May County, N. J.—Salt water invasion of principal aquifers: New Jersey Dept. Conserv. and Econ. Devel. Div. Water Policy and Supply, Spec. Rept. 18, 171 p.

Hollick, C. A., 1900, The relation between forestry and geology—in Annual Report of the State Geologist for 1899: New Jersey Geol. Survey, 519 p.

Kümmel, H. B., 1913, Annual administrative report of the State Geologist for 1912: New Jersey Geol. Survey Bull. 8, p. 12-14.

Minard, J. P., and Owens, J. P., 1962, Pre-Quaternary geology of the New Egypt quadrangle, New Jersey: U. S. Geol. Survey Geol. Quad. Map GQ-161.

Owens, J. P., and Minard, J. P., 1962, Pre-Quaternary geology of the Columbus quadrangle, New Jersey: U. S. Geol. Survey Geol. Quad. Map GQ-160.

Richards, H. G., 1945, Subsurface stratigraphy of Atlantic Coastal Plain between New Jersey and Georgia: Am. Assoc. Petroleum Geologists Bull., v. 29, no. 7, p. 885-955.

Salisbury, R. D., and Knapp, G. N., 1917, The Quaternary formations of southern New Jersey: New Jersey Dept. Conserv. and Devel., State Geologist final report v. VIII, 218 p.

Thompson, D. G., 1928, Ground-water supplies of the Atlantic City region: New Jersey Dept. Conserv. and Devel. Bull. 30, 138 p.

N. J. State Department of Health, 1962, Potable water standards.

Woolman, Lewis, Annual Reports 1890 through 1902, Report on artesian wells in southern New Jersey in annual report of the State Geologist: New Jersey Geological Survey, Trenton, N. J.

APPENDIX

Well-Numbering System

Locations of selected wells in Atlantic County are shown in figure 4, wherein each well has been numbered sequentially by political subdivision. These wells have also been assigned grid numbers according to a system based upon the New Jersey topographic atlas sheets (see figure 5). The sequential and grid numbers identify each well for which data is given in tables 5 and 6.

The grid numbers are established as follows. Ocean County is included in parts of atlas sheets 28, 29, 32, 33, and 36. The numbering system was described by Kümmel (1913, p. 13 and 14) as follows: "Each atlas sheet is divided into rectangles measuring 6-minutes of latitude and 6-minutes of longitude. Beginning in the upper left-hand corner, these are numbered across the sheet from 1 to 5, inclusive, number 5 being an incomplete rectangle comprising 2-minutes of longitude at the right. Those on the second row are numbered 11 to 15, those on the third 21 to 25, those on the fourth 31 to 35 and on the fifth 41 to 45. The rectangles numbered 41 to 44 inclusive, differ from the others in comprising 6-minutes of longtitude and 4-minutes of latitude. Number 45 embraces 2-minutes of longitude and 4-minutes of latitude. Each of these rectangles is divided into smaller rectangles measuring 2-minutes of latitude and 2-minutes of longitude by lines already engraved upon the sheet. The 2-minute rectangles in each of the 6-minute rectangles are numbered from 1 to 9 beginning in the upper left-hand corner and numbering to the right, number 4 being on the left under number 1. The subdivisions of the incomplete 6-minute rectangles on the right of the sheet, i.e., those numbered 5, 15, 25, 35, are numbered 1, 4, 7, of those at the bottom, i.e., numbers 41, 42, 43, 44, the subdivisions are numbered 1, 2, 3, 4, 5, 6. The subdivisions of the incomplete rectangle in the lower right-hand corner, number 45, are numbered 1, 4. It is evident that by writing first the number of the atlas sheet; second, the number of the 6-minute rectangle; and third, the number of any 2-minute rectangle, we can form a combination of numbers peculiar to any 2-minute rectangle within the State. In order to locate points more accurately, each of the 2-minute rectangles is divided into nine equal parts, numbered from 1 to 9, beginning in the upper left-hand corner, and each of these is again divided into nine, numbered similarly. The smallest rectangles represent areas about 330 yards from east to west and 440 yards from north to south. By adding the appropriate numbers of these two smaller divisions to the three already written, it is possible to get a combination which represents the exact location of any area 330 x 440 yards."

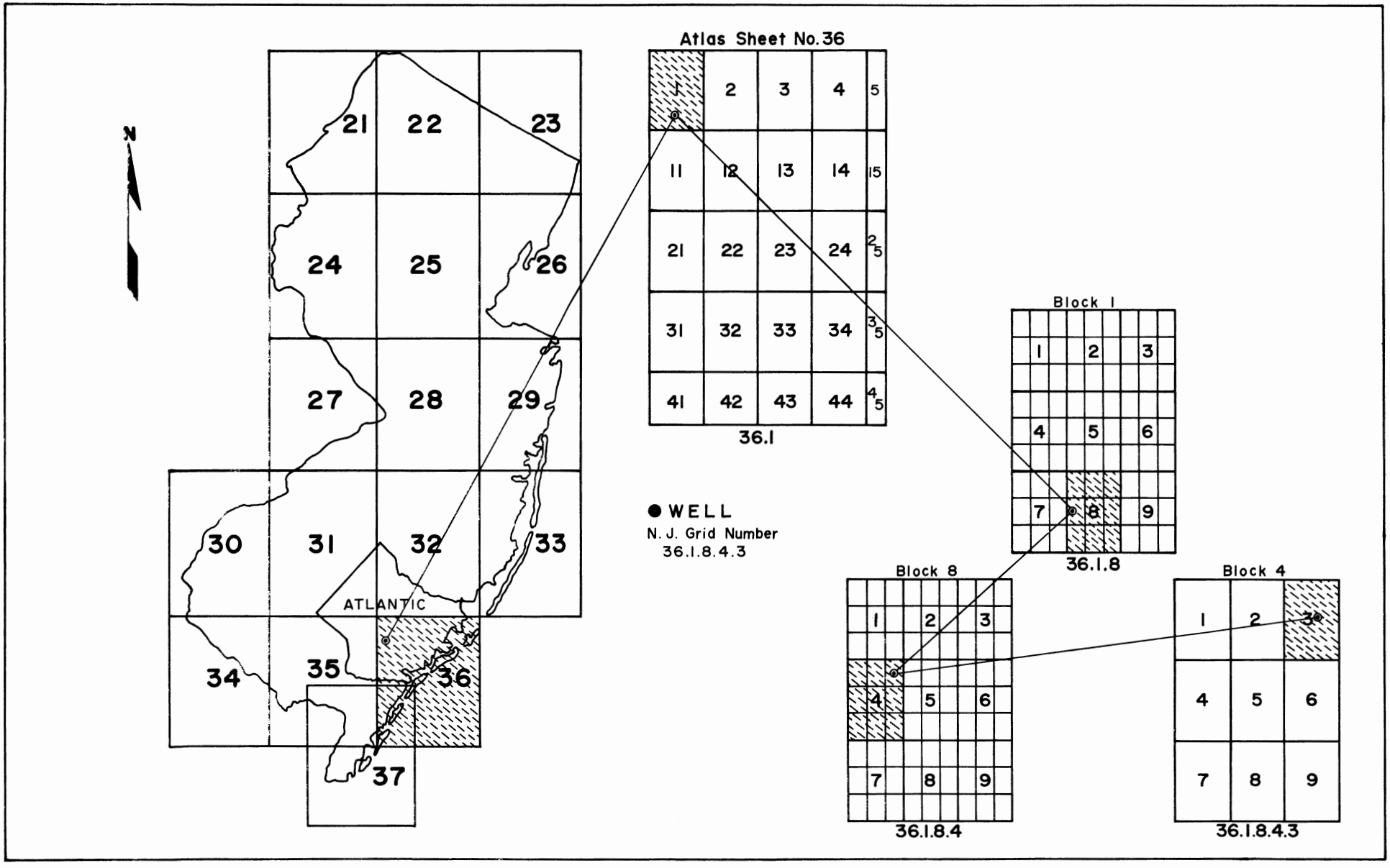

Figure 5.—Map showing the method of numbering wells according to the New Jersey grid system.

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
	Mullica Twp.														
1	32.41.2.6.7	J. Sawyer	Frank J. Kobelo	1954	90	51	2	45	43-51	Tch	20	21	--	Dom	
2	32.41.2.6.7	Frank J. Lozzoreu	Frank J. Kobelo	1952	91	72	2	67	67-72	Tch	24	13	15	Dom	
3	32.41.2.5.6	Mullica Twp. Board of Education	Willwood S. McGinnis	1954	90	80	5	72	72-80	Tch	20	26	4	Sch	
4	32.31.9.8.7	Ralph Ramberg	Pfeiffer	1918	57	136	8-6	136	-----	Tch	240	6	53	Obs	
5	32.41.3.2.1	Ralph Ramberg	Pfeiffer	1918	63.5	326	8-4	117	112-117	Tch	12	10.8	--	Obs	Dl
6	32.31.7.7.5	Geo. K. Heebner Co.	Artesian Well Drilling Co.	1956	75	117	8	84	84-111	Tch	350	18	25	---	
7	32.31.3.6.9	U. S. Geological Survey	Greer Engineers	1957	20	236	4	198	198-203	Tkw	---	--	--	Obs	Dl; Ch.a
8	32.31.3.6.9	U. S. Geological Survey	C. W. Lauman and Sons	1959	20	125	8	66	66-76	Tch	---	--	--	Obs	
9	32.32.7.1.6	Frank Rosenberg	E. E. Panciera	1951	15	86	3	86	None	Tch	5[1]	--	--	Dom	1
10	32.32.8.4.7	Enoch Olson	E. E. Panciera	1951	15	91	3	84	84-91	Tch	30	15	--	Dom	
11	32.32.8.2.7	Elmer G. Bregler	Frank J. Kobelo	1956	9	115	2	115	None	Tch	25[1]	--	--	Dom	1
12	32.32.8.7.9	Edward Blood	Frank J. Kobelo	1953	50	61	4-2	43	54-61	Tch	24	8	26	Dom	
13	32.42.1.5.7	Meyer K. Harris	E. E. Panciera	1948	60	62	3	56	55-62	Tch	10	10	--	Dom Irr	
	Hammonton Twp														
1	31.34.9.2.5	Hammonton Water Dept.	Artesian Well Drilling Co.	1922	120	315	18-12	255	255-315	Tkw	700	33	29	Pub	Ch. a
2	31.34.9.2.5	Hammonton Water Dept.	Artesian Well Drilling Co.	1917	120	300	8	256	256-300	Tkw	Approx. 700	47	38	Pub	
3	31.34.9.2.5	Hammonton Water Dept.	Artesian Well Drilling Co.	1928	120	323	12 1/2-10	268	268-320	Tkw	675	38	47	Pub	Dl
4	31.35.7.7.7	American Home Products Corp.	Layne-New York Co., Inc.	1958	100	428	10-6	390	390-410	Tkw	310	50	31	Ind	Dl
5	31.34.9.5.2	John B. Olivio	Charles Caruso	1954	80	80	4	70	70-80	Tch	80	14	2	Irr	Dl
6	31.35.4.2.1	John Maciarella	Robert D. Perna	1955	70	90	2	85	85-90	Tch	25	13	--	Dom	
7	31.35.4.6.4	Geo. Campanella	Charles Sacco	1957	80	70	3	64	64-70	Tch	---	--	--	Dom	
8	31.35.4.6.7	Natural Gas Co.	E. E. Panciera	1951	75+	95	3	88	88-95	Tch	20	18	None	Dom	

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
9	31.35.7.6.9	Dept. of Defense Training School	Rulon and Cook, Inc.	1958	90	107	6	97	97-107	Tch	200	23	47	Dom	Dl; Ch. a
10	31.34.9.3.1	John Bruno	E. E. Panciera	1954	120	98	3	91	91-98	Tch	20	47	1	Dom	Dl; Ch. a
11	31.34.9.1.5	James J. Angello	Gus Hauser	1955	90	120	4	90	90-110	Tch	150	10	3	Irr	Dl
12	31.34.6.3.7	Ideal Manufacturing Co.	Artesian Well Drilling Co.	1953	110	170	6	153	153-165	Tch	190	21	25	Ind	
13	31.35.1.7.2	Frank Deluca	Charles Caruso	1953	90±	46	4	36	36-46	Tch	80	5	--	Irr	
14	31.35.4.8.7	South Jersey Tank Co.	Gus Hauser	1959	95	66	6	57	57-62	Tch	40	18	3	Pf	
15	31.34.9.9.6	R. H. Cramer	Gus Hauser	1959	105	70	4	60	60-66	Tch	16	36	1	Dom	
16	31.34.9.6.4	J. Franchetti	Gus Hauser	1956	115	58	4	34	34-54	Tch	---	2	--	Irr	
17	31.35.4.9.2	John Capaferri	Rudy Skypala	1954	71	61	2	55	55-61	Tch	10	11	2	Dom	
18	31.34.9.6.9	Anthony Caruso	R. D. Perna	1952	90	47	2	42	42-47	Tch	8	10	2	Dom	
19	32.31.4.9.5	Frank Gozzara	B. A. Leek	1952	40+	46	3	40	40-46	Tch	7	10	3	Dom	
20	31.34.6.8.6	Eastern Brewing Co.	Dave McGinnis	1962	100-	171	10	130	130-170	Tch	600	30	40	Ind	
21	31.34.9.4.6	Atlantic City Expressway	A. C. Schultes and Sons	1964	80	230	6	220	220-230	Tkw	61	9	72	Dom	Dl; Ch. a
	Folsom Boro														
1	31.34.8.5.4	C. and E. Canners Inc.	Vance Skinner	1951	85	168	6	153	153-168	Tch	250	11	11	Ind	Dl
2	31.44.2.3.2	Folsom Board of Education	J. Henry Robbins	1948	65	111	3	100	100-111	Tch	35	29	--	Sch	
3	31.44.3.7.9	Michal Pezzuto	R. D. Perna	1952	50	55	2	48	48-53	Tch	---	10	None	Dom	
4	31.44.2.3.3	Harry Ingemi	Charles Caruso	1955	70	70	4	60	60-70	Tch	70	7	--	Irr	
5	31.34.8.4.2	Wm. H. Whitmeyer	L. E. Panciera	1953	122	104	3	97	96-104	Tch	40	15	10	Dom	
	Buena Vista Twp														
1	35.3.3.7.5	Erman Manzoni	Gus Hauser	1953	100	180	4-3	139	139-179	Tch	125	10	--	Irr	Dl
2	35.3.6.5.9	Chas. C. Bylone	Milton Shepard	1953	110	195	5	179	179-195	Tkw	100	14	7	Irr	Dl; Ch. a
3	35.3.6.9.4	Walter Badaracco	Vance Skinner	1953	105	220	5	22	198-220	Tkw	100	14	8	Irr	Dl

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
4	35.4.4.8.4	Jacob Liverant	Rudolph Skypala	1953	95	56	2	50	50-56	Tch	10	4	6	Poul	
5	35.4.4.7.3	J. Fairnberg	Rudolph Skypala	1953	90	58	2	53	53-58	Tch	15	10	5	Poul	
6	35.4.1.7.5	Max Mandelson	Gus Hauser	1954	90	47	2	42	42-47	Tch	11	18	--	Poul	
7	35.4.4.3.8	Fred Bohren	Rudolph Skypala	1954	100	84	2	78	78-84	Tch	15	16	4	Dom	
8	35.4.4.3.7	Jerry F. Liquori	Rudolph Skypala	1953	95	81	2	76	76-81	Tch	6	8	1	Poul	
9	35.4.4.3.5	Jerry F. Liquori	Rudolph Skypala	1953	100	82	2	77	77-82	Tch	---	--	--	Dom	
10	35.4.4.3.5	Joseph Romanini	Rudolph Skypala	1954	100	60	2	54	54-60	Tch	20	14	4	Dom	
11	35.4.4.3.5	John Simroes	Rudolph Skypala	1954	100	91	2	85	85-91	Tch	15	19	5	Dom	
12	35.4.7.3.3	Eugenia Rial	Gus Hauser	1952	90	61	4	51	51-61	Tch	15	9	--	Dom Poul	
13	35.4.7.6.3	J. N. Bullock	Gus Hauser	1952	92	106	4	96	96-102	Tch	100	11	9	Dom	
14	35.4.8.7.1	A. Schydlowsky	Rudolph Skypala	1953	100	55.6	2	50	50-55	Tch	17	11	4	Dom	
15	35.3.5.1.3	D. Muzzarelli	Frank J. Kobelo	1953	95	55	4	41	41-53	Tch	400	10	10	Irr	
16	35.3.5.2.5	Henry Cola	Chas. Caruso	1953	100	54	4	44	44-54	Tch	70	11	--	Irr	
	Buena Boro														
1	35.3.2.1.3	Nathan Neuwirth	Gus Hauser	1954	110	44	4	34	34-40	Tch	35	15	9	Dom Poul	
2	35.3.2.2.8	James Asselta	Chas. Caruso	1953	110	65	4	55	55-65	Tch	75	10	--	Irr	Ch. a
3	35.3.2.5.2	Adele Franceschi	Rudolph Skypala	1953	110	58	4	48	48-54	Tch	---	--	--	Dom	
4	35.3.2.2.6	Ubaldo Mazzoni	Chas. Caruso	1953	100	54	4	44	44-54	Tch	65	7	--	Irr	
5	35.3.2.5.7	Adele Franceschi	Rudolph Skypala	1953	120	123	2	117	117-123	Tch	10	15	3	Dom	
6	31.43.6.7.9	Sally Henick	Rudolph Skypala	1953	115	118	2	112	112-118	Tch	20	15	4	Dom	
7	35.3.2.5.5	Lorenzo Romano	Rudolph Skypala	1954	120	53	3	45	45-53	Tch	15	16	6	Dom	
8	35.3.3.4.4	John Labo	Rudolph Skypala	1954	105	131	2	125	125-131	Tch	30	12	3	Dom	
9	35.3.2.3.9	F. Mengeliuzze	Gus Hauser	1953	110	90	4	80	80-86	Tch	56	11	8	Dom	

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.–RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
	Weymouth Boro														
1	35.14.3.7.1	Clem Lisitski		1960	85	61	4	51	51-57	Tch	16	10	2	Dom	
2	35.14.6.2.1	Otto Geyer	Rudolph Skypala	1959	70	56	2	50	50-56	Tch	40	8	6	Dom	
	Estell Manor City														
1	36.11.4.4.1	M. P. Ferth	Frank J. Kobelo	1963	60	52	2	46	46-52	Tch	20	21	7	Dom	
2	36.11.1.2.9	L. V. Weinstock	Frank J. Kobelo	1953	30	36	4	28	28-34	Tch	110	16	4	Dom Poul	
	Hamilton Township														
1	36.1.8.4.3	Hamilton Township Water Dept. No. 4	Artesian Well Drilling Co.	1949	10	230	12-10	199	200-230	Qcm-Tch	360	10	49	Pub	Dl; Ch. a
2	36.1.8.4.3	Hamilton Township Water Dept. No. 3	Artesian Well Drilling Co.	1928	12	231	10	200	200-230	Qcm-Tch	350	12	52	Pub	
3	35.4.6.9.8	Alfred Mecholsky	Frank J. Kobelo	1962	85	126	2	114	114-126	Tch	20	25	10	Dom	
4	35.4.5.5.1	Kurt Goldstein	Rudolph Skypala	1953	12	96	4	86	86-92	Tch	---	--	--	Dom Poul	
5	31.44.6.5.7	J. Donelczyk	Frank J. Kobelo	1954	80	65	1 1/4	60	60-65	Tch	---	--	--	Dom	
6	35.4.3.4.3	Chas. Thomas	Gus Hauser	1953	70	100	4	90	90-96	Tch	---	21	--	Dom	Dl
7	31.45.4.7.7	D. McNew	Rudolph Skypala	1952	95	74	2	69	69-74	Tch	15	11	--	Dom	
8	35.5.1.1.8	James Valente	Frank J. Kobelo	1956	60	91	2	81	81-91	Tch	30	9	28	Dom	
9	35.5.1.5.1	Eugene Annaconi	Gus Hauser	1952	48	43	4	33	33-39	Tch	18	5	6	Dom	
10	31.44.3.8.9	Snug Harbor Gun Club	Rudolph Skypala	1952	43	48	4	38	38-44	Tch	30	25	2	Dom	
11	36.1.4.3.7	P. A. Colasurdo	Charlton McGinnis	1953	30	186	2	180	180-185	Tch	12	6	4	Dom	
12	32.41.4.3.3	Scholler Bros. Inc.	Willwood McGinnis	1955	80	275	8	250	250-271	Tkw	250	40	100	Ind	
13	32.41.4.3.5	Scholler Bros. Inc.	A. C. Schultes and Sons	1957	90	176	12-8	155	155-176	Tch	305	32	38.5	Ind	Dl
14	36.2.1.8.5	Egg Harbor City Sewage Plant No. 1	Wm. Stothoff Co., Inc.	1953	55	83	6	73	73-83	Tch	30	2	5	Pub	Dl
15	36.2.8.4.8	Berel Soffer	Jerry Williams	1953	70	41	2	36	36-41	Tch	6	15	5	Poul	

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
16	36.2.8.7.1	David Weintal	Jerry Williams	1953	70	86	2	80	80-86	Tch	8	13	4	Dom	
17	36.1.9.3.7	Greater Egg Harbor Regional High School Dist.	Layne-New York Co., Inc.	1961	60	151	8	128	128-148	Tch	300	40	23	Sch	Dl
18	32.41.4.6.5	New Jersey Expressway Authority	A. C. Schultes and Sons	1964	80	157	8	142	142-157	Tch	210	24'6"	12	Dom	Dl
19	32.41.4.6.5	New Jersey Expressway Authority	A. C. Schultes and Sons	1964	80	142	8	127	127-142	Tch	201	21'8"	17	Dom	
20	36.1.3.5.4	Atlantic City Expressway	A. C. Schultes and Sons	1964	60	55	6	44'6"	44'6"-55	Tch	49	10'7"	13.5	Dom	Ch. a
21	36.2.8.4.4	Atlantic City Expressway	A. C. Schultes and Sons	1964	70	63'9"	6	53	53-64	Tch	99	29	9	Dom	Dl; Ch. a
	Egg Harbor City														
1	32.42.4.8.6	City of Egg Harbor Water Works	Artesian Well Drilling Co.	1942	45	401	8-6	342	342-394	Tkw	750	15	--	Pub	Dl; Ch. a
2	32.42.4.9.4	City of Egg Harbor Water Works	Artesian Well Drilling Co.	1955	45	410	10	363	363-406	Tkw	415	18	62	Pub	Ch. a
3	32.42.4.8.5	City of Egg Harbor Water Works	A. C. Schultes and Sons	1964	45	430	12-8	350	350-430	Tkw	1,200	25	55	Pub	Dl; Ch. a
	Egg Harbor Twp.														
1	36.2.9.8.2	Atlantic City Naval Air Station	Layne-New York Co., Inc.	1943	45	166	12-8	143	143-163	Tch	258	11	39	Pf	
2	36.2.9.8.2	Atlantic City Naval Air Station	Layne-New York Co., Inc.	1942	45	165	8	removed		Tch	---	13	--	Test	Dl
3	36.3.7.7.6	Nat. Air Facilities Experimental Center	Layne-New York Co., Inc.	1960	45	182	12-8	160	160-180	Tch	200	13	8	Pf	Dl
4	36.12.2.3.1	Clifford Waysz	Gus Hauser	1952	60	60	4	50	50-56	Tch	---	7	--	Dom	
5	36.12.3.1.2	Jerome Joyce	Robert Hackney	1963	70	53	2	47	47-53	Tch		23	--	Dom	
6	36.12.2.3.6	Saul Cymmer	Jerry Williams	1953	80	70	2	63	63-69	Tch	5	21	3	Dom	
7	36.12.3.6.2	Flamingo Realty Co.	Jerry Williams	1954	60	109	2	103	103-109	Tch	---	--	--	Dom	
8	36.12.2.5.2	Saul Cymmer	Jerry Williams	1953	60	40	2	32	32-38	Tch	16	14	4	Dom	
9	36.13.1.7.4	J. H. Strous	Jerry Williams	1953	40	84	4	74	74-80	Tch	10	14	1	Pf	
10	36.13.4.1.3	Russell Heinle	Gus Hauser	1952	50	78	4	64	64-74	Tch	50	11	0	Pf	Dl
11	36.13.4.2.5	Trevor Bryn Owen	Jerry Williams	1953	50	49	2	41	41-47	Tch	8	30	4	Dom	

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; Flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
12	36.13.4.2.8	Sam Garland	Jerry Williams	1954	45	80	2	72	72-78	Tch	5	25	1	Dom	
13	36.12.6.8.2	Carman Tubolo	Gus Hauser	1950	30	137	6-5	105	105-135	Tch	385	12	6	Irr	
14	36.12.6.5.8	J. P. Madison	Jerry Williams	1954	30	70	2	64	64-70	Tch	15	12	3	Dom	
15	36.12.2.8.9	Thomas Frazier	Charles F. Adkisson	1962	40	92	2	85	85-90	Tch	7	11	--	Dom	
16	36.12.1.8.2	Domenio J. Antoino	Charles F. Adkisson	1954	60	120	2	115	115-120	Tch	8	12	--	Dom	
17	36.12.1.8.7	Soldyn	Rudolph Skypala	1952	60	50	2	44	44-50	Tch	5	12	--	Pf	
18	36.12.8.2.5	H. Hand	Rudolph Skypala	1952	50	74	2	69	69-74	Tch	---	29	--	Dom	
19	36.12.8.9.2	Horace French	Jerry Williams	1953	12	70	2	63	63-69	Tch	5	12	0	Dom	
20	36.12.7.2.7	E. S. Buffington	Rudolph Skypala	1952	30	47	2	39	39-45	Tch	8	11	0	Dom	
21	36.11.9.1.7	R. B. Driscoll	Jerry Williams	1954	15	150	2	142	144-150	Tch	10	15	5	Dom	
22	36.11.9.1.9	Wm. Hewes	Gus Hauser	1952	20	63	4	53	53-59	Tch	11	6	20	Dom	
23	36.11.9.6.6	S. G. Lipari	Rudolph Skypala	1952	15	70	4-3	64	64-70	Tch	10	5	0	Dom	
24	36.12.7.8.9	Thomas Jones	Jerry Williams	1954	15	90	2	83	83-89	Tch	20	5	2	Dom	
25	36.23.1.6.9	Seaview Harbor Water Co.	Layne-New York Co., Inc.	1958	10	783	10-6	130	740-780	Tkw	300	75	22	Pub	Dl
26	36.22.3.5.8	Joseph O'Byrne	Gus Hauser	1950	10	637	8-4	610	610-631	Tkw	104	32	--	Dom	
	Galloway Twp.														
1	36.4.7.2.1	U. S. Geological Survey	C. W. Lauman and Co.	1959	29	1,002	8-6	560	560-570	Tkw	140+	39	--	Obs	Dl; Ch. a
2	36.4.7.1.4	Board of Education	Gus Hauser	1953	40	102	5	78	78-98	Tch	118	32	1	Sch	Dl
3	36.3.9.6.5	Sea View Golf Club No. 7			37	228	10	208	208-228	Tch	324	43	39	Pf	
4	36.3.9.6.5	Sea View Golf Club No. 8	Artesian Well Drilling Co.	1929-1930	42	253	16-10	203	203-253	Tch	600	46	25	Pf	Dl
5	36.3.9.7.1	Paul Ivey	Gus Hauser	1952	50	52	2	47	47-52	Tch	5	28	--	Dom	
6	36.3.9.1.5	Edna Fischer	Frank J. Kobelo	1957	25	64	2	58	58-64	Tch	10	25	7	Dom	
7	36.3.5.7.8	New Jersey Highway Authority	C. W. Lauman and Son	1954	65	111	8	80	78-110	Tch	149	21	12	Pf	Dl

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
8	36.3.5.7.8	New Jersey Highway Authority	C. W. Lauman and Son	1954	65	111	8	79	77-108	Tch	149	19	11	Pf	
	Absecon City														
1	36.3.8.8.9	Atlantic County Water Co.	A. C. Schultes and Sons	1960	30	204	12-10	160	160-204	Tch	710	44	30	Pub	Dl; Ch.a
2	36.3.8.8.8	Wm. Heinle	Jerry Williams	1954	20	51	2	45	45-51	Tch	10	10	10	Pf	
3	36.13.2.2.4	Atlantic City Water Dept. No. 12	Daniel Coyle	1928	5	195	24-12	145	145-195	Tch	668	14	25	Pub	Dl; Ch.a
4	36.13.2.2.4	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	7	201	26	160	160-190	Tch	1,320	9	54	Pub	
5	36.13.2.2.8	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	7	201	26	163	163-193	Tch	1,438	7	59	Pub	
6	36.13.2.5.3	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	7	220	26	160	160-195	Tch	837	12	48	Pub	
7	36.13.2.6.1	Atlantic City Water Dept. No. 8	Layne-New York Co., Inc.	1930	7	100	26	62	62-92	Tch	1,204	5	37	Pub	
8	36.13.2.6.1	Atlantic City Water Dept. No. 7	Layne-New York Co., Inc.	1930	7	211	26	160	160-195	Tch	981	10	44	Pub	Ch.a
9	36.13.2.6.4	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	8	102	26	56	56-86	Tch	1,051	15	45	Pub	
10	36.13.2.6.4	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	8	240	26	180	180-210	Tch	811	7	60	Pub	Dl
11	36.13.3.4.8	Thomas McCorkle	Will McGinnis	1954	30	201	3	193	193-201	Tch	40	5	5	Pf	
12	36.13.6.1.2	Ray Roncace	Dave McGinnis	1953	10	210	3	198	198-210	Tch	30[1]	0	5	Pf	Originally a flowing well, 10 gpm
13	36.13.6.1.6	Anthony Wilhelm	Will McGinnis	1953	8	230	3	218	218-230	Tch	30[1]	0	5	Pf	Originally a flowing well, 12 gpm
	Pleasantville														
1	36.13.2.8.3	Atlantic City Water Dept.	Layne-New York Co., Inc.	1925	5	676	16-10	606	606-666	Tkw	1,005	9	34		Abandoned
2	36.13.2.9.1	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	11	116	26-24	67	67-97	Tch	1,223	5	45	Pub	
3	36.13.2.9.1	Atlantic City Water Dept. No. 3	Layne-New York Co., Inc.	1930	8	252	26-24	178	178-208	Tch	721	7	52	Pub	Ch. a
4	36.13.2.6.7	Atlantic City Water Dept.	Layne-New York Co., Inc.	1930	8	131	26	70	70-100	Tch	819	6	37	Pub	
5	36.13.2.8.3	Atlantic City Water Dept. No. 13	Layne-New York Co., Inc.	1930	18	110	26	60	60-90	Tch	1,190	20	37	Pub	Ch. a
6	36.13.2.8.3	Atlantic City Water Dept.	Layne-New York Co., Inc.	1950	8	668	16-10	110	610-660	Tkw	1,056	47	86	Pub	Dl

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
7	36.13.2.8.3	Atlantic City Water Dept. No. 15	Layne-New York Co., Inc.	1961	8	636	12-8	162	583-633	Tkw	1,050	31	51	Pub	Dl; Ch. a
8	36.13.2.9.2	Laurence Price	Will McGinnis	1954	10	98	2 1/2	---	-----	Tch	20	24	12	Dom	
9	36.13.2.8.6	Lewis Hankins	Charles F. Adkisson	1958	34	97	2	92	92-97	Tch	None	Test		Dom	
10	36.13.2.7.8	Atlantic County Water Co.	Layne-New York Co., Inc.	1948	50	161	16-10	127	127-157	Tch	602	40	14	Pub	Ch. a
11	36.13.2.8.1	Atlantic County Water Co.	Kelly Well Co.	1932	10	109	18	48	48-109	Tch	1,100	13	40	Pub	Dl
12	36.13.5.1.7	Antlers Trailer Park	Will McGinnis	1953	40	139	3	130	130-139	Tch	30	15	5	Pf	
13	36.13.4.3.9	Sherry's Motel	Artesian Well Drilling Co.	1952	--	122	6-4	106	106-116	Tch	200	16	26	Pf	
	Northfield														
1	36.13.7.2.1	Atlantic County Water Co. Mill Rd. Well	Layne-New York Co., Inc.	1949	20±	152	10	117	117-152	Tch	524-620	15	21	Pub	Dl; Ch. a
2	36.13.4.8.7	William Carney	Jerry Williams	1953	18	52	2	47	47-52	Tch	6	22	4	Dom	
3	36.13.4.7.6	The Atlantic Refining Co.	Gus Hauser	1958	20±	104	6	90	90-104	Tch	40	17	17	Ind	
4	36.12.6.9.7	M. Mathot	Jerry Williams	1954	12	63	2	52	57-63	Tch	10	12	4	Dom	
5	36.13.7.1.4	Nick Marad	Jerry Williams	1953	20	63	2	58	58-63	Tch	10	20	2	Dom	
6	36.13.7.1.6	Fred Scherer	Willwood S. McGinnis	1952	10	144	4	127	127-144	Tch	100	12	6	Dom Irr	
	Linwood														
1	36.12.9.8.7	Atlantic County Water Co.	Artesian Well Drilling Co.	1962	20±	71	20-12	56	56-71	Qcm	525	8	47	Pub	Ch. a
2	36.12.9.8.6	Eggelton Florist	Willwood S. McGinnis	1953	20	95	4	87	87-95	Qcm	30	18	6	Irr Dom	
3	36.12.9.5.8	Prudential Insurance Co. of America	Layne-New York Co., Inc.	1959	10	262	12	238	238-258	Tch	pump cap. 904	2	60	Ind	Dl
4	36.12.9.5.8	Prudential Insurance Co. of America	Layne-New York Co., Inc.	1959	10	177	12	145	145-175	Tch	pump cap. 904	6	82	Ind	
5	36.12.9.6.6	Brighton Farms	David McGinnis	1952	25	158	6	137	137-158	Tch	200	18	17	Irr	Dl
6	36.13.7.4.2	Linwood Country Club	Gus Hauser	1952	20	165	10	145	145-165	Tch	300	18	38	Irr Dom	
7	36.13.7.4.2	Linwood Country Club	Gus Hauser	1953	20	165	10	145	145-165	Tch	300	18	38	Irr Dom	Drilled to 182′ Dl

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY
(Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; ¹flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
8	36.12.9.3.5	Fisher's Nurseries	Vance Skinner	1948	10±	115	6	100	100-115	Tch	200	19	8	Irr	
	Somers Point														
1	36.22.2.8.1	U. S. Geological Survey	C. W. Lauman Co.	1959	11.5	680-1,001	8	670	670-680	Tkw	210	39	--	Obs	Dl; Ch. a
2	36.22.2.6.4	Atlantic County Water Co.	A. C. Schultes and Sons	1951	20	99	20-10	79	79-99	Tch	1,000	10	65	Pub	
3	36.22.2.6.2	Atlantic County Water Co.	Artesian Well Drilling Co.	1946	32	123	8	78	78-118	Tch	450	30	16	Pub	Dl; Ch. a
4	36.22.2.8.5	New Jersey Highway Authority	A. C. Schultes and Sons	1963	12	181	6	168	165-181	Tch	100	6	--	Dom	Dl; Ch. a
5	36.22.2.9.5	John T. Hohman	Jerry Williams	1954	10	60	2	54	54-60	Qp undif	15	10	3	Dom	
6	36.22.3.7.1	Harry Krenz	Gus Hauser	1951	10	35	4	25	25-31	Qp undif	25	16	2	Dom	
7	36.22.2.6.6	Chas. B. Wahl	Jerry Williams	1953	24	50	2	42	44-50	Qp undif	10	24	4	Dom	
8	36.22.3.4.2	Marie Anivito	Jerry Williams	1953	20	51	2	46	46-51	Qp undif	10	26	6	Dom	
	Brigantine														
1	36.14.6.1.6	City of Brigantine No. 3	Layne-New York Co.; Inc.	1952	10±	769	12-8	706	706-766	Tkw	706	55	66	Pub	Dl; Ch. a
2	36.15.1.7.1	City of Brigantine No. 1	Layne-New York Co., Inc.	1925	9	850	16-8	769	769-829	Tkw	700	23	57	Pub	
3	36.15.1.4.6	City of Brigantine No. 2	Layne-New York Co., Inc.	1929	12	788	16-6	718	718-778	Tkw	700	21	49	Pub	Ch. a
4	36.15.1.3.5	U. S. Coast Guard	Artesian Well Drilling Co.	1944	5±	751	8-4 1/2	735	735-747	Tkw	25	20	36	Dom	Capped--no longer in use.
	Atlantic City														
1	36.14.8.2.5	Breakers Hotel	No. record	1916 (1961)	10±	840	10-6	800	800-840	Tkw	---	--	--	Pf	This well was revamped in 1961 and is still in use.
2	36.14.7.2.3	Atlantic City Electric Co.	Layne-New York Co., Inc.	1924 (1947)	15±	824	16-6	745	745-805	Tkw	400			Ind	Well revamped in 1947; Dl; Ch. a
3	36.14.7.5.5	Monte Carlo Beach Motels	Artesian Well Drilling Co.	1956	10±	140	10	116	116-140	Qcm	400	8	22	Ac	Dl; Ch. a
4	36.14.7.5.4	Monte Carlo Beach Motels	Artesian Well Drilling Co.	1956	10±	135	8	114	114-135	Tch	300	10	25	Ac	Ch. a
5	36.14.7.5.4	President Hotel	A. C. Schultes and Sons	1955	15±	831	12-8	779	779-831	Tkw	554	61	49	Pf	Dl; Ch. a

Well number: Numbers correspond with number on the map and those in table 3.
Location: Wells are located, numbered, and listed by political subdivision and by use of the New Jersey grid numbering system.
Aquifer: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation; Qp, Pleistocene.
Static water level, yield, and drawdown reported for date of well completion.

TABLE 5.—RECORDS OF SELECTED WELLS IN ATLANTIC COUNTY (Continued)

Use: Dom, domestic; Sch, school; Obs, USGS observation well; Pub, public water supply; Ind, industrial; Ac, air-conditioning; Poul, poultry farm; Pf, public facility—motels, service stations, clubs, Turnpike service area, hotels, diners; Irr, irrigation.
Remarks: Ch.a, chemical analysis in table 4; Dl, driller's log in table 3; [1]flowing well.

Well no.	Location (Political subdivision and N. J. grid number)	Owner	Driller	Year completed	Altitude of land surface (feet)	Total depth (feet)	Diameter (inches)	Casing length (feet)	Screen setting (feet)	Aquifer	Yield (gpm)	Static water level below lsd (feet)	Drawdown (feet)	Use	Remarks
6	36.14.8.2.7	Friedbery Realty Co.	A. C. Schultes and Sons	1948	10	146 1/2	10	128	128-146 1/2	Tch	500	8	42	Ac	
7	36.14.8.2.7	Leland Theatre Co.	A. C. Schultes and Sons	1949	10	162	10	141	141-162	Tch	660	5	35	Ac	
	Ventnor City														
1	36.13.9.8.2	Ventnor City Water Dept. No. 8	Artesian Well Drilling Co.	1931	8	810	12-8	750	750-810	Tkw	750	65	22	Pub	
2	36.13.9.8.2	Ventnor City Water Dept. No. 4		1924	8	810	8	760	760-810	Tkw	500	85	58	Pub	Dl; Ch. a
3	36.13.9.8.2	Ventnor City Water Dept. No. 6	Artesian Well Drilling Co.	----	8	810	8-6	750	750-810	Tkw	960	65	55	Pub	
4	36.13.9.8.2	Ventnor City Water Dept. No. 3		----	8	805	6-4 1/2	755	755-805	Tkw	375	65	30	Pub	
5	36.13.9.8.2	Ventnor City Water Dept. No. 5		----	8	815	8-4	765	765	Tkw	1,000	63	62	Pub	
	Margate City														
1	36.13.8.9.9	Margate City Water Dept.	Layne-New York Co., Inc.	1955	10±	797	12-8	745	745-795	Tkw	700	71	38	Pub	Dl
2	36.13.8.9.8	Margate City Water Dept.	Layne-New York Co., Inc.	1958	8	801	12-8	735	735-785	Tkw	700	73	47	Pub	
3	36.23.2.2.8	Margate City Water Dept.	Layne-New York Co., Inc.	1962	10±	804	12-8	740	740-790	Tkw	1,000	74	45	Pub	Ch. a
	Longport														
1	36.23.2.5.7	Boro of Longport	Layne-New York Co., Inc.	1940	10±	812	18-6	745	745-805	Tkw	517	64	32	Pub	Ch. a
2	36.23.2.5.7	Boro of Longport	Layne-New York Co., Inc.	1947	10±	804	12-8	750	750-800	Tkw	725	74	28	Pub	
3	36.23.1.9.6	Boro of Longport	Uriah White	1895	6±	803	6	750	750-800	Tkw	---	47-74	--	Pub Obs	Original flow--180 gpm USGS obs. well since 1924 Dl

TABLE 6.—CHEMICAL ANALYSES OF WATER FROM WELLS IN ATLANTIC COUNTY

(Results in parts per million except as indicated)

Water-bearing formation: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation.

Use: Obs, USGS observation well; Pub, public water supply; Dom, domestic well; Irr, irrigation; Ac, air-conditioning; Pf, public facility—hotel, motel, service station, etc.

Well No.	Location by Political subdivision and N. J. grid number	Water-bearing formation	Approximate screen setting	Date of collection	Temperature (°F)	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Specific conductance (micromhos at 25°C)	pH	Color	Source of analysis	Use
N. J. Dept. of Health, Potable Water Standards							0.3	0.05		125				250	250		20	500	170				15		
	Mullica Twp.																								
7	32.31.3.6.9	Tkw	198-203	11-11-63	59	16	4.6	.26	7.2	2.4	17	2.2	67	12	2.6	0.2	.5	96	28		135	7.4	23	USGS	Obs
	Hammonton Twp																								
1	31.34.9.2.5	Tkw	255-315	8-13-63	--	11	.13	.03	2.0	.2	1.5	.7	1	6.0	1.9	.0	1.3	51	6	5	36	5.0	2	USGS	Pub
10	31.34.9.3.1	Tch	91-98	5-19-64	--	4.3	.16	.03	2.8	3.6	7.1	.0	2	.6	9.6	.0	30	68	22	21	116	5.4	1	USGS	Dom
9	31.35.7.6.9	Tch	97-107	4- 7-64	--	3.8	.68	.00	.8	.2	.9	.9	6	.6	2.8	.0	.0	16	3	0	16	6.0	5	USGS	Dom
21	31.34.9.4.6	Tkw	220-230	5- 4-64	--	----	3.25	.00	----	----	----	----	--	----	2	----	----	78	9	0	---	6.0	--	Driller	Dom
	Buena Vista Twp.																								
2	35.3.6.5.9	Tch	179-195	5-19-64	--	5.4	.02	.00	1.6	1.0	4.1	.0	5	.6	6.0	.0	7.2	33	8	4	44	5.4	1	USGS	Irr
	Buena Boro																								
2	35.3.2.2.8	Tch	55-65	5-20-64	--	5.7	.05	.10	8.8	7.3	8.5	1.5	0	.6	34	.3	37	135	--	52	221	4.5	3	USGS	Irr Dom
	Hamilton Twp.																								
1	36.1.8.4.3	Tkw	200-230	10-17-63	--	54	2.0	.03	5.2	2.2	3.5	2.2	20	9.4	3.4	.2	.2	96	22	6	67	6.4	8	USGS	Pub
20	36.1.3.5.4	Tch	44-55	4- 9-64	--	----	1.08	.0	----	----	----	----	--	----	3.0	----	----	66	3	0	---	6.5	--	Driller	Dom
21	36.2.8.4.4	Tch	53-64	5-14-64	--	----	.04	.0	----	----	----	----	--	----	4.0	----	----	32	4	0	---	5.4	--	Driller	Dom
	Egg Harbor City																								
1	32.42.4.8.6	Tkw	342-394	10-16-63	--	47	4.0	.04	2.8	1.5	2.5	2.0	10	8.2	3.3	.0	.3	73	13	5	47	5.9	6	USGS	Pub
2	32.42.4.9.4	Tkw	363-406	10-16-63	--	51	3.6	.03	2.4	1.7	2.5	2.0	8	9.6	3.3	.0	.3	77	13	7	59	5.7	5	USGS	Pub
3	32.42.4.9.5	Tkw	350-430	11-12-64	--	----	2.3	.05	----	----	----	----	--	----	2.0	----	----	98	12	1	---	6.1	--	Driller	Pub
	Galloway Twp.																								
1	36.4.7.2.1	Tkw	560-570	8-26-59	62	36	.64	.03	4.9	1.5	15	2.2	44	12	2.2	.1	.2	105	18	0	---	---	--	USGS	Obs
	Absecon																								
1	36.3.8.8.9	Tch	160-204	5-15-64	--	14	.64	.03	1.2	.7	5.0	.5	2	9.0	8.2	.0	.2	45	6	5	58	4.9	3	USGS	Pub
3	36.13.2.2.4	Tch	145-195	4-28-64	49	18	1.4	.03	2.4	1.5	3.5	1.5	6	11	5.4	.0	.0	46	12	7	53	5.5	4	USGS	Pub
8	36.13.2.6.1	Tch	160-195	4-28-64	50	17	1.5	.00	2.4	1.0	3.5	1.5	2	12	7.1	.0	.0	46	10	9	64	4.8	3	USGS	Pub
7	36.13.2.6.1	Tch	62-92	4-28-64	50	7.0	.23	.02	1.6	2.4	10	1.0	3	2.0	14	.1	15	61	14	12	95	5.2	2	USGS	Pub

TABLE 6.—CHEMICAL ANALYSES OF WATER FROM WELLS IN ATLANTIC COUNTY —Continued

(Results in parts per million except as indicated)

Water-bearing formation: Tch, Cohansey Sand; Tkw, Kirkwood Formation; Qcm, Cape May Formation.

Use: Obs, USGS observation well; Pub, public water supply; Dom, domestic well; Irr, irrigation; Ac, air-conditioning; Pf, public facility—hotel, motel, service station, etc.

Well No.	Location by Political subdivision and N. J. grid number	Water-bearing formation	Approximate screen setting	Date of collection	Temperature (°F)	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids	Hardness as $CaCO_3$		Specific conductance (micromhos at 25°C)	pH	Color	Source of analysis	Use
																			Calcium, magnesium	Noncarbonate					
	Pleasantville																								
10	36.13.2.7.8	Tch	127-157	4-22-64	--	7.0	.27	.00	1.6	1.0	5.4	.2	6	4.4	8.7	.0	3.8	39	8	3	55	5.9	5	USGS	Pub
3	36.13.2.9.1	Tch	178-208	4-28-64	50	26	1.6	.00	1.6	1.0	3.5	1.5	2	11	5.8	.0	.0	46	8	7	54	4.8	4	USGS	Pub
5	36.13.2.8.3	Tch	60-90	4-28-64	48	6.5	.4	.03	3.2	3.4	11	1.0	3	11	19	.1	8.5	66	22	20	125	5.1	3	USGS	Pub
7	36.13.2.8.3	Tkw	583-633	4-28-64	54	32	.44	.00	7.2	1.5	12	2.0	52	6.0	2.5	.1	.2	89	24	0	111	7.1	6	USGS	Pub
	Northfield																								
1	36.13.7.2.1	Tch	117-152	4-22-64	55	8.2	.17	.00	2.8	3.6	6.4	1.5	4	9.2	11	0.0	11	59	22	19	92	5.2	3	USGS	Pub
	Linwood																								
1	36.12.9.8.7	Qcm	56-71	4-22-64	56	9.3	.68	.03	1.6	1.5	8.0	.2	8	3.4	13	.0	1.4	48	10	4	70	5.6	4	USGS	Pub
	Somers Point																								
1	36.22.2.8.1	Tkw	670-680	9-12-59	--	33	.20	.04	13	2.3	18	3.6	79	14	5.6	.2	.4	127	42	0	127	7.6	3	USGS	Obs
3	36.22.2.6.6	Tch	76-118	4-22-64	55	7.6	.35	.03	1.6	1.0	7.5	.2	7	2.6	10	.0	2.5	41	8	3	60	5.9	5	USGS	Pub
4	36.22.2.8.5	Tch	165-181	3-27-64	--	16	6.4	2.0	368	738	5,340	124	0	1,290	9,800	.0	.2	18,200	3,960	--	27,800	3.85	7	USGS	Pf
	Brigantine																								
3	36.15.1.4.6	Tkw	718-778	4-21-64	64	28	.45	.0	3.2	1.5	21	2.0	40	10	11	.3	.2	103	14	0	128	6.9	12	USGS	Pub
1	36.14.2.6.4	Tkw	706-766	4- 2-53	66	--	.22	---	5.6	2.9	----	----	72	14	4.6	----	.1	---	26	---	153	7.0	3	USGS	Pub
	Atlantic City																								
2	36.14.7.2.3	Tkw	745-805	4-21-64	64	32	.20	.0	7.6	1.2	22	2.0	66	12	3.8	.3	.0	114	24	0	141	7.4	6	USGS	Ind
3	36.14.7.5.5	Tch	116-140	5- 8-64	--	8.2	7.3	.24	338	997	7,620	210	340	1,790	13,900	.8	.2	27,500	4,870	4,590	37,900	7.4	6	USGS	Ac
4	36.14.7.5.4	Tch	114-135	5- 8-64	--	8.8	2.4	.02	330	924	7,350	205	379	1,570	13,600	1.0	.0	26,800	4,630	4,320	37,000	7.1	17	USGS	Ac
5	36.14.7.5.4	Tkw	779-831	4-21-64	64	29	.30	.00	7.6	1.7	27	2.5	75	13	6.8	.2	.4	125	26	---	166	7.3	7	USGS	Pf
	Ventnor City																								
2	36.13.9.8.2	Tkw	750-810	4-21-64	65	30	.07	.00	6.8	1.7	21	2.0	65	8.2	3.9	.3	.2	109	24	0	138	7.5	4	USGS	Pub
	Margate City																								
3	36.23.2.2.8	Tkw	740-790	4-21-64	64	28	.11	.03	8.4	1.7	22	2.5	70	11	5.5	.3	.0	117	28	0	152	7.3	4	USGS	Pub
	Longport Boro																								
1	36.23.2.5.7	Tkw	745-805	4-21-64	64	28	.18	.00	8.8	1.9	26	2.5	82	12	6.8	.2	.2	125	30	0	168	7.4	7	USGS	Pub

Table 7.—Logs of selected wells in Atlantic County

Well no. 1, Absecon

Atlantic County Water Co. well 7
(Log by F. J. Markewicz, N.J.G.S.)
Altitude 20 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Over burden	20	20
Sand, quartz, very coarse, light-gray, clean	9	29
Sand, quartz, very coarse, yellow, oxidized, clean	8	37
Clay, silty, tough, light-gray	25	62
Sand, quartz, fine to medium, grayish-yellow, clean, fairly uniform	28	90
Sand, quartz, fine to very coarse, grayish-yellow, somewhat oxidized, with scattered pea-sized grains	5	95
Sand, quartz, very coarse, light-brown, oxidized, clean	3	98
Ironstone, layered with weathered whitish chert fragments	3	101
Silt, clayey, tough, gray, and very fine sand	21	122
Sand, quartz, fine to very coarse, gray, slightly micaceous; with approximately 1.3 percent heavy minerals	13	135
Sand, fine, light-gray, fairly clean, uniform; pyrite cemented layer of fine dark quartz sand at 162 ft.	27	162
Sand, quartz, medium, gray, fairly uniform, clean	13	175
Sand, fine, light-brown, uniform, clean	5	180
Sand, quartz, fine to very coarse, light-purple, clean	5	185
Sand, quartz, fine, very pale pinkish-gray; scattered very coarse grains	5	190
Sand, quartz, fine, light-gray, clean; scattered pea-sized grains	10	200
Sand, quartz, fine to very coarse, very pale-red, clean; few pea-size grains	7	207
Sand, quartz, very coarse, gray, clean	25	232
Miocene Series:		
Kirkwood Formation:		
Sand, quartz, fine, gray, uniform, clean; approximately 2.0-2.5 percent heavy minerals	5	237
Sand, quartz, fine, gray and mottled brown, fairly clean; 1.5 percent heavy minerals	12	249
Sand, quartz, very fine, gray, fairly clean, uniform, slightly micaceous	12	261

Well no. 2, Atlantic City

Atlantic City Electric Co. well 2
(Log by Layne-New York Co. Inc.)
Altitude 15 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Fill	12	12
Sand, fine, clean	40	52
Pleistocene Series:		

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 2, Atlantic City—Continued

Cape May Formation:		
Clay, blue	3	55
Sand, coarse, white	45	100
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Sand, coarse, white and gravel	135	235
Miocene Series:		
Kirkwood Formation:		
Clay, blue	11	246
Clay, sandy	18	264
Sand, brown with clay streaks	60	324
Sand, fine, brown, muddy	32	356
Clay, sandy	70	426
Clay, tough, blue	95	521
Clay, hard, sandy	144	665
Hardpan	2	667
Clay, soft, blue	24	691
Clay, sandy	4	695
Clay, soft, blue	8	703
Sand, coarse	11	714
Clay, very soft	39	753
Sand, brown	4	757
Sand, coarse, brown and gravel	62	819
Sand	4	823
Clay	10	833

Well no. 3, Atlantic City

Monte Carlo Beach Motels, Silver Sands well 1
(Log by Artesian Well Drilling Co.)
Altitude 10 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Fill	3	3
Sand, fine, and shells	32	35
Pleistocene Series:		
Cape May Formation:		
Sand, fine	27	62
Sand, coarse, and gravel	9	71
Sand, coarse, and clay lumps	3	74
Clay, sandy	9	83
Sand, fine	7	90
Sand, fine, with some clay	7	97
Sand, fine, with some gravel	14	111
Sand, coarse; gravel; water bearing	24	135
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Clay, sandy	5	140

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 5, Atlantic City

President Hotel well 2
(Log by F. J. Markewicz, N.J.G.S.)
Altitude 10 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Sand, fine to medium, light olive-gray, angular to sub-angular, mostly quartz; large percentage of heavy minerals	26	26
Pleistocene Series:		
Cape May Formation:		
Sand, light-gray, angular to subangular, slightly micaceous and fossiliferous	12	38
Sand, fine, light-gray, uniform, fossiliferous, slightly micaceous; scattered forams	62	100
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Sand, fine to coarse, light-gray, fairly clean, angular to sub-angular. Large percentage heavy minerals	30	130
Sand, fine to very coarse, light yellowish-gray, angular to sub-rounded	41	171
Sand, fine to medium, light yellowish-gray, fairly clean	37	208
Sand, fine, medium, grayish-red, clayey, 15 percent pea-gravel	10	218
Sand, fine, yellowish gray; 50 percent lignite; scattered shell fragments	33	251
Sand and pea gravel, light-gray to yellowish-gray	22	273
Sand, pebbly, fine-medium, light-gray. Pebbles pea-size. Micaceous silt, light-gray below 298 ft.	38	311
Miocene Series:		
Kirkwood Formation:		
Sand, slightly clayey, fine to coarse, light-gray, micaceous; some pea gravel	92	403
Clay, light olive-gray, slightly micaceous, and sand, fine to coarse; diatomaceous; few broken fossil fragments	239	642
Clay, sandy, light olive-gray, slightly micaceous, fossiliferous; broken shell fragments; few forams	162	804
Sand, medium to very coarse, medium, dark-gray, fossiliferous; mostly quartz, few forams	41	845
Clay, silty, medium-gray, moderately micaceous, fossiliferous; pea-sized gravel mixed	20	865

Well no. 1, City of Brigantine

Brigantine Water Dept. well 3
(Log by Layne-New York Co., Inc.)
Altitude 10 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Fill	18	18
Marsh mud	12	30

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, City of Brigantine—Continued

Pleistocene Series:		
Cape May Formation:		
Sand and gravel	17	47
Clay, soft	3	50
Sand and gravel	35	85
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Clay, tough	13	98
Sand	50	148
Clay	9	157
Sand	28	185
Sand and gravel with clay streaks	79	264
Miocene Series:		
Kirkwood Formation:		
Clay, sandy and gravelly	31	295
Clay, sandy, soft	25	320
Sand and clay	40	360
Clay	40	400
Clay, tough	70	470
Clay, soft	35	505
Clay, sandy, hard	65	570
Clay, tough	104	674
Sand, coarse; shells	20	694
Sand, coarse, gray	40	734
Sand, coarse, brown	44	778

Well no. 1, Buena Vista Township

Erman Manzoni well 1
(Log by Gus Hauser)
Altitude 100 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation-Cohansey Sand (undifferentiated):		
Gravel, pea-sized and stones	31	31
Sand, ivory-colored	8	39
Clay, white	3	42
Sand, silty, yellow	15	57
Clay, orange	11	68
Clay and sand, orange	47	115
Clay, brown	4	119
Sand, fine to medium, yellow, water-bearing	26	145
Sand, medium, orange, water-bearing	19	164
Sand, medium, yellow, water-bearing	16	180
Miocene Series:		
Kirkwood Formation:		
Clay, black		+180

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, Egg Harbor City

Egg Harbor City Water Dept. Well 3
(Log by Artesian Well Drilling Co.)
Altitude 50 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation-Cohansey Sand (undifferentiated):		
Fill	10	10
Sand, clayey, fine to coarse, yellow	114	124
Clay, slightly sandy, gray	22	146
Sand, slightly clayey, fine to coarse, gray	64	210
Miocene Series:		
Kirkwood Formation:		
Clay, gray; abundant microfossils	81	291
Clay, sandy, gray	20	311
Clay and sand, fine to coarse, mixed; some fossil fragments	13	324
Sand, clayey, fine to coarse, dark gray; some interbedded clay streaks	16	340
Sand, slightly clayey, medium to coarse, gray	14	354
Sand, fine to coarse, gray	5	359
Sand, medium to coarse, gray	2	361
Sand, same as above, cleaner	40	401

Well no. 25, Egg Harbor Township

Seaview Harbor Water Co. well 1
(Log by D. Parrillo, N.J.G.S.)
Altitude 5 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Sand, quartz, medium- to fine-grained, medium-gray, well rounded and sorted; recent shell fragments. Heavy minerals mostly hornblende with epidote, pyroxene, and garnet	20	20
Sand, same as above; slightly finer grained and very well sorted. Only a few shell fragments	20	40
Pleistocene Series:		
Cape May Formation:		
Sand, quartz, fine to very coarse, medium-gray	40	80
Sand, quartz, medium to coarse, light-gray, rounded. Heavy minerals—opaques predominant	20	100
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Sand, quartz, medium to very coarse, light-gray, rounded	40	140
Sand, same as above; becoming slightly clayey	20	160
Sand, quartz, silty, medium to coarse, medium-gray, rounded to subrounded. Few pea-sized pebbles	90	250

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 25, Egg Harbor Township—Continued

Miocene Series:		
Kirkwood Formation:		
Sand, quartz, slightly clayey, medium to coarse, medium-gray, subrounded	30	280
Silt, clayey, sandy, medium-gray, finely micaceous	20	300
Sand, quartz, medium, gray, subrounded; some coarse sand grains	10	310
Sand, same as above; slightly clayey	30	340
Silt, sandy, medium-gray, finely micaceous. Some shell fragments. Heavy minerals, 70 percent opaques, good rutilated leucoxene, little epidote and garnet. Flat circular diatoms present	200	540
Silt, same as above; more sand and containing microscopic shell fragments	60	600
Silt, same as above; some black lignitic sandy silt	80	680
Sand, quartz, medium to coarse; mixed with shell fragments. Some small gastropods and little silt	20	700
Silt, sandy, medium gray; shell fragments	25	725
Sand, quartz, slightly silty, medium-grained, medium- to dark-gray, rounded. Contains 25 percent shell fragments. Very coarse sand at depth	28	753
Sand, medium to very coarse, slightly brownish-gray, polished; some shell fragments	32	785
Clay, hard	45	830

Well no. 1, Galloway Township

U. S. Geological Survey Observation well 1
(Log by H. R. Anderson, U.S.G.S.)
Altitude 29 feet

	Thickness (feet)	Depth (feet)
Pleistocene Series:		
Cape May Formation:		
Gravel, coarse sand, cobbles, pale yellow-orange	6	6
Sand, coarse, granules, yellowish-gray; shell fragments	14	20
Sand, coarse, pebbles, pale yellow-brown; 10 percent white chert and shell fragments	16	36
Sand, fine to coarse, very light-gray	10	46
Sand, fine to coarse, well-sorted, medium-yellow	10	56
Sand, medium to granules, pale yellow-orange	10	66
Sand, medium to fine gravel becoming clayey and coarser with depth	10	76
Sand, fine, medium, slightly clayey, pale yellow-orange	10	86
Gravel with clayey pebbles, yellowish-gray to sand, fine, medium, dark yellow-orange to sand, fine, medium-clayey, pale green-yellow	10	96
Sand, fine to coarse, yellowish-gray	10	106

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, Galloway Township—Continued

Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Sand, very coarse to fine, pale yellow-orange. Six inch layer hardpan at 110 ft.	10	116
Clay, fine, sandy to silty, light-brown to light brown-gray	30	146
Sand, medium, coarse, brownish-black	10	156
Sand, fine to coarse, dark yellow-orange, well-sorted, clean	10	166
Sand, fine to medium, dark yellow-orange, well-sorted, clean	10	176
Miocene Series:		
Kirkwood Formation:		
Sand, fine, slightly clayey, olive-gray to dark-gray	20	196
Sand, very fine, well-sorted, dark-gray to medium light-gray	20	216
Sand, very fine, clayey, greenish-gray to dark green-gray; scattered thin clay layers	30	246
Clay, hard, 1-2 percent micaceous; layers of very fine clayey sand, olive-gray	10	256
Clay, hard, slightly micaceous, lignitic, grayish olive-green, massively-bedded	50	306
Sand, fine to coarse; containing quartz granules; some pebbles (5-10 mm) dark-green, gray	10	316
Clay, hard, slightly silty at top, grayish olive-green to massive, olive-gray with depth	60	376
Sand, fine to coarse, clayey, poorly-sorted, dark green, gray; some quartz	30	406
Clay, with stratified thin layers of very fine sands and silt, micaceous, olive-gray	50	456
Silt to very fine sand, clayey, some massive clay, olive-gray	10	466
Clay, micaceous, massive, olive-gray; paper-thin shell fragments	30	496
Clay, fine to coarse, sandy, dark gray; few quartz granules	30	526
Sand, coarse to gravel, light olive-gray; pebbles to 10 mm	10	536
Sand, fine, well-sorted, dark gray. Thin clay layers	10	546
Sand, fine to very coarse, olive-gray, scattered quartz granules, good sorting	30	576
Clay, olive-black and multicolored	10	586
Sand, fine to coarse, thin clay layers, dark-gray	10	596
Sand, medium to very coarse, medium dark-gray; few rounded quartz granules, fair sorting	10	606
Clay, lignitic, micaceous, layers of clayey fine sand and silt, from light olive-gray to dusky-brown. Some shell fragments	40	646
Sand, micaceous, medium dark-gray; alternating from fine to very coarse to very fine	40	686
Clay, massive, hard, fossiliferous, light olive-gray, forams	50	736
Clay, silty, micaceous, olive-gray	10	746
Eocene Series:		
Piney Point(?) Formation:		
Sand, fine to coarse, glauconitic, fossiliferous, dusky blue-green; becomes clayey with depth	50	796

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, Galloway Township—Continued

Clay, fine to coarse, sandy, glauconitic, greenish-black	40	836
Sand, medium to granules, clayey, poorly-sorted, moderate olive-brown	30	866
Sand, fine to very coarse, clayey, poorly-sorted	60	926
Clay, fine to very coarse sandy, olive-gray	20	946
Sand, fine to coarse, clayey, olive-gray	20	966
Clay, fossiliferous, massive, hard, black-to dark green-gray; shell fragments	36	1002

Well no. 13, Hamilton Township

Scholler Bros. Inc. well 2
(Log by D. Parrillo, N.J.G.S.)
Altitude 90 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene (?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Sand, clayey, medium to very coarse, reddish-brown; contains gravel to ½in.	3	3
Sand, same as above; contains much weathered feldspar	5	8
Sand, gravelly, medium to very coarse, yellow	5	13
Sand, same as 13 ft.; contains gravel to 1 in.	10	23
Sand, quartz, coarse to very coarse, yellowish-orange	5	28
Sand, quartz, medium to coarse, yellow; heavy minerals about 1 percent	5	33
Sand, same as above; contains gray clay streaks	4	37
Sand, fine to medium, grayish-yellow; few coarse grains. Micaceous. Some gray clay 47-52 ft.	20	57
Sand, quartz, medium to coarse, yellow, clean	15	72
Sand, slightly clayey, medium to very coarse, grayish-yellow; quartz grains to 3/8 in.	7	79
Sand, quartz, medium to coarse, light-gray	5	84
Sand, medium to coarse, yellowish-brown; some ironstone	3	87
Sand, same as above; contains brown clay lenses	3	90
Sand, quartz, very clayey, medium-grained, orange	5	95
Sand, fine, yellowish-orange; ironstone and quartz grains	15	110
Sand, quartz, fine, yellowish-orange, slightly micaceous; slightly clayey 125 to 130 ft.	25	135
Sand, quartz, fine, clayey, orange	5	140
Sand, same as above; some coarse quartz grains	15	155
Clay, sandy, orange, micaceous	5	160
Sand, medium to coarse, brown, clean	3	163
Sand, fine, yellowish-brown, micaceous; few coarse quartz grains and brown clay lumps	5	168
Sand, same as above; more brown clay	5	173

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 13, Hamilton Township—Continued

	Thickness (feet)	Depth (feet)
Miocene Series:		
Kirkwood Formation:		
Clay, sandy, fine, dark-gray, micaeous and lignitic. Contains very fine pyrite spheres. Diatoms also present	5	178

Well no. 17, Hamilton Township

The Greater Egg Harbor Regional High School Dist. well 1
(Log by Layne-New York Co. Inc.)
Altitude 60 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Clay, sandy, yellow; mixed with coarse sand and gravel	16	16
Clay, yellow and white	8	24
Clay, sandy, yellow and white; fine sand and gravel streaks	18	42
Clay, white	3	45
Sand, fine to coarse; contains gravel and streaks of yellow and white clay	50	95
Clay, yellow and white	9	104
Sand, fine to medium gravel; streaks of yellow, white and red clay	26	130
Sand, fine to medium; contains gravel	35	165

Well no. 3, Hammonton Township

Hammonton Water Dept. well 3
(Log by Artesian Well Drilling Co.)
Altitude 110 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Soil, coarse sandy, grayish-yellow, containing fine gravel	5	5
Sand, fine, pale-yellow	5	10
Sand, coarse, brownish, clayey	5	15
Sand, fine, gray, clayey	5	20
Sand, fine, gray	5	25
Sand, fine, pale-yellow, with streaks of sandy brown clay and tough gray clay	15	40
Sand, very fine, grayish-yellow; contains little clay	25	65
Sand, medium-to-fine, yellowish-gray	59	124
Sand, fine, gray	24	148
Miocene Series:		
Kirkwood Formation:		
Clay, tough, blue-gray; containing grains of coarse sand	22	170
Clay, tough, gray	34	204
Sand, fine to coarse, grayish-white	13	217
Sand, fine, bluish-gray	44	261
Sand, yellowish-white, water-bearing	62	323

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 4, Hammonton Township

American Home Products Corp. well 1
(Log by Layne-New York Co., Inc.)
Altitude 80 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Sand and gravel, fine, yellow	12	12
Sand, clayey, yellow	18	30
Sand, fine to medium	30	60
Sand, coarse, yellow; streaks of clay	31	91
Sand, fine to coarse	29	120
Clay, sandy, white	6	126
Sand, coarse, and gravel	16	142
Clay, white	5	147
Sand, coarse, and gravel	44	191
Miocene Series:		
Kirkwood Formation:		
Clay, sandy, blue	24	215
Clay, sandy, white	10	225
Clay, sandy, blue	29	254
Sand, fine, hard-packed	33	287
Clay, tough, blue-white; streak of clay	68	355
Sand and shells, hard-packed	43	398

Well no. 5, Hammonton Township

John B. Olivio well 1
(Log by F. J. Markewicz, N.J.G.S.)
Altitude 114 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Sand, fine to coarse, dull yellowish-gray; scattered pebbles to 3/8 in.	10	10
Sand, quartz, fine, light yellowish-gray, fairly clean. Few dark minerals. Scattered coarse grains and lumps of white silty clay	10	20
Sand, fine to medium, light-yellow, fairly clean, very slightly micaceous. Scattered coarse grains	10	30
Sand, fine, light-yellow lumps of light-yellow to grayish-white silty clay. Scattered coarse grains and small pebbles to ¼ in.	10	40
Sand, fine to coarse, dark yellowish-orange, dirty. Scattered very small pebbles; grains subangular to rounded	10	50
Sand, same as 50 ft.; much cleaner	10	60
Sand, same as 60 ft.; somewhat coarser	10	70
Sand, fine to coarse, light yellowish-gray, clean, water bearing. Numerous small ¼ in. pebbles. Grains subangular to rounded	10	80

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 7, Linwood

Linwood Country Club well 2
(Log by I. J. Winograd, U.S.G.S.)
Altitude 20 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Sand, micaceous, fine to very fine-grained, well-polished and sorted. Yellowish to greenish gray	16	16
Pebble sand, fine to 25 mm, mostly white	3	19
Sand, fine to very coarse, pale yellowish-orange; some pebbles	9	28
Sand, fine to very coarse, quartzose, subangular, dirty, dark yellowish-orange	8	36
Clay, olive-gray	24	60
Pebble sand, poorly-sorted, white-to olive-gray	13	73
Sand, medium to very coarse, dirty, subangular, light olive-gray	8	81
Sand, fine to medium, quartzose, subrounded, dirty, yellowish-gray	21	102
Sand, fine to medium, dirty, subangular, grayish-orange to pale yellowish-brown	32	134
Sand, medium to very coarse, pale yellowish-orange to grayish-orange; quartz grains are frosted and subangular	22	156
Sand, fine to granulitic, quartz, subangular to subrounded, and frosted, pale yellowish-orange; some chert	11	167
Sand, medium to very coarse, quartzose, subangular and frosted, dark yellowish-orange	15	182
Sand, medium to very coarse, dark yellowish-orange; 10 percent clay		+182

Well no. 3, Longport

Longport Water Dept. well 1
(Log extracted from the Annual Report of the State Geologist—1895)
Altitude 6 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Beach sand	25	25
Pleistocene Series:		
Cape May Formation:		
Sand and shell fragments	30	55
Clay, silty; contains diatoms	20	75
Sand, white	50	125
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Clayey sand	5	130
Sand, yellowish-white	38	168
Clayey sand	6	174
Sand, drab-colored	86	260
Sandy clay	12	272
Sand	20	292

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 3, Longport—Continued

Miocene Series:		
Kirkwood Formation:		
Sandy clay with diatoms	18	310
Sand with clay	10	320
Clay; contains diatoms and fragments of molusks	10	330
Clayey sand	44	374
Clay with diatoms	106	480
Sandy clay with diatoms	20	500
Clay, sand, and shells	5	505
Sandy clay with diatoms	108	613
Clay; diatoms	51	664
Sandy clay with shells	56	720
Sand, brown, water-bearing; becomes lighter in color with depth	83	803

Well no. 1, Margate

Margate Water Dept. well 4
(Log by Layne-New York Co. Inc.)
Altitude 6 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Fill and fine sand	11	11
Sand	14	25
Pleistocene Series:		
Cape May Formation:		
Sand and streaks of gravel	76	101
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Clay, soft	3	104
Sand and clay streaks	14	118
Sand	27	145
Clay	6	151
Sand	10	161
Sand, hard	13	174
Sandy clay	42	216
Clay, wood, and sand	24	240
Sand, gravel, and clay streaks	33	273
Miocene Series:		
Kirkwood Formation:		
Sand, clay, and gravel streaks	37	310
Sand, fine, gray; clay streaks	30	340
Sandy clay	25	365
Sandy clay, hard	85	450
Clay	35	485
Sandy clay, hard	35	520
Sandy clay	125	645
Sand, hard	4	649
Clay, tough	21	670

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, Margate—Continued

Sand and clay streaks	55	725
Clay	15	740
Sand, medium-coarse	63	803
Clay, tough	7	810

Well no. 5, Mullica Township

Amatol South well 1
(Log by E. C. Rhodehamel, U.S.G.S.)
Altitude 64 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Surface soil	1	1
Sand, yellow	33	34
Sand, yellow and gray (loam)	44	78
Sand, red and gray clay	32	110
Sand, dark red, water-bearing	20	130
Clay, grayish-black and sand; pieces of quartz, slate	17	147
Clay, grayish-black; pieces of quartz, gneiss, sandstone, gray sand; some water	37	184
Sand, yellow	8	192
Clay streak, yellow	1	193
Clay, yellow, and sand	2	195
Sand, yellow, water	7	202
Miocene Series:		
Kirkwood Formation:		
Clay, dark, and sand	7	209
Clay, chocolate-colored; containing pieces of wood	23	232
Sand, gray, coarse	23	255
Sand, gray, coarser than at 255 ft.	17	272
Sand, black and clay	5	277
Clay, chocolate-covered, or muck	17	294
Sand and gravel, brown	13	307
Clay streak	1	308
Sand, gray	18	326

Well no. 7, Mullica Township

U. S. Geological Survey Observation well, Wharton 4-H
(Log by E. C. Rhodehamel, U.S.G.S.)
Altitude 20 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation-Cohansey Sand (undifferentiated):		
Sand, fine to coarse, yellowish-orange	1.5	1.5
Sand, fine, micaceous	11.5	13

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 7, Mullica Township—Continued

Sand, fine to medium, micaceous	2	15
Sand, medium to very coarse, clean	9.5	24.5
Sand, very coarse to sandy clay. Very thin layer of plastic clay at 26.5 ft.	2	26.5
Sand, coarse to fine	1.5	28
Sand, quartzose, fine to medium, micaceous	5	33
Sand, fine, micaceous. Ironstone layer at base	3	36
Sand, quartzose, fine to coarse, clean	19	55
Sand, medium to coarse, clean, yellowish-orange	12	67
Sand, coarse to very coarse, clean, yellowish-orange	2	69
Sand, medium to coarse	7	76
Sand, medium to very coarse; few pebbles	6	82
Sand, quartzose, very fine to coarse, clean	9	91
Sand, medium to coarse, dark yellowish-orange; few pebbles	1	92
Clay, plastic, yellowish-gray	2	94
Sand, very fine to coarse; some coarse gravel	1	95
Sand, fine to very coarse, grayish-yellow; mica flakes; thin clay layer at 96 ft.	3	98
Sand, medium to coarse, few pebbles	12	110
Sand, coarse; contains notable heavy minerals	1	111
Sand, medium to coarse, dark yellowish-orange	15	126
Sand, fine, clayey	5	131
Sand, medium to coarse, clean; granules and pebbles	29	160
Miocene Series:		
Kirkwood Formation:		
Sand, micaceous, fine to very fine, clayey	16	176
Sand, fine to medium; small pebbles	2	178
Sand, fine to very fine, clayey, micaceous	3	181
Sand, fine to medium to very coarse	9	190
Sand, clayey, very fine, micaceous, silty	46	236

Well no. 7, Pleasantville

Atlantic City Water Dept. well 15
(Log by Layne-New York Co. Inc.)
Altitude 8 feet

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene(?) and Miocene(?) Series:		
Cape May Formation and Cohansey Sand (undifferentiated):		
Fill	5	5
Sand and grass roots, muddy	5	10
Sand, fine to coarse; gravel; some wood; streaks of clay	95	105
Clay, sandy, yellow and white	48	153
Sand, fine to medium and gravel, mixed	12	165
Clay, sandy	45	210
Sand, fine to medium and gravel; streaks of clay	40	250

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 7, Pleasantville—Continued

Miocene Series:		
Kirkwood Formation:		
Clay, sandy	12	262
Clay, green and brown	50	312
Sand, fine to medium and gravel; some shells	14	326
Clay, green and brown	42	368
Clay, sandy with some shells	22	390
Clay, green and brown	118	508
Hardpan	1	509
Sand, fine to medium, and gravel; streaks of clay	31	540
Clay, sandy	10	550
Sand, fine to coarse, and gravel; streaks of clay	120	670

Well no. 1, Somers Point

U. S. Geological Survey Observation well 1
(Log by H. R. Anderson, U.S.G.S.)
Altitude 10 feet

	Thickness (feet)	Depth (feet)
Pleistocene Series:		
Cape May Formation:		
Sand, medium to coarse, gray; grit; little gravel	8	8
Clay and bog, gray	1	9
Sand, medium to coarse, gray; grit; gravel	16	25
Sand, fine to medium, multicolored; some clay	8	33
Clay, solid, gray	10	43
Sand, fine to medium, gray; some clay	21	64
Clay, fine, gray	10	74
Sand, very fine to fine, multicolored; few grits, gravel, some clay	9	83
Sand, clayey, very fine, gray; streaks of sandy clay	11	94
Sand, very fine, gray, layered; some clay and solid sandy clay	8	102
Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Clay, sandy, fine, gray	22	124
Sand, fine, light-gray; some mica	10	134
Sand, medium to coarse, gray	7	141
Clay, solid; sandy clay and sand, fine grained; stratified	11	152
Sand, fine, gray	19	171
Sand, fine, black	22	193
Sand, medium, gray	8	201
Sand, very fine, gray; some clay, mica	22	223
Clay, solid, gray	9	232
Sand, fine to medium, gray; lumps of sandy clay	19	251
Sand, very fine to fine, gray; few grits	10	261
Sand, medium to coarse, gray; grit	9	270

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 1, Somers Point—Continued

	Thickness (feet)	Depth (feet)
Miocene Series:		
Kirkwood Formation:		
Sand, very fine, gray	11	281
Sand, clayey, very fine, greenish-gray; streaks of silty clay	9	290
Clay, solid, gray	38	328
Clay, solid, greenish gray; some shells	93	421
Clay, solid, brownish-gray; mica	22	443
Silt and sandy clay, fine, gray, stratified; shell fragments	8	451
Clay, sandy, fine, gray, and solid clay; stratified shell fragments	11	462
Clay, solid, gray, very hard; some shell fragments	107	569
Sand, very fine, gray; some clay; many shell fragments	12	581
Clay, solid and sandy, gray; many shell fragments	13	594
Sand, fine, gray; lumps of sandy clay	15	609
Clay, solid, greenish-gray; mica	12	621
Clay, silty, greenish-gray; mica	13	634
Clay, sandy, greenish-gray; many shell fragments	10	644
Clay, sandy, very fine to fine, greenish-gray; streaks of solid clay; mica; shell fragments	9	653
Clay, solid, greenish-gray, and streaks of sandy clay	18	671
Sand, medium to coarse	27	698
Sand, silty, gray; some clay; mica	7	705
Sand, silty, gray; some clay; mica; streaks of solid clay	9	714
Clay, solid, brownish-gray	42	756
Clay, solid, gray; some shells	41	797
Eocene Series:		
Piney Point(?) Formation:		
Clay, sandy, greenish-gray; mica	28	825
Clay, sandy, fine, green	16	841
Clay, sandy, fine, green, and solid clay; stratified	10	851
Clay, solid, gray; shell fragments	11	862
Clay, solid, gray and sandy clay; shell fragments	12	874
Clay, solid, greenish-gray; some shells and mica	11	885
Clay, solid, greenish-gray, and sandy clay; some shells	14	899
Clay, sandy, fine to coarse, greenish-brown; streaks of sandstone	11	910
Clay, sandy, medium, greenish-brown; streaks of solid clay	21	931
Clay, sandy, fine to coarse, greenish-gray; and clayey sand	71	1,002

Well no. 2, Ventnor

Ventnor Water Dept. well 4
(Log by Artesian Well Drilling Co.)
Altitude 8 feet

	Thickness (feet)	Depth (feet)
Recent Series:		
Beach sand	30	30
Pleistocene Series:		
Cape May Formation:		
Sand	25	55
Sandy clay	30	85
Wood and sandy clay	9	94

Table 7.—Logs of selected wells in Atlantic County—Continued

Well no. 2, Ventnor—Continued

Pliocene(?) and Miocene(?) Series:		
Cohansey Sand:		
Sand, coarse, white; gravel	56	150
Lignite and clay	15	165
Gravel, yellow	10	175
Sand, coarse, yellow	75	250
Miocene Series:		
Kirkwood Formation:		
Sand, quartz, fine, gray; lignite	10	260
Sandy clay	10	270
Sand, quartz, alternating gray and brown	90	360
Clay, sand, and broken shells	10	370
Clay, varicolored	110	480
Sand, fine, gray	50	530
Clay, brown	90	620
Sand, quartz, gray	30	650
Sandy clay, lignite, and gray sand	40	690
Sand, quartz with fine broken shells	50	740
Sand, quartz	40	780
Sand, quartz, fine, gray	30	810
Clay, hard		+810

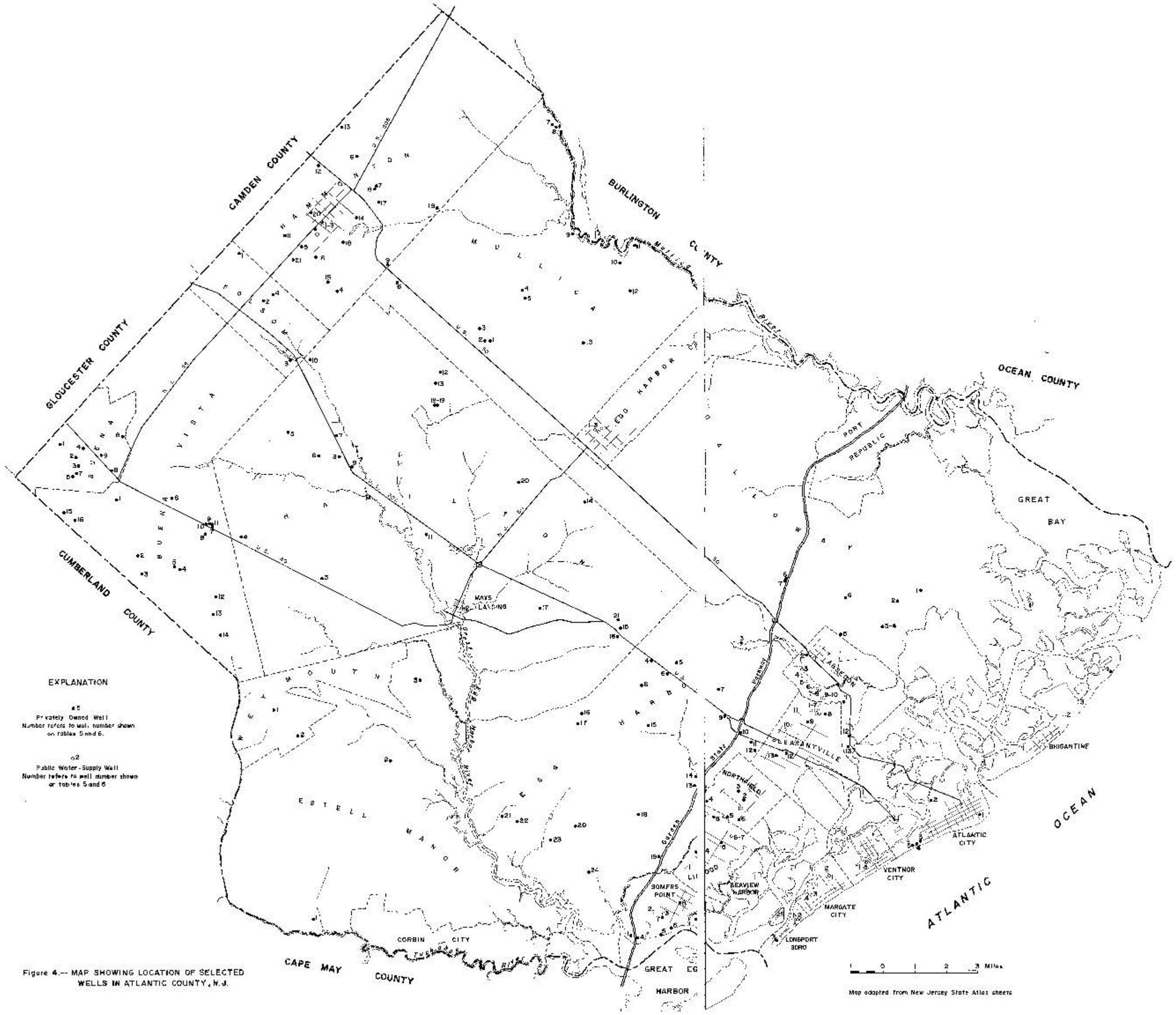

Figure 4.— MAP SHOWING LOCATION OF SELECTED WELLS IN ATLANTIC COUNTY, N.J.