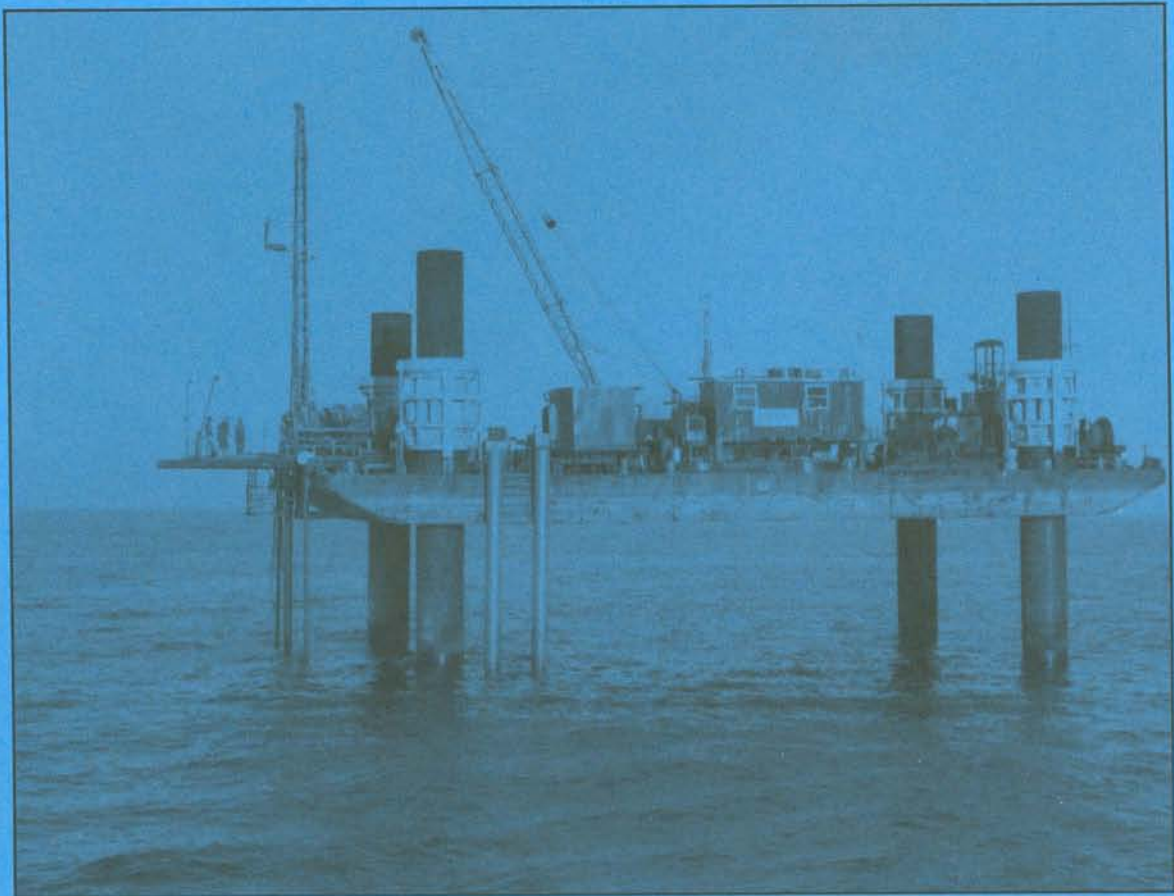




New Jersey Geological Survey
Geological Survey Report GSR 22

Records of Selected Wells in Atlantic County, New Jersey



STATE OF NEW JERSEY

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Department of Environmental Protection

Judith A. Yaskin, *Commissioner*

Environmental management and control

John S. Keith, *Assistant Commissioner*

Geological Survey

Haig F. Kasabach, *State Geologist*

Cover illustration: Offshore drilling platform at observation well 2 site, 5.3 miles off Atlantic City. This well was drilled to investigate offshore conditions which might contribute to salt water movement towards wells supplying the Atlantic City area. The log for this well is on page 24.

Conversion Factors

Multiply	by	to obtain
inch (in.)	25.40	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
square mile (mi ²)	2.590	square kilometer (km ²)
feet per mile (ft/mi)	0.189	meters per kilometer (m/km)
gallons per minute (gal/min)	0.06308	liters per second (L/s)
acre	0.4047	hectare

Sea Level

In this report sea level refers to the National Geodetic Vertical Datum of 1929 (NGVD 1929)

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**New Jersey Geological Survey
Geological Survey Report GSR 22**

Records of Selected Wells in Atlantic County, New Jersey

by
Lloyd G. Mullikin

New Jersey Department of Environmental Protection
Division of Water Resources
Geological Survey
CN-029
Trenton, NJ 08625

1990

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RECORDS AND LOGS OF SELECTED WELLS IN ATLANTIC COUNTY, NEW JERSEY

ABSTRACT

This report contains records of 129 wells in Atlantic County. Included are 126 lithologic logs and 39 borehole geophysical logs. Information on hydrogeologic conditions at the time of well construction is included. New Jersey Department of Environmental Protection well permit numbers and U.S. Geological Survey Ground Water Site Inventory (GWSI) reference numbers are given. These logs, collected from 1891 to 1988, include the most detailed well information available for the county's 23 municipalities. Wells are shown on a 1:100,000-scale map.

INTRODUCTION

Purpose and Scope

This collection of hydrogeologic information, derived from well records and borehole geophysical logs, was assembled to support the Atlantic City regional water bond study. This study was undertaken to aid in the protection and management of the ground water resources in the southern part of the State. The 2,500-square-mile study area (fig. 1) includes all of Atlantic, Cape May and Cumberland Counties and parts of Burlington, Camden, Gloucester, Ocean and Salem Counties.

Acknowledgments

Conrad Jacoby of the Department of Environmental Protection, Management Services

Element, and Jeffrey Kearns, formerly of the N.J. Geological Survey, helped with computer digitization of the borehole geophysical logs; Jeffrey Clark and others of the New Jersey district office of the U.S. Geological Survey provided information and assistance; Donna Moore and Joyce Rosetty of the N.J. Geological Survey typed the well logs. Thanks are also due to the drillers and property owners in Atlantic County, who provided valuable information and assistance.

The Water-Supply Bond Issue of 1981, approved by the voters of New Jersey, included funding for water-supply investigations. This bond issue is the funding source for this report and study.

SOURCE OF RECORDS

This report contains records of 129 wells. The wells were drilled for public and private water supply, irrigation, exploration, ground-water monitoring, and other purposes. Well locations are shown on plate 1. Sources for previously published records are referenced in the "Remarks" column of table 3. Most of the records include lithologic logs, and many have borehole geophysical logs.

Many of the records are from the files of the Bureau of Water Allocation, Division of Water Resources, N.J. Department of Environmental Protection. The Bureau of Water Allocation is responsible for issuing diversion permits and

collecting and maintaining well records. These files consist predominantly of records required by New Jersey law since 1948, but also include those collected by Lewis Woolman between 1890 and 1903 (Woolman, 1903, p. 10), and M.W. Twitchell (Kummel, 1921) and others before 1948. In all, more than 150,000 well records are in these files. Of these more than 9,000 are from Atlantic County.

Other sources of well data were publications of the N.J. Geological Survey and U.S. Geological Survey and drillers and land owners in Atlantic County.

WELL-NUMBERING SYSTEMS

Several numbering systems are used in the well records and logs in this report. The geographic code is a four-digit number derived

from the Federal Information Processing Standard (FIPS) System (GEOCODES, 1986, p. i). The first two digits (01) are a county code for

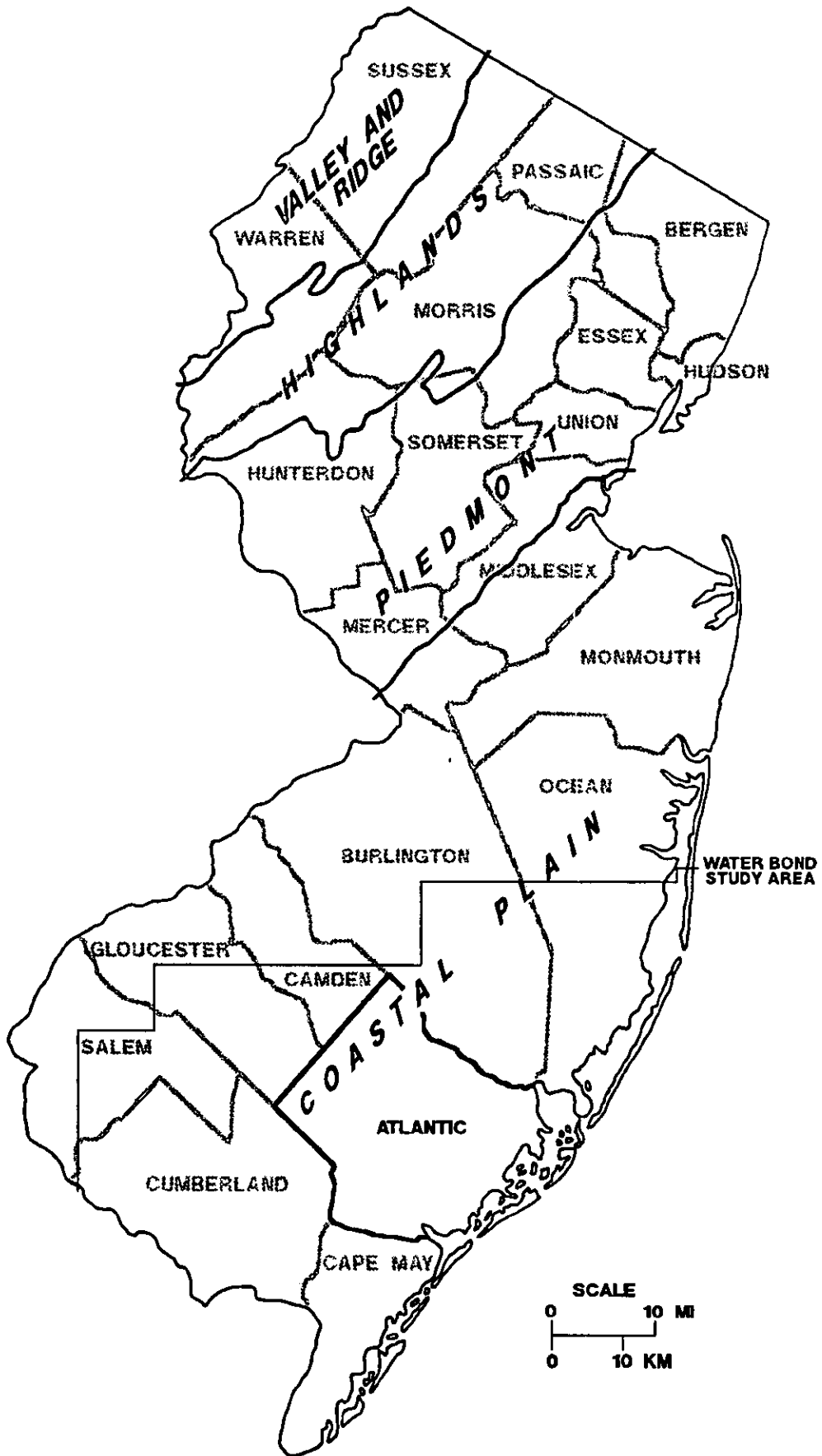


Figure 1. Physiographic provinces of New Jersey, the Atlantic City regional water bond study area, and Atlantic County.

Atlantic County. The next two digits indicate the municipality. Municipality codes for Atlantic County are listed in table 1.

The well number is a unique three-digit site-location number assigned to each well listed in this report.

A well permit number is assigned by the Bureau of Water Allocation prior to drilling. Upon completion, the driller is required to submit a well record. Permit numbers are assigned sequentially within areas covered by a particular New Jersey Atlas Sheet. A permit number such as 32-10935, for example, indicates the 10,935th

permit issued within the area covered by Atlas Sheet 32.

The U.S. Geological Survey Ground Water Site Inventory (GWSI) provides access to over two hundred types of information on selected wells. The database includes public water supply wells, high capacity wells, and wells used in N.J. Geological Survey and U.S. Geological Survey aquifer studies. The first two digits of a GWSI number are the FIPS county code. The remaining digits are a unique number for each well. Information on construction, well use, water quality, water levels, aquifer, lithology and other hydrogeologic characteristics is included.

Table 1. Well data included in report

Municipality Code*	Municipality Name	Well records	Logs		Municipality Code*	Municipality Name	Well records	Logs	
			Lithologic	Geophysical				Lithologic	Geophysical
0101	Absecon City	8	8	0	0113	Hammonton Town	6	6	1
0102	Atlantic City	21	20	8	0114	Linwood City	1	1	0
0103	Brigantine City	5	5	1	0115	Longport Borough	4	3	2
0104	Buena Borough	4	4	1	0116	Margate City	6	6	2
0105	Buena Vista Township	7	7	1	0117	Mullica Township	5	5	1
0106	Corbin City	0	0	0	0118	Northfield City	1	1	0
0107	Egg Harbor City	3	3	1	0119	Pleasantville City	7	6	1
0108	Egg Harbor Township	12	12	6	0120	Port Republic City	0	0	0
0109	Estell Manor City	1	1	1	0121	Somers Point City	2	2	1
0110	Folsom Borough	1	1	0	0122	Ventnor City	3	3	0
0111	Galloway Township	16	16	6	0123	Weymouth Township	1	1	0
0112	Hamilton Township	15	15	6					

*Modified from Geocodes, 1986, p.1

LATITUDE AND LONGITUDE LOCATION SYSTEM

Latitude and longitude locations in this report consist of 6-digit numbers corresponding to degrees, minutes and seconds. For location N392513 W742926, the "N" indicates north latitude, and the following 6 digits show degrees,

minutes, and seconds of latitude. The "W" indicates west longitude, and the following 6 digits show degrees, minutes, and seconds of longitude. Each second of latitude and longitude defines an area of approximately 100 x 75 feet.

NEW JERSEY ATLAS SHEET COORDINATE SYSTEM

The New Jersey Atlas Sheet Coordinate System (ASCS), developed by the N.J. Geological Survey (Kummel, 1912, p. 13), is the primary method for reporting well locations in New Jersey. The ASCS method was designed to be easier

to use and understand than the latitude and longitude system. All well records are filed by the Bureau of Water Allocation utilizing ASCS numbers.

HYDROLOGIC DATA

Hydrologic data in table 3 are from records filed after completion of drilling and show conditions at the time of well construction. More recent data may be available through the U.S. Geological Survey Ground Water Site Inventory

(GWSI), in the files of the Bureau of Water Allocation, and elsewhere.

In some instances, "pumping level" may mean depth of the pump setting during the test, rather than water level during pumping.

GEOLOGIC SETTING

The 610 square miles which make up Atlantic County are about 7.5 percent of New Jersey's total area. Atlantic County lies within the Outer Coastal Plain and is underlain by interbedded sand, gravel, silt and clay of Cretaceous, Tertiary and Quaternary age (table 2). The sediments of New Jersey's Coastal Plain dip and thicken to the southeast. Near the town of Dorothy, in the western part of Atlantic County, these sediments are about 3,700 feet thick. Along the coast, the thickness increases gradually from 3,798 feet at

Island Beach State Park, in Ocean County to the north (Gill and others, 1963), to over 6,000 feet in Cape May County to the south (Gill, 1962b, p. 7).

The Kirkwood-Cohansey aquifer system and the Atlantic City 800-foot sand of the Kirkwood Formation are the hydrogeologic units (table 2) most frequently developed for water supply in Atlantic County.

LITHOLOGIC LOGS

The lithologic logs in this report have been revised slightly for readability and consistency. The most complete logs contain information on the type of material drilled, grain size, color, depth, thickness, and water-bearing characteristics.

(Munsell, 1975). This is a precise method for identifying colors of rocks and sediments based on standard charts. Notations for hue, value, and chroma, are combined to form a color designation such as 5YR 5/6 (hue 5YR, value 5, and chroma 6; light brown with a yellowish-red hue).

Sediment Color

Most of the colors mentioned are easily understood descriptive terms. Several of the logs use the Munsell method for color identification

Grain Size

The grain-size classification shown below is widely accepted for clastic sedimentary rock.

Grain-Size Classification*		
Sediment	Sediment	Grain Size (mm)
Gravel	Boulder	Greater than 256
	Cobble	64 - 256
	Pebble	4 - 64
	Granule	2 - 4
Sand	Very coarse sand	1 - 2
	Coarse sand	1/2 - 1
	Medium sand	1/4 - 1/2
	Fine sand	1/8 - 1/4
	Very fine sand	1/16 - 1/8
Mud	Silt	1/256 - 1/16
	Clay	Less than 1/256

*Modified from Wentworth, 1922, p. 277

Table 2. Geologic and hydrologic units of the New Jersey Coastal Plain (modified from Zapecza, 1989, table 2).

SYSTEM	SERIES	GEOLOGIC UNIT	LITHOLOGY	HYDROGEOLOGIC UNIT	HYDROGEOLOGIC CHARACTERISTICS				
QUATERNARY	Holocene	Alluvial deposits	Sand; silt; black mud.	Undifferentiated	Surficial material, commonly hydraulically connected to underlying aquifers. Locally some units may act as confining beds. Thicker sands are capable of yielding large quantities of water.				
		Beach sand and gravel	Sand, medium to coarse, light colored, quartz, pebbly.						
	Pleistocene	Cape May Formation	Sand, heterogeneous, light-colored, quartz, clayey, pebbly						
TERTIARY	Miocene	Pensauken Formation	Sand, heterogeneous, light-colored, quartz, clayey, pebbly	Kirkwood-Cohansey aquifer system	Ground-water occurs generally under water-table conditions. Interconnection with Cohansey Sand occurs where upper and lower confining units of the Kirkwood are not present. In Cape May County, the Cohansey Sand is under artesian conditions.				
		Bridgeton Formation							
		Beacon Hill Gravel	Gravel, light-colored, quartz, sandy.						
		Cohansey Sand	Sand, medium to coarse, light-colored, quartz, pebbly; local clay beds.						
		Kirkwood Formation	Sand, very fine to medium, gray and tan, quartz, micaceous; dark-colored diatomaceous clay.			Diatomaceous clay unit	upper confining unit Rio Grande water-bearing zone lower confining unit	Thick diatomaceous clay unit occurs along coast and for a short distance inland. A thin water-bearing sand occurs within the middle of this unit.	
	Atlantic City 800-foot sand	upper sand unit Atlantic City confining unit lower sand unit		A major aquifer along the coast.					
	Oligocene ¹	ACGS beta unit ¹	Sand, fine to coarse, quartz; glauconite.	Composite confining unit	basal clay	Poorly permeable sediments.			
		Mays Landing unit ¹			Piney Point aquifer ²	Yields moderate quantities of water locally.			
	Eocene	Shark River Formation	Clay, green, gray and brown, silty and sandy, glauconitic; fine quartz sand.		Vincentown aquifer	Poorly permeable sediments	Yields small to moderate quantities of water in and near its outcrop area.		
		Manasquan Formation				Poorly permeable sediments	Poorly permeable sediments		
	Paleocene	Vincentown Formation	Sand, fine to coarse, gray and green, quartz, glauconitic; brown, clayey, very fossiliferous glauconite and quartz calcarenite.		Red Bank sand	Yields small quantities of water in and near its outcrop area.			
		Hornerstown Formation	Sand, fine to coarse, dark green, clayey, glauconitic.			Poorly permeable sediments			
	CRETACEOUS	Upper Cretaceous	Tinton Sand		Sand, fine to coarse, brown and gray, quartz, glauconitic, clayey, micaceous.	Wenonah-Mount Laurel aquifer	A major aquifer.		
			Red Bank Sand		Sand, medium to coarse, green and black, clayey, silty, glauconitic.			Marshalltown-Wenonah confining unit	A leaky confining unit.
			Navesink Formation		Sand, fine to coarse, brown and gray, quartz, slightly glauconitic				
Mount Laurel Sand			Sand, very fine to fine, gray and brown, silty, slightly glauconitic		Englishtown aquifer system	A major aquifer. Two sand units in Monmouth and Ocean Counties.			
Wenonah Formation			Clay, dark greenish gray, silty; glauconitic quartz sand.						
Marshalltown Formation			Sand, fine to medium, tan and gray, quartz; local clay beds.						
Lower Cretaceous			Englishtown Formation		Clay, gray and black; micaceous silt.	Merchantville-Woodbury confining unit	A major confining unit. Locally the Merchantville Formation may contain a thin water-bearing sand.		
		Woodbury Clay	Sand, fine to coarse, light-gray quartz; local beds of dark-gray, lignitic clay.						
		Merchantville Formation	Sand, fine to coarse, light-gray, quartz, pebbly, arkosic; red, white, and variegated clay						
Lower Cretaceous		Magothy Formation	Alternating clay, silt, sand and gravel.	Potomac-Raritan-Magothy aquifer system	A major aquifer system. In the northern coastal plain, the upper aquifer is equivalent to the Old Bridge aquifer and the middle aquifer is the equivalent of the Farrington aquifer. In the Delaware River valley, three aquifers are recognized. In the deeper subsurface, units below the upper aquifer are undifferentiated.				
	Raritan Formation								
Pre-Cretaceous		Bedrock	Precambrian and lower Paleozoic crystalline rocks, schist and gneiss; locally Triassic sandstone and shale, Jurassic diabase.	Bedrock confining unit	No wells known to obtain water from these consolidated rocks, except along Fall Line.				

¹from Poore and Bybell, 1988, p. 8

²from Olsson and others, 1980, p. 549

BOREHOLE GEOPHYSICAL LOGS

Borehole geophysical logging includes all techniques of lowering sensing devices into a borehole and recording physical properties useful for interpreting characteristics of sediments, rocks, ambient fluids, and well construction. Borehole geophysical logs can help determine the lithology, geometry, resistivity, formation factor, bulk density, porosity, permeability, moisture content, and specific yield of water-bearing sediments and rocks and define the

source, movement, and chemical and physical characteristics of ground water (Keys and MacCary, 1971, p.1).

Of the 129 wells presented in this report, 39 have borehole geophysical logs. Some of these wells have multiple logs, permitting comparison of the different borehole geophysical techniques. The logs have been adjusted to a uniform vertical scale of one inch equals 100 feet.

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GLOSSARY

Anhedral - Showing no rational faces or crystal outline.

Artesian aquifer - An aquifer containing water under sufficient pressure to cause the water level in a well to rise above the top of the aquifer. Also called confined aquifer.

Argillite - A compact rock derived from mudstone or shale, more highly indurated than either of those rocks. It lacks the fissility of shale or the cleavage of slate. It is a product of weak metamorphism.

Bioclastic rock - A sedimentary rock consisting of fragmental or broken remains of organisms, such as a sandstone composed of shell fragments.

Bioturbation - The churning and stirring of a sediment by organisms.

Bog iron - A general term for a soft, porous deposit of impure hydrous iron oxides formed in bogs, swamps, and shallow lakes by precipitation

from iron-bearing waters and by the oxidizing action of algae, iron bacteria, or the atmosphere. Composed principally of limonite impregnated with plant debris, clay, and clastic material. It is an iron ore of poor quality.

Bulk density - The weight of an object or material divided by its volume, including the volume of its pore spaces.

Carbonaceous - Rich in carbon or containing organic matter.

Concretion - A hard, compact aggregate of mineral matter, sub-spherical to irregular in shape, formed by precipitation from water solution around a nucleus, such as wood or a shell, in a sedimentary rock.

Concretionary - Characterized by, consisting of, or producing concretions.

Diatom - A microscopic single-celled aquatic plant related to the algae. It grows in both fresh and salt water. Diatoms secrete siliceous frus-

tules in a great variety of forms, which may accumulate in sediments in enormous numbers.

Euhedral - A mineral grain that is completely bounded by its own rational faces, and whose growth has not been restrained or interfered with by adjacent grains.

Formation factor - The ratio of the conductivity of an electrolyte to the conductivity of a rock saturated with that electrolyte.

Glauconite - A green mineral closely related to the micas and essentially a hydrous potassium iron silicate. It is abundant in greensand, and is an indicator of very slow sedimentation.

Gumbo - A term used for a clay soil that becomes sticky, impervious, and plastic when wet.

Lignite - A brownish-black coal that is intermediate in grade between peat and sub-bituminous coal.

Lamination - The thinnest recognizable layer in a sediment or sedimentary rock, differing from other layers (laminae) in color, composition, or particle size. Also called a streak.

Micaceous - Consisting of, containing, or pertaining to mica.

Microbreccia - A poorly sorted sandstone containing relatively large and sharply angular sand grains set in a very fine silty or clayey matrix.

National Geodetic Vertical Datum of 1929 (NGVD 1929) - A geodetic datum based on the first order level nets of the United States and

Canada, formerly called mean sea level. It is also referred to as sea level in this report.

Ped - A naturally formed unit of soil structure, such as an aggregate.

Porosity - The ratio of the aggregate volume of interstices in a rock or soil to its total volume. It is usually stated as a percentage.

Permeability - The capacity of a porous rock, sediment, or soil to transmit a fluid; it is a measure of the relative ease of fluid flow under unequal pressure.

Pyrite - A common mineral, FeS_2 . The most widespread and abundant of the sulfide minerals, which occurs in all kinds of rocks.

Rational face - A crystal face naturally suggested by and peculiar to the internal molecular structure of the mineral species to which the crystal belongs.

Specific yield - The ratio of the volume of water that a given mass of a saturated rock or soil will yield by gravity to the volume of that mass. This ratio is stated as a percentage.

Streak - See lamination.

Subhedral - Bounded partly by its own rational faces and partly by surfaces formed against preexisting grains as a result of either crystallization or recrystallization.

Trace - A concentration or amount of material that is too small for accurate quantitative determination.

Table 3. Records of wells in Atlantic County

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
ABSECON CITY																		
0101	042	56-66	--	N392513 W742928	36.13.343	Sara White Property	R.W. Sundstrom Engineering	07/1934	10	205	178-205	--	--	--	--	Tch	L	
0101	113	36-453	--	N392542 W743136	36.13.215	Atlantic City Water Dept.	Layne-N.Y.	07/28/1975	10	692	598-641	52	97	457	8	Tkw	L	
0101	115	56-29	010574	N392510 W743031	36.13.261	Atlantic City Water Dept.	Layne-N.Y.	12/31/1930	7	211	160-195	10	55	981	32	Tch	L	C.A.
0101	116	56-37A	010006	N392455 W743028	36.13.264	Atlantic City Water Dept.	Layne-N.Y.	12/31/1930	8	240	180-210	7	67	811	32	Tch	L	
0101	117	56-32	010011	N392534 W743108	36.13.224	Atlantic City Water Dept.	Layne-N.Y.	12/31/1930	7	201	160-190	9	64	1320	32	Tch	L	
0101	118	56-30	010005	N392511 W743052	36.13.253	Atlantic City Water Dept.	Layne-N.Y.	12/31/1930	8	220	160-195	12	61	831	32	Tch	L	C.A.
0101	121	36-299	--	N392602 W743003	36.03.899	Atlantic County Water Co.	A.C. Schultes	06/28/1960	35	261	178-204	13	44	708	8	Tch	L	From Clark and others, 1968, p.31, 37; log by F.J. Markewicz, N.J. Geol. Survey.
0101	214	56-33	010575	N392548 W743122	36.13.224	Atlantic City Water Dept.	Johnson Well Screen Co.	08/15/1928	6	205	145-195	+14	11	668	1	Tch	L	C.A.
ATLANTIC CITY																		
0102	216	56-67	010026	N392131 W742522	36.14.819	Haddon Hall	Uriah White	1896	10	840	790-840	--	--	--	--	Tkw	L	C.A.; from Woolman, 1897, p.170.
0102	217	56-68	010030	N392132 W742522	36.14.819	Haddon Hall	Layne-N.Y.	02/16/1925	10	841	--	55	--	--	--	--	L	C.A.
0102	218	56-69	--	N392108 W742648	36.14.756	Chelsea House	Thomas B. Harper	1900	10	840	790-840	--	--	--	--	Tkw	L	From Woolman, 1901, p.116.
0102	219	56-70	--	N392108 W742600	36.14.766	Youngs Ocean Pier	Uriah White	1901	20	2,306	--	+10	--	--	--	--	L	From Woolman, 1902, p.110.
0102	220	56-71	010037	N392152 W742459	36.14.822	Galen Hall	Thomas B. Harper	01/07/1905	7	840	--	--	--	250	--	--	L,G	C.A.; U.S. Geol. Survey observation well.
0102	221	56-72	010675	N392138 W742501	36.14.825	St. Charles Hotel	Thomas B. Harper	11/30/1910	10	835	--	21	28	314	--	--	L	
0102	222	56-73	010669	N392146 W742620	36.14.734	Atlantic City Gas Works	Layne-N.Y.	10/24/1925	10	840	769-829	58	94	594	--	Tkw	L	C.A.
0102	223	56-74	010670	N392136 W742614	36.14.738	American Ice Co.	Layne-N.Y.	03/01/1927	10	845	775-835	75	110	551	--	Tkw	L	
0102	226	56-75	010038	N392158 W742640	36.14.723	Atlantic City Electric Co.	Layne-N.Y.	1924	10	833	745-805	--	--	400	--	Tkw	L	C.A.; from Clark and others, 1968, p.33, 37.
0102	227	36-220	010015	N392058 W742711	36.14.754	President Hotel	A.C. Schultes	03/28/1955	10	865	780-832	61	110	554	4	Tkw	L,G	C.A.; from Clark and others, 1968, p.39; log by F.J. Markewicz, N.J. Geol. Survey.
0102	239	36-108A	010648	N392124 W742604	36.14.811	Bally's Park Place, Inc.	Layne-N.Y.	12/07/1979	7	884	775-835	78	141	1016	24	Tkw	L,G	C.A.
0102	280	36-964	010682	N392133 W742522	36.14.819	Resorts International	Layne-N.Y.	08/26/1979	8	887	779-840	80	148	855	8	Tkw	L	C.A.
0102	308	56-84	--	N392207 W742513	36.14.587	Citizen's Ice and Cold Storage Co.	Thomas B. Harper	1894	7	805	790-805	+7	--	125	--	Tkw	L	

Notes:

Geographic code: see text for explanation of well numbering system
 Well number: see text for explanation of well numbering system
 U.S.G.S. GWSI number: see text for explanation of GWSI numbering system
 Atlas sheet coordinates: see text for explanation

Elevation: feet above or below sea level estimated from U.S.G.S. 7.5-minute topographic quadrangle map (contour interval 10 ft.)
 Depth drilled: feet below land surface
 Depth to screened interval: feet below land surface
 Static water level: feet below land surface at time well was drilled
 Pumping level: depth in feet below land surface.

Formation screened:
 Tch: Cohansey sand
 Tkw: Kirkwood Formation
 Tkw/Tch: Kirkwood-Cohansey aquifer system
 sub-Tkw: aquifer stratigraphically below Kirkwood Fm.

Type of Log:
 L - lithologic
 G - Borehole geophysical
 All logs shown in table 4
 Remarks: C.A. - chemical analysis shown in Barton and others, in press

Table 3 (cont.)

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
ATLANTIC CITY (cont.)																		
0102	311	56-85	-	N392127 W742607	36.14.739	Dennis Hotel	Uriah White	1896	10	835	-	-	-	-	-	-	L	From Woolman, 1897, p.168.
0102	313	56-86	-	N392153 W742553	36.14.811	Atlantic City Cooling Co.	Uriah White	1895	7	813	763-813	-	-	400	-	Tkw	L	From Woolman, 1896, p.81.
0102	314	56-87	-	N392127 W742607	36.14.739	Brighton Hall	Uriah White	1895	10	843	-	-	-	-	-	-	L	From Woolman, 1896, p.79.
0102	337	36-5615	010711	N391955 W742507	36.24.266	U.S. Geol. Survey	Warren George	07/29/1985	-32	931	849-879	-	-	40	144	Tkw	L,G	C.A.; marine observation well-inshore.
0102	338	36-5972	010710	N391726 W742221	36.24.655	U.S. Geol. Survey	Warren George	09/04/1985	-43	1,025	935-965	-	-	50	144	Tkw	L,G	C.A.; marine observation well-offshore.
0102	344	56-65	010649	N392247 W742713	36.14.481	U.S. Dept. of Energy	Gruy Federal	4/1978	5	1,004	-	-	-	-	-	-	L,G	U.S. Geol. Survey observation well.
0102	350	56-88	010022	N392124 W742548	36.14.817	Traymore Hotel	Uriah White	1899	8	830	-	0	11	225	-	-	G	C.A.; from Woolman, 1900, p.106.
0102	351	56-89	010021	N392123 W742600	36.14.817	Marlborough-Blenheim Hotel	-	1922	7	823	-	-	-	-	-	-	L,G	C.A.
BRIGANTINE CITY																		
0103	074	36-209	010683	N392411 W742226	36.15.149	City of Brigantine	Layne-N.Y.	06/1980	5	830	725-775	58	153	1060	8	Tkw	L	C.A.
0103	305	56-90	-	N392427 W742147	36.15.174	Brigantine	Uriah White	Summer/1895	10	798	738-788	0+	-	100	-	Tkw	L	From Woolman, 1896, p.77; flowed 100 gpm at surface; static level unknown.
0103	306	56-12	010039	N392330 W742348	36.14.617	Brigantine Borough	Layne-N.Y.	09/13/1966	5	840	728-788	75	182	1023	-	Tkw	L,G	C.A.
0103	348	56-11	010040	N392342 W742348	36.14.614	Brigantine Water Dept.	Layne-N.Y.	10/07/1952	5	785	706-766	55	120	717	-	Tkw	L	C.A.; from Clark and others, 1968, p.33, 39.
0103	349	56-9	010041	N392432 W742153	36.15.171	Brigantine Borough	Layne-N.Y.	12/12/1925	10	840	735-827	23	79	-	-	Tkw	L	C.A.
BUENA BOROUGH																		
0104	099	35-4559	010701	N393148 W745617	35.03.233	Buena Borough M.U.A.	Layne-N.Y.	02/23/1985	118	474	405-455	100	210	606	48	sub-Tkw	L,G	C.A.
0104	103	35-1490	010647	N393030 W745808	35.03.193	Frank Marolda	Vance Skinner	05/1976	105	197	90-178	18	45	460	1	Tkw/Tch	L	
0104	104	31-19096	-	N393302 W745638	31.43.565	Monfardini Brothers	Vance Skinner	05/17/1982	110	160	118-158	6	9	50	1	Tkw/Tch	L	
0104	105	35-2418	-	N393113 W745620	35.03.262	Dom Visconti	Vance Skinner	03/26/1982	108	160	110-150	-	-	-	-	Tkw/Tch	L	
BUENA VISTA TOWNSHIP																		
0105	101	31-5832	010114	N393208 W745503	31.43.685	Buena Reg. Sch. Dist.	A.C. Schultes	02/1972	110	196	157-177	21	77	351	8	Tkw/Tch	L,G	
0105	106	35-1725	-	N393033 W745447	35.03.383	Buena Vista Twp.	Vance Skinner	08/17/1978	90	136	122-132	8	-	-	-	Tkw/Tch	L	
0105	136	35-963	010075	N392741 W745229	35.04.763	Eric Hensel	Delmarva Drilling	04/23/1968	93	165	100-160	9	12	60	2	Tch	L	
0105	137	35-3292	-	N392713 W745220	35.04.762	Eric Hensel	D'Agostino Well Drilling	06/11/1982	90	250	-	9	-	-	-	-	L	
0105	142	35-1121	010085	N392837 W745240	35.04.491	John Kollmer	Vance Skinner	03/30/1971	91	155	95-138	8	12	70	1	Tkw/Tch	L	
0105	143	35-1481	010646	N392817 W745443	35.03.694	Badaracco Farms	Vance Skinner	02/03/1977	100	270	178-238	20	90	500	4	Tkw/Tch	L	
0105	144	35-152	010089	N392843 W745449	35.03.658	C.C. Bylone	Milton Shepard	03/28/1953	110	195	179-195	14	21	100	1	Tkw/Tch	L	

Table 3 (cont.)

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
CORBIN CITY																		
No wells included in this summary																		
EGG HARBOR CITY																		
0107	011	32-175	010118	N393215 W743826	32.42.494	Egg Harbor City	Artesian Well Drilling	04/1957	40	410	365-405	18	80	415	--	Tkw	L	C.A.
0107	012	32-477	010117	N393207 W743836	32.42.494	Egg Harbor City	A.C. Schultes	11/11/1964	40	507	350-432	22	57	768	12	Tkw	L,G	C.A.
0107	324	52-20	--	N393220 W743833	32.42.494	Egg Harbor City	Kiener and Bennett	1897	40	371	--	0	--	100	--	--	L	From Woolman, 1898, p.222; 1899, p.73.; flowed only at high tide.
EGG HARBOR TOWNSHIP																		
0108	112	36-454	--	N392622 W743212	36.03.796	Atlantic City Water Dept.	Layne-N.Y.	08/11/1975	20	691	564-619	48	74	485	8	Tkw	L,G	
0108	119	36-428	--	N392527 W743300	36.13.128	N.J. Water Co.	C.W. Lauman	11/23/1971	35	233	172-208	13	41	1016	24	Tch	L,G	
0108	120	36-1828	--	N392327 W743526	36.12.619	N.J. Water Co.	A.C. Schultes	02/15/1980	20	235	166-201	4	21	201	24	Tch	L,G	
0108	126	36-367	010160	N392652 W743512	36.02.957	U.S. Air Force	Ridpath and Potter	02/04/1965	55	166	130-165	20	40	670	16	Tch	L	Located on National Aviation Facility Experimental Center (NAFEC) property.
0108	128	36-401	010154	N392516 W743825	36.12.161	South Jersey Gas Co.	Layne-N.Y.	01/30/1968	58	249	127-157	8	51	503	6	Tch	L	
0108	172	36-9	--	N391842 W743247	36.23.183	Emma Kuntz	Artesian Well Drilling	06/1949	6	700	658-668	8	22	25	4	Tkw	L	
0108	286	36-271	010121	N391853 W743208	36.23.169	Seaview Harbor Water Co.	Layne-N.Y.	05/07/1958	5	830	740-780	75	97	300	8	Tkw	L	C.A.; from Clark and others, 1968, p.30, 41; log by D.G. Parillo, N.J. Geol. Survey.
0108	293	36-5091	010704	N392344 W743749	36.12.435	Egg Harbor Twp. High School	A.C. Schultes	03/28/1985	50	678	596-606	--	--	--	--	Tkw	L,G	
0108	294	36-5092	010703	N392639 W743232	36.03.794	U.S. Geol. Survey	A.C. Schultes	03/23/1985	25	608	560-570	80	96	60	12	Tkw	L,G	C.A.; Observation well; located on National Aviation Facility Experimental Center (NAFEC) property.
0108	315	56-83	--	N391847 W743207	36.23.169	Mr. Field	--	1891	5	397	--	--	--	--	--	--	L	From Woolman, 1893, p.281.
0108	341	36-5517	--	N392344 W743749	36.12.435	Egg Harbor Twp. High School	N.J. Geol. Survey	06/14/1985	50	377	361-371	--	--	--	--	Tkw	L	U.S. Geol. Survey observation well.
0108	347	36-5339	--	N392257 W743008	36.13.555	Comfort Inn	A.C. Schultes	05/17/1985	5	661	606-626	70	75	35	6	Tkw	L,G	
ESTELL MANOR CITY																		
0109	178	35-4903	010715	N391946 W745125	35.24.213	Peaslee Wildlife Mgt. Area	N.J. Geol. Survey	07/13/1985	40	600	--	--	--	--	--	--	L,G	Joint exploratory borehole of N.J. Geol. Survey and U.S. Geol. Survey.
FOLSOM BOROUGH																		
0110	098	31-5381	010629	N393614 W745017	31.34.892	Southern Counties Land Co.	A.C. Schultes	08/01/1969	73	166	87-102	13	26	200	4	Tkw/Tch	L	
GALLOWAY TOWNSHIP																		
0111	033	36-294	010180	N392753 W742701	36.04.487	U.S. Geol. Survey	C.W. Lauman	08/29/1959	27	1,002	558-574	--	--	--	--	Tkw	L,G	C.A.; observation well; from Clark and others, 1968,, p.30, 42; log by H.R. Anderson, U.S. Geol. Survey.
0111	041	36-426	010172	N392650 W742752	36.04.747	Seaview Country Club	A.C. Schultes	02/02/1972	10	270	161-201	+3	145	1000	4	Tch	L	

Table 3 (cont.)

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
GALLOWAY TOWNSHIP (cont.)																		
0111	044	36-2432	010688	N392944 W742818	36.03.635	Town of Smithville	Layne-N.Y.	07/19/1981	30	186	130-180	--	--	--	--	Tch	L	C.A.
0111	045	36-2433	010689	N392944 W742812	36.03.635	Smithville Water Co.	Layne-N.Y.	07/18/1981	32	202	130-180	21	47	904	8	Tch	L	
0111	048	36-3042	--	N392953 W742740	36.04.412	Smithville Development Co.	Absecon Elec. Motor Works	10/12/1982	30	182	--	16	--	100	--	--	L	
0111	047	36-408	010175	N392701 W742825	36.03.964	Seaview Country Club	Artesian Well Drilling	07/07/1969	50	250	192-244	32	67	610	8	Tch	L	
0111	053	36-2620	--	N393008 W742728	36.04.118	Smithville Development Co.	Absecon Elec. Motor Works	10/08/1982	14	182	--	6	--	100	--	--	L	
0111	054	36-1078	--	N393007 W742807	36.03.399	Town of Smithville	Layne-N.Y.	10/31/1979	20	199	115-165	3	21	525	24	Tch	L	
0111	110	62-18	--	N39322 W743300	32.43.485	Fred Schroer	Fred Schroer	03/28/1956	65	429	--	48	--	--	--	--	L	Log by Fred Schroer, and M.E. Johnson, N.J. Geol. Survey.
0111	123	36-418	010189	N392923 W743557	36.02.618	Biocraft Labs Inc.	Layne-N.Y.	11/06/1970	60	208	122-163	--	--	--	--	Tch	L,G	Observation well.
0111	124	36-422	010191	N392901 W743521	36.02.646	Biocraft Labs Inc.	Layne-N.Y.	11/11/1970	65	208	133-159	7	66	403	24	Tch	L,G	Test borehole.
0111	125	36-398	--	N392820 W743526	36.02.676	Agries Explor. Corp.	Joseph Strauber	06/11/1967	70	700	--	--	--	--	--	--	L	Exploratory well.
0111	127	36-3110	010686	N392908 W743213	36.03.457	Atlantic City Medical Center	A.C. Schultes	12/07/1982	74	175	149-169	23	41	305	8	Tch	L,G	
0111	215	56-81	010177	N392658 W742830	36.03.964	Sea View Golf Club	Artesian Well Drilling	03/26/1931	45	278	203-253	46	72	600	--	Tch	L	
0111	289	36-4982	010706	N392933 W743130	36.03.456	Stockton State College	A.C. Schultes	01/11/1985	40	680	520-530	--	--	5	6	Tkw	L,G	C.A.; U.S. Geol. Survey observation well.
0111	340	36-6551	010717	N392933 W743130	36.03.456	Stockton State College	N.J. Geol. Survey	06/27/1985	40	336	320-330	223	--	75	--	Tkw	L,G	C.A.; U.S. Geol. Survey observation well.
HAMILTON TOWNSHIP																		
0112	009	32-320	010377	N393332 W744427	32.41.435	Scholler Brothers, Inc.	A.C. Schultes	02/05/1958	90	178	155-176	32	38	305	--	Tch	L	C.A.; from Clark and others, 1968, p.28, 44; log by D.G. Parillo, N.J. Geol. Survey.
0112	010	32-474	--	N393302 W744408	32.41.465	Atlantic City Expressway	A.C. Schultes	08/17/1964	85	188	142-157	25	37	210	12	Tch	L,G	
0112	014	35-4274	010700	N392933 W744604	35.05.436	Atlantic County Girl Scout Camp	U.S. Geol. Survey	08/07/1984	40	945	479-539	--	--	--	--	sub-Tkw	L,G	From Owens and others, 1988; exploratory corehole.
0112	040	36-1865	--	N393157 W744251	36.01.222	Atlantic City Expressway	A.C. Schultes	09/08/1980	65	172	134-154	23	35	360	8	Tch	L,G	
0112	130	36-391	010227	N392709 W744439	36.01.762	Hamilton Twp. M.U.A.	A.C. Schultes	11/1966	20	371	317-347	+6	98	754	8	Tkw	L,G	C.A.
0112	131	36-15	010228	N392709 W744322	36.01.843	Hamilton Twp. M.U.A.	Artesian Well Drilling	12/1949	12	240	299-331	3	49	360	3	Tkw	L	
0112	132	31-23070	010716	N393429 W744649	31.34.994	Aratak Paving Co.	N.J. Geol. Survey	06/01/1985	70	550	--	--	--	--	--	--	L,G	Joint exploratory borehole of N.J. Geol. Survey and U.S. Geol. Survey.
0112	133	35-4370	010699	N392933 W744604	36.05.436	Atlantic County Girl Scout Camp	N.J. Geol. Survey	10/10/1984	40	171	132-162	--	--	--	--	Tch	L	C.A.; U.S. Geol. Survey observation well.
0112	134	36-398	010222	N392641 W744123	36.01.957	Wheaton Plasti-Cote Corp.	Vance Skinner	08/14/1967	50	194	67-87	25	43	305	8	Tch	L	
0112	135	56-82	--	N392713 W744400	36.01.841	Mays Landing Water Power Co.	J.W. Wells Drilling	1892	8	176	--	0+	--	--	25	--	L	From Woolman, 1890, p.286; flowed 25 gpm at land surface; static level unknown.

Table 3 (cont.)

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
HAMILTON TOWNSHIP (cont.)																		
0112	138	35-297	--	N392740 W744726	35.05.716	Savo Batic	Vance Skinner	03/1974	85	195	118-148	40	90	45	1	Tch	L	
0112	291	35-4656	010713	N392902 W745051	35.04.568	U.S. Geol. Survey	N.J. Geol. Survey	03/29/1985	92	577	525-535	101	--	5	--	sub-Tkw	L,G	† C.A.; observation well on N.J. Dept. of Transportation property.
0112	292	35-4796	010712	N392902 W745051	35.04.567	U.S. Geol. Survey	N.J. Geol. Survey	05/16/1985	92	396	377-387	33	--	60	--	Tkw	L	C.A.; observation well on N.J. Dept. of Transportation property.
0112	322	51-137	--	N393233 W744700	31.45.482	Atlantic Co. Cranberry Bogs	--	1892	40	45	--	10	--	--	--	--	L	From Woolman, 1893, p.295.
0112	323	51-138	--	N393407 W744700	31.45.188	Homer's Bog	--	1892	50	106	--	2	--	--	--	--	L	From Woolman, 1893, p.295.
HAMMONTON TOWN																		
0113	087	32-533	010328	N393941 W744426	32.31.432	P.E. Wolfe	DelmarvaDrilling	05/23/1967	75	218	146-210	6	--	--	--	Tkw/Tch	L	
0113	095	31-12437	010638	N393828 W744932	31.34.676	Board of Water Commissioners	Layne-N.Y.	01/18/1978	115	298	185-215	27	66	--	8	Tkw/Tch	L	
0113	096	31-5022	010292	N393842 W744641	31.35.483	Board of Water Commissioners	Layne-N.Y.	07/14/1967	90	245	201-241	28	36	1000	8	Tkw/Tch	L	
0113	097	31-4701	--	N393700 W744926	31.34.946	Atlantic City Expressway	A.C. Schultes	05/04/1964	85	256	220-230	9	81	61	12	Tkw/Tch	L	
0113	326	51-139	--	N393759 W744824	31.34.698	Hammonton	Kisner and Bennett	1902	110	316	250-310	30	--	--	--	Tkw/Tch	L	From Woolman, 1903, p.74.
0113	400	51-140	--	N393759 W744824	31.34.698	Hammonton Water Dept.	--	1920	110	304	--	--	--	--	--	--	L,G	Log by Peter Sugarnan, N.J. Geol. Survey.
LINWOOD CITY																		
0114	174	36-284	--	N392047 W743500	36.12.958	Prudential Insurance	Layne-N.Y.	06/30/1983	10	289	238-258	2	71	904	8	Tch	L	
LONGPORT BOROUGH																		
0115	209	56-38	010367	N391859 W743124	36.23.246	Longport	Layne-N.Y.	08/22/1947	5	818	750-800	74	102	726	--	Tkw	L	C.A.
0115	210	36-402	010369	N391905 W743129	36.23.246	Longport	C.J. McKee Drilling	11/29/1968	5	840	760-810	80	156	1007	8	Tkw	L,G	C.A.
0115	307	56-79	--	N391847 W743126	36.23.249	M.S. McCullough	Uriah White	1895	10	803	753-803	+14	--	180	--	Tkw	L	From Woolman, 1896, p.83.
0115	376	56-80	010366	N391821 W743208	36.23.196	Longport Water Dept.	--	06/26/1961	6	803	--	--	--	--	--	--	G	
MARGATE CITY																		
0116	018	36-05032	010702	N392032 W743008	36.13.898	U.S. Geol. Survey	A.C. Schultes	01/30/1985	5	840	740-750	80	114	63	6	Tkw	L,G	C.A.; observation well.
0116	170	36-197	010375	N392003 W743013	36.13.899	Margate City	Layne-N.Y.	06/28/1955	8	810	745-795	71	109	700	8	Tkw	L	C.A.; from Clark and others, 1968, p.34, 48.
0116	171	36-278	010376	N392008 W743017	36.13.898	Margate City	Layne-N.Y.	06/24/1958	5	800	741-791	73	120	700	8	Tkw	L	C.A.
0116	207	36-326	010372	N391932 W743100	36.23.229	Margate City	Layne-N.Y.	06/13/1963	5	804	750-800	68	131	800	8	Tkw	L	C.A.
0116	208	36-318	010370	N391928 W743056	36.23.225	Margate City	Layne-N.Y.	06/29/1962	5	804	748-798	74	119	1000	8	Tkw	L	C.A.
0116	437	36-10548	010834	N392017 W743002	36.13.899	U.S. Geol. Survey	Grassroots Production	05/20/1988	5	1,055	970-990	54	58	70	6	sub-Tkw	L,G	Observation well.
MULLICA TOWNSHIP																		
0117	007	32-10935	010705	N393507 W744040	32.41.355	Mullica Twp. Landfill	A.C. Schultes	02/02/1985	95	540	--	--	--	--	--	--	L,G	
0117	008	52-19	010384	N393553 W744118	32.31.987	Atlantic Loading Co.	--	09/1918	60	950	--	--	--	--	--	--	L	

Table 3 (cont.)

Geographic code	Well number	Permit number	U.S.G.S. GWSI number	Latitude/ longitude	Atlas sheet coordinates	Owner or name	Driller	Completion date	Elevation (ft)	Depth drilled (ft)	Depth to screened interval (ft)	Static water level (ft)	Pumping level (ft)	Pumping rate (gpm)	Test duration (hours)	Formation screened	Type of log	Remarks
MULLICA TOWNSHIP (cont.)																		
0117	088	32-518	010304	N393852 W744257	32.31.558	L. Wolfe	Delmarva Drilling	06/25/1966	60	165	--	5	--	--	--	--	L	
0117	111	32-529	010378	N393359 W744055	32.41.623	R. Franceschini	Delmarva Drilling	02/02/1967	80	184	-176	4	29	868	6	Tch	L	C.A.
0117	242	32-4810	--	N393900 W744047	32.31.656	Discovery House	A.C. Schultes	09/1978	20	229	193-203	3	--	10	--	Tkw/Tch	L	
NORTHFIELD CITY																		
0118	310	56-76	--	N392233 W743220	36.13.492	Atlantic County Asylum	Uriah White	1899	30	715	663-704	17	23	100	--	Tkw	L	From Woolman, 1900, p.104.
PLEASANTVILLE CITY																		
0119	043	56-77	--	N392433 W742953	36.13.371	California Ave.	R.W. Sundstrom Engineering	07/30/1934	10	194	--	--	--	--	--	--	L	
0119	114	36-14	010565	N392438 W743047	36.13.283	Atlantic City Water Dept.	Layne-N.Y.	10/26/1950	8	680	610-660	47	133	1056	8	Tkw	L	
0119	122	36-2466	--	N392447 W743113	36.13.257	Atlantic City M.U.A.	H.P. Drilling	07/16/1981	30	301	240-260	33	58	20	3	Tch	L	
0119	211	36-18	010565	N392437 W743049	36.13.283	Atlantic City Water Dept.	Layne-N.Y.	10/26/1950	10	680	610-660	47	133	1056	8	Tkw	L	
0119	212	56-34A	010570	N392447 W743050	36.13.283	Atlantic City Water Dept.	Layne-N.Y.	08/27/1925	10	689	606-666	10	44	1005	8	Tkw	L	C.A.
0119	213	56-28	--	N392437 W743036	36.13.291	Atlantic City Water Dept.	Layne-N.Y.	12/31/1930	10	252	178-208	7	59	721	32	Tch	L	
0119	375	56-91	010566	N392434 W743032	36.13.291	Atlantic City Water Dept.	--	01/01/1925	12	565	--	--	--	--	--	--	G	
PORT REPUBLIC CITY																		
No wells included in this summary																		
SOMERS POINT CITY																		
0121	019	36-295	010578	N391826 W743709	36.22.193	Jobs Point	C.W. Lauman	09/23/1959	10	1,002	671-686	39	--	210	--	Tkw	L,G	C.A.; observation well; from Clark and others, 1968,,p.33, 51; log by H.R. Anderson, U.S. Geol. Survey
0121	401	36-323	010576	N391823 W743709	36.22.282	N.J. Highway Authority	A.C. Schultes	03/1963	5	197	165-181	6	--	100	--	Tch	L	C.A.
VENTNOR CITY																		
0122	224	36-371	010593	N392018 W742945	36.13.975	City of Ventnor	Layne-N.Y.	05/03/1965	9	835	740-800	80	152	818	8	Tkw	L	C.A.
0122	225	36-372	010598	N392030 W742852	36.13.985	City of Ventnor	Layne-N.Y.	06/30/1965	8	835	740-790	95	155	1022	8	Tkw	L	C.A.
0122	312	56-78	--	N392007 W742900	36.13.988	Ventnor Land Co.	Uriah White	1898	10	813	763-813	--	--	--	--	Tkw	L	
WEYMOUTH TOWNSHIP																		
0123	139	35-1519	--	N392518 W744706	35.15.128	Albert Bailey	Vance Skinner	05/03/1977	60	163	133-154	9	--	--	--	Tch	L	

Table 4. Lithologic and geophysical well logs

Based on well records; reorganized and slightly condensed for readability. Interpretations by the author of this report are in parentheses. The stratigraphic nomenclature in this table is that of the original author of the log; it may be outdated.

Absecon City**Well 042** **Geographic code: 0101**

Owner or name: Sara White Property
 Location: N392513 W742926
 Driller: R.W. Sundstrom Engineering
 Quad.: Oceanville Comp. date: 07/1934
 Atlas Sheet no. 36.13.343 Elevation: 10 ft
 Permit no. 56-66 Depth drilled: 205 ft

Thickness (ft)	Depth (ft)	Lithology
19	0-19	Sand, medium to fine, light-yellow
1	19-20	Sand, coarse, white; clay streaks
1	20-21	Sand, yellow; clay
9	21-30	Sand, white; yellow clay streaks at 25-30 ft
8	30-38	Clay, yellow
5	38-43	Sand, fine to medium, white
67	43-110	Sand, medium to coarse, white at 43-83 ft, dark-yellow at 83-110 ft
1	110-111	Clay, yellow, streaks
4	111-115	Sand, fine, clayey
3	115-118	Clay, white, tough
9	118-127	Sand, medium, brown
39	127-166	Clay, gray, sandy
4	166-170	Sand, fine to medium, dark
10	170-180	No sample
25	180-205	Sand, fine to medium, brown

Well 113 **Geographic code: 0101**

Owner or name: Atlantic City Water Department
 Location: N392542 W743136
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 07/28/1975
 Atlas Sheet no. 36.13.215 Elevation: 10 ft
 Permit no. 36-453 Depth drilled: 692 ft

Thickness (ft)	Depth (ft)	Lithology
8	0-8	Clay, yellow and white, sandy; large gravel
65	8-73	Sand, fine to coarse; gravel; soft clay streaks
57	73-130	Clay, tough; sandy clay streaks
55	130-185	Sand, fine to coarse, gray, gravel; lignite; clay streaks
53	185-238	Clay, gray, hard, dry, sandy
42	238-280	Clay, gray, tough
13	280-293	Sand, fine to medium, gray; gravel
57	293-350	Clay, gray, tough
47	350-397	Clay, gray, sandy; sand streaks
83	397-480	Clay, brown, tough
1	480-481	Shells; hard streaks
119	481-600	Clay, sandy; shells; sand streaks
48	600-648	Sand, fine to medium; fine gravel; clay streaks
10	648-658	Clay, sandy
34	658-692	Clay, brown, tough

Well 115 **Geographic code: 0101**

Owner or name: Atlantic City Water Department
 Location: N392510 W743031
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 12/31/1930
 Atlas Sheet no. 36.13.261 Elevation: 7 ft
 Permit no. 56-29 Depth drilled: 211 ft

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Sand, yellow; gravel
3	20-23	Clay
17	23-40	Sand and clay
20	40-60	Clay, sandy, soft

35	60-95	Sand, coarse; gravel
8	95-103	Clay and sand
48	103-151	Clay, blue, tough at 119-125 ft and 140-151 ft; sandy at 125-140 ft
48	151-199	Sand, coarse, brown
12	199-211	Sand, muddy (silty)

Well 116 **Geographic code: 0101**

Owner or name: Atlantic City Water Department
 Location: N392455 W743028
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 12/31/1930
 Atlas Sheet no. 36.13.264 Elevation: 8 ft
 Permit no. 56-37A Depth drilled: 240 ft

Thickness (ft)	Depth (ft)	Lithology
14	0-14	Sand, yellow, fill
14	14-28	Clay, dark-blue
30	28-58	Sand, fine to coarse, yellow
15	58-73	Sand, white, red and yellow
2	73-75	Hardpan
10	75-85	Sand, white, red and yellow
17	85-102	Clay, brown, tough
21	102-123	Clay, sandy, soft
15	123-138	Clay, gray, tough
30	138-168	Clay, sandy, tough
55	168-223	Sand, coarse, brown
17	223-240	Clay, brown, soft

Well 117 **Geographic code: 0101**

Owner or name: Atlantic City Water Department
 Location: N392534 W743108
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 12/31/1930
 Atlas Sheet no. 36.13.224 Elevation: 7 ft
 Permit no. 56-32 Depth drilled: 201 ft

Thickness (ft)	Depth (ft)	Lithology
3	0-3	Sand and gravel
2	3-5	Fill
13	5-18	Sand, gravel, and clay
21	18-39	Clay, yellow; gravel
42	39-81	Clay, soft; fine sand
1	81-82	Hardpan
75	82-157	Clay, blue, tough, soft at 82-101 ft; fine sand streaks at 101-122 ft
39	157-196	Sand, coarse, brown
5	196-201	Sand, black, muddy (silty)

Well 118 **Geographic code: 0101**

Owner or name: Atlantic City Water Department
 Location: N392511 W743052
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 12/31/1930
 Atlas Sheet no. 36.13.253 Elevation: 8 ft
 Permit no. 56-30 Depth drilled: 220 ft

Thickness (ft)	Depth (ft)	Lithology
5	0-5	Sand, yellow
15	5-20	Clay, blue
8	20-28	Mud (silt)
11	28-39	Clay, blue; gravel
19	39-58	Clay, blue, sandy, soft
19	58-77	Sand, yellow; gravel streaks
15	77-92	Sand, coarse; gravel

Absecon City

Well 118 (cont.)

Thickness (ft)	Depth (ft)	Lithology
2	92-94	Hardpan
4	94-98	Gravel, coarse, red
58	98-156	Clay, blue, soft at 98-127 ft, tough at 127-138 ft, sandy and soft at 138-156 ft
43	156-199	Sand, coarse, brown; gravel
21	199-220	Sand, muddy (silty); clay

Well 121

Geographic code: 0101

Owner or name: Atlantic County Water Company

Location: N392602

W743003

Driller: A.C. Schultes

Quad.: Pleasantville

Comp. date: 06/28/1960

Atlas Sheet no. 36.03.899

Elevation: 35 ft

Permit no. 36-299

Depth drilled: 261 ft

From Clark and others, 1968, p. 31, 37; log by F.J. Markewicz, N.J.

Geological Survey.

Cape May Fm.-Cohansey Sand (undifferentiated)

Thickness (ft)	Depth (ft)	Lithology
7	3-10	Overburden
9	20-29	Sand, very coarse, light-gray, quartz, clean
8	29-37	Sand, very coarse, yellow, oxidized, clean
25	37-62	Clay, light-gray, silty, tough
28	62-90	Sand, fine to medium, grayish-yellow, clean, fairly uniform, quartz
5	90-95	Sand, fine to very coarse, grayish-yellow, somewhat oxidized, clean, quartz; scattered pea-size grains
3	95-98	Sand, very coarse, light-brown, clean, quartz, oxidized
3	98-101	Ironstone (bog iron), weathered whitish chert fragments
21	101-122	Silt, gray, slightly clayey, tough; very fine sand
10	122-132	Sand, fine to very coarse, gray, clean, poorly sorted, quartz, 1-3 percent heavy minerals; trace mica
27	132-162	Sand, fine, light-gray, fairly clean, uniform
1	162-163	Sand, fine, dark, quartz, pyrite-cemented
12	163-175	Sand, fine, gray, clean, fairly uniform
5	175-180	Sand, fine, light-brown, uniform, clean
5	180-185	Sand, fine to very coarse, light-purple, clean, quartz

5	185-190	Sand, fine, very-pale-pinkish-gray, clean, quartz; scattered very coarse grains
5	195-200	Sand, fine, light-gray, clean, quartz; scattered pea-size grains
7	200-207	Sand, fine to very coarse, very-pale-red, clean quartz; few pea-size grains
15	207-222	Sand, very coarse, gray, clean, quartz; scattered pea-size grains

Kirkwood Formation:

5	232-237	Sand, fine, gray, uniform, clean, quartz; about 2.0-2.5 percent heavy minerals
12	237-249	Sand, fine, gray, light-brown mottling, fairly clean quartz; 1.5 percent heavy minerals
12	249-261	Sand, very fine, gray, fairly clean, uniform, quartz, trace mica

Well 214

Geographic code: 0101

Owner or name: Atlantic City Water Department

Location: N392548

W743122

Driller: Johnson Well Screen Co.

Quad.: Pleasantville

Comp. date: 08/15/1928

Atlas Sheet no. 36.13.224

Elevation: 6 ft

Permit no. 56-33

Depth drilled: 205 ft

Thickness (ft)	Depth (ft)	Lithology
5	0-5	Sand and loam, surficial
13	5-18	Sand, fine to medium, yellowish-gray
12	18-30	Sand, fine, grayish-white; very little clay; few coarse grains
10	30-40	Sand, fine to medium, yellow, fairly clean; few small quartz pebbles at 30-35 ft
1	40-41	Sandstone, brown, soft, iron-cemented
4	41-45	Sand, very fine, brownish-cream, with enough clay to make it lumpy when dry
25	45-70	Sand, fine, yellow-brown, sticks in ball shape, dries slowly, darker-brown and slightly coarser at 50-70 ft
14	70-84	Clay, blue to gray, very tough
2	84-86	Clay and sand, streaked; sand is fine and gray; few coarse grains
44	86-130	Sand, fine, blackish-brown or peat-colored
65	130-195	Sand, medium, dark-gray, water-bearing, probably coarser at 142-195 ft
10	195-205	Clay, soft; sand

101	478-579	Clay, soft
21	579-600	Clay, sandy, hard
57	600-657	Clay, blue, tough
3	657-660	Hardpan
17	660-677	Clay, blue
3	677-680	Hardpan
16	680-696	Clay, black, soft
47	696-743	Clay, blue, sticky
17	743-760	Sand, brown; gravel
58	760-818	Sand, brown to gray
10	818-828	Sand, gray
12	828-840	Clay, soft, 828-835 ft, black, hard, 835-840 ft

Well 223 **Geographic code: 0102**

Owner or name: American Ice Company
 Location: N392136 W742614
 Driller: Layne-N.Y.
 Quad.: Atlantic City Comp. date: 03/01/1927
 Atlas Sheet no. 36.14.738 Elevation: 10 ft
 Permit no. 56-74 Depth drilled: 845 ft

Located at Michigan and Arctic Avenues

Thickness (ft)	Depth (ft)	Lithology
110	0-110	Sand, with cinders from 0-10 ft
24	110-134	Boulders (gravel)
331	134-465	Sand, with gravel at 213-465 ft
88	465-553	Clay, blue at 465-533 ft, sandy at 533-553 ft
54	553-607	Clay and boulders (gravel)
153	607-760	Clay, blue
72	760-832	Sand; shells at 760-772 ft; brown at 772-802; gravel at 802-832 ft
10	832-842	Clay

Well 226 **Geographic code: 0102**

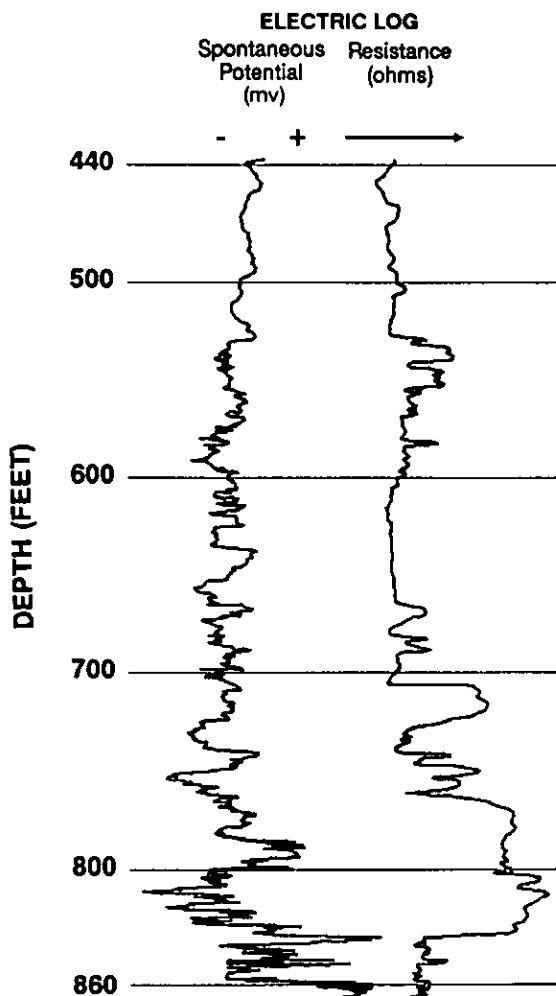
Owner or name: Atlantic City Electric Company
 Location: N392158 W742640
 Driller: Layne-N.Y.
 Quad.: Atlantic City Comp. date: 1924
 Atlas Sheet no. 36.14.723 Elevation: 10 ft
 Permit no. 56-75 Depth drilled: 833 ft
 From Clark and others, 1968, p. 33, 37.

Thickness (ft)	Depth (ft)	Lithology
Recent:		
12	0-12	Fill
40	12-52	Sand, fine, clean
Cape May Formation:		
3	52-55	Clay, blue
45	55-100	Sand, coarse, white
Cohansey Sand:		
135	100-235	Sand, coarse, white; gravel
Kirkwood Formation:		
29	235-264	Clay, blue at 235-246 ft, sandy at 246-264 ft
92	264-356	Sand, brown; clay streaks at 264-324 ft; fine, muddy (silty) at 324-356 ft
309	356-665	Clay, sandy at 356-426 ft; tough, blue at 426-521 ft; hard, sandy at 521-665 ft
2	665-667	Hardpan
36	667-703	Clay, soft, blue at 667-691 ft and 695-703 ft, sandy at 691-695 ft
11	703-714	Sand, coarse
39	714-753	Clay, very soft
66	753-819	Sand, brown, coarse to gravel at 757-819 ft
4	819-823	Sand
10	823-833	Clay

Well 227 **Geographic code: 0102**
 Owner or name: President Hotel
 Location: N392058 W742711
 Driller: A.C. Schultes
 Quad.: Atlantic City Comp. date: 03/28/1955
 Atlas Sheet no. 36.14.754 Elevation: 10 ft
 Permit no. 36-220 Depth drilled: 865 ft
 From Clark and others, 1968, p. 39; log by F.J. Markewicz, N.J.

Thickness (ft)	Depth (ft)	Lithology
Recent Series:		
26	0-26	Sand, fine to medium, light-olive-gray, angular to subangular, mostly quartz; high percentage of heavy minerals
Cape May Formation:		
12	26-38	Sand, light-gray, angular to subangular, slightly micaceous and fossiliferous
62	38-100	Sand, fine, light-gray, uniform, fossiliferous, slightly micaceous; scattered forams
Cohansey Sand:		
30	100-130	Sand, fine to coarse, light-gray, fairly clean, angular to subangular; high percentage of heavy minerals

WELL 227
PRESIDENT HOTEL



Atlantic City

WELL 239
BALLY'S PARK PLACE, INC.

Well 227 (cont.)

Thickness (ft)	Depth (ft)	Lithology
41	130-171	Sand, fine to very coarse, light-yellowish-gray, angular to subround
47	171-218	Sand, fine to medium, light-yellow-gray, fairly clean, 171-208 ft; grayish-red, clayey, 15-percent pea-sized gravel, 208-218 ft
33	218-251	Sand, fine, yellowish-gray; 50-percent lignite; some shells
22	251-273	Sand and pea-size gravel, light-gray to yellowish-gray
38	273-311	Sand, fine to medium, light-gray below 298 ft; pea-size gravel; micaceous silt

Kirkwood Formation:

92	311-403	Sand, fine to coarse, light-gray; slightly clayey; micaceous; some pea-size gravel
239	403-642	Clay, light-olive-gray; slightly micaceous; sand, fine to coarse; diatomaceous; few fossil fragments
162	642-804	Clay, light-olive to gray, sandy, slightly micaceous, fossiliferous; shell fragments; few forams
41	804-845	Sand, medium to very coarse, medium-dark-gray, fossiliferous, mostly quartz; few forams
20	845-865	Clay, medium-gray, silty, moderately micaceous, fossiliferous; pea-size gravel

Well 239

Geographic code: 0102

Owner or name: Bally's Park Place, Inc.

Location: N392124

W742604

Driller: Layne-N.Y.

Quad.: Atlantic City

Comp. date: 12/07/1979

Atlas Sheet no. 36.14.811

Elevation: 7 ft

Permit no. 36-1084

Depth drilled: 884 ft

Thickness (ft)	Depth (ft)	Lithology
22	31-53	Sand, fine; gravel and soft clay streaks
20	53-73	Sand; gravel; lignite; clay, gray, soft
64	73-137	Sand, fine to coarse
87	137-224	Sand, fine to medium; some gravel
21	224-245	Sand and gravel; streaks of sandy clay, white and yellow
50	245-295	Sand, fine to medium; streaks, sandy clay, gray
5	295-300	Clay, gray
10	300-310	Sand, fine, hard-packed
17	310-327	Clay, gray, soft, sandy
7	327-334	Sand and gravel, hard-packed
23	334-357	Clay, soft; sand streaks
23	357-380	Sand, fine to medium, gray; some clay streaks
20	380-400	Clay, sandy; hard packed sand
154	400-554	Clay, gray, sandy, 400-443 ft; tough, 443-554 ft
22	554-576	Clay, gray, sandy; gravel; shells; hard streaks
66	576-642	Clay, gray, tough; shells at 576-599 ft; hard streaks at 599-642 ft
48	642-690	Clay, gray and brown, tough; shells
1	690-691	Very hard streaks
15	691-706	Sand, gray; clay, brown, soft; shells; hard streaks
21	706-727	Clay, sandy; sand, fine to medium, gray
8	727-735	Sand and shells
15	735-750	Clay, soft, sandy; streaks of tough clay
15	750-765	Sand; clay, soft; shells
5	765-770	Clay, tough
24	770-794	Sand, fine; some shells
49	794-843	Sand, fine to medium, gray, brown
41	843-884	Clay, sandy, 843-862 ft, very tough. 862-884 ft

GAMMA-RAY LOG

Radiation Increases

→

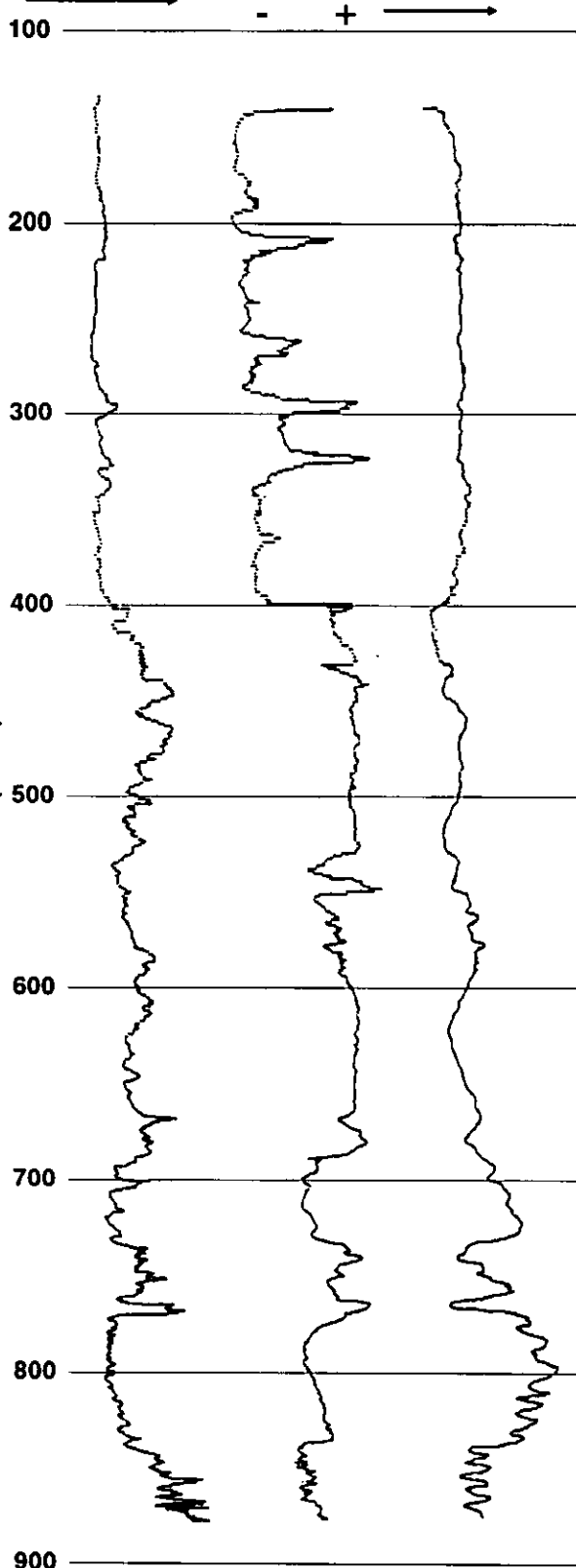
ELECTRIC LOG

Spontaneous-

Potential (mv)

Resistance

(ohms)



Well 280 **Geographic code: 0102**

Owner or name: Resorts International Hotel
 Location: N392133 W742522
 Driller: Layne-N.Y.
 Quad.: Atlantic City Comp. date: 08/26/1979
 Atlas Sheet no. 36.14.819 Elevation: 8 ft
 Permit no. 36-964 Depth drilled: 887 ft

Thickness (ft)	Depth (ft)	Lithology
150	0-150	Beach sand; shells; gravel; clay
20	150-170	Sand, fine to coarse; gravel; shells
8	170-178	Sand, yellow and white, mixed with gravel
2	178-180	Hard streak
33	180-213	Clay streaks, yellow, white and brown; sand; gravel; wood (lignite)
7	213-220	Clay, green, sandy
48	220-268	Sand, medium to coarse, white; gravel; clay streaks
67	268-335	Clay, gray, sandy; some gravel; wood (lignite) at 290-335 ft
33	335-368	Sand, fine to coarse, gray; gravel; clay streaks
324	368-692	Clay, gray, green, brown; sand streaks; gravel; shells; hard streaks
2	692-694	Hard streak
41	694-735	Sand, fine to coarse; gravel; shells; lignite
41	735-776	Clay, brown and gray; sand streaks; shells
65	776-841	Sand, fine to medium; gravel; shells; light clay streaks
46	841-887	Clay, sandy; sand streaks; shells

Well 309 **Geographic code: 0102**

Owner or name: Citizens Ice and Cold Storage Co.
 Location: N392207 W742513
 Driller: Thomas B. Harper
 Quad.: Atlantic City Comp. date: 1894
 Atlas Sheet no. 36.14.587 Elevation: 7 ft
 Permit no. 56-84 Depth drilled: 805 ft
 From Woolman, 1895, p. 180. Located on Baltic Avenue, between Massachusetts and Connecticut Avenues

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Sand
48	20-68	Clay and marl
22	68-90	Sand and gravel; fine white clay at 88 ft
320	90-410	Sand and clay; fine white clay at 187 ft
150	410-560	Black clay; brackish water at 430 ft
10	560-570	Sand, coarse; brackish water
208	570-778	Clay, with four sand seams; coarse sand at 763 ft; wood (lignite) and shells at 765 ft
4	778-782	Wood (lignite); clam shells
23	782-805	Clay, dark, tough; underlain by sand, coarse to pea-size, brown, water-bearing

Well 311 **Geographic code: 0102**

Owner or name: Dennis Hotel
 Location: N392127 W742607
 Driller: Uriah White
 Quad.: Atlantic City Comp. date: 1896
 Atlas Sheet no. 36.14.739 Elevation: 10 ft
 Permit no. 56-85 Depth drilled: 835 ft
 From Woolman, 1897, p. 168.

Thickness (ft)	Depth (ft)	Lithology
55	0-55	Beach sand, gray, 0-22 ft, slightly darker, 22-55 ft
15	55-70	No record
13	70-83	Clay, sandy; marine diatoms
7	83-90	Sand, white
10	90-100	Clay, no microfossils
10	100-110	Sand, white
45	110-155	Gravel, coarse as cracked hominy, white at 110-130 ft, orange-yellow at 130-155 ft
38	155-193	Sand, orange-yellow, brown-sugar color, 155-165 ft, coarse, 165-175 ft, finer, 175-193 ft

7	193-200	Sand, white
1	200-201	Clay, white, no microfossils
44	201-245	Sand, white; some lignite at 220-245 ft; much lignite at 245 ft
55	245-300	Sand, gray
5	300-305	Clay, no diatoms
95	305-400	Sand, gray; no microfossils at 305-350 ft; diatomaceous marine clay at 370-390 ft
82	400-482	Clay; marine diatoms; sponge spicules at 400-425 ft and 446-482 ft; some comminuted shells at 425-446 ft
191	482-673	Clay; marine diatoms and sponge spicules; few diatoms at 482-500 ft; sandy; many diatoms, 559-579 ft
17	673-690	Clay; few diatoms
40	690-730	Sand; shells; little clay; very few diatoms at 690-710 ft
20	730-750	Clay, sandy, no microfossils
25	750-775	Sand and clay, no microfossils
60	775-835	Sand, brownish, water-bearing

Well 313 **Geographic code: 0102**

Owner or name: Atlantic City Cooling Company
 Location: N392153 W742553
 Driller: Uriah White
 Quad.: Atlantic City Comp. date: 1895
 Atlas Sheet no. 36.14.811 Elevation: 7 ft
 Permit no. 56-86 Depth drilled: 813 ft
 From Woolman, 1896, p. 81.

Thickness (ft)	Depth (ft)	Lithology
4	0-4	Meadow mud
66	4-70	Sand, gray at 4-40 ft, white at 40-70 ft
5	70-75	Clay, brown
15	75-90	Gravel, various colors
3	90-93	Clay, white
17	93-110	Gravel
40	110-150	Sand, yellow
118	150-268	Sand, white, layered at 150-212 ft
24	268-292	Clay, brown; streaks of water-bearing sand
83	292-375	Sand, dark-brown or red
180	375-555	Clay
15	555-570	Sand; water flowed seven gpm
120	570-690	Clay
20	690-710	Sand; water flowed five gpm
11	710-721	Clay
24	721-745	Sand with water
10	745-755	Clay
30	755-785	Sand, reddish brown; with water
28	785-813	Sand, white; water-bearing; 6 inches light-bluish clay

Well 114 **Geographic code: 0102**

Owner or name: Brighton Hall
 Location: N392127 W742607
 Driller: Uriah White
 Quad.: Atlantic City Comp. date: 1895
 Atlas Sheet no. 36.14.739 Elevation: 10 ft
 Permit no. 56-87 Depth drilled: 843 ft
 From Woolman, 1896, p. 79.

Thickness (ft)	Depth (ft)	Lithology
65	0-65	Beach sands; 5-10 ft of mud at base
235	65-300	Sand, yellowish; gravel and pebbles at top
100	300-400	Sand, drab colored
300	400-700	Clay, diatomaceous; mollusk fossils, 642-670 ft
30	700-730	Sand; gravelly clay; shells; no microfossils
13	730-743	Gravel; sand; shells; water-bearing
27	743-770	Clay, sandy, no diatoms
70	770-840	Sand, brownish, changing to gray near base; abundant water
3	840-843	Quicksand, gray, micaceous

Atlantic City

Well 337
 Owner or name: U.S. Geological Survey, marine observation well 1
 Location: N391955
 Driller: Warren George
 Quad.: Atlantic City
 Atlas Sheet no. 36.24.266
 Permit no. 36-5615
 Drilled from a platform 59 ft above the sea floor.

Geographic code: 0102

W742507

Comp. date: 07/29/1985

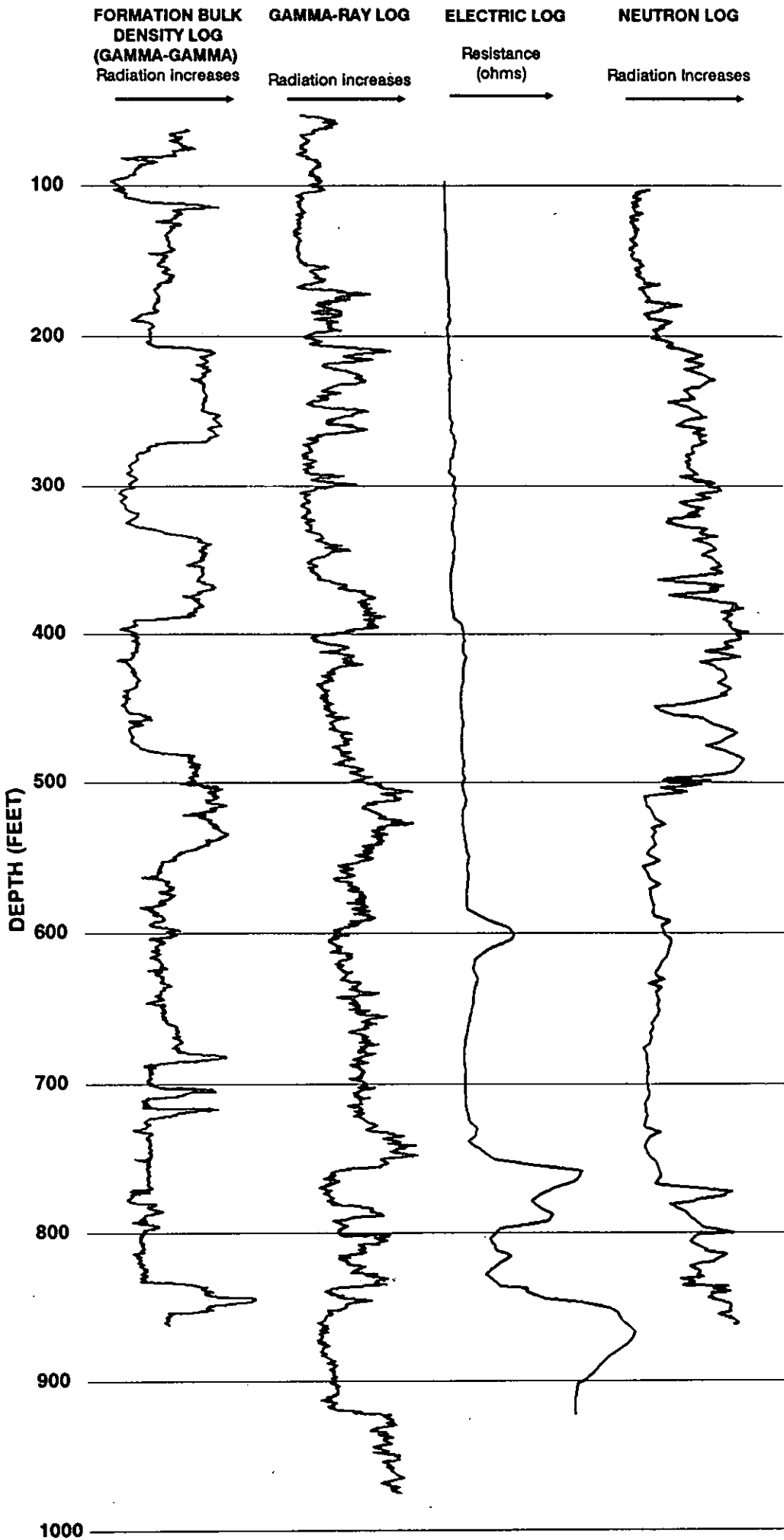
Elevation: -32 ft

Depth drilled: 931 ft

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Shelly clay, greenish-black (5G 2/1); some very fine sand with the shell fragments; pieces of wood (lignitic) at 10-20 ft
10	20-30	Clay and gravel, dark-greenish-gray (5GY 4/1), gravel is subround to round, up to 10 mm diameter; few shell fragments
10	30-40	Clay, dark-greenish-gray (5GY 4/1); some gravel up to 10 mm diameter; very few shell fragments
10	40-50	Clay, dark-greenish-gray (5G 4/1); some subround to round gravel, to 15 mm diameter
10	50-60	Sandy clay, dark-greenish-gray (5G 4/1); abundant angular to subangular coarse sand; some subround to round gravel, up to 10 mm diameter
10	60-70	Sandy clay, dark-greenish-gray (5G 4/1), decreasing clay content
10	70-80	Clayey sand, dark-greenish-gray (5G 4/1), similar to previous sample except for decreasing clay
10	80-90	Sand and gravel, dark-greenish-gray (5G 4/1), subround to round; very coarse sand; gravel up to 10mm diameter, some angular gravel up to 15 mm diameter; some dark-greenish-gray clay
20	90-110	Sandy clay, medium-bluish-gray (5B 5/1); fine sand, angular to subround; olive-gray silty clay; gravel up to 10 mm diameter
10	110-120	Sand, medium, gray (N4), some coarse; silt; lignite
10	120-130	Sand, medium, light-gray (N6), well rounded quartz with fine sand; silt; much less lignite than previous sample
10	130-140	Sand, medium to coarse, light-gray (N6-7), moderately sorted, some fine and well rounded; abundant silt; lignite
20	140-160	Sand, very fine to coarse, medium to light-gray (N5-6), well rounded, quartz; silt; abundant lignite; few heavy minerals
10	160-170	Sand, fine to medium, light-gray (N7), moderately sorted; abundant silt
10	170-180	Silty sand, light-gray (N7); very fine sand; abundant silt
10	180-190	Sandy silt, brownish gray (5YR 4/1); 5 to 10 percent medium to coarse sand; abundant clay; lignite
10	190-200	Silty sand, medium-light-gray (N6); very coarse sand; abundant silt
20	200-220	Sand, medium to coarse, very-light-gray (N8), quartz, some fine sand; gravel up to 3 mm diameter; small amount of medium gray (N5) clay
10	220-230	Sand, fine to medium, very-light-gray (N8), quartz; less coarse sand and gravel than previous samples
20	230-250	Sand, medium to coarse, very-light-gray (N8), quartz; gravel up to 3 mm diameter; lignite, 240-250 ft
40	250-290	Sand and gravel, sand is medium to coarse, quartz, with gravel up to 10 mm diameter; small amount of light-olive-gray (5Y 6/1) clay
20	290-310	Sand and gravel, sand is medium to coarse quartz, with gravel up to 10 mm diameter;

20	310-330	increasing amount of light-gray (N7) and olive-gray (5Y 4/1) clay; some silt Clay, dark-greenish-gray (5GY 4/1); moderate amount of olive-gray (5Y 3/2) silty clay; coarse sand, gravel; some lignite
10	330-340	Clay, olive-gray (5Y 4/1); very little sand; pyrite; microfossils
20	340-360	Sandy clay, olive-gray (5Y 4/1); abundant very fine to medium quartz sand and silt
10	360-370	Sandy clay, olive-gray (5Y 4/1); silt; abundant shell fragments; less than 20 percent fine quartz sand
20	370-390	Sandy clay, dark-greenish-gray (5GY 4/1), many shells; silt; fine quartz sand
20	390-410	Clayey sand, dark-greenish-gray (5GY 4/1); fine to medium quartz sand; shell fragments; silt; clay
10	410-420	Silty clay, dark-greenish-gray (5GY 4/1); shell fragments, very fine sand
30	420-450	Clay, dark-greenish-gray (5GY 4/1); some fine to medium sand; shell fragments and silt, 440-450 ft
50	450-500	Silty clay, dark-greenish-gray (5GY 4/1); shell fragments less than 4 mm diameter
10	500-510	Silty clay, dark-greenish-gray (5GY 4/1); some shell fragments; abundant hard dark-greenish-gray silt
30	510-540	Clay, olive-gray (5YR 4/1), very dense; some shell fragments and microfossils
10	540-550	Sand, very fine to fine, light-brownish-gray (5YR 6/1), well sorted, subangular, quartz; trace heavy minerals; little olive-gray clay
10	550-560	Silty sand, olive-gray (5Y 3/2); very fine to fine subangular sand, moderately sorted; some light-olive-brown (5Y 5/6) clay, mixed with olive-gray (5Y 3/2) silty clay; some shell fragments
70	560-570	Silty clay, light-olive-gray (5Y 5/2); trace of very fine to fine subround quartz sand
10	570-580	Silty clay, light-olive-gray (5Y 5/2), mostly soft clay with some firm silt
20	580-600	Clay, dark-greenish-gray (5GY 4/1); moderate amount silt; few shell fragments, 590-600 ft
10	600-610	No record
20	610-630	Silty clay, dark-greenish-gray (5GY 4/1); some shell fragments less than 1mm diameter
30	630-660	Silty clay, dark-greenish-gray (5GY 4/1); no shells
10	660-670	Silty clay, dark-greenish-gray (5GY 4/1), with little soft very-light-gray (N8) clay
10	670-680	Silty clay, dark-greenish-gray (5GY 4/1); little angular to subangular gravel 5-7 mm diameter
40	680-720	Silty clay, dark-greenish-gray to olive-gray; 3 percent shell fragments; trace of glauconite and lignite at 690-700 ft; increasing 3-5 percent fine vitreous quartz sand, 700-710 ft; 10 percent shell fragments, 710-720 ft
20	720-740	Clayey silt and sand, dark-greenish-gray (5GY 4/1); fine to medium sand; shell fragments
30	750-780	Clayey silt, olive-gray; very fine sand; shell fragments; trace of glauconite; increased medium to coarse quartz sand, 780-800 ft
10	800-810	Sand, medium to very coarse, olive-gray, vitreous; some very fine to fine sand, silt
10	810-820	Sand, coarse to very coarse, olive-gray, subround; some clay
30	820-850	Silty sand, olive-gray; medium to coarse sand
30	850-880	No sample
20	880-900	Clay, dark-greenish-gray; some clayey silt; minor light-gray clay; shell fragments
30	900-930	Clay, dark-greenish-gray; some silt; few shell fragments at 900-910 ft

WELL 337
U.S. GEOLOGICAL SURVEY MARINE OBSERVATION WELL 1



Atlantic City

Well 338
 Owner or name: U.S. Geological Survey, marine observation well 2
 Location: N391726
 Driller: Warren George
 Quad.: Atlantic City
 Atlas Sheet no. 36.24.655
 Permit no. 36-5972
 Drilled from a platform 69 ft above the sea floor.

Geographic code: 0102

W742221

Comp. date: 09/04/1985

Elevation: -43 ft

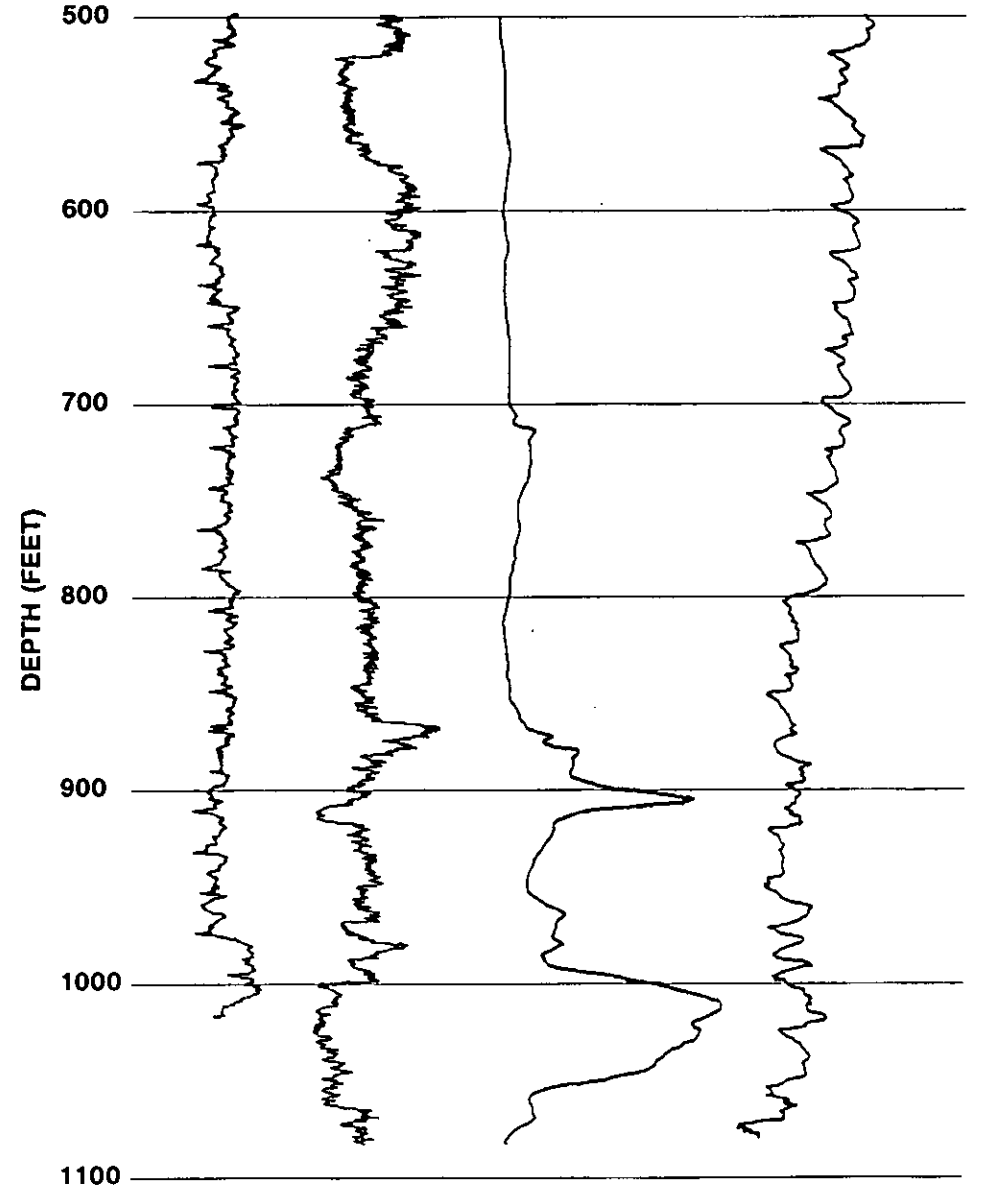
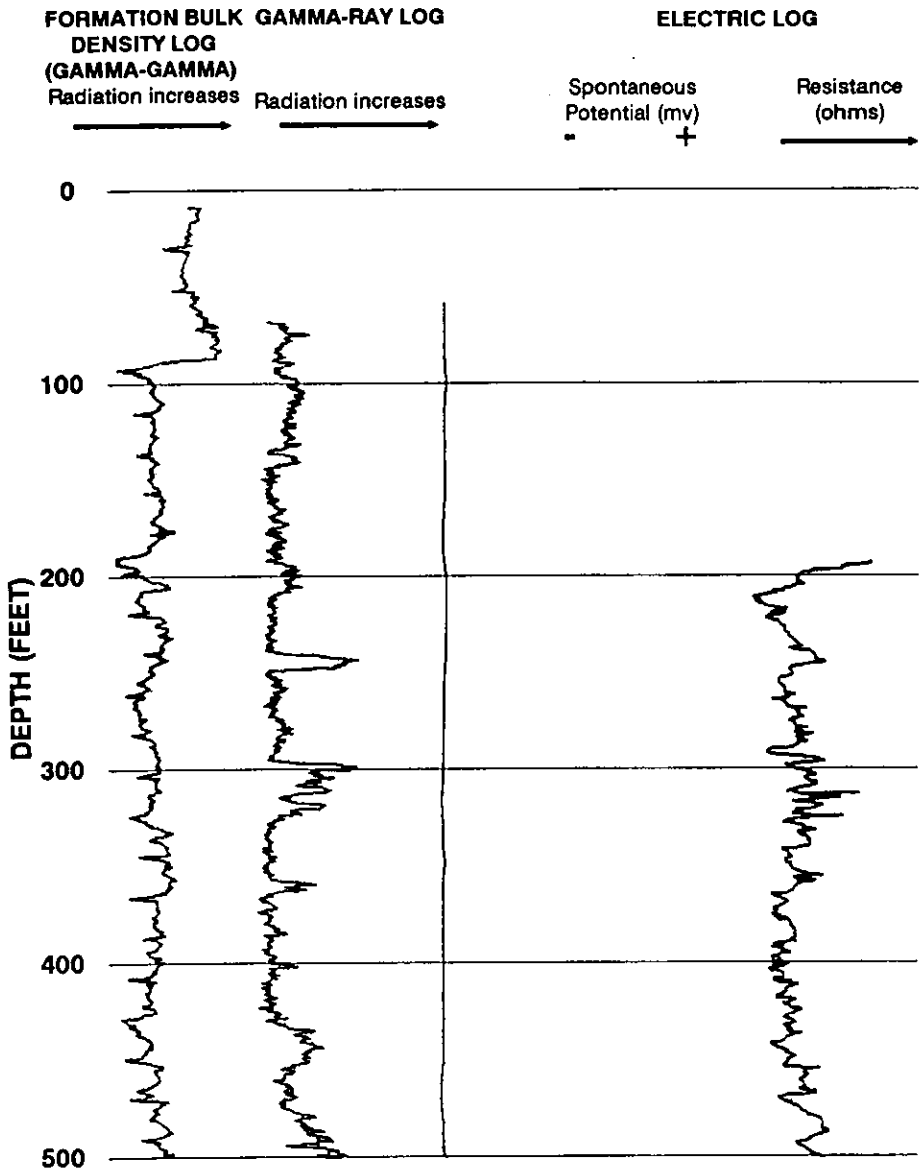
Depth drilled: 1,025 ft

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Shells, mostly fragments, some unbroken, to 3/4 inch in diameter; moderate amount of gray (N5), very fine, sandy clay
10	20-30	Shells and gravel, shell fragments with rounded quartz gravel, up to 10mm diameter; some very fine gray sandy clay
40	30-70	Clay, dark-greenish-gray (SGY 4/1); very fine sand; silty; micaceous; some angular gravel 10mm in diameter; some shell fragments at 30-50 ft
10	70-80	Clayey silt, dark-greenish-gray (SGY 4/1); very fine sand; some angular gravel
5	80-85	Gravel, up to 4 mm diameter, light-gray, quartz, subangular to subround, some angular; abundant lignite; few shell fragments
15	85-100	Silty clay and gravel, equal amounts; gravel, yellowish-orange, subangular to subround; silty clay, dark-greenish-gray (SGY 4/1); micaceous
10	100-110	Silty clay, dark-greenish-gray (SGY 4/1) and light-gray (N6); very fine sand; some very coarse sand and gravel
20	110-130	Silty clay, light-gray (N6); very fine sand; medium-dark-gray (N4) clay; trace of light-olive-brown (SY 5/6) clay; abundant gravel
20	130-150	Gravel, brownish-yellow and white, round, poorly sorted; medium to coarse sand; abundant lignite
20	150-170	Gravel, white, dark-yellowish-orange (10YR6/6); some poorly sorted fine to coarse subround sand; abundant lignite
5	170-175	Sand, white to dark-yellowish-orange (10YR6/6), poorly sorted, round to subround; little silt; trace lignite
5	175-180	Clay, olive-gray (SY 4/1), firm
20	180-200	Sand, fine to medium, white and light-bluish-gray (5B 7/1), subangular to subround, moderately sorted, few coarse; some silt; trace lignite
38	200-238	Sand, medium to coarse, white and light-bluish-gray (5B 7/1), subround to subangular, moderately sorted; trace silt and lignite
7	238-245	Silt, dusky-yellow (SY 6/4); soft clay with some very fine sand; olive-gray clay
5	245-250	Silt, pale-olive (10Y 6/2); some lignite; trace sand and gravel
10	250-260	Silt, light-olive-gray (SY 6/1); some sand, fine to medium, angular to subangular; trace lignite
10	260-270	Sand, fine to medium, white, moderately well sorted, subangular; pale-olive silt; abundant lignite
20	270-290	Sand, fine to coarse, white (N9), subangular to subround, moderately sorted, quartz; light-olive-gray (SY 6/1) silt; moderate lignite
5	290-295	Gravel, white, light-bluish-gray (5B 7/1) and grayish-yellow (5Y 8/4), subround to round; sand, fine to coarse, some subround; trace silt
5	295-300	Lignite, olive-black (SY 2/1), fragments; gravel; fine to coarse sand; moderate amounts of silt

10	300-310	Sand, fine to coarse, white (N9) and pinkish-gray (5YR 8/1), subangular to subround, quartz; some gravel; light-olive-gray (5Y6/1) silt; trace lignite
90	310-400	Gravel, white (N9), transparent and pinkish-gray (5YR 8/1), subround to round, poorly sorted; sand, fine to coarse, light-olive-gray (SY 6/1); silt; trace lignite; trace shell fragments at 370-390 ft; abundant black chert at 390-400 ft
10	400-410	Sandy silt and gravel, dark-greenish-gray (SGY 4/1); some clay
10	410-420	Silty clay, dark-greenish-gray (SGY 4/1); some sand and gravel
50	420-470	Silty clay, dark-greenish-gray (SGY 4/1); some sand; very abundant lignite at 425-429 ft; less lignite at 430-470 ft
40	470-510	Silty clay and clay, dark-greenish-gray (SGY 4/1); equal amount of light-olive-gray (SY 6/1) clay, and coarse sand, gravel
80	510-590	Clay, olive-gray (SY 4/1) and grayish-brown (5YR 4/1); trace shell fragments; trace very fine quartz sand and heavy minerals, 550-590 ft
30	590-620	Clayey silt, olive-gray (SY 4/1); abundant light-gray (NG) clay; some shell fragments
10	620-630	Silty clay, olive-gray (SY 4/1); abundant hard silt; shell fragments, to 3 mm diameter
15	630-645	Clayey silt, olive-gray (SY 4/1); some fine sandy silt; increasing very fine sand; some shell fragments at 640-645 ft
3	645-648	Chert, black (N1); olive-gray silt
2	648-650	Silt, olive-gray (SY 4/1); sand, very fine, subround; some shell fragments
20	650-670	Sand, very fine to fine, bluish-white, subround, quartz, in olive-gray (SY 4/1) silty matrix
50	670-720	Silt, olive-gray (SY 4/1); some well sorted very fine sand; shell fragments; some brownish clay at 680-720 ft
20	720-740	Clayey silt, olive-gray (SY 4/1), alternately hard and loose; clay, medium-light-gray (N6); shell fragments; no light-gray clay, and few shell fragments at 730-740 ft
10	740-750	Silty clay, olive-gray (SY 4/1); hard silt; shell fragments; trace light-gray clay
10	750-760	Silt, dusky-yellow-green (SGY 3/2); some clay
10	760-770	Clay, olive-gray (SY 4/1); very fine sand; some silt; shell fragments
20	770-790	Clayey silt, olive-gray (SY 4/1); clay; some shell fragments
10	790-800	Sandy silt, olive-gray (SY 4/1); sand, coarse, subround, shell fragments, trace clay
10	800-810	Silty clay, olive-green; shell fragments
20	810-830	Clayey silt, olive-gray; medium sand; abundant shell fragments
10	830-840	Sand, medium to coarse, olive-gray, subround; abundant shell fragments; some silt, clay
40	840-880	Sand, medium, transparent, some white, quartz, subround; light-olive-gray (SY 6/1) silt matrix; trace shell fragments; increasing fine sand at 860-870 ft; increasing silt and trace of clay at 870-880 ft
10	880-890	Silty sand, olive-gray (SY 4/1), well sorted; very fine subrounded sand; silt; some clay
10	890-900	Silt, olive-gray (SY 4/1); some fine sand; clay
20	900-920	Clay, olive-gray (SY 4/1); some fine sand; shell fragments; trace pyrite
10	920-930	Shelly clay, olive-gray (SY 4/1); very abundant shell fragments
5	930-935	Clay, olive-gray (SY 4/1); shell fragments; some fine to medium sand

WELL 338
U.S. GEOLOGICAL SURVEY MARINE OBSERVATION WELL 2

FORMATION BULK DENSITY LOG (GAMMA-GAMMA) **GAMMA-RAY LOG** **ELECTRIC LOG**
 Radiation increases Radiation increases Spontaneous Potential (mv) Resistance (ohms)
 - + - + - + - +



Atlantic City

Well 344 Geographic code: 0102

Owner or name: U.S. Department of Energy

Location: N392247 W742713

Driller: -----

Quad.: Oceanville Comp. date: 04/1978

Atlas Sheet no. 36.14.481 Elevation: 5 ft

Permit no. 56-65 Depth drilled: 1,004 ft

U.S. Geological Survey observation well; log by Virginia Polytechnic Institute.

Thickness (ft)	Depth (ft)	Lithology
70	0-70	Sand, fine to coarse, granular
50	70-120	Sand, fine to medium; small amount of silt at mid-interval
110	120-230	Sand, fine to coarse; granular (gravel)
10	230-240	Sand, fine to medium; scattered granules (gravel)
10	240-250	No record
20	250-270	Silt; fine to coarse sand
30	270-300	Sand, fine to medium; some silt and granules (gravel) toward end of interval
10	300-310	Sand, medium to coarse; granular (gravel); some silt
20	360-380	Silt; shell hash; some granules (gravel)
20	380-400	Sand, medium to coarse; silty
40	400-440	Silt; medium sand in center of interval
20	440-460	Sand, fine to coarse; some silt
10	460-470	Silt; some coarse sand
10	470-480	Sand, fine to medium; some silt
10	480-490	Silt
40	490-530	Sand, medium to coarse; some silt
60	530-590	Silt; medium to coarse sand
30	590-620	No record

30	620-650	Sand, fine; some silt
40	650-690	Sand, medium to coarse; increasing silt
130	690-820	Sand, medium; silty; shell hash at 690-700 ft
10	820-830	Silt; fine sand
10	830-840	Silt and granules (gravel)
70	840-910	Sand, fine to coarse; some silt; some pebbles and granules (gravel)

Well 350 Geographic code: 0102

Owner or name: Traymore Hotel

Location: N392124 W742548

Driller: Uriah White

Quad.: Atlantic City Comp. date: 1899

Atlas Sheet no. 36.14.817 Elevation: 8 ft

Permit no. 56-88 Depth drilled: 830 ft

From Woolman, 1900, p. 106

No lithologic log available, geophysical log on page 28.

Well 351 Geographic code: 0102

Owner or name: Marlborough-Blenheim Hotel

Location: N392123 W742600

Driller: -----

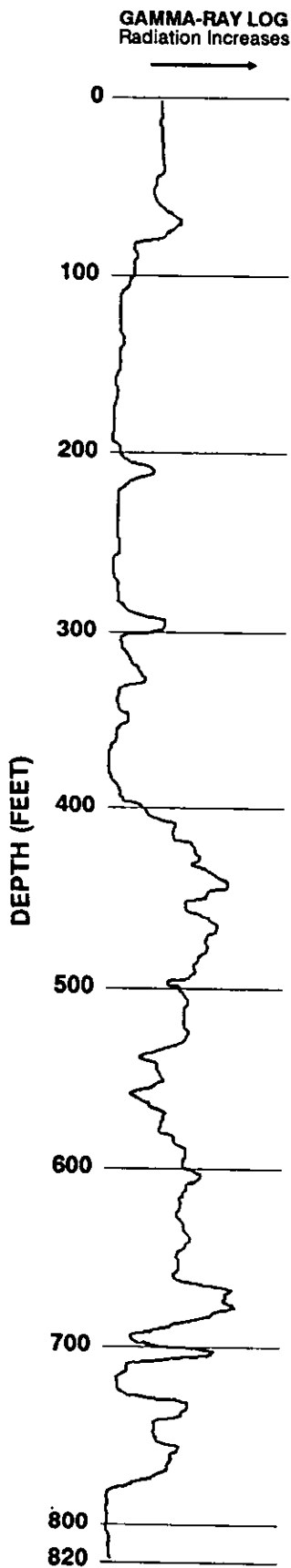
Quad.: Atlantic City Comp. date: 1922

Atlas Sheet no. 36.14.817 Elevation: 7 ft

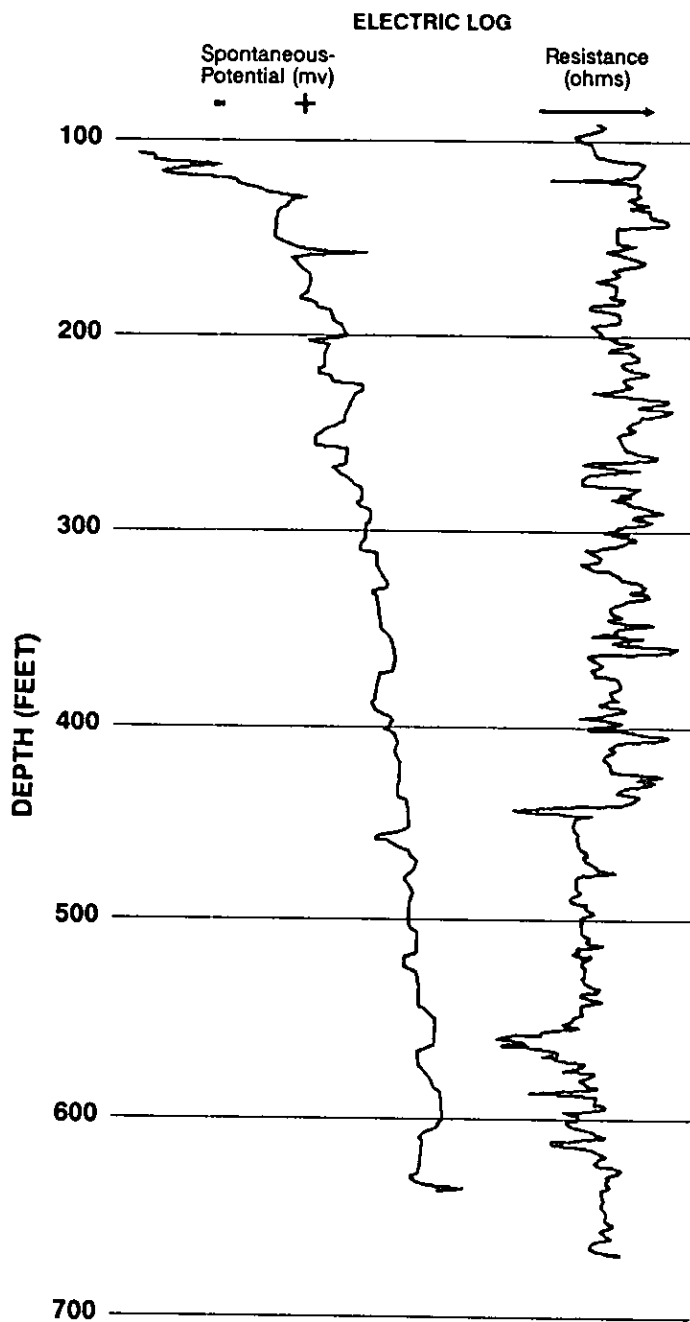
Permit no. 56-89 Depth drilled: 823 ft

No lithologic log available
Geophysical log on page 28

**WELL 350
TRAYMORE HOTEL**



**WELL 351
MARLBOROUGH-BLENHEIM HOTEL**



Brigantine City

WELL 306

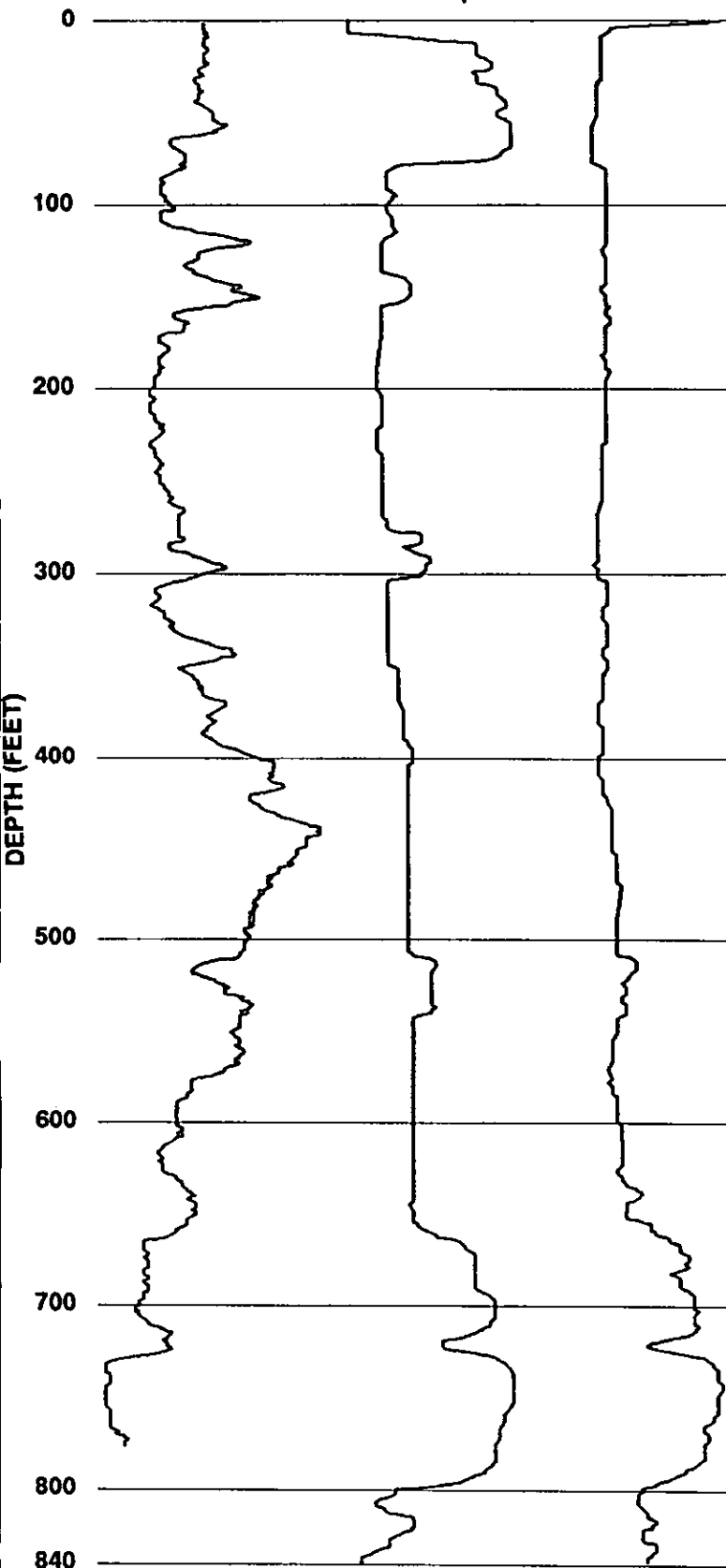
GAMMA-RAY LOG

ELECTRIC LOG

Radiation increases
→

Spontaneous Potential (mv)
- +

Resistance (ohms)
→



Well 348

Geographic code: 0103

Owner or name: Brigantine Water Department

Location: N392342

W742348

Driller: Layne-N.Y.

Quad.: Oceanville

Comp. date: 10/07/1952

Atlas Sheet no. 36.14.614

Elevation: 5 ft

Permit no. 56-11

Depth drilled: 785 ft

From Clark and others, 1968, p. 33, 39; located at Circle and Brigantine Blvd., Brigantine, NJ.

Thickness (ft)	Depth (ft)	Lithology
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Recent series:

18	0-18	Fill
12	18-30	Marsh mud

Cape May Formation:

17	30-47	Sand and gravel
3	47-50	Clay, soft
35	50-85	Sand and gravel

Cohansey Sand:

13	85-98	Clay, tough
50	98-148	Sand
9	148-157	Clay
107	157-264	Sand; gravel; clay streaks, 185-264 ft

Kirkwood Formation:

56	264-320	Clay, sandy; gravel, 264-295 ft; soft, 295-320 ft
40	320-360	Sand and clay
145	360-505	Clay; tough at 400-470 ft; soft at 470-505 ft
65	505-570	Sand, hard; clay
104	570-674	Clay, tough
104	674-778	Sand, coarse; shells at 674-694 ft; gray at 694-734 ft; brown at 734-778 ft
7	778-785	Clay

Well 349

Geographic code: 0103

Owner or name: Brigantine Borough

Location: N392432

W742153

Driller: Layne-N.Y.

Quad.: Brigantine Inlet

Comp. date: 12/12/1925

Atlas Sheet no. 36.15.171

Elevation: 10 ft

Permit no. 56-9

Depth drilled: 840 ft

Thickness (ft)	Depth (ft)	Lithology
----------------	------------	-----------

22	0-22	Sand, blue
6	22-28	Clay, blue
48	28-76	Sand, gray
7	76-83	Clay, blue
286	83-369	Sand, blue
126	369-495	Clay, blue
41	495-536	Clay and shells
63	536-599	Clay, blue
63	599-662	Shells and stone (gravel)
83	662-745	Clay, blue; hard pan
26	745-771	Clay, soft
59	771-830	Sand, brown and gray
10	830-840	Clay, blue

Buena Borough

Well 104 Geographic code: 0104

Owner or name: Monfardini Brothers

Location: N393302 W745638

Driller: Vance Skinner

Quad.: Buena

Comp. date: 05/17/1982

Atlas Sheet no. 31.43.565

Elevation: 110 ft

Permit no. 31-19096

Depth drilled: 160 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, fine, yellow; white clay lenses
10	10-20	Sand, fine, light color
10	20-30	Sand, fine to medium, orange, clayey
10	30-40	Sand, fine; white clay layers
10	40-50	Clay, orange, 8 ft layer; some white sand
60	50-110	Sand, fine, orange, clayey
50	110-160	Sand, fine to medium, dark-orange

Well 105

Geographic code: 0104

Owner or name: Dom Visconti

Location: N393113

W745620

Driller: Vance Skinner

Quad.: Buena

Comp. date: 03/26/1982

Atlas Sheet no. 35.03.262

Elevation: 108 ft

Permit no. 35-2418

Depth drilled: 160 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, medium, orange
80	10-90	Sand, fine to medium, light-colored; white clay layers at 30-60 ft
30	90-120	Sand, fine to medium, yellow at 90-110 ft, orange at 110-120 ft
40	120-160	Sand, medium, orange, very clean

Buena Vista Township

Well 101

Geographic code: 0105

Owner or name: Buena Regional School District

Location: N393208

W745503

Driller: A.C. Schultes

Quad.: Buena

Comp. date: 02/1972

Atlas Sheet no. 31.43.685

Elevation: 110 ft

Permit no. 31-5832

Depth drilled: 196 ft

Thickness (ft)	Depth (ft)	Lithology
1	0-1	Fill
11	1-11	Clay, sandy
6	11-17	Clay, yellow
11	17-28	Sand
11	28-39	Clay, yellow
98	39-137	Sand and clay layers
16	137-153	Clay, brown
43	153-196	Sand

Well 106

Geographic code: 0105

Owner or name: Buena Vista Township

Location: N393033

W745447

Driller: Vance Skinner

Quad.: Buena

Comp. date: 08/17/1978

Atlas Sheet no. 35.03.383

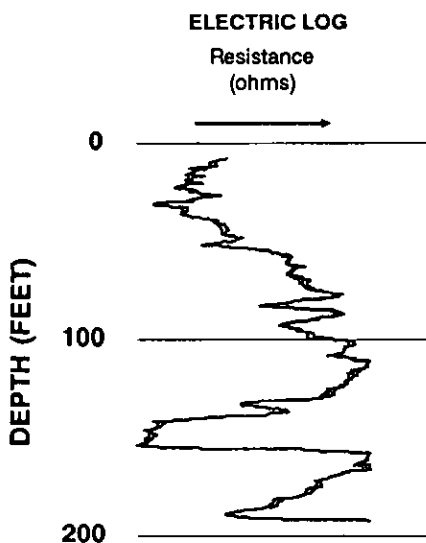
Elevation: 90 ft

Permit no. 35-1725

Depth drilled: 136 ft

Thickness (ft)	Depth (ft)	Lithology
30	0-30	Sand, fine, white, clayey, siliceous
60	30-90	Sand, fine, pale-grayish-orange; trace thin clay strips (laminations)
10	90-100	Sand, medium, pale-grayish-orange
20	100-120	Sand, fine, pale-grayish-orange; slightly clayey
15	120-135	Sand, medium, orange-brown
1	135-136	Sand, gray; clay

WELL 101 BUENA REGIONAL SCHOOL DISTRICT



Well 136

Geographic code: 0105

Owner or name: Eric Hensel

Location: N392741

W745229

Driller: Delmarva Drilling

Quad.: Dorothy

Comp. date: 04/23/1968

Atlas Sheet no. 35.04.763

Elevation: 93 ft

Permit no. 35-963

Depth drilled: 165 ft

Thickness (ft)	Depth (ft)	Lithology
1	0-1	Top soil
14	1-15	Sand, fine to coarse, tan, 1-4 ft, white, 4-15 ft
2	15-17	Clay
13	17-30	Sand, fine to medium, tan
4	30-34	Clay, yellow
1	34-35	Sand, fine to coarse, tan
23	35-58	Clay, gray at 35-51 ft, blue at 51-58 ft
39	58-97	Sand, fine, tan
63	97-160	Sand, fine to coarse, tan; iron ore (bog iron) gravel
5	160-165	Sand, fine, tan

Well 137 **Geographic code: 0105**

Owner or name: Eric Hensel
 Location: N392713 W745220
 Driller: D'Agostino Well Drilling
 Quad.: Dorothy Comp. date: 06/11/1982
 Atlas Sheet no. 35.04.762 Elevation: 90 ft
 Permit no. 35-3292 Depth drilled: 250 ft

Thickness (ft)	Depth (ft)	Lithology
6	0-6	Topsoil, black, loose
9	6-15	Sand, fine, brown; clay
45	15-60	Sand, fine to medium, brown; clay
25	60-85	Sand, medium to fine, brown, some coarse
15	85-100	Sand, fine to medium, brown; bits clay
40	100-140	Sand, medium to fine, light and dark-gray, some coarse
50	140-190	Clay, black, sticky; sand, fine
20	190-210	Sand, fine, dark-gray, some medium
40	210-250	Sand, medium, light-gray, some fine

Well 142 **Geographic code: 0105**

Owner or name: John Kollmer
 Location: N392837 W745240
 Driller: Vance Skinner
 Quad.: Five Points Comp. date: 03/30/1971
 Atlas Sheet no. 35.04.491 Elevation: 91 ft
 Permit no. 35-1121 Depth drilled: 155 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Gravel, buff, clayey
30	10-40	Sand, medium, dark-buff; slightly clayey, some very coarse layers at 20-40 ft
11	40-51	Sand, medium, light-buff; slightly clayey
29	51-80	Sand, fine; buff at 51-74 ft; light-buff, slightly clayey at 74-80 ft
33	80-113	Sand, generally medium, buff; trace very thin white clay strips (laminaions)
13	113-135	Sand, medium to coarse, buff; darker-buff at 126-135 ft
20	135-155	Sand, fine to medium, light-buff; slightly clayey; increasing clay at 141-155 ft

Well 143 **Geographic code: 0105**

Owner or name: Badaracco Farms
 Location: N392817 W745443
 Driller: Vance Skinner
 Quad.: Five Points Comp. date: 02/03/1977
 Atlas Sheet no. 35.03.694 Elevation: 100 ft
 Permit no. 35-1481 Depth drilled: 270 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Gravel, buff; sand, red; slightly clayey
12	10-22	Clay, buff; stone (gravel) layers, grading to silty clay
34	22-56	Clay, hard, massive, buff; silty; grading to clayey sand
12	56-68	Sand, fine, buff, hard; clayey
22	68-90	Sand, buff, cemented; clayey
107	90-197	Clay, gray; some fine sand streaks, 120-197 ft
73	197-270	Sand, coarse, buff; grading to fine, hard, gray at 270 ft

Well 144 **Geographic code: 0105**

Owner or name: C.C. Blyone
 Location: N392843 W745449
 Driller: Milton Shepard
 Quad.: Five Points Comp. date: 03/28/1953
 Atlas Sheet no. 35.03.658 Elevation: 110 ft
 Permit no. 35-152 Depth drilled: 195 ft

Thickness (ft)	Depth (ft)	Lithology
18	0-18	Gravel, buff, hard
5	18-23	Clay, buff
15	23-38	Stones (gravel); clay; sand
51	38-89	Sand, fine, buff, cemented at 38-46 ft and 75-89 ft; gravel at 70-75 ft
4	89-93	Sand, buff
67	93-160	Clay, buff; cemented sand at 93-149 ft
10	160-170	Clay, gray
9	170-179	Clay, sand, buff
16	179-195	Gravel, buff, clean

Corbin City

No wells included in this summary

Egg Harbor City

Well 011 **Geographic code: 0107**

Owner or name: Egg Harbor City
 Location: N393215 W743826
 Driller: Artesian Well Drilling
 Quad.: Egg Harbor City Comp. date: 04/1957
 Atlas Sheet no. 32.42.494 Elevation: 40 ft
 Permit no. 32-175 Depth drilled: 410 ft

Thickness (ft)	Depth (ft)	Lithology
5	0-5	Fill
36	5-41	Sand, coarse; white, 5-14 ft., 23-41 ft; gravel, yellow, 14-23 ft
42	41-83	Sand and clay
9	83-92	Sand, brown

15	92-107	Clay, black
13	107-120	Sand, coarse, white; gravel
61	120-181	Clay, black
16	181-197	Sand, fine, dirty
6	197-203	Sand, coarse, gray
125	203-328	Clay; black at 203-282 ft; sandy, 282-328 ft
5	328-333	Sand, coarse, water-bearing
14	333-347	Clay, stiff, sandy
5	347-352	Sand, coarse, water-bearing
4	352-356	Clay, sandy
48	356-404	Sand and gravel, water-bearing
6	404-410	Clay, sandy

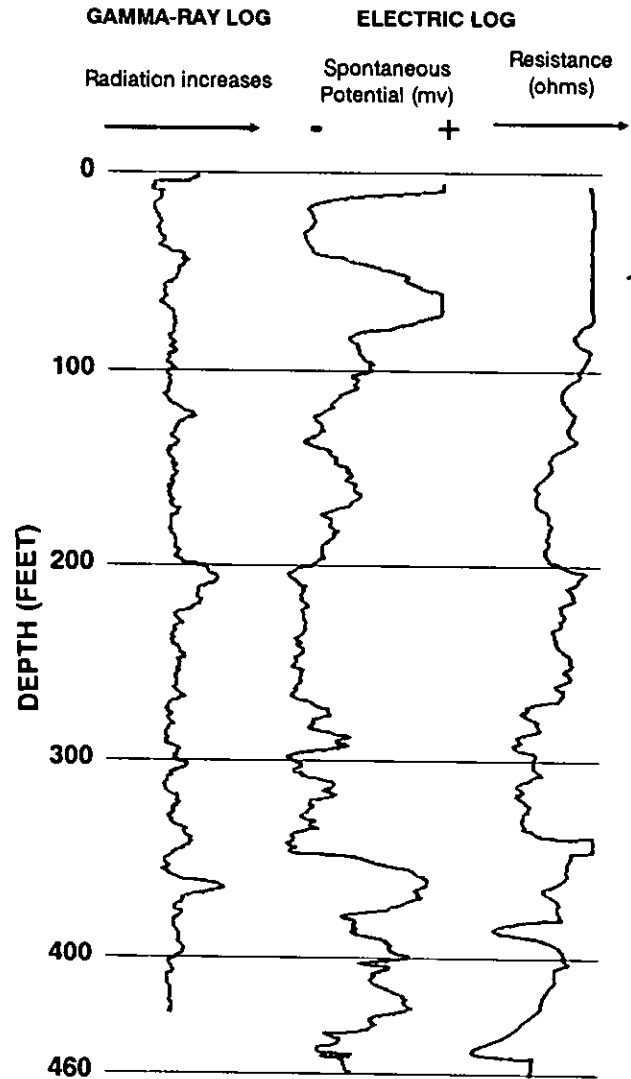
Egg Harbor City

Well 012
 Owner or name: Egg Harbor City
 Location: N393207
 Driller: A.C. Schultes
 Quad.: Egg Harbor City
 Atlas Sheet no. 32.42.494
 Permit no. 32-477

Geographic code: 0107
 W743836
 Comp. date: 11/11/1964
 Elevation: 40 ft
 Depth drilled: 507 ft

Thickness (ft)	Depth (ft)	Lithology
4	0-4	Fill
8	4-12	Sand, fine to coarse
2	12-14	Clay
24	14-38	Sand, yellow
4	38-42	Clay
44	42-86	Sand, coarse; clay streaks
31	86-117	Sand, fine to medium
25	117-142	Clay, sandy, gray
24	142-166	Sand, fine, silty
26	166-192	Clay
112	192-304	Sand, silty; gray at 192-206 ft; fine, 206-304 ft
25	304-329	Sand; coarse, 304-317; 327-329 ft; fine, clayey, 317-327 ft
13	329-342	Clay; sand, fine
59	342-401	Sand; coarse, hard, 342-374 ft; fine, 374-380 ft, 389-401 ft; clayey, 374-380 ft; coarse to medium, 380-389 ft
2	401-403	Clay, silty
2	403-405	Hardpan
3	405-408	Sand, clayey
7	408-415	Clay, sandy
22	415-437	Sand
14	437-451	Clay, sandy
7	451-458	Sand
49	458-507	Clay, sandy

WELL 012 EGG HARBOR CITY



Well 324
 Owner or name: Egg Harbor City
 Location: N393220
 Driller: Kisner and Bennett
 Quad.: Egg Harbor City
 Atlas Sheet no. 32.42.494
 Permit no. 52-20
 From Woolman, 1898, p. 222; 1899, p. 73.

Geographic code: 0107
 W743833
 Comp. date: 1897
 Elevation: 40 ft
 Depth drilled: 371 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Mud, black; recent freshwater diatom species
3	10-13	Gravel, very coarse; white pebbles with limonite coating at 10-11 ft; muddy, 11-13 ft
2	13-15	Gravel, coarse, dark
9	15-24	Sand, fine, orange to yellow, clayey
13	24-37	Sand, coarse, white, water-bearing
8	37-45	Clay, orange to yellow
27	45-72	Sand, very fine, yellow; clayey at 45-59 ft; slushy (silty) at 59-72 ft
6	72-78	Sand, fine; gravel; slushy (silty)
6	78-84	Sand, very fine, dark-yellow, clayey

10	84-94	Sand, fine to coarse, light-orange-yellow, water-bearing
1	94-95	Gravel conglomerate with iron-stone crust 6 in. thick; sandy clay, black, 6 in. thick
10	95-105	Sand, coarse, iron-rust colored; slushy (silty); clayey 95-97 ft; dark-orange-yellow, 97-105 ft
2	105-107	Gravel, lighter-colored, slushy (silty)
12	107-119	Sand, fine, light-orange to yellow; water-bearing at 97-119 ft
1	119-120	Clay, black, sandy; no microfossils
10	120-130	Sand, dark, clayey; few diatoms
12	130-142	Clay, dark, sandy; diatoms
4	142-146	Clay, gray, sandy
18	146-164	Clay, yellowish, sandy
70	164-234	Sand, dark; clayey, 164-199 ft, 216-234 ft
17	234-251	Sand, clayey, slightly yellow
39	251-290	Clay, sandy; dark at 251-270 ft; lighter shade at 270-290 ft
20	290-310	Sand and clay; coniferous wood (lignite)
18	310-328	Sand, brownish
43	328-371	Sand, gray; water-bearing 346-371 ft

Egg Harbor Township

Well 126 **Geographic code: 0108**
 Owner or name: U.S. Air Force
 Location: N392652 W743512
 Driller: Ridpath and Potter
 Quad.: Pleasantville Comp. date: 02/04/1965
 Atlas Sheet no. 36.02.305 Elevation: 55 ft
 Permit no. 36-367 Depth drilled: 166 ft
 Located at National Aviation Facility Experimental Center (NAFEC) property.

Thickness (ft)	Depth (ft)	Lithology
7	0-7	Sand, brown; gravel; clay
2	7-9	Clay, brown
11	9-20	Sand, brown
13	20-33	Sand, light-brown; little gravel at 20-23 ft; little clay at 23-33 ft
14	33-47	Clay, brown; little sand at 36-47 ft
13	47-60	Clay, light-brown; little sand
5	60-65	Sand, brown
1	65-66	Gravel
20	66-86	Sand, coarse; fine gravel 76-86 ft
9	86-95	Hard pan, followed by gray clay
2	95-97	Sand and fine gravel
2	97-99	Sand, coarse; gravel
6	99-105	Sand and fine gravel
11	105-116	Sand, coarse; hard pan at 110-111 ft
15	116-131	Clay, blue
12	131-143	Sand, brown, water-bearing; coarse at 138-142 ft
23	143-166	Sand, water-bearing; dark at 143-144 ft; coarse at 144-166 ft

Well 128 **Geographic code: 0108**
 Owner or name: South Jersey Gas Company
 Location: N392516 W743825
 Driller: Layne-N.Y.
 Quad.: Mays Landing Comp. date: 01/30/1968
 Atlas Sheet no. 36.12.161 Elevation: 58 ft
 Permit no. 36-401 Depth drilled: 249 ft

Thickness (ft)	Depth (ft)	Lithology
5	0-5	Clay, yellow, sandy
15	5-20	Sand, coarse; gravel
50	20-70	Sand, fine to medium; gravel
11	70-81	Clay, yellow, sandy
14	81-95	Clay, tough, white and gray
9	95-104	Sand, medium to coarse
22	104-126	Clay, gray
29	126-155	Sand, fine to medium, brown
94	155-249	Clay, gray; sandy at 155-205 ft

Well 172 **Geographic code: 0108**
 Owner or name: Emma Kuntz
 Location: N391842 W743247
 Driller: Artesian Well Drilling
 Quad.: Ocean City Comp. date: 06/1949
 Atlas Sheet no. 36.23.183 Elevation: 6 ft
 Permit no. 36-9 Depth drilled: 700 ft

Thickness (ft)	Depth (ft)	Lithology
6	0-6	Fill
4	6-10	Mud
30	10-40	Sand; fine at 10-28 ft; gray, 28-40 ft
3	40-43	Clay
22	43-65	Sand; gravel
11	65-76	Clay
8	76-84	Sand
7	84-91	Gravel
9	91-100	Clay
8	100-108	Sand
35	108-143	Clay
21	143-164	Sand and clay

34	164-198	Sand; gravel, 164-171 ft; hard clay, 171-198 ft
4	198-202	Clay
47	202-249	Sand, fine; muddy (silty) at 202-230 ft; coarse at 230-249 ft
3	249-252	Clay
17	252-269	Sand; muddy (silty)
28	269-297	Clay
20	297-317	Sand; gravel, 297-308 ft; muddy (silty), 308-317 ft
2	317-319	Hardpan
29	319-348	Sand
4	348-352	Clay
7	352-359	Sand, muddy (silty)
12	359-371	Marl, sandy; clay
134	371-505	Clay
6	505-511	Shells; sand, fine
129	511-640	Clay; hardpan at 632-633 ft
30	640-670	Shells and sand
30	670-700	Sand

Well 286 **Geographic code: 0108**
 Owner or name: Seaview Harbor Water Company
 Location: N391853 W743208
 Driller: Layne-N.Y.
 Quad.: Ocean City Comp. date: 05/07/1958
 Atlas Sheet no. 36.23.169 Elevation: 5 ft
 Permit no. 36-271 Depth drilled: 830 ft
 From Clark and others, 1968, p. 30, 41; log by D.G. Parillo, N.J. Geological Survey.

Thickness (ft)	Depth (ft)	Lithology
40	0-40	Sand, medium to fine, medium-gray, well rounded, quartz; recent shell fragments; heavy minerals, mostly hornblende, epidote, pyroxene and garnet; few shell fragments, slightly finer at 20-40 ft

Cape May Formation:
 40 40-80 Sand, fine to very coarse, medium-gray, quartz
 20 80-100 Sand, medium to coarse, light-gray, rounded, quartz; heavy minerals, with opaques dominant

Cohansey Sand:
 60 100-160 Sand, medium to coarse, light-gray, rounded, quartz; slightly clayey at 140-160 ft
 90 160-250 Sand, medium to coarse, medium-gray, well rounded to subround, quartz, silty; few pea-sized pebbles; cleaner (less silty), 200-210 ft

Kirkwood Formation:
 30 250-280 Sand, medium to coarse, medium-gray, subround, slightly clayey quartz sand
 20 280-300 Silt, medium-gray, clayey, sandy; finely micaceous; no microfossils
 40 300-340 Sand, medium, medium-gray, subround, quartz, some coarse; slightly clayey, 310-320 ft
 340 340-680 Silt, finely micaceous, medium-gray, sandy; some fossil fragments; heavy minerals are 70 percent opaque, well rutillated leucoxene, little epidote, garnet, zircon, staurolite, rutile, kyanite-sillimanite; flat, circular diatoms, microscopic oolitic pyrite nodules; more sandy; shell fragments, 540-600 ft; black lignitic sandy silt, 600-680 ft
 20 680-700 Sand, medium to coarse, round, quartz; shell fragments, including small gastropods; silty from 690-700 ft
 25 700-725 Silt, medium-gray, sandy; shell fragments
 28 725-753 Sand, medium, medium to dark-gray, round, quartz; slightly silty; about 25 percent shell fragments; very coarse sand, 738-753 ft
 32 753-785 Sand, medium to very coarse, slightly brownish-gray, polished; some shell fragments; very few shell fragments, 773-785 ft
 45 785-830 Clay

Egg Harbor Township

Well 293

Geographic code: 0108

Owner or name: Egg Harbor Township High School

Location: N392344

W743749

Driller: A. C. Schultes

Quad.: Mays Landing

Comp. date: 03/28/1985

Atlas Sheet no. 36.12.435

Elevation: 50 ft

Permit no. 36-5091

Depth drilled: 678 ft

U.S. Geological Survey observation well.

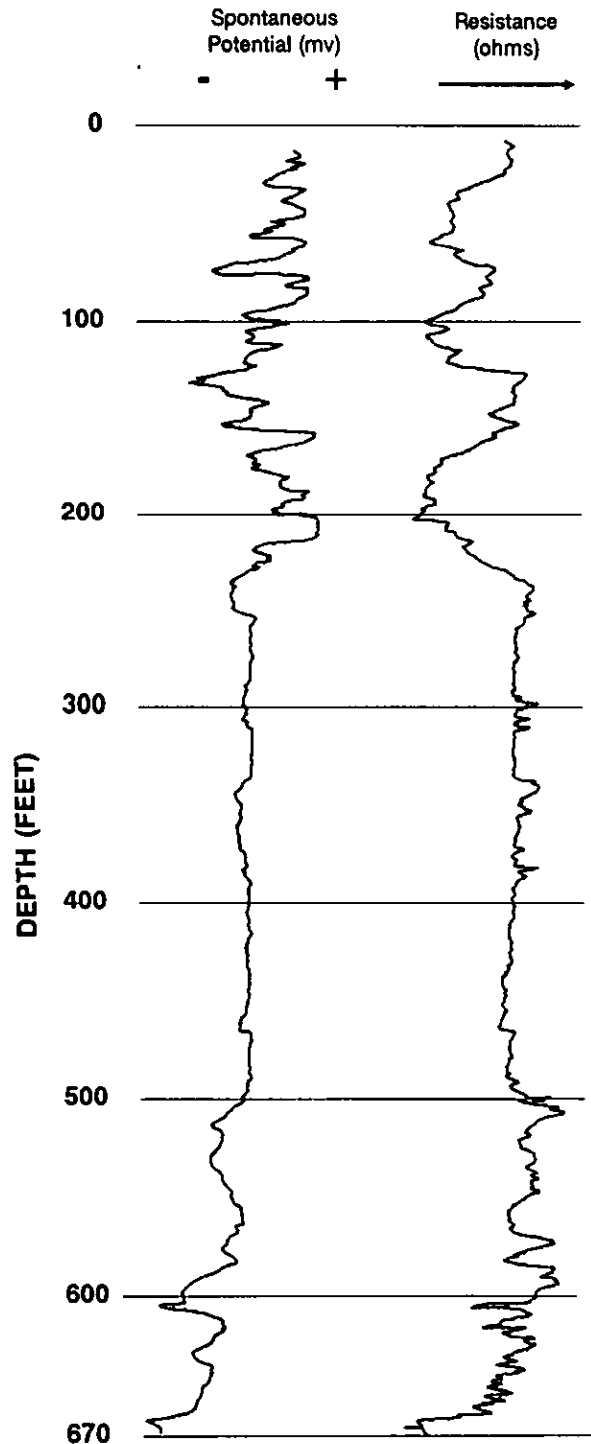
Thickness (ft)	Depth (ft)	Lithology
8	0-8	Gravel, light-yellow to orange, loose, round; abundant yellow clay
10	8-18	Gravel, light-yellow to varicolored; clay, light-yellow to white; silt; lignite
10	18-28	Sand, fine to pebble (gravel), very light-yellow; abundant white clay; silt
10	28-38	Sand, medium to coarse, orange to yellowish-orange; abundant orange clay; some silt
10	38-48	Sand, fine to medium, yellowish-gray, round to subround; abundant yellow clay, lignite
10	48-58	Sand, very fine to medium, yellow (10YR 7/4); abundant yellow-orange clay; silt; pebbles
10	58-68	Sand, very fine to coarse, yellow (10YR 5/4), grading to burnt-orange; moderate clay; some silt and pebbles
10	68-78	Sand, fine to medium, yellow, subround; trace white clay
10	78-88	Sand, fine to coarse, orange-yellow (10YR 6/6); trace white clay
10	88-98	Sand and gravel; gravel, pebble to cobble, light-orange-yellow (10YR 8/6), subround to round; trace clay; trace sand, black, gray and pink, quartz
10	98-108	Sand, medium to coarse, light-orange-yellow (10YR 8/6), round to subround, quartz
10	108-118	Sand, fine to coarse, brown to orange, subangular, quartz; trace sand, very fine
10	118-128	Sand, medium to coarse, brownish-orange (10YR 5/4), quartz; some pebbles; chert; iron staining on grains
10	128-138	Sand, very fine to medium, yellow-gray to orange-gray (10YR 7/4), round to subround, quartz, iron-stained
10	138-148	Clay, brown to gray; small amount of pyrite; lignite; silt; sand
20	148-168	Sand, very fine to fine, light-brown to gray; trace clay, brown to gray; increasing gray chert and lignite at 158-168 ft
10	168-178	Sand, fine, tan to light-gray to brown (5Y8/4); decreasing clay
10	178-188	Sand, very fine to fine, light-tan becoming yellow-brown (10YR 6/2); lignite
10	188-198	Sand, silty to fine, yellow to orange (10YR 8/6); iron staining; abundant pyrite
20	198-218	Sand, silty to fine, yellow to brown (10YR 6/2); iron staining; some clay
10	218-228	Sand, very fine to coarse, very-pale-orange (10YR 8/2); abundant clay
10	228-238	Clay, olive-gray (5Y 3/2); 5 to 10 percent sandy, fine; silt; some mica
10	238-248	Clay, grayish-olive (10Y 4/2) to light-olive-gray (5Y 5/2); sand, 30 percent silt to medium; lignite, very fine, black
10	248-258	Sand, fine to medium, light-olive-gray (5Y 5/2), subangular, clayey; some silt; lignite; iron staining
10	258-268	Sand, medium to coarse, light-olive-gray (5Y 5/2), subround to round; abundant clay; lignite; iron staining
10	268-278	Clay, light-olive-gray (5Y 5/2) to olive-gray (5Y 3/2); sand, fine to medium; very fine lignite
10	278-288	Clay, olive-gray (5Y 3/2), trace sand, fine to coarse; abundant lignite; some silt
10	288-298	Clay, olive-gray (5Y 3/2); lignite; trace sand and gravel sized quartz; abundant shell fragments
10	298-308	Clay, olive-gray (5Y 3/2); sand, very fine to fine; some white clay; lignite; abundant shell fragments
20	308-328	Clay, olive-gray (5Y 3/2); increasing sand, very fine to medium, subround; abundant shell fragments; some pyrite and mica
20	328-348	Clay, olive-gray (5Y 3/2); decreasing sand; abundant lignite at 328-338 ft; some shell fragments at 338-348 ft
10	348-358	Clay, olive gray (5Y 3/2); sand, 30-40 percent fine to coarse; 5 percent shell fragments; some pyrite
20	358-378	Clay, olive-gray (5Y 3/2); 20 to 25 percent shell fragments; 15 to 20 percent very fine to medium sand; some mica
10	378-388	Clay, olive-gray (5Y 3/2); some silt and mica; trace sand, very fine to fine
10	388-398	Clay, olive-gray (5Y 3/2); large shell "pelecypod" fragments; increasing sand, fine, subround
10	398-408	Clay, olive-gray (5Y 3/2), silty; some shell fragments; some sand, fine, subround; minor white clay and mica
10	408-418	Clay, olive-gray (5Y 3/2), silty; decreasing shell fragments; fine sand; some mica
10	418-428	Clay, olive-gray (5Y 3/2), sandy; increasing sand; some silt; few shell fragments
10	428-438	Sand, very fine to fine, light-olive-gray (5Y 5/2) to light-olive (10Y 6/2), subangular to subround; some shell fragments; some gray and green clay; little lignite
10	438-448	Sand, very fine to fine, some medium, light-olive-gray (5Y 5/2); some shell fragments and clay
10	448-458	Sand, very fine to fine, light-olive-gray (5Y 5/2), silty; some clay
10	458-468	Clay, olive-gray (5Y 3/2); abundant shell fragments; silt; some fine sand and lignite
40	468-508	Clay, olive-gray (5Y 3/2); some white clay; trace sand; shell fragments at 478-508 ft
30	508-538	Clay, tan and olive-gray (10YR 6/2); abundant shell fragments, increasing up to 6 mm in size at 528-538 ft; little sand, silt
20	538-558	Clay, olive-gray (5Y 3/2); shell fragments, to 4 mm in size; increasing clay, 548-558 ft
10	558-568	Clay, olive-gray (5Y 3/2); abundant shells, 10 percent sand, fine to coarse; some silt
10	568-578	Silt, olive-gray (5Y 3/2), clayey; few shells; some brown silty clay
10	578-588	Sand, fine to coarse, olive-gray (5Y 3/2), clayey; some shells

WELL 293
EGG HARBOR TOWNSHIP HIGH SCHOOL

SIDEWALL CORES

10	588-598	Sand, fine to coarse, olive-gray (SY 4/1), some gravel; silt; shell fragments
15	598-613	Sand, fine to coarse, olive-gray (SY 4/1); increasing clay, to 20 percent of interval; shell fragments
5	613-618	No sample
20	618-638	Sand, coarse to gravel, olive-gray (SY 3/2); few shells; little silt; fine sand
20	638-658	Gravel, some sand, light-olive-gray (SY 5/2), subround to round; few shell fragments; slightly increasing shell fragments at 648-658 ft
2	658-660	Gravel and sand; gravel to fine, light-olive-gray (SY 5/2), subround to round; abundant fossils; some glauconite
18	660-678	Sand, fine to gravel, olive-gray (SY 3/2); clayey, abundant shells and glauconite
2	150-152	Clay, olive-gray (SY 3/2); some shells; little silt; fine sand
2	284-286	Clay, olive-gray (SY 4/1), dense; some silt
2	422-424	Clay, olive-gray (SY 4/4), soft, plastic; lignite; mica
2	489-491	Clay, olive-gray (SY 3/2), dense, silty; some angular sand; some lignite; shells; mica
2	557-559	Clay, olive-gray (SY 3/2), silty; 5 percent sand, fine; abundant lignite; some shells
2	668-670	Clay, olive gray (SY 3/2), very silty, dense; some fine sand

ELECTRIC LOG



Egg Harbor Township

Well 294

Owner or name: U.S. Geological Survey
 Location: N392639
 Driller: A.C. Schultes
 Quad.: Pleasantville
 Atlas Sheet no. 36.03.794
 Permit no. 36-5092
 Observation well on National Aviation Facility Epermental Center (NAFEC) property.

Geographic code: 0108

W743232

Comp. date: 03/23/1985

Elevation: 25 ft

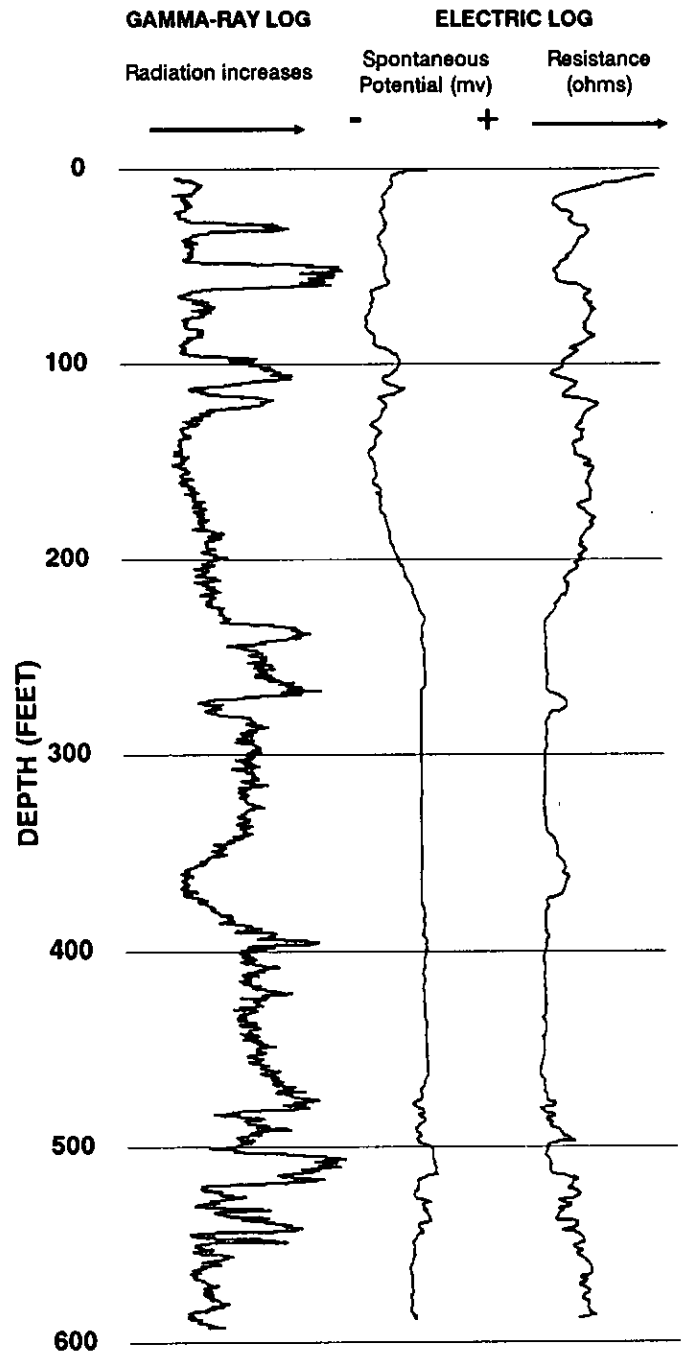
Depth drilled: 608 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, fine to coarse, dusky-yellow (5Y 6/4), loose, subangular, argillaceous, trace iron staining
10	10-20	Sand, medium to coarse, dusky-yellow (5Y 6/4), loose, subround; some very fine to fine subangular sand; trace slightly iron stained clay
10	20-30	Sand, medium to coarse, dusky-yellow (5Y 6/4) becoming yellowish-gray (5Y 7/2); trace light-yellow clay; some light-gray chert
10	30-40	Gravel and sand; sand, medium to very coarse, very-pale-orange (10YR 8/2); gravel, light-orange to light-gray, round to subround; trace of iron-stained clay coating grains
10	40-50	Clay, grayish-yellow (5Y 6/4), blocky, soft; sand, medium to coarse, subround; trace brown lignite and iron-stained clay
10	50-60	Gravel, grayish-yellow (5Y 6/4) to very-pale-orange (10YR 8/2), loose to very friable, round; trace light-yellow clay coating grain surfaces; sand, medium to coarse; abundant clay at base
10	60-70	Clay, very-light-gray (N8) to yellowish-gray (5Y 7/2), very soft, blocky; trace very fine lignite; some sand
10	70-80	Clay and sand; clay, white (N9), becoming dark-yellowish-orange (10YR 6/6), soft, blocky; sand at base is very fine to medium, yellowish-orange, with dark-orange coatings
10	80-90	Sand, fine to medium, dark-yellowish-orange (10YR 6/6), very friable, subangular; abundant dark-orange clay; trace rounded silt grains with 20 percent exhibiting dark-orange coating
10	90-100	Sand, fine to coarse, dark-yellowish-orange (10YR 6/6), subround to subangular; very clayey; abundant iron staining and thin dense ironstone (bog iron) laminations; trace lignite
10	100-110	Sand, medium to coarse, dark-yellowish-orange (10YR 6/6), subround, 30 to 40 percent iron stained; dark-orange clay with trace dark-gray streaks (laminations); very lignitic, dark-brown to black
10	110-120	Clay, medium-dark-gray (N4), subblocky to slightly fissile, firm; abundant lignite; sand, fine to coarse
10	120-130	Clay, medium-dark-gray (N4) at top of section, becoming light-brownish-gray (5YR 6/1) at base, firm, blocky to subblocky, increasingly iron stained; abundant lignite; trace sand, fine to medium
10	130-140	Sand, fine to medium, light-brownish-gray (5YR 6/1), subangular; abundant lignitic clay
10	140-150	Sand, fine to coarse, light-brownish-gray (5YR 6/1), subangular to subround; dark-orange stained clay-coated at base; 30-40 percent clay, grayish-orange, soft; lignitic
10	150-160	Sand, fine to medium, coarser at base, dark-yellowish-orange (10YR 6/6), subangular; 60 percent of sand heavily iron-stained

10	160-170	Sand, coarse at top, fine to medium at base, dark-yellowish-orange (10YR 6/6), very argillaceous; trace ironstone (bog iron)
10	170-180	Sand and clay; sand, fine to coarse, pale-yellowish-orange (10YR 8/5), subangular to subround, 20 percent iron stained clay coated; clay, dark-yellowish-orange to medium-gray (N5), firm, subblocky to sub-fissile; lignite, dark-brown to black; trace silt
10	180-190	Sand, fine to medium, dark-yellowish-brown (10YR 4/2), subangular; trace silica cement; orange iron stained clay; trace lignitic clay with very fine pyrite crystals; some silt
10	190-200	Sand, fine to coarse, dark-yellowish-brown to moderate-yellowish-brown (10YR 5/4), round to subangular; some pyritic inclusions in quartz grains; increasing iron stained argillaceous material; trace ironstone (bog iron)
10	200-210	Sand, very fine to fine, moderate-yellowish-brown (10YR 5/4), subround, 10 percent iron-stained; clay, light-brown; trace silt
10	210-220	Sand and silt; sand, very fine, moderate-yellowish-brown (10YR 5/4); grading to silt at base; increasingly abundant brown argillaceous debris; scattered very finely crystalline pyrite
10	220-230	Sand, very coarse to very fine, moderate-yellow-brown (10YR 5/4) to varicolored, round; some sand, iron-cemented, bright-red, yellow to brown and orange; abundant light-brown clay
10	230-240	Clay, light-olive-gray (5Y 4/4) to olive-gray (5Y 3/2), soft; abundant very fine to coarse sand, angular; very silty in part
30	240-270	No record
10	270-280	Sand, medium to coarse, light-olive-gray (5Y 4/4), subangular; very argillaceous; clay, brown to orange; trace pyrite; trace light-green glauconite grains; trace light-gray chert
10	280-290	Sand, fine to medium, light-olive-gray (5Y 4/4), subround; very clayey, olive gray; trace pyrite; some dark-gray argillite
10	290-300	Sand and clay; sand, fine to coarse, light-olive-gray (5Y 4/4), angular to subangular; grading to olive gray clay, soft; silt; some mica
10	300-310	Sand, very fine to fine, light-olive-gray (5Y 5/2), round to subround; 20 percent iron-stained; becoming very clayey, olive-gray to olive-brown; very fine black carbonaceous flakes; some clay, tan to white
10	310-320	Clay, light-olive-gray (5Y 5/2), soft to very soft; decreasing sand, very fine to fine, 20 to 30 percent orange iron-stained; black carbonaceous flakes; trace pyrite; 2 percent clay, tan to white
10	320-330	Clay, light-olive-gray (5Y 4/4), soft, very thinly bedded; lignite; pyrite; sand, coarse to very coarse, subangular to subround; trace green, orange and white clay
10	330-340	Clay, light-olive-gray; silt sized mica; coarse to gravel-sized grains; some sand, gravel, white, predominately light-orange stained

10	340-350	Clay and gravel; clay, light-olive-gray, soft, firm; increasing gravel, less orange-stained, 20 to 30 percent pink and red iron stained; decreasing sand, coarse to very coarse;
10	350-360	Clay and gravel; clay, light-olive-gray, soft; abundant subround 4 mm or larger gravel, most fractured, pink and bright-orange iron stained
10	360-370	Clay, olive-gray (5Y 3/2), soft, dense, sticky, uniform; decreasing coarse sand, gravel; 10 percent or less silt
10	370-380	Clay, olive-gray (5Y 3/2), soft, sticky; very sandy, fine to medium, angular to sub-round; some black lignite flakes; trace silt and pyrite
10	380-390	Clay and sand; clay, olive-gray (5Y 3/2), soft to very soft, sticky; trace silt; sand, coarse to very coarse, olive-gray to light-olive-gray, subangular, grains appear to be composed of fine sand cemented into very coarse sand grains by silica; inclusions of olive-gray clay and pyrite are common
10	390-400	Clay, olive-gray (5Y 3/2), soft, uniform, sticky, dense; decreasing very coarse sand; trace sand, very fine to fine, rounded; trace red and orange sand; pyrite coating
10	400-410	Clay, olive-gray (5Y 3/2), soft, blocky, very sticky, dense, uniform; trace sand, light-olive-gray; very fine pyrite; trace mica
10	410-420	Clay, olive-gray (5Y 3/2), soft, uniform; sand, fine to coarse; some red to orange iron staining; some pyrite and mica
10	420-430	Clay, olive-gray (5Y 3/2), blocky, soft; trace pyrite; some coarse sand; some silt; mica
10	430-440	Clay, olive-gray (5Y 3/2), blocky, sticky, soft; some silt; sand, medium to coarse; pyritic; micaceous
10	440-450	Clay, olive-gray (5Y 3/2) and dusky-yellowish-brown (10YR 2/2), soft, sticky, firm, blocky, silty, pyritic, dense in part, iron stained; some sand, fine to coarse
10	450-460	Clay, olive-gray (5Y 3/2), soft, sticky, uniform; trace angular silt; pyritic; mica, decreasing brown clay with some sand
10	460-470	Clay, olive-gray (5Y 3/2), some dusky-yellowish-brown (10YR 2/2), soft, firm, pyritic, silty; trace sand; micaceous
10	470-480	Clay, olive-gray (5Y 3/2), blocky, soft, dense, sticky, uniform; trace silt; trace sand, dusky-yellowish; micaceous
10	480-490	Clay, olive-gray (5Y 3/2), soft, blocky, dense; very fine euhedral pyrite; silt; some angular sand; trace fossil fragments; micaceous
10	490-500	Clay, olive-gray (5Y 3/2), blocky, firmer, less sticky; trace silt; abundant shells with 30 percent pitted, altered to glauconite, some whole specimens; white clay, trace sand
10	500-510	Clay and shells; clay, olive-gray (5Y 3/2) to dusky-yellowish-brown (10YR 2/2); shells, grayish-orange-pink (10R 8/2); clay, olive-gray, soft to firm; pyritic; micaceous; some alteration to glauconite; brown very sandy clay; trace mica
10	510-520	Clay and shells; clay, olive-gray (5Y 3/2) to grayish-orange-pink (10R 8/2), soft, sticky; abundant pelecypod fragments; trace glauconite and lacy pyrite

WELL 294
U.S. GEOLOGICAL SURVEY



Egg Harbor Township

Well 315	Geographic code: 0108	
Owner or name: Mr. Fifield		
Location: N391847	W743207	
Driller: -----		
Quad.: Ocean City	Comp. date: 1891	
Atlas Sheet no. 36.23.169	Elevation: 5 ft	
Permit no. 56-83	Depth drilled: 397 ft	
From Woolman, 1893, p. 281.		
Thickness	Depth	Lithology
(ft)	(ft)	
40	0-40	Beach sand
10	40-50	Mud, some shells
8	50-58	Gravel, coarse
2	58-60	Clay, white
6	60-66	Gravel, coarse sand
4	66-70	Clay, dark
14	70-84	Gravel, coarse; water at 84 ft
191	84-275	Sand, gray; lignite, 160-164 ft
19	275-294	Clay, greenish
52	294-346	Sand, coarse; gravel
51	346-397	Clay, solid, greenish-blue

Well 341	Geographic code: 0108	
Owner or name: Egg Harbor Township High School		
Location: N392344	W743749	
Driller: N.J. Geological Survey		
Quad.: Mays Landing	Comp. date: 06/14/1985	
Atlas Sheet no. 36.12.435	Elevation: 50 ft	
Permit no. 36-5517	Depth drilled: 377 ft	
U.S. Geological Survey observation well.		
Thickness	Depth	Lithology
(ft)	(ft)	

13	0-13	Sand, fine to medium; gravel
5	13-18	Clay, yellow and white
22	18-40	Sand, fine and medium; gravel
6	40-46	Clay, yellow
4	46-50	Sand and gravel
24	50-74	Sand, fine to medium; gravel
2	74-76	Clay, white
4	76-80	Sand, medium; white clay
44	80-124	Sand, coarse, some gravel
16	124-140	Gravel; sandstone, yellow, hard, layered; light gray clay streaks, 130-140 ft
7	140-147	Clay, olive-gray; white, tan sand streaks
23	147-170	Lignite, large amounts; white sand, gravel; dark clay streaks at 155-170 ft
20	170-190	Sand, fine to medium, white; lignite
22	190-212	Sand, coarse, white and yellow; stones (gravel); wood (lignite); light-gray clay layers, 200-212 ft
13	212-225	Sand, medium to coarse, white and orange; less wood (lignite)
15	225-240	Lignite, more; coarser sand
30	240-270	Silt, fine, greenish-gray; lignite
35	270-305	Clay, olive; hard shell layers, lignite, 284-305 ft
25	305-330	Clay, darker-greenish-gray; shells; lignite
10	330-340	Clay, light-gray; shells; lignite
36	340-376	Clay, olive-green; silt; greenish-gray sand; shells; fine silt and sand layers at 355-376 ft
1	376-377	Clay, dark-greenish-brown

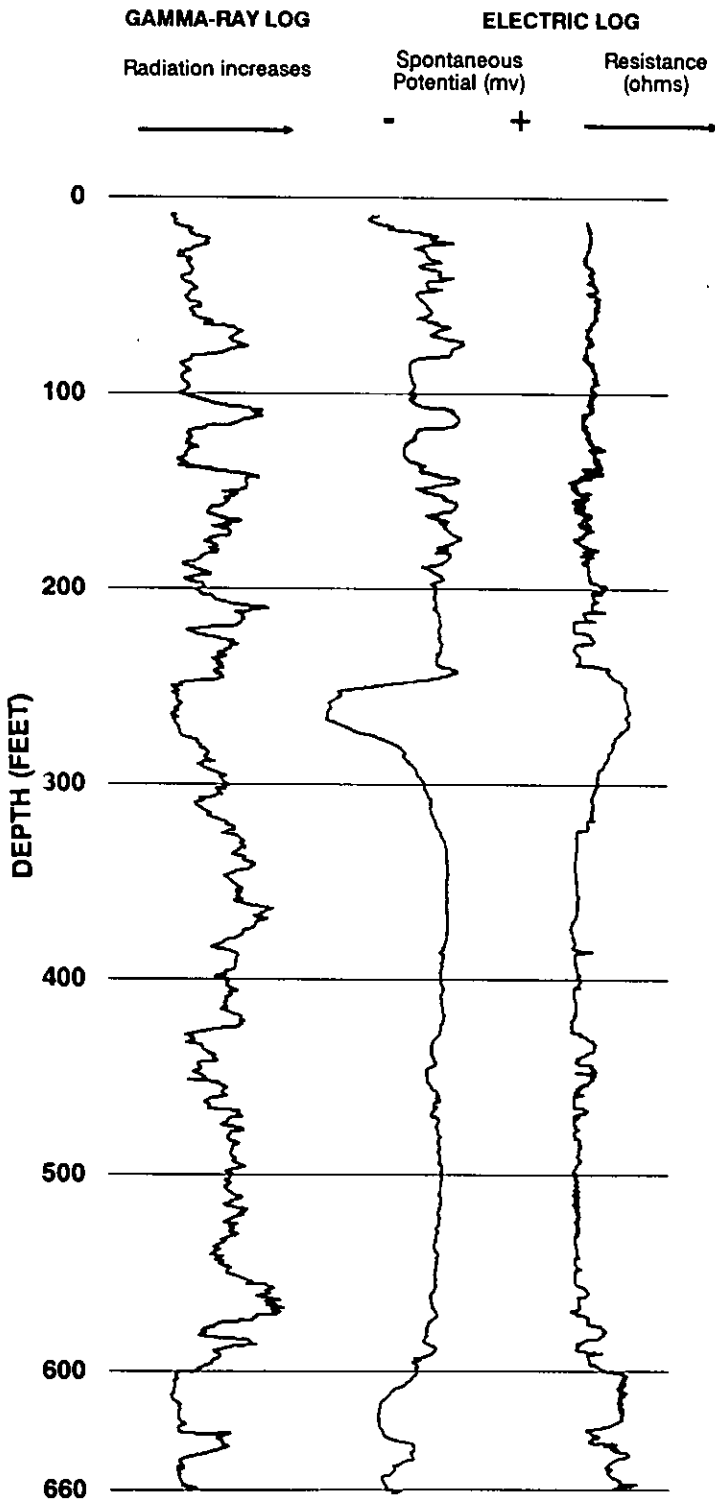
Well 347	Geographic code: 0108	
Owner or name: Comfort Inn		
Location: N392257	W743008	
Driller: A.C. Schultes		
Quad.: Pleasantville	Comp. date: 05/17/1985	
Atlas Sheet no. 36.13.555	Elevation: 5 ft	
Permit no. 36-5339	Depth drilled: 661 ft	
Thickness	Depth	Lithology
(ft)	(ft)	
15	0-15	Sand
15	15-30	Clay, gray
4	30-34	Sand, tan
4	34-38	Clay, brown
26	38-64	Sand; fine, gray at 38-49 ft; medium, light-gray, 49-56 ft; gravel, medium, tan, 56-64 ft

16	64-80	Clay, tan
26	80-106	Sand, tan to orange; gravel
11	106-117	Clay, tan
23	117-140	Gravel, medium, tan
70	140-210	Clay; tan, white at 140-149 ft; gray gravel, 149-170 ft; 176-210 ft; clay, white, 170-176 ft
30	210-240	Clay; gray and white, 210-219 ft; light-green, 219-240 ft
22	240-262	Sand, medium, brown
37	262-299	Sand, medium to coarse, gray; white clay, 280-299 ft
18	299-317	Sand, fine, gray; clay, gray
14	317-331	Clay, white, gray; sand, fine, gray
51	331-382	Clay, gray
7	382-389	Gravel and clay
16	389-405	Clay; gravel at 393-405 ft
19	405-424	Clay, gray; gravel at 418-424 ft
30	424-454	Sand, fine, gray; clay at 437-441 ft
7	454-461	Clay
5	461-466	Sand, fine, gray
20	466-486	Clay, brown; shells
35	486-521	No sample
27	521-548	Clay, brown; gravel; shells, 521-544 ft
28	548-576	Clay, brown and grayish-green
5	576-581	Shells; brown clay
20	581-601	Clay, brown; shells at 587-601 ft
60	601-661	Sand, medium, gray

Estelle Manor City

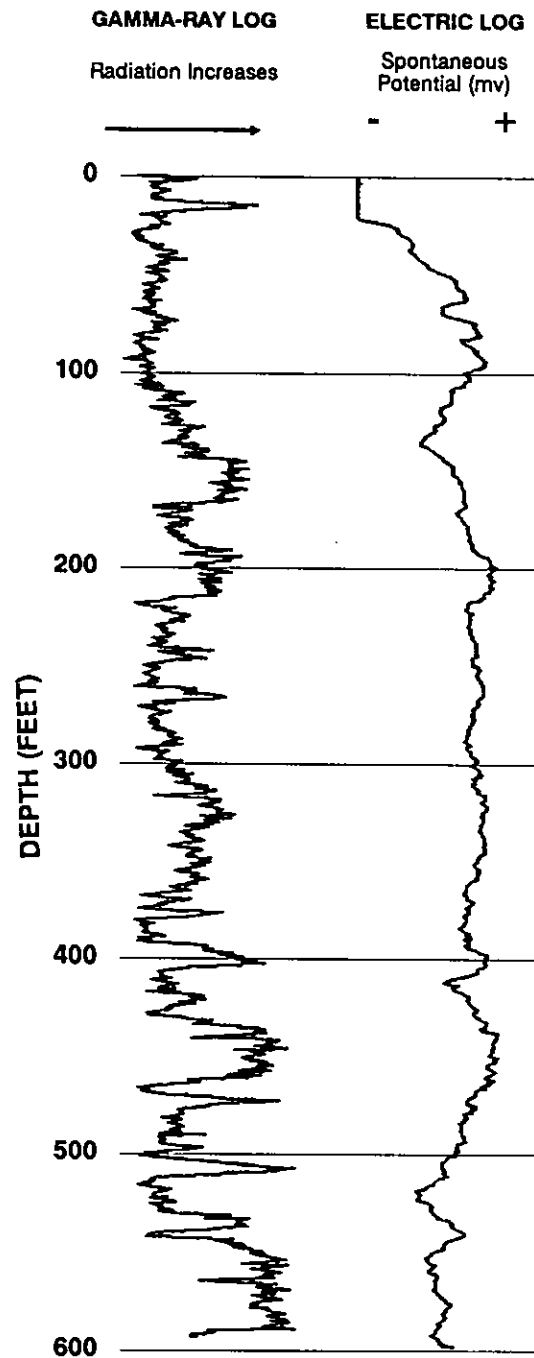
Well 178	Geographic code: 0109	
Owner or name: Peaslee Wildlife Management Area		
Location: N391946	W745125	
Driller: N.J. Geological Survey		
Quad.: Tuckahoe	Comp. date: 07/13/1985	
Atlas Sheet no. 35.24.213	Elevation: 40 ft	
Permit no. 35-4903	Depth drilled: 600 ft	
Joint exploratory borehole of N.J. Geological Survey and U.S. Geological Survey		
Thickness	Depth	Lithology
(ft)	(ft)	
18	0-18	Sand, yellow; gravel; clay streaks
2	18-20	Clay, gray
25	20-45	Sand, fine to medium, brown
8	45-53	Clay, multicolored
20	53-73	Sand, fine to medium, tan
3	73-76	Clay, white
69	76-145	Sand, white; yellow at 76-135 ft; gravel, dark-yellow clay, 135-145 ft
15	145-160	Clay, gray, sticky
20	160-180	Clay, olive-gray; stones (gravel); wood (lignite) and clear sand at 175-180 ft
8	180-188	Sand, medium, clear, white and gray, olive gray streaks; lignite
50	188-238	Clay, olive; sand streaks at 203-238 ft
10	238-248	Sand, medium to coarse, white, gray, clean
12	248-260	Clay, brown and green; lignite
8	260-268	Sand, coarse, gray; white pebbles (gravel); wood (lignite)
5	268-273	Sand; dark-brown clay layers
17	273-290	Clay, dark-brown; sand layers
20	290-310	Shells; clean, 290-298 ft; sand, lignite, 298-310 ft
62	310-372	Clay, olive-gray; shell fragments
12	372-384	Shells; clay, olive
6	384-390	Clay, brown
20	390-410	Sand; shells; sand, fine, green at 390-398 ft and 405-410 ft; sand, fine to medium, and brown clay at 398-405 ft
8	410-418	Clay, olive-green
42	418-460	Sand, fine; shells
13	460-473	Shells; clay, olive
7	473-480	Clay, hard; shells
10	480-490	Shells; sand, fine
30	490-520	Sand, medium to coarse; shells

**WELL 347
COMFORT INN**



20	520-540	Clay, brown; sand and shells at 528-540 ft
5	540-545	Sand, fine; shells
55	545-600	Clay, brown; silt at 545-560 ft; clay, green and brown at 560-570 ft; shells at 570-600 ft
2	0-2	Topsoil
4	2-6	Sand and stones (gravel)
5	6-11	Sand, fine, brown
3	11-14	Sand and stones (gravel); clayey
7	14-21	Clay, white, sandy

**WELL 178
PEASLEE WILDLIFE MANAGEMENT AREA**



48	21-69	Sand, white; fine 21-30 ft; fine to medium 30-69 ft
3	69-72	Clay
1	72-73	Sand
3	73-76	Clay, white, sandy
10	76-86	Sand, brown, clayey
20	86-106	Sand, hard packed; stones (gravel)
9	106-115	Sand; clayey; gravel, brown
2	115-117	Clay, black

GAMMA-RAY LOG

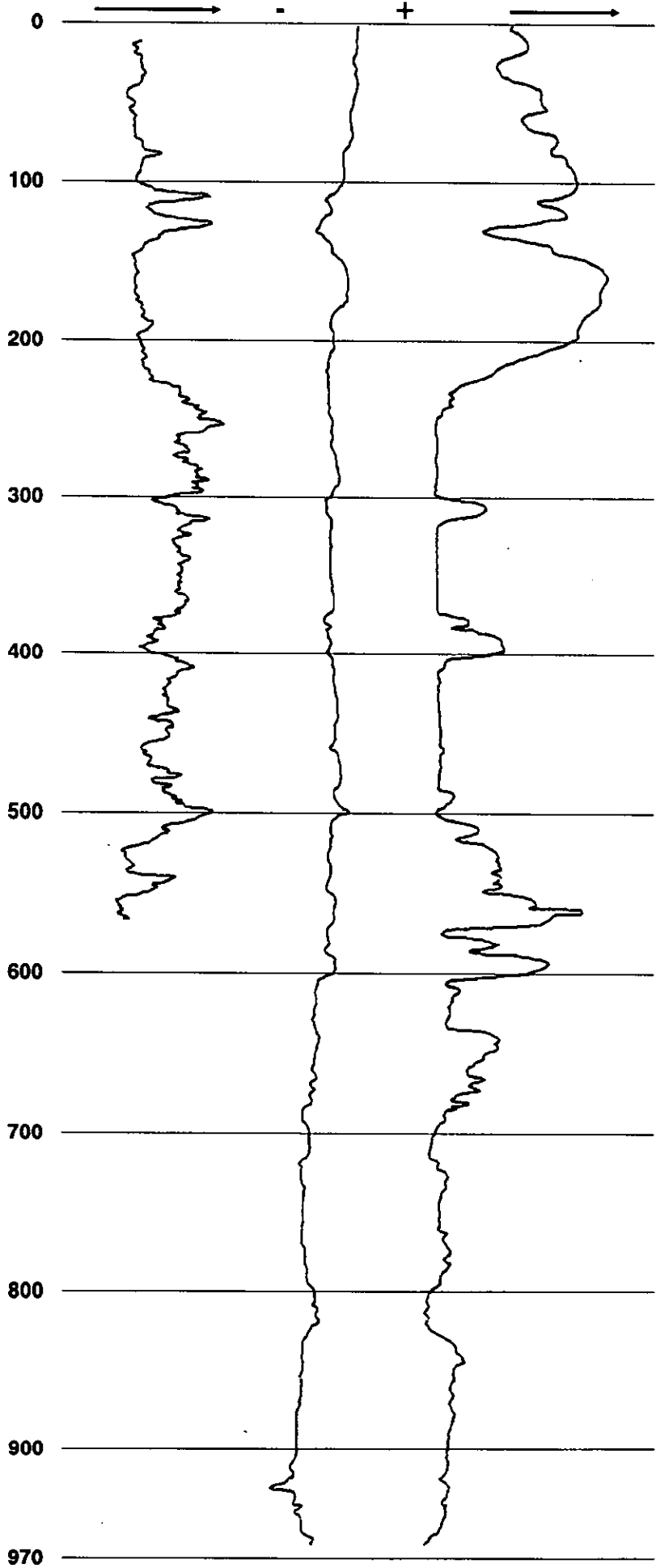
ELECTRIC LOG

Radiation Increases

Spontaneous Potential (mv)

Resistance (ohms)

Galloway Township



**WELL 033
U.S. GEOLOGICAL SURVEY**

Galloway Township

Well 041 Geographic code: 0111

Owner or name: Seaview Country Club
 Location: N392650 W742752
 Driller: A.C. Schultes
 Quad.: Oceanville Comp. date: 02/02/1972
 Atlas Sheet no. 36.04.747 Elevation: 10 ft
 Permit no. 36-426 Depth drilled: 270 ft

Thickness (ft)	Depth (ft)	Lithology
15	0-15	Sand and stone (gravel)
4	15-19	Clay
70	19-89	Sand
40	89-129	Clay; silty at 89-101 ft
31	129-160	Sand
8	160-168	Clay, silty
72	168-240	Sand, stone and gravel
30	240-270	Clay

Well 044 Geographic code: 0111

Owner or name: Town of Smithville
 Location: N392944 W742818
 Driller: Layne-N.Y.
 Quad.: Oceanville Comp. date: 07/19/1981
 Atlas Sheet no. 36.03.635 Elevation: 30 ft
 Permit no. 36-2432 Depth drilled: 186 ft

Thickness (ft)	Depth (ft)	Lithology
11	0-11	Sand and gravel; clay, gray
1	11-12	Sand, orange; gravel
2	12-14	Clay, gray; sand; yellow clay
12	14-26	Sand, fine to coarse, white, orange; gravel
9	26-35	Gravel and bog iron
16	35-51	Clay, white; sandy at 36-46 ft
4	51-55	Sand, silt, clay
10	55-65	Clay, gray, yellow streaks; bog iron
11	65-76	Sand, fine to medium; yellow and white, gravel 65-75 ft; bog iron at 75-76 ft
10	76-86	Clay, gray, sand streaks
18	86-104	Clay, light and dark, sandy; gravel and sand streaks at 86-96 ft; soft, 96-104 ft
1	104-105	Clay, tough
2	105-107	Sand, fine
3	107-110	Clay, tough, tan
6	110-116	Sand, fine; brown wood (lignite)
20	116-136	Sand, fine to medium; gravel, clay streaks, 116-126 ft; gray, clay, 126-136 ft
40	136-176	Sand, fine to coarse, gray; gravel; yellow, white clay streaks; fine silty sand, 146-176 ft
10	176-186	Sand, fine, gray; yellow, white, gray clay streaks

Well 045 Geographic code: 0111

Owner or name: Smithville Water Company
 Location: N392944 W742812
 Driller: Layne-N.Y.
 Quad.: Oceanville Comp. date: 07/18/1981
 Atlas Sheet no. 36.03.635 Elevation: 32 ft
 Permit no. 36-2433 Depth drilled: 202 ft

Thickness (ft)	Depth (ft)	Lithology
14	0-14	Sand, fine to medium; white, yellow clay streaks
3	14-17	Clay, gray
1	17-18	Gravel and yellow clay
9	18-27	Clay, gray, brown; gravel, 22-27 ft
5	27-32	Sand, medium to coarse; gravel
9	32-41	Sand, fine to medium; gravel; white and yellow clay streaks
11	41-62	Clay, white, yellow, silty; coarse sand streaks
10	62-72	Clay, dark, light-gray; yellow streaks sand, bog iron
10	72-82	Sand, fine, streaks; bog iron; gravel
33	82-115	Clay, yellow, gray, 82-92 ft; gray, fine sand, 92-102 ft; light and dark-gray, 102-115 ft
9	115-124	Sand, fine; gray clay streaks
2	124-126	Clay, gray
4	126-130	Sand streaks; clay, gray
55	130-185	Sand, fine to coarse; gravel; white clay, 142-185 ft
17	185-202	Sand, fine; clay

Well 046 Geographic code: 0111

Owner or name: Smithville Development Company
 Location: N392953 W742740
 Driller: Absecon Electric Motor Works
 Quad.: Oceanville Comp. date: 10/12/1982
 Atlas Sheet no. 36.04.412 Elevation: 30 ft
 Permit no. 36-3042 Depth drilled: 182 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, orange
18	10-28	Sand, fine to medium, yellow
4	28-32	Sand, yellow, clayey; small stones (gravel)
15	32-47	Sand, fine to medium, gray
43	47-90	Sand, medium; gray and brown at 47-62 ft; light-gray at 62-90 ft
10	90-100	Clay lenses; sand, medium
67	100-167	Sand, dark-gray; fine at 100-107 ft; medium to coarse, 107-152 ft; slightly fine, 152-167 ft
15	167-182	Sand, fine; gray, 167-180 ft; clayey, 180-182 ft

Well 047 Geographic code: 0111

Owner or name: Seaview Country Club
 Location: N392701 W742825
 Driller: Artesian Well Drilling
 Quad.: Oceanville Comp. date: 07/07/1969
 Atlas Sheet no. 36.03.964 Elevation: 50 ft
 Permit no. 36-408 Depth drilled: 250 ft

Thickness (ft)	Depth (ft)	Lithology
16	0-16	Sand; gravel at 0-9 ft
25	16-41	Clay, sandy
64	41-105	Sand and gravel
4	105-109	Clay, white
80	109-189	Clay, gray; sandy at 109-150 ft
61	189-250	Sand and gravel

Well 053 Geographic code: 0111

Owner or name: Smithville Development Company
 Location: N393008 W742728
 Driller: Absecon Electric Motor Works
 Quad.: New Gretna Comp. date: 10/08/1982
 Atlas Sheet no. 36.04.118 Elevation: 14 ft
 Permit no. 36-2620 Depth drilled: 182 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, fine to medium, yellow
52	10-62	Sand, medium, yellow; clayey at 28-62 ft
30	62-92	Sand, clayey; fine at 62-77 ft; very fine, 77-92 ft
45	92-137	Sand, medium; tan to yellow, 92-107 ft; yellow at 107-137 ft; no clay at 122-137 ft
15	137-152	Sand, very fine to medium, yellow
30	152-182	Sand, tan; medium to fine, 152-167 ft; fine, 167-182 ft

Well 054 Geographic code: 0111

Owner or name: Town of Smithville
 Location: N393007 W742807
 Driller: Layne-N.Y.
 Quad.: New Gretna Comp. date: 10/31/1979
 Atlas Sheet no. 36.03.399 Elevation: 20 ft
 Permit no. 36-1078 Depth drilled: 199 ft

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Sand and gravel
25	20-45	Clay, gray, 20-41 ft; white, sandy, 41-45 ft
14	45-59	Gravel; heavy, white at 45-52 ft; large, sand and clay at 52-59 ft
32	59-91	Clay, dark-gray
3	91-94	Sand, fine
15	94-109	Clay, brown, sandy
13	109-122	Sand, fine to medium; clay, white
57	122-179	Sand, medium to coarse; white clay streaks at 122-144 ft
19	179-198	Lignite
1	198-199	Clay, hard, gray

Galloway Township

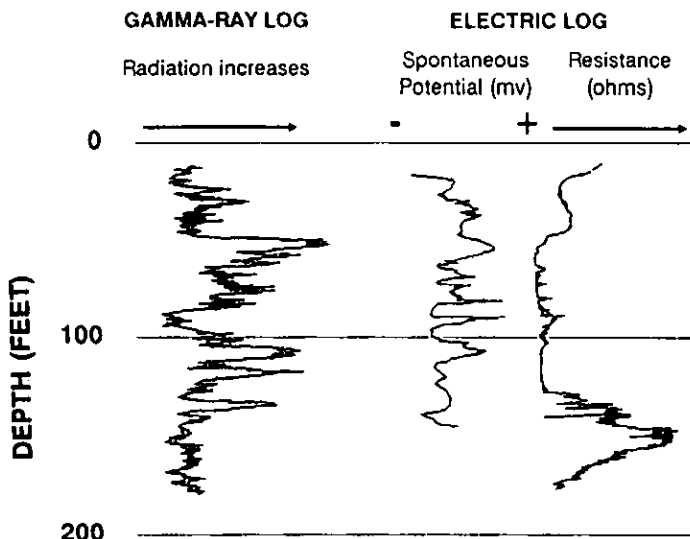
Well 125 **Geographic code: 0111**
 Owner or name: Agries Exploration Corporation
 Location: N392820 W743526
 Driller: Joseph Strauber
 Quad.: Pleasantville Comp. date: 06/11/1967
 Atlas Sheet no. 36.02.676 Elevation: 70 ft
 Permit no. 36-398 Depth drilled: 700 ft
 Exploratory well.

Thickness (ft)	Depth (ft)	Lithology
198	0-198	Sand, coarse to fine, light-gray; little gravel
107	198-305	Clay, dark-gray, silty
65	305-370	Sand, medium to fine, dark-gray; little silt
40	370-410	Sand, medium to fine, gray; some brown clayey silt layers
250	410-660	Sand, medium to fine, gray; shells; some brown silt layers at 410-460 ft; some brown clayey silt layers at 460-660 ft
40	660-700	Sand, medium to fine, gray; few shells; some green clay layers at 680-700 ft

Well 127 **Geographic code: 0111**
 Owner or name: Atlantic City Medical Center
 Location: N392908 W743213
 Driller: A.C. Schultes
 Quad.: Pleasantville Comp. date: 12/07/1982
 Atlas Sheet no. 36.03.457 Elevation: 74 ft
 Permit no. 36-3110 Depth drilled: 175 ft

Thickness (ft)	Depth (ft)	Lithology
22	0-22	Sand, brown; gravel
1	22-23	Stones (gravel), large
7	23-30	Clay, white
15	30-45	Sand, fine, white
12	45-57	Clay, yellow and white
24	57-81	Clay; white at 57-63 ft and 73-81 ft; white and yellow, 63-71 ft; gray and white, 71-73 ft; brown sand, 57-63 ft; gravel, 80-81 ft
2	81-83	Gravel and stones
1	83-84	Clay
2	84-86	Gravel and sand
22	86-108	Clay; white, gravel, 86-101 ft; gray, yellow, 101-104 ft; gray, fine gray sand, 104-108 ft
10	108-118	Sandstone; sand, tan, white; lignite
10	118-128	Clay, light-tan; pyrite
47	128-175	Sand, medium, brown

WELL 127
ATLANTIC CITY MEDICAL CENTER



Well 215 **Geographic code: 0111**
 Owner or name: Sea View Golf Club
 Location: N392658 W742830
 Driller: Artesian Well Drilling
 Quad.: Oceanville Comp. date: 03/26/1931
 Atlas Sheet no. 36.03.964 Elevation: 45 ft
 Permit no. 56-81 Depth drilled: 278 ft

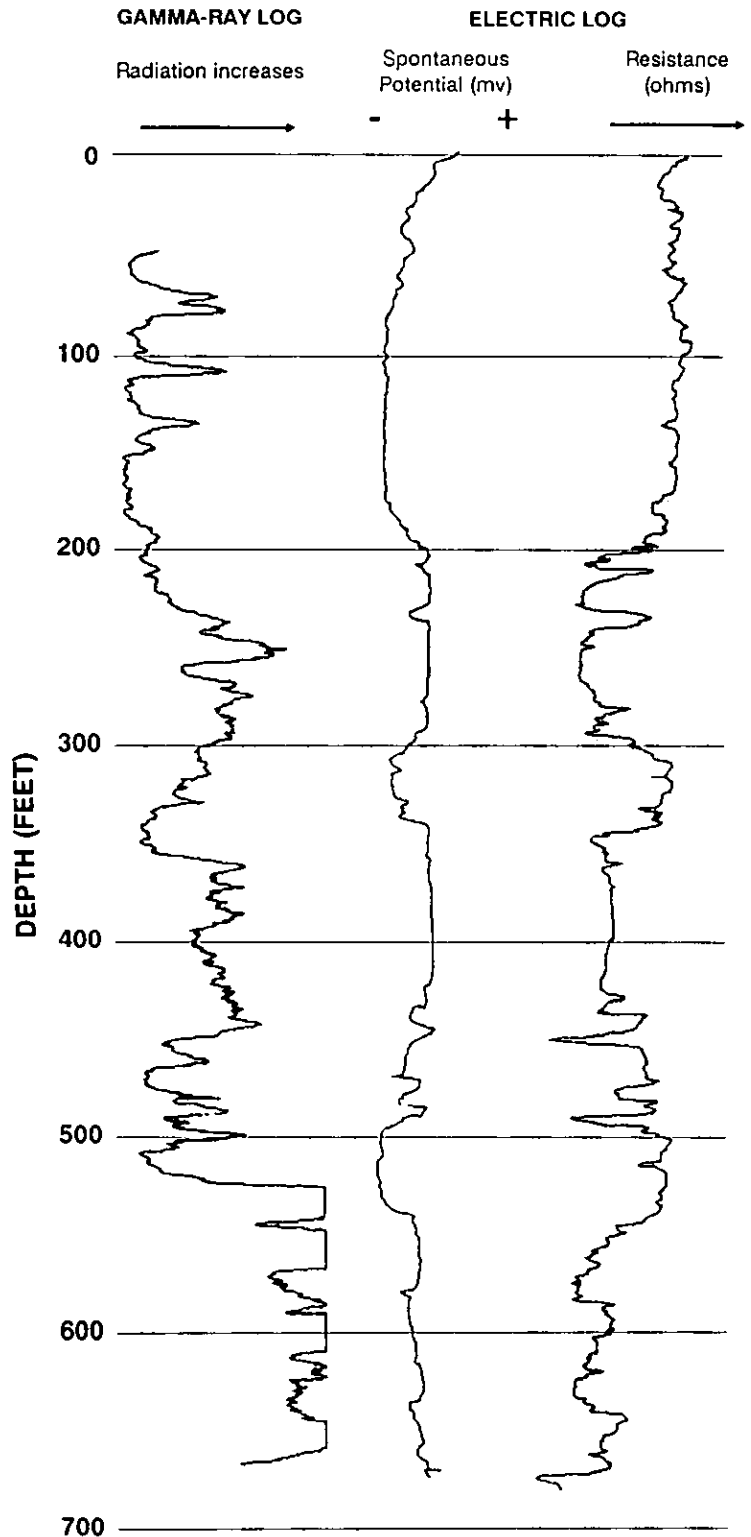
Thickness (ft)	Depth (ft)	Lithology
41	0-41	Gravel and sand
12	41-53	Sand, coarse, sharp (angular grains)
8	53-61	Sand, coarse, white
9	61-70	Clay, yellow, sandy, stiff
10	70-80	Sand, yellow; fine to coarse at 70-73 ft; medium to fine at 73-80 ft
3	80-83	Sand; coarse, hardpan, ironstone, 80-82 ft; medium to coarse, yellow at 82-83 ft
9	83-92	Gravel; sand, fine and coarse
7	92-99	Sand; fine, brownish-yellow, brown-sugar texture, 92-97 ft; medium to fine and gravel to 1.5 inches, 97-99 ft
9	99-108	Sand, coarse, yellow; gravel to 0.25 inches, 99-104 ft; gravel to 0.75 inches, 104-108 ft
23	108-131	Sand; medium to fine, yellow at 108-125 ft; very fine, clayey at 125-131 ft
4	131-135	Clay, yellow
7	135-142	Sand, fine to medium
1	142-143	Gravel, medium; yellow sand, with darker-red grains
3	143-146	Sand, coarse; sandstone; rock and gravel
5	146-151	Clay, blue, stiff
14	151-165	Clay, black, stiff; some gravel
6	165-171	Clay, red and blue streaks; yellowish-blue at 165-169 ft; reddish-blue at 169-171 ft
21	171-192	Clay; yellow at 171-176 ft; blue at 176-192 ft
10	192-202	Sand, white; medium to fine at 192-193 ft; medium to coarse at 193-202 ft
1	202-203	Sand, medium to coarse, yellow and red
15	203-218	Sand, coarse, brown; little yellow clay, 213-218 ft
5	218-223	Sand, fine, brownish-yellow; some clay streaks at 221-223 ft
16	223-239	Sand; coarse, some clay at 223-227 ft; fine to medium, light-yellow at 227-239 ft
25	239-264	Sand, brown; very fine at 239-248 ft; lighter color, 245-248 ft; fine, clayey, 248-264 ft
14	264-278	Sand, very fine; clay, black

Well 289 **Geographic code: 0111**
 Owner or name: Stockton State College
 Location: N392933 W743130
 Driller: A.C. Schultes
 Quad.: Pleasantville Comp. date: 01/11/1985
 Atlas Sheet no. 36.03.456 Elevation: 40 ft
 Permit no. 36-4982 Depth drilled: 680 ft
 U.S. Geological Survey observation well.

Thickness (ft)	Depth (ft)	Lithology
10	210-220	Sand, medium to coarse, light-olive-gray (SY 5/2), quartz; silt; clay; no fossils
10	220-230	Clay and silt; poor sample recovery
10	230-240	Clay, grayish-olive-green (SGY 3/2), silty; coarse to fine; no fossils
20	240-260	Sand; very coarse to coarse, dark-greenish-gray (SFY 4/1), subround, quartz; silt; clay; shell fragments, 250-260 ft
40	260-300	Clay, olive-gray (SY 4/1), silty; some sand at 260-270 ft; very little sand at 270-280 ft
20	300-320	Sand; coarse to very coarse, olive-gray (SY 3/2), subangular; silt; no fossils 310-320 ft
20	320-340	Clay, sandy
20	340-360	Sand; coarse, 340-350 ft; coarse to very coarse, olive-gray (SY 3/2), 3 to 4 mm subangular pebbles, some silt, no fossils at 350-360 ft

**WELL 289
STOCKTON STATE COLLEGE**

30	360-390	Clay, silty; olive-gray (SY 4/1), 370-380 ft; olive-black (SY 2/1), some very silty, 380-390 ft
10	390-400	Sand, fine to medium, dusky-yellowish-brown (10YR 2/2), subangular; silt with pale-brown (5YR 5/2) clay clumps
10	400-410	Sand, coarse, olive-gray (SY 4/1), subangular, quartz; pebbly; shell fragments in a silty clay matrix; some clumps of light-gray (N7) silty clay
30	410-440	Clay, silty; some fine sand; olive-gray (SY 4/1), few coarse sand grains at 410-420 ft; greenish-black (SG 2/1) at 420-430 ft; dark-greenish-gray (SGY 4/1) at 430-440 ft
10	440-450	Clay, olive-gray (SY 3/2), silty; trace of fine sand and lignite
20	450-470	Silt, olive-gray (SY3/2); 5-10 percent shell fragments; lignite; clayey, trace fine sand, 450-460 ft; sandy, interbedded silty clay, at 460-470 ft
30	470-500	Sand, olive-gray (SY 3/2); fine to coarse, subangular, shell fragments, 470-480 ft; fine to pebbly, trace shell fragments, pebbles milky-white, 480-490 ft; medium, 15 percent coarse shell fragments, some clay in matrix, last few feet of sample is a grayish-olive-green (SGY 3/2) to dusky-yellow-green (SGY 5/2) clay layer at 490-500 ft
10	500-510	Silt, grayish-green (SG 5/2), clayey; trace of interbedded grayish-olive-green fine sand; 5-10 percent shell fragments; lignite
10	510-520	Sand, fine, dark-greenish-gray (SG4/2), silty; abundant lignite, shell fragments; trace gravel
10	520-530	Sand, medium, dark-greenish-gray (SGY 4/1), subround, trace fine to very fine sand; lignite; very few shell fragments
10	530-540	Sand, fine to coarse, grayish-olive (10Y 4/2); trace shell fragments
20	540-560	Sand, coarse to very coarse, dusky-yellow-green (SGY 5/2); some angular gravel, fine sand; silt; mostly coarse sand, small interbedded zone of dark-yellow-brown (10YR 2/2) silty clay, lignite, trace shell fragments at 550-560 ft
10	560-570	Silt, grayish-olive-green (SGY 3/2), clayey, micaceous; some lignite; trace pyrite and very fine sand; olive-green to dusky-yellow-brown clay
10	570-580	Clayey silt and silty clay; clayey silt, olive-gray (SY 3/2); silty clay, dark-yellowish-brown (10YR 4/2); mica; lignite
40	580-620	Silt, olive-gray (SY 3/2), clayey, micaceous; lignite; some very fine sand at 585-586 ft and 590-620 ft; olive-green to dusky-yellow-brown clay at 580-590 ft; some medium sand at 590-600 ft; olive-green-clayey silt at 600-620 ft
30	620-650	Clay, dark-yellowish-brown (10YR 6/2), silty; some lignite; some mica and very fine sand at 620-640 ft; trace pyritic shell fragments at 630-640 ft; small light-brown (5YR 6/4) clay lumps at 640-650 ft
10	650-660	Shells, fragments, abundant; some clay, olive-gray (SY 5/1), with olive-gray (SY 3/2) still predominant; some lignite
20	660-680	Silt, olive-gray (SY 5/1), clayey, glauconitic; shell fragments; glauconite primarily a fine to medium interbedded sand; lignite at 670-680 ft



Galloway Township

Well 340 Geographic code: 0111

Owner or name: Stockton State College

Location: N392933W743130

Driller: N.J. Geological Survey

Quad.: Pleasantville

Comp. date: 06/27/1985

Atlas Sheet no. 36.03.456

Elevation: 40 ft

Permit no. 36-6551

Depth drilled: 336 ft

U.S. Geological Survey observation well.

Thickness (ft)	Depth (ft)	Lithology
24	0-24	Sand, medium to coarse, white; gravel
1	24-25	Clay, white
5	25-30	Sand, white and yellow
20	30-50	Clay, yellow and white; sand streaks
10	50-60	Sand, fine to medium, white
8	60-68	Sand, medium to coarse, white and red; sandstone layers
2	68-70	Clay, bright-pink
24	70-94	Sand, coarse, yellow, white and red; sandstone layers
3	94-97	Clay, light-gray; wood (lignite)
8	97-105	Clay, brown, white and gray
7	105-112	Clay, very-light-gray; heavy lignite
8	112-120	Clay, darker-gray; wood (lignite); sand layers
40	120-160	Sand, fine to coarse, brown
40	160-200	Sand; clear and gray at 160-170 ft; gray clay streaks at 170-200 ft
10	200-210	Silt, gray; very fine sand; olive-gray clay streaks
50	210-260	Clay, olive-gray; wood (lignite); streaks of white and blue stones (gravel) at 250-260 ft
45	260-305	Clay; darker-gray at 260-300 ft; dark, sand streaks at 300-305 ft
15	305-320	Sand, medium to coarse, white
10	320-330	Sand, coarse, clear and gray; stones (gravel)
16	330-336	Sand, finer; brown-gray clay streaks

Well 340 Stockton State College

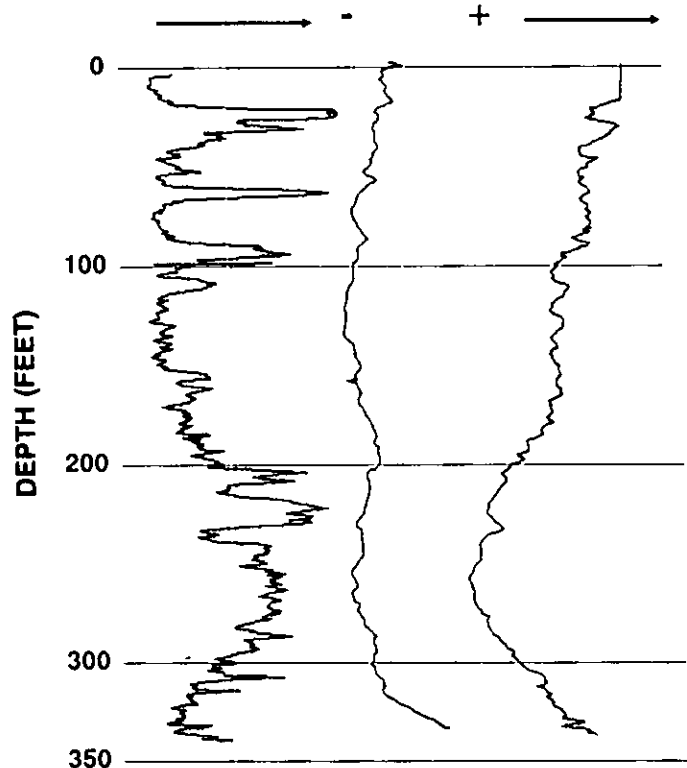
GAMMA-RAY LOG

Radiation increases →

ELECTRIC LOG

Spontaneous Potential (mv) - +

Resistance (ohms) →



Hamilton Township

Well 009 Geographic code: 0112

Owner or name: Scholler Brothers, Inc.

Location: N393332

W744427

Driller: A.C. Schultes

Quad.: Egg Harbor City

Comp. date: 02/05/1958

Atlas Sheet no. 32.41.435

Elevation: 90 ft

Permit no. 32-320

Depth drilled: 178 ft

From Clark and others, 1968, p. 28, 44; log by D.G. Parillo, N.J.

Geological Survey.

Thickness (ft) Depth (ft) Lithology

Cape May and Cohansey Sand (undifferentiated):

21	2-23	Sand, medium to very coarse; gravel, reddish-brown, clayey; gravel up to 0.5 inches at 2-8 ft; much weathered feldspar at 3-8 ft; yellow at 8-23 ft; gravel to 1 inch at 13-23 ft
5	23-28	Sand, coarse to very coarse, yellowish-orange, quartz
9	28-37	Sand, medium to coarse, yellow, quartz; 1 percent heavy mineral with 80 percent opaque; gray clay streaks at 33-37 ft
20	37-57	Sand, fine to medium, grayish-yellow; mica; few coarse grains; some gray clay at 47-52 ft;
15	57-72	Sand, medium to coarse, yellow, clean, quartz

7	72-79	Sand, medium to very coarse, grayish-yellow, slightly clayey; quartz grains up to 3/8 inch
5	79-84	Sand, medium to coarse, light-gray, clean, quartz
6	84-90	Sand, medium to coarse, yellowish-brown; some ironstone (bog iron); brown clay lenses at 87-90 ft
5	90-95	Sand, medium, orange, quartz; very clayey
15	95-110	Sand, fine, mostly yellowish-orange; ironstone (bog iron); coarse quartz grains
25	110-135	Sand, fine, yellowish-orange, slightly micaceous; slightly clayey at 125-135 ft
20	135-155	Sand, fine, orange, quartz, very clayey; coarse at 140-155 ft
5	155-160	Clay, orange, micaceous, moderately sandy
3	160-163	Sand, medium to coarse, brown, clean, quartz
10	163-173	Sand, fine, yellowish-brown; mica; trace coarse quartz; brown clay lumps; more brown clay, 168-173 ft

Kirkwood Formation:

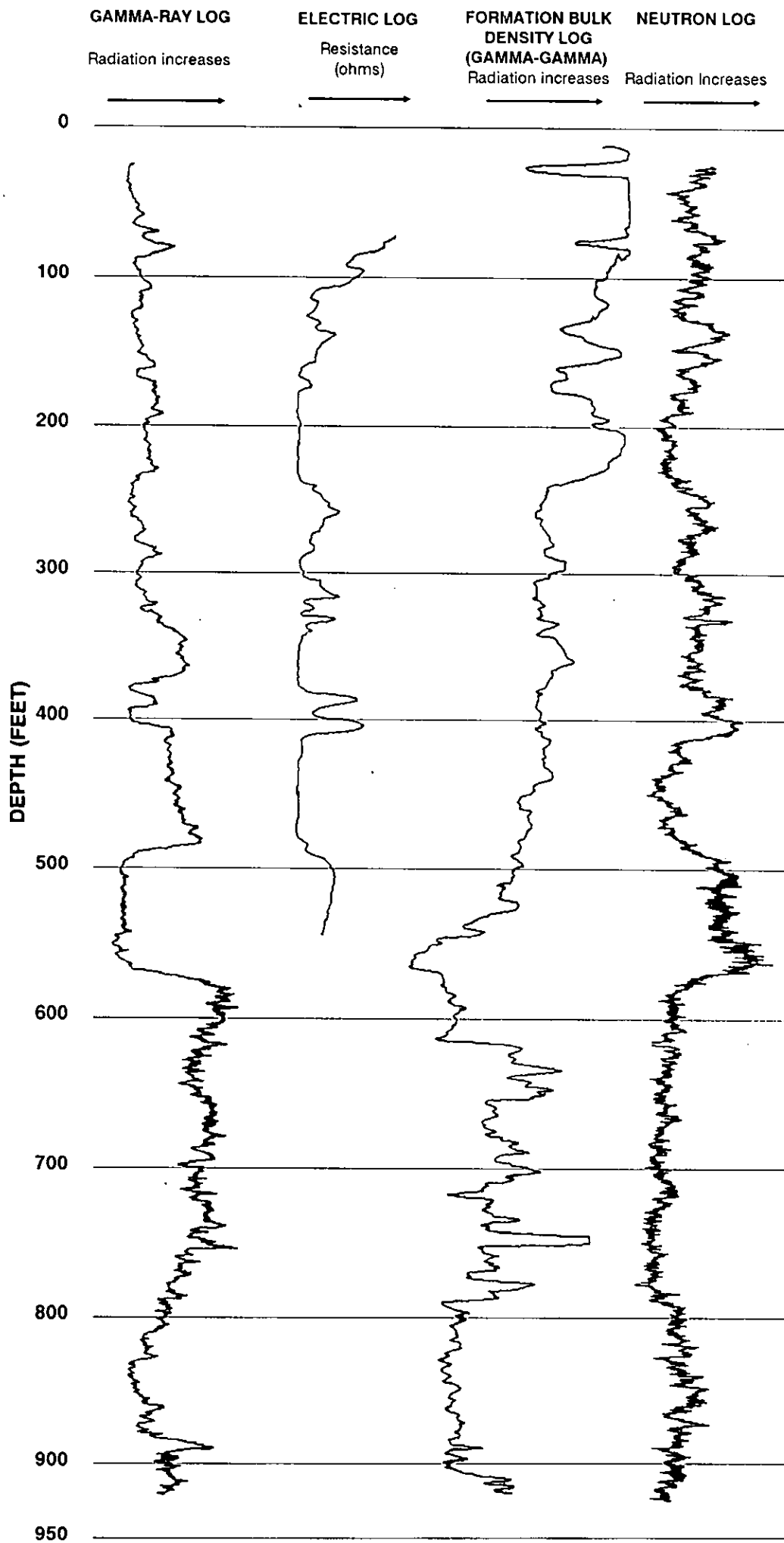
5	173-178	Clay, gray, finely micaceous, lignitic, sandy; diatoms with concentric very fine pyrite spheres
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Hamilton Township

Well 1014 (cont.)

Thickness (ft)	Depth (ft)	Lithology			Lithology
2	41-43	Sand, very coarse, white (10YR8/2); overlying sand, fine to medium, yellow (10YR7/6)	2	83-85	Sand, fine to medium, gray (7.5YR9/0); some coarse sand; traces of silt; grading to increased silt, with some clayey silt laminae
2	43-45	No recovery, probably very coarse sand or gravel	2	85-87	Sand, fine to medium, gray (7.5YR5/0), silty
2	45-47	Sand, very coarse, light-brownish-gray (10YR6/2); grading to medium, brownish-yellow (10YR6/8); overlying medium to fine, brownish-yellow (10YR6/8)	2	87-89	Clayey silt, very dark-gray (10YR3/0), with traces of fine sand; grading to sand, medium to coarse, very dark-gray (7.5YR3/0), silty
3	47-50	Sand, medium, light-brownish-gray (10YR6/2), silty; grading down to sand, fine to medium, brownish-yellow (10YR6/6), with some silt partings at top	2	89-91	Sandy silt, very dark-gray (7.5YR3/0); thinly interbedded with sand, fine to medium, very dark-gray (7.5YR3/1), clean
1	50-51	Sand, fine to medium, brownish-yellow (10YR6/6), heavy-mineral content increasing with depth	2	91-93	Sandy silt, very dark-gray (10YR3/1), micaceous; overlying sandy silt, dark-grayish-brown (10YR3/2), layered with fine sand, gray (10YR6/1)
2	51-53	Sand, fine to medium, brownish-yellow (10YR6/8)	2	93-95	Clayey and sandy silt, dark-gray (10YR4/1); interbedded with sand, medium to coarse, dark-gray (10YR4/1), micaceous, slightly silty
2	53-55	Sand, fine to medium, yellow (10YR7/8), with 0.08 inch light-gray clay partings "flasers"	2	95-97	Sand, medium to coarse, dark-gray (10YR5/1), silty; overlying sand, medium to coarse, medium-gray (10YR5/1) and light-gray (10YR6/1), well sorted
2	55-57	Sand, fine to medium, brownish-yellow (10YR6/8), silty, crossbedded, heavy mineral concentrations	3	97-100	Sand, medium to coarse, dark-gray (10YR4/1), silty; grading down to sand, medium to coarse, gray (10YR5/1), well-sorted; grading to sand, medium to coarse, dark-gray (10YR4/1), silty
2	57-59	Sand, medium to coarse, brownish-yellow (10YR6/8) and very pale-brown (10YR7/4), occasional gravel beds; gravel, up to 0.5 inches	2	100-102	Sand, medium to very coarse, dark-gray (10YR4/1), silty; overlying sand, medium to coarse, gray (10YR5/1), well-sorted; overlying sand, medium to very coarse, dark-gray (10YR4/1), silty, some gravel and pebbles up to 0.2 inches
2	59-61	Sand, medium, yellow (10YR7/8), poorly sorted, oxidized in patches to brownish-yellow (7.5YR6/8)	2	102-106	Sand, fine to very coarse, dark-gray (10YR4/1), silty; coarse sand grains are angular and include many clear quartz shards up to 0.2 inches; increasing pebbles at 104-106 ft.
2	61-63	Sand, medium, light-gray (10YR7/2); trace of very fine ilmenite; overlying sand, medium to very coarse, brownish-yellow (10YR6/8), silty, some granules, pebbles and 0.16 inch wood fragments	2	106-108	Sand, coarse to very coarse, gray (10YR5/1), well-sorted; grading down to sand, medium to coarse, very dark-gray (10YR3/1), silty, with black (10YR2/1) streaks "possibly organic fragments"; overlying sand, fine to medium, very dark-grayish-brown (10YR3/2), slightly silty
2	63-65	Sand, fine to very coarse, brownish-yellow (10YR6/8), poorly sorted, silty, some pebbles	2	108-110	Sand, fine to very coarse, dark-gray (10YR4/1), silty, trace organic material, including rounded wood fragments up to 0.8 inches
4	65-69	Sand, fine to very coarse, yellow (10YR7/8), silty; silt, very pale-brown (10YR7/3), thin layers	4	110-114	Sand, fine to coarse, dark-gray (10YR4/1), silty
2	69-71	Sand, fine to very coarse, yellow (10YR7/8), poorly sorted, silty, with granules and pebbles	2	114-116	Sand, fine to coarse, dark-gray (10YR4/1), silty, trace organic material; overlying thinly bedded, silt, dark-gray (10YR4/1) and sand, fine to medium, gray (10YR5/1); compressed wood in two (0.2-0.4 inch) layers near bottom
2	71-73	Sand, medium to coarse, very pale-brown (10YR7/4); grading down to sand, interbedded medium and medium to coarse, very pale-brown (10YR7/4) and brownish-yellow (10YR6/8); light-gray silt partings near 71.5 ft	2	116-118	Sand, fine to very coarse, very dark-grayish-brown (10YR3/2), silty, some quartz granules; overlying sand, fine to very coarse, dark-gray (10YR4/1), some silt, 0.08-0.12 inch layers
2	73-75	Sand, medium to coarse, very pale-brown (10YR7/4); interbedded with finely layered very coarse sand with quartz granules	3	118-121	Sand, fine to very coarse, dark-gray (10YR4/1), silty; overlying sand, fine, dark-gray (10YR4/1), slightly silty
2	75-77	No recovery			
2	77-79	Sand, medium to coarse, dark-reddish-brown (2.5YR3/4); overlying clayey to sandy silt, brownish-yellow (10YR6/8), interbedded with sand, medium to coarse, gray (10YR6/1), silty			
2	79-81	Sand, very fine, dark-gray (7.5YR4/0), silty; some silt, dark-yellowish-orange; overlying sand, fine, dark-gray (7.5YR4/0), silty			
2	81-83	Sand, very fine, dark-gray (7.5YR4/0), silty, streaks and laminae of orange clayey silt;			

WELL 014
ATLANTIC COUNTY GIRL SCOUT CAMP



Hamilton Township

Well 014 (cont.)

Thickness (ft)	Depth (ft)	Lithology
5	121-126	Silty clay, dark-gray (10YR4/1); shell fragments at bottom
10	126-136	Sand, medium to fine, dark-gray (10YR4/1), poorly sorted; overlying sand, fine to medium, micaceous, silty
19	136-155	No recovery
7	155-162	Sand, medium to fine, olive-gray (5Y3/2), clayey, scattered pebbles
Kirkwood Formation:		
1	162-163	Sand, fine to medium, olive-gray (5Y3/2), clayey; diatoms common
2	163-165	Very clayey silt, olive-gray (5Y3/2); few interbeds of sand, medium, light-yellow; abundant diatoms; silt oxidized readily, coating core with jarosite
7	165-172	No recovery
3	172-175	Sand, medium, olive-gray (5Y3/2) to grayish-brown (5YR3/2), clayey, silty, abundant diatoms
10	175-185	Sand, fine, brownish-gray (5YR4/1), very clayey, micaceous, faintly bedded; small pieces of wood, abundant at 180 ft
15	185-200	Clayey silt to very fine sand, micaceous, sparingly diatomaceous, laminated to massively bedded; small pieces of wood
11	200-211	No recovery
4	211-215	Silt, dusky-yellowish-brown (10YR2/2), slightly clayey, micaceous, massive; thin seams very fine sand; diatoms common at 213 ft
5	215-220	No recovery
15	220-235	Clayey silt and fine sand, dusky-yellowish-brown (10YR2/2), micaceous, diatomaceous; fine pieces of wood are common
6	235-241	No recovery
4	241-245	Sand, fine, olive-gray (5Y3/2), silty, some quartz granules, diatomaceous; phosphate grains, black, shiny
Disconformity		
7	245-252	No recovery
3	252-255	Sand, medium to coarse, olive-gray (5Y3/2), slightly clayey; pebbles up to 0.25 inches
9	255-264	No recovery
1	264-265	Shells, olive-gray (5Y3/2), coarse fragments, thin beds in fine sand matrix
7	265-272	No recovery
3	272-275	Shell layer, olive-gray (5Y3/2), coarse; medium sand matrix; shells oriented parallel to bedding plane
9	275-284	No recovery
1	284-285	Silt and fine sand, interbedded, olive-gray (5Y3/2); finely divided woody fragments are common
4	285-289	No recovery
6	289-295	Clay and silt, olive-gray (5Y3/2), interbedded with sand, very coarse, lighter colored, pebbly, lignitic, throughout interval
29	295-324	No recovery
1	324-325	Sand, olive-gray (5Y4/1); shells, coarse, abundant, broken, thick-walled
9	325-334	No recovery
1	334-335	Sand and silty clay, interbedded; sand, medium to coarse, olive-gray (5Y3/2); silty clay, micaceous, scattered lignite fragments
9	335-344	No recovery

1	344-345	Sand and silty clay, olive-gray (5Y3/2), interbedded, finely laminated; sand, fine, micaceous
3	345-348	No recovery
2	348-350	Silty clay and sand, interbedded, olive-gray (5Y4/1); sand, fine to coarse, poorly sorted; lignitic wood, a few large pieces
3	350-353	No recovery
8	353-361	Clay, olive-gray (5Y4/1), laminated, with thin interbeds of silty, very fine sand; intense bioturbation; very carbonaceous
2	363-365	Silty clay, olive-gray (5Y3/2), micaceous, oxidized in part to yellowish-gray (5Y7/2)
2	361-363	No recovery
10	365-375	Clay, silty fine sand, grayish-olive (10Y4/2), interbedded, locally oxidized to dusky-yellow (5Y6/4); clay, laminated; lignite, finely divided, scattered throughout; some small shell fragments
7	375-382	No recovery
3	382-385	Sand, medium to coarse, dark-grayish-green (5GY4/1), clayey; some small pebbles; mollusk shells, thin walled, fragments, are common; abundant finely dispersed organic matter and pyrite
Disconformity		
8	385-393	No recovery
2	393-395	Sand, medium to coarse, dusky-yellowish-brown (10YR2/2), clayey; pebbles up to 0.25 inches; finely dispersed organic matter and pyrite are common
8	395-403	No recovery
2	403-405	Sand, very coarse, olive-gray (5Y3/2), pebbly, slightly clayey
4	405-409	No recovery
1	409-410	Clayey silt, olive-gray (5Y3/2)
2	410-412	No recovery
23	412-435	Sand, fine, grayish-brown (5YR 3/2) to moderate-brown (5YR3/4), clayey, silty, laminated, micaceous; abundant carbonaceous matter, finely dispersed; no recovery at 415-424 ft and 425-432 ft
10	435-445	Silty clay and clayey silt, dark-grayish-brown (5YR3/4) to dark-yellowish-brown (10YR4/2), laminated, micaceous; scattered masses of pyrite; carbonaceous matter, abundant, finely dispersed
5	445-450	No recovery
5	450-455	Clayey silt, moderate-brown (5YR4/1), oxidized locally to yellowish-brown (10YR2/2), massive to finely laminated; small fossils, thin layers up to 0.40 inches
10	455-465	Clayey silt, brownish-gray (5YR4/1), laminated; occasional thin layers of very fine sand; scattered small shells, some foraminifers
10	465-475	Clayey silt, moderate-brown (5YR3/4), laminated, micaceous; shelly near 468 ft; microfossils abundant at 473 ft
10	475-485	Sand, fine, grayish-olive-green (5GY3/2), clayey, micaceous, bioturbated; glauconitic, especially in lower 5 ft; foraminifers, common near 476 and 484 ft
Unconformity		
ACGS Beta unit:		
28	485-513	No recovery
2	513-515	Sand, fine, olive-gray (5Y4/1) to grayish-olive-green (5GY3/2), quartz; slightly clayey and glauconitic; abundant worn shell fragments
4	515-519	No recovery
1	519-520	Sand, fine to medium, olive-gray (5Y4/1) to olive-black (5Y3/1), quartz, silty; abundant worn shells and glauconite sand
5	520-525	No recovery

Hamilton Township

0.5	525-525.5	Sand, fine to medium, olive-gray (SY4/1), quartz, silty; abundant shell fragments and glauconite sand
7.5	525.5-563	No recovery
12	563-575	Sand, fine to medium, grayish-green (10G4/2), glauconitic quartz, indurated, laminated; very shelly; no recovery, 565-569 ft; 571-574 ft
Unconformity		
Mays Landing unit:		
2	575-577	No recovery
18	577-595	Silty clay and sand, thinly interbedded, micaceous; silty clay, dark-greenish-gray (SGY4/1); sand, fine to medium, light-gray, glauconite quartz; woody fragments common; fine shells throughout, increasingly at 585-595 ft
10	595-605	Sand, very fine, olive-gray (SY2/1) to olive-black (SY4/1), finely laminated, micaceous; scattered small shells; occasional lignitic wood fragments
1	605-606	Sand, medium, dusky-green (SG3/1), glauconitic, loose, slightly clayey
9	606-615	Sand, fine, olive-black (SY2/1), clayey, massive to laminated, micaceous; scattered small shells; some burrows
Unconformity		
ACGS Alpha unit:		
Subunit C:		
10	615-625	Similar to 606-615 ft. interval, except massively bedded
5	625-630	No recovery
5	630-635	Sand, fine, olive-black (SY2/1), very clayey, massive to laminated; shells, thin, small, scattered
10	635-645	Clayey silt, dark-greenish-gray (SGY4/1), laminated; shells, thin, small, scattered
10	645-655	Clay and silt, dark-greenish-gray (SGY4/1) to olive-gray (SY3/2), laminated; common rip-up microbreccias; pyrite masses
20	655-675	Silt and clay, olive-gray (SY3/2), laminated; small shells and wood pieces throughout; glauconite grains, fine to very fine, 665-675 ft
10	675-685	Very clayey silt, olive-black (SY2/1) to grayish-olive-green (SGY3/2), laminated, micaceous; some glauconite sand; shells, thin, small, scattered
10	685-695	Very clayey silt, brownish-black (SYR2/1), laminated; shells, thin, small, scattered; more glauconite sand than last interval
Disconformity		
Subunit B:		
20	695-715	Sand, silt, interbedded, bioturbated; sand, fine to medium, olive-black (SY2/1), thin-bedded, glauconite quartz; silt, nonglauconitic; shells, moderate-sized, scattered; burrows, larger at 705-715 ft, particularly near 710 ft
2	715-717	Clayey silt to fine sand, olive-black (SY2/1)
2	717-719	Sand, medium to coarse, grayish-olive-green (SGY3/2), glauconite, quartz
6	719-725	Sand, fine, olive-black (SY2/1), clayey, massive, clayey; burrowed; some pyrite clusters
10	725-735	Clayey silt, sand, interbedded; clayey silt, olive-black (SY2/1); sand, fine, layers with variable amounts of glauconite; shells, large, scattered, especially near 727 ft
Disconformity		
Subunit A:		
10	735-745	Sand and clayey sand, interbedded; sand, medium to coarse, olive-gray (SY3/2), glauconitic, with scattered pebbles up to 0.25 inches; clayey sand, fine to medium, glauconite quartz; large shells near 743 ft; some pyrite clusters

7	745-752	Sand, medium to coarse, dark-yellowish-gray (SY7/2), glauconite quartz, massive; fossiliferous, mostly broken shells (hash); pyrite clusters; laminated, less glauconite sand, intensely bioturbated, burrows are filled with glauconite sand at 748-752 ft
3	752-755	Sand, fine, dark-yellowish-gray (SY7/2), clayey, crudely stratified, glauconitic; scattered mica; shells, large, worn, calcareous
6	755-761	Silty clay, brownish-gray (SYR2/1); many small shells
Unconformity		
Shark River Formation:		
24	761-785	Sand, medium to coarse, grayish-olive-green (SGY3/2), clayey, glauconitic; interbedded with clayey, silty, fine quartz sand; intense bioturbation; scattered fossils
7	785-792	Sand, medium to coarse, dusky-green (SG3/2), clayey, glauconite quartz; shells, large, scattered; many burrows
3	792-795	Clayey silt to fine sand, pale-olive (10Y6/2), laminated
20	795-815	Very clayey sand, dusky-yellow-green (SGY5/2), massive; quartz sand, slightly glauconitic; intensely burrowed; many small shells
20	815-835	Sand, fine, dusky-yellow-green (SGY5/2), glauconitic, crudely laminated; locally thin bedded, especially near 820 ft; burrows; occasional indurated layers at 825-835 ft
34	835-869	Clayey silt, pale-olive (10Y6/2), massive to faintly bedded; glauconite grains, fine, scattered; occasional large burrows, filled with glauconite sand; includes an indurated pyritic layer containing flattened shells, intensely burrowed, with burrows calcite filled at 844 ft.; some medium quartz sand, increasing glauconite sand, intensely burrowed at 864-869 ft.
16	869-885	Sand, very fine, light-olive-gray (SY5/2), silty, massive, intensely bioturbated; fine grains of glauconite scattered throughout; crudely stratified at 873-885 ft.
4	885-889	No recovery
4.5	889-893.5	Sand, very fine, light-olive-gray (SY5/2), silty, interbedded with dusky-yellowish-green (10GY3/2), very glauconitic sand, intensely burrowed; glauconitic sand is thickest from 891 to 893 ft; abundant phosphatic debris "fish parts" and occasional small shark teeth; contact with underlying bed sharp
Unconformity		
Manasquan Formation (part):		
11.5	893.5-905	Clayey silt, pale-olive (10Y6/2), crudely bedded, burrowed; small amounts of fine glauconite sand; scattered large shells, but most fossils are very small
18	905-923	Clayey silt, pale-olive (10Y6/2), finely laminated; numerous small burrows; abundant microfauna
22	923-945	Clayey silt, pale-olive (10Y6/2), crudely laminated, intensely bioturbated; some large burrows; abundant microfauna; increasing fine glauconite sand at 941-945 ft

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Well 132 (cont.)

(ft)		
90-100	Sand and clay; sand, coarse, dark-yellowish-orange (10YR 6/6); clay, orange to pale-orange; abundant lignite and pyritized plant remains; iron staining throughout	320-330 Clay, soft, blocky, olive-gray (5Y 3/2), light-brown-gray streaks; trace platy carbonaceous flakes; coarse anhedral pyrite; sand with brown and green clays; micaceous
100-110	Clay, firm, subblocky to fissile, dusky-yellowish-brown (10YR 2/2), lignitic, partially pyritized; some sand, fine to coarse, subangular	330-340 Clay, soft, blocky, sticky, olive-gray (5Y 3/2) and light-olive-gray (5Y 5/2); increasing sand, fine to coarse, subround; partially pyritic; iron stained, fine black carbonaceous flakes; some mica
110-120	Clay, fissile, firm, dusky-yellowish-brown (10YR 2/2) to olive-black (5Y 2/1); abundant black carbonaceous flakes and pyritic crystals; subround sand	340-350 Clay, blocky, very soft, sticky, olive-gray, (5Y 3/2) to (5Y 4/1); 5-10 percent black lignite; sand, fine to very coarse, subround; disseminated pyritic sand size nodules and coating on 40 percent of sand; mica
120-130	Sand, medium to coarse, light-olive-gray (5Y 5/2), subround; clay, olive-gray; lignite; abundant pyrite coating carbonaceous flakes and sand	350-360 Clay, soft, blocky, olive-gray (5Y 3/2) to (5Y 4/1); silty clay, light-blue-gray; 10 percent carbonaceous material partially replaced with pyrite; light-blue-gray clay; sandy; trace mica
130-140	Clay, soft, fissile, sticky, olive-gray (5Y 3/2); sand with trace iron oxide; mica; pyritic	360-370 Clay, soft, sticky, olive-gray (5Y 3/2); sand, light-olive-gray (5Y 5/2), dense; decreasing lignite; trace mica; some mica
140-150	Clay, subblocky, firm, olive-gray (5Y 3/2); abundant pyrite; trace angular chert; coarse sand; abundant black carbonaceous material; trace mica	370-380 Clay, blocky, soft, sticky, olive-gray (5Y 3/2); sand, subround at top; 20-30 percent fossils, mostly pelecypods; trace mica
150-160	Clay, blocky, soft, olive-gray (5Y 3/2) to olive-black (5Y 2/1); sand, coarse, subangular, pyrite coating; increasingly carbonaceous with black pyritized lignite	380-390 Clay, blocky to subfissile, soft, sticky, olive-gray (5Y 3/2); trace silt and pyrite; increasingly abundant shells; some mica
160-170	Clay and lignite; clay, firm, blocky, olive-gray (5Y 6/4); lignite, abundant; trace sand with pyritic coating, some iron staining	390-400 Shells and sand, light-olive (5Y 5/2); shells, abundant, trace pyrite replacement; sand, coarse to very coarse, round, clear to white, trace amber grains; some coarse gray chert; trace green glauconitic clay
170-180	Lignite, grayish-black (N2), splintery to platy, partially pyritized with some iron staining; trace gray clay	400-410 Shells and sand, light-olive-gray (5Y 5/2), tan specks; sand, fine to very coarse, subround to round; trace gray chert; 40 percent of grains exhibit lacy pyrite growths on internal surfaces; trace iron staining; fossils appear altered to pyrite; occasional glauconite on shells
180-190	Clay, soft, blocky to subblocky, medium-light-gray (N6); decreasing lignite; trace sand at base	410-420 Sand and shells; sand, medium to very coarse, light-olive-gray (5Y 5/2), round to subround; abundant shells with pyritic growths; trace glauconite
190-200	Sand, fine to medium, pale-olive (10Y 6/2), subround, trace pyrite coating on some grains	420-430 Shells and sand, light-olive-gray (5Y 5/2); abundant shells, little alteration; coarse sand
200-210	Sand, coarse to very coarse, olive-gray (5Y 4/1), round, silica cemented; trace gray chert; scattered carbonaceous flakes	430-440 Sand, medium to very coarse, light-olive-gray (5Y 5/2), subround, silty; brown clay with abundant shells; trace mica and anhedral pyrite on 30 percent of fossils; scattered silt size glauconite
210-220	Sand, medium to coarse, light-olive-gray (5Y 6/1), round; trace clay, light-gray; isolated pyritic coatings	440-450 Sand, coarse to very coarse, light-olive-gray (5Y 5/2), subround to round; trace of light-gray chert; round black fine grains; 25 percent clay and shells; trace pyrite on sand and shells
220-230	Lignite and clay; clay, blocky to chunky, firm, dusky-yellowish-brown (10YR 2/2), some light-gray; lignite, brown to dark-brown	450-470 Clay, firm, subfissile, olive-gray (5Y 3/2), silty; sand, medium to coarse; 30 percent shell fragments with slight glauconitic alterations; trace pyrite
230-240	Clay and gravel; clay, soft, blocky, olive-gray (5Y 4/1), grading to gravel at base; gravel, pink to white, rounded; pyritic; trace chert	470-480 Clay and sand; clay, firm, subblocky to subfissile, pyritic, olive-gray (5Y 3/2) to light-olive-gray (5Y 5/2), silty; sand, medium, subangular to subround, 20 percent shell fragments; lignite; some mica
240-250	Clay, soft, blocky, light-brownish-gray (5Y 6/1), silty; pyritic coating on some sand grains; black plant material (lignite); trace mica	480-490 Sand, fine to coarse, light-olive-gray (5Y 5/2), subround to subangular; clay, dusky-yellowish-brown with black grains; glauconite; iron stained lignite; 30-40 percent shells
250-260	Clay, blocky, very soft, sticky, medium-light-gray (N6); abundant silt; trace angular sand; very fine black carbonaceous flakes; micaceous; pyritic	
260-270	Clay, mottled, very soft, medium-light-gray (N6) to very-pale-orange (10YR 8/2); sand; decreasing silt and organic material; trace mica; trace ironstone (bog iron), dark-brownish orange	
270-280	Clay, blocky, soft, sticky, olive-gray (5Y 4/1), mottled with orange staining; sand, abundant, angular to round; black carbonaceous material (lignitic); trace mica, silt, and ironstone (bog iron)	
280-320	No record	

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490-500 Sand, fine to coarse, light-olive-gray (5Y 5/2), subround; trace lignite and glauconite; 5 percent of grains have iron stained argillaceous debris on surfaces; clay, brown, thin, platy; 20 percent shells

500-510 No record

510-520 Clay, firm, blocky, olive-gray (5Y 3/2), with platy dark-gray clay, calcareous and pyritic in part; sand, abundant fine to medium orange stained sand; silty; 30 percent shells

520-530 Sand, very fine to coarse, light-olive-gray (5Y 5/2), subangular to round, becoming very clayey; 10-15 percent shells, altered to pyrite and glauconite in part; rounded black grains

530-540 Clay, firm, blocky, slightly sticky, olive-gray (5Y 3/2); abundant sand at top of interval; trace of glauconitic and black grains, silty, micaceous, scattered pyrite

540-550 Clay, firm, subblocky to fissile, olive-gray (5Y 3/2), becoming dusky-yellowish-brown (10YR 2/2); sandy in part, subround, fine to medium; some lignite; decreasing mica

Well 133 **Geographic code: 0112**

Owner or name: Atlantic County Girl Scout Camp
 Location: N392933 W744604
 Driller: N.J. Geological Survey
 Quad.: Dorothy Comp. date: 10/10/1984
 Atlas Sheet no. 36.05.436 Elevation: 40 ft
 Permit no. 35-4370 Depth drilled: 171 ft
 U.S. Geological Survey observation well.

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, fine to coarse; very coarse gravel; silty sand
2	10-12	Sand, fine, tannish-brown; trace ironstone (bog iron) at the bottom
2	12-14	Sand, brown to orange, clayey, silty
2	14-16	Silt, tan, clayey, to fine brown sand
8	16-24	Sand, light-brown; fine and silty at 16-22 ft
2	24-26	Clay, tan, silty
6	26-32	Sand, fine to medium, tannish-brown
2	32-34	Sand, fine, brownish-yellow
5	34-39	Clay, yellow; sand
2	39-41	No record
1	41-42	Sand, medium to coarse, light-brown
1	42-43	No record
2	43-45	Sand, fine, brown
10	45-55	Sand, fine to coarse, orange-brown
20	55-75	Sand, brown; fine, silty, 55-71 ft; fine to medium at 71-73 ft; coarse, silty at bottom of 73-75 ft
2	75-77	No record
2	77-79	Sand, brown and red, to gray clay
8	79-87	Sand, fine, gray, silty; clayey at 79-81 ft; shell fragments at 85-87 ft
2	87-89	Sand, coarse, gray, silty
6	89-95	Clay, gray; sand, fine, light-gray at 89-91 ft; silty at 93-95 ft
26	95-121	Sand, gray; fine at 95-99 ft and 114-121 ft; silty at 95-99 ft and 103-121 ft; coarse to fine at 99-114 ft; wood fragments (lignite) at 114-116 ft
9	121-130	Sand, coarse, gray to white
7	130-137	Wood (lignite), fine fragments; sand, coarse, white to gray
2	137-139	Sand, coarse, gray; white pebbles (gravel)
8	139-147	Sand, very coarse, gray to white; some clay
15	147-162	Sand, gray; fine, 147-152 ft; coarse, 152-162 ft

Well 134 **Geographic code: 0112**

Owner or name: Wheaton Plasti-Cote Corporation
 Location: N392641 W744123
 Driller: Vance Skinner
 Quad.: Mays Landing Comp. date: 06/14/1967
 Atlas Sheet no. 36.01.957 Elevation: 50 ft
 Permit no. 36-396 Depth drilled: 194 ft

Thickness (ft)	Depth (ft)	Lithology
41	0-41	Sand, fine; buff at 0-11 ft and 17-41 ft; stone (gravel) at 0-5 ft; light-yellow at 11-17 ft; interbedded thin layers of white clay at 17-31 ft; slightly clayey at 31-41 ft
10	41-51	Clay, buff, sandy
10	51-61	Sand, fine, buff, slightly clayey
26	61-87	Sand, fine to medium, light-buff, quartz
8	87-95	Clay, buff
70	95-165	Sand, fine, buff, clayey
29	165-194	Sand, fine, gray; slightly clayey at 165-180 ft; thin black clay layers at 180-194 ft

Well 135 **Geographic code: 0112**

Owner or name: Mays Landing Water Power Company
 Location: N392713 W744400
 Driller: J.W. Wells Drilling
 Quad.: Mays Landing Comp. date: 1892
 Atlas Sheet no. 36.01.841 Elevation: 8 ft
 Permit no. 56-82 Depth drilled: 176 ft
 From Woolman, 1893, p.286.

Thickness (ft)	Depth (ft)	Lithology
--	--	Gravel, yellow; yellowish-white clay; recent diatom species observed on higher ground south of well
--	22	Sand, granular (very coarse), gray
32	22-54	Sand, finer than previous interval, gray
18	54-72	Sand, bluish-gray, clayey; considerable wood (lignite), well preserved
26	72-98	Clay, bluish, diatomaceous
14	98-112	Sand, clayey, diatomaceous
4	112-116	Sand, bluish when wet
9	116-125	Sand and diatomaceous clay
7	125-132	Sand, water (water-bearing)
10	132-142	Sandy clay, diatomaceous
7	142-149	Clay, bluish, diatomaceous
2	149-151	Sand, water (water-bearing)
14	151-165	Sand, and diatomaceous clay
7	165-172	Clay, blue, richly diatomaceous
4	172-176	Sand, water-bearing

Well 138 **Geographic code: 0112**

Owner or name: Savo Balic
 Location: N392740 W744726
 Driller: Vance Skinner
 Quad.: Dorothy Comp. date: 03/1974
 Atlas Sheet no. 35.05.716 Elevation: 85 ft
 Permit no. 35-297 Depth drilled: 195 ft

Thickness (ft)	Depth (ft)	Lithology
19	0-19	Sand, buff, clayey
56	19-75	Sand, fine, light-buff, generally clayey; some thin strips of sandy and white clay
12	75-87	Clay, gray, sandy
31	87-118	Sand, fine, slightly clayey; grayish-buff at 87-100 ft; buff at 100-118 ft
37	118-155	Sand, fine to medium, gray; some strips of gray clay at 145-155 ft
34	155-189	Sand, fine, gray, clayey; sandy clay
6	189-195	Clay, brownish-gray, sandy

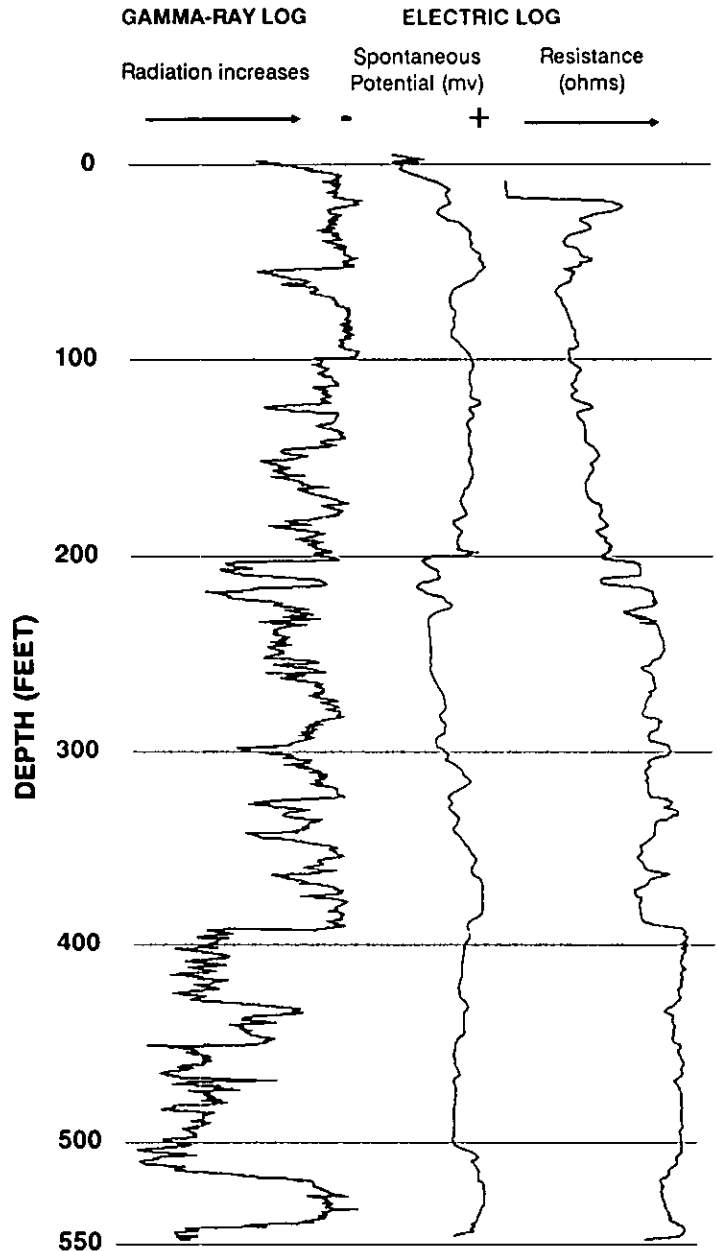
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Well 291
 Owner or name: U.S. Geological Survey
 Location: N392902
 Driller: N.J. Geological Survey
 Quad.: Dorothy
 Atlas Sheet no. 35.04.568
 Permit no. 35-4656
 Observation well, on N.J. Department of Transportation property.

Geographic code: 0112
 W745051
 Comp. date: 03/29/1985
 Elevation: 92 ft
 Depth drilled: 577 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Disturbed layer
10	10-20	Sand, very fine to coarse, dusky-yellow (5Y 6/4), subangular, some white chert; silty in part
10	20-30	Sand, fine to medium, dusky-yellow becoming dark-yellowish-orange (10YR 6/6), subangular to subround, increasingly clayey, trace iron coating on grains
10	30-40	Gravel, pale-yellowish-brown (10 YR 6/2); sand, medium to coarse and pebbles, red, yellow, and cream, subround, loose; trace black carbonaceous flakes and grains; slightly argillaceous
10	40-50	Gravel, pale-yellowish-brown (10 YR 6/2), increasingly larger pebble-sized grains, cream, orange and white; light-grayish-orange clayey filling; trace iron coating most grain surfaces
10	50-60	Sand, fine, grayish-orange (10YR 7/4), subround, argillaceous, trace black and yellowish-orange iron coating
10	60-70	Sand, very fine to fine, grayish-orange (10YR 7/4), subrounded; increasing pale-yellowish-orange clay with silt; no pebbles or carbonaceous flakes
10	70-80	Sand, medium to coarse, dark-yellowish-orange (10YR 6/6); some pebbles, varicolored; trace dark-brown to black lignite flakes and clay; abundant ironstone (bog iron) on grains
10	80-90	Sand, coarse, dark-yellowish-orange (10YR 6/6); trace pebbles, subangular, mostly cream and light-orange; clayey; trace carbonaceous flakes and iron oxide coatings
10	90-100	Sand, very fine to fine, moderate-yellowish-brown (10YR 5/4), subround; 50-percent sandy clay, cream, tan and orange; trace white chert; abundant iron stained clay on grains
10	100-110	Sand, fine, with medium to coarse streaks, moderate-yellowish-brown (10YR 5/4), subangular to subround; abundant dark-orange-brown clay; black lignite; some white chert; iron stone (bog iron) probably in streaks
10	110-120	No record
10	120-130	Sand, fine to medium, dark-yellowish-orange (10YR 6/6), subround, silty in part; abundant lignite giving salt and pepper appearance; 30-40 percent dark-orange clay; iron oxide stains
10	130-140	Clay, dark-yellowish-orange (10YR 6/6), firm; sand, coarse, round; trace disseminated silt; iron staining
10	140-150	Clay, dark-yellowish-gray to grayish-yellow (10YR 6/6), firm; sand, very fine,

WELL 291
U.S. GEOLOGICAL SURVEY



10 150-160 yellowish-gray; trace lignite; some silt; decreased iron staining
 Clay, grayish-yellow, soft; 30-40 percent sand, decreasing toward base
 10 160-170 Sand, fine, grayish-yellow to light-gray (5Y 8/4), subround; trace coarse round sand, gradational into clay above; some siliceous fossil debris; trace iron staining
 10 170-180 Sand, fine to very fine, grayish-yellow (5Y 8/4) to light-gray (N7), subround, decreasing coarse rounded sand; abundant gray clay; no visible iron staining; trace pelecypod fragments with some alteration to silica, some very fine mica

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10	180-190	Sand, fine, light-brownish-gray (5YR 6/1), subround, some iron stained orange clay on 30 percent of sand; trace light-gray to white chert; some silica-replaced shell fragments; increasing multicolored clay; thin dark-brown lignite; very silty in part; some mica			glaucanite and white noncalcareous clay; 5 percent fine to medium subround sand in bioclastic material
10	190-200	Clay, olive-gray (5Y 3/2), soft, blocky, sticky, uniform, dense; trace angular silt; some calcareous pelecypod fragments and very fine mica flakes	10	370-380	Clay, olive-gray (5Y 3/2), firm, subfissile to subblocky, massive; decreasing angular silt; some pyritic crystals, very fine and euhedral; trace black lignite and sand; decreasing fossil fragments
10	200-210	Clay, olive-gray (5Y 3/2), soft to slightly firm, sticky, blocky, dense; some indistinct calcareous fossil fragments; very fine euhedral pyrite crystals; trace silt; no sand	10	380-390	Clay, olive-gray (5Y 3/2), soft blocky, dense, massive; silt; mica; trace clay, light-olive-brown (5Y 5/6) to dark-yellowish-brown (10YR 4/2), firm, blocky, iron oxide and lignite in clay; increasing sand, very fine to medium, subround
10	210-220	Clay, olive-gray (5Y 3/2), soft, firm, dense streaks, sticky in part, silty; some pyrite crystals; trace dusky-yellowish-brown clay with sand; trace dark-brown lignite; decreasing mica	10	390-400	Sand, very fine to fine, light-olive-gray (5Y 5/2), subround; trace light-gray angular chert and lignite; 20-30 percent clay, light-olive-brown (5Y 5/6), firm, blocky
10	220-230	Clay, olive-gray (5Y 3/2) and dusky-yellowish-brown (10YR 2/2), firm, dense, silty; sand, 30-40 percent fine to coarse, subangular to round; lignite, 5-10 percent dark-brown to black; mica; trace lacey pyrite on finer grain surfaces; trace silt	10	400-410	Clay and sand, light-olive-brown (5Y 5/6) to light-olive-gray (5Y 5/2); clay, firm to soft, variable density; sand, fine, subround, trace pyrite on grains, some mica, trace black lignite and pyrite
10	230-240	Clay, olive-gray (5Y 3/2) to dusky-yellowish-brown (10YR 2/2), firm, variable density, sticky in part, silty; increasing yellowish-brown clay; hard ironstone (bog iron); abundant black lignite; fine to medium sand, iron stained, some lacey pyrite on surfaces	10	410-420	Clay, light-olive-brown (5Y 5/6) at top of interval, to olive-gray (5Y 3/2) at base, firm to soft and sticky, pyritic; some black lignite; fine sand at top; some very fine mica in olive gray clay; no fossils
10	240-250	Clay, olive-gray (5Y 3/2), soft, dense, trace yellowish-brown; fine sand; some lignite; pyritic crystals throughout; locally abundant very fine mica	10	420-430	Clay, olive-gray (5Y 3/2), soft, moderately dense; trace medium to coarse pyritized lignite, 20-30 percent sand, coarse, round to subround, with laminations of fine to medium sand cemented with silica, brown clay and lacey pyrite coating coarse grains; 1-2 percent milky coarse chert; trace large shell material; abundant very fine mica
10	250-260	Clay and sand, dusky-yellowish-brown (10YR 2/2) to light-olive-gray (5Y 5/2); clay, firm to hard, fissile; black lignite in upper interval; sand, very fine to fine, subangular to subround, iron stained, trace mica	10	430-440	Clay, olive-gray (5Y 3/2), soft to firm, less dense; 5 percent pyritized coarse black lignite; 10 percent sand, fine to coarse, subround to angular; trace shell fragments; micaceous
10	260-270	Sand, very fine to fine, light-olive-gray (5Y 5/2), subround, trace white argillite grains; trace olive-gray clay; black lignite; 10 percent of grains show pyrite growths on surfaces; some mica	10	440-450	Clay, light-olive-gray (5Y 5/2) to olive-gray (5Y 3/2), with pale-yellowish-brown (10YR 6/2) specks, firm; silt; 30-40 percent shells; trace glauconite with some pyrite; calcareous clay throughout
70	270-340	No record	10	450-460	Clay, olive-gray (5Y 3/2) to dusky-yellowish-brown (10YR 2/2), firm, calcareous; increasing subangular sand; 1-2 percent very fine glauconite; abundant very large shells; trace pyrite and mica
10	340-350	Clay and shells, olive-gray (5Y 3/2) and pinkish-gray (5YR 8/1); clay, subfissile, firm, sticky dense; trace angular silt and very fine sand; some fine mica; shells are pinkish-gray, with abundant clay, various sizes appear fresh and unweathered, trace pyrite on shells	10	460-470	Clay, olive-gray (5Y 3/2) to light-olive-gray (5Y 5/2), firm, variable density; increasing sand, very coarse to fine, subangular; 1-2 percent glauconite, very fine; 40 percent shell fragments, mostly large, <i>Pecten</i> sp., <i>Cardium</i> sp., <i>Turritella</i> sp., and other broken shells; trace mica and coarse angular milky chert
10	350-360	Shells, pinkish-gray (5YR 8/1) and olive-gray (5Y 3/2), abundant <i>Pecten</i> sp., <i>Arica</i> sp., and some <i>Turritella</i> sp. as whole specimens, increased alteration to clay on the aragonitic shell layers, shells are 70 percent of sample; clay, firm, subfissile to fissile; trace euhedral pyrite crystals and angular silt; some mica	10	470-480	Clay, olive-gray (5Y 3/2), firm, nonsticky, calcareous; 20-30 percent fossils, <i>Pecten</i> sp., <i>Cardium</i> sp., <i>Polinices</i> sp., <i>Dentalium</i> sp., <i>Turritella</i> sp., and other fragments; 25 percent sand, coarse grains composed of fine grains cemented with silica, subround; mica; pyrite
10	360-370	Clay, olive-gray (5Y 3/2), firm, fissile, pyritic; trace silt and black lignite; 20-30 percent shells, <i>Pecten</i> sp., coarse shell fragments;			

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Well 291 (cont.)

Thickness (ft)	Depth (ft)	Lithology
10	480-490	Clay, olive-gray (SY3/2), firm, variable density, less calcareous; 10 percent sand, medium to coarse, subangular; 5 percent milky chert grains; 15-20 percent shell fragments; increasing pyrite; some mica; trace glauconite
10	490-500	Clay, olive-gray (SY 3/2), firm, blocky; trace silt and sand; 5-10 percent of sand is chert; some shell fragments with glauconite and pyrite alterations; mica
10	500-510	Clay, olive-gray (SY 3/2), blocky, soft, dense, sticky, uniform, massive; trace angular silt and euhedral very fine pyrite crystals; pale-yellowish-brown clay at base with fine to coarse shell fragments; trace glauconite and mica
10	510-520	Clay and shells, pale-yellowish-brown (10YR 6/2), becoming grayish-orange-pink (SYR 7/2) at base; clay, firm, fissile, noncalcareous, becoming shelly at base; shells, pale-brown, abundant pelecypods with 5 percent or less of gastropods; some glauconite, trace pyritic crystals on shells
10	520-530	Shells, grayish-orange-pink (SYR 7/2), clayey, very fine to very coarse fragments and whole specimens of pelecypods and gastropods, <i>Phacoides</i> sp., <i>Astarte</i> sp., <i>Pecten</i> sp., <i>Turritella</i> sp., and others, trace glauconite on shells
10	530-540	Shells, grayish-orange-pink (SYR 7/2), abundant pelecypod and some gastropod shell fragments; light-brown clay; glauconitic; trace rounded sand and mica
10	540-550	Sand and shells, light-olive-gray (SY 5/2) to grayish-orange-pink (SYR 7/2); sand, very fine to fine, subangular to subround, trace rounded calcareous grains; shells, increasing amount of <i>Turritella</i> sp.; glauconite and white clay with pyritic crystalline growth; abundant brown clay
10	550-560	Clay, dusky-yellowish-brown (10 YR 2/2), firm, hard streaks; sand, very fine to medium, subround; trace olive-gray clay at base; glauconitic; trace mica; some silt; few black carbonaceous flakes (lignite)
10	560-570	Clay, olive-gray (SY 3/2) and some dusky-yellowish-brown (10YR 2/2), soft, sticky, dense; angular silt; very fine sand; brown clay is not silty; slightly carbonaceous; micaceous
7	570-577	Clay, olive-gray (SY 3/2), soft, blocky, dense, uniform, massive; decreasing silt; trace sand and pyrite crystals; micaceous

Well 292

Geographic code: 0112
 Owner or name: U.S. Geological Survey
 Location: N392902 W745051
 Driller: N.J. Geological Survey
 Quad.: Dorothy Comp. date: 05/16/1985
 Atlas Sheet no. 35.04.567 Elevation: 92 ft
 Permit no. 35-4796 Depth drilled: 396 ft
 Observation well, on N.J. Department of Transportation property.

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, orange and red; dry clay
15	10-25	Clay, yellow; large gravel
20	25-45	Sand, coarse, white; stones (gravel)
11	45-56	Gravel, large, white, red and yellow
9	56-65	Clay, white, yellow stringers (laminations)
15	65-80	Gravel, multicolored; cemented sand
21	80-101	Sand, medium, tan and white, clean, uniform; red pebbles (gravel)
24	101-125	Clay and silt, brown, layers
2	125-127	Clay, white
20	127-147	Sand, fine to medium, white, clean
8	147-155	Clay, yellow
7	155-162	Sand and sandstone, clean
22	162-184	Sand, medium, tan and white, clean; coarser at 170-184 ft
6	184-190	Clay, gray, wood (lignite)
13	190-203	Sand, fine, greenish-gray, wood pebbles (lignite)
9	203-212	Clay, lighter-gray
3	212-215	Sand, fine, gray and white, fingers (layers)
10	215-225	Clay, gray, hard; wood (lignite)
15	225-240	Clay, sand and wood (lignite), gray, layers
10	240-250	Clay, gray, tight
22	250-272	Clay, gray; white sand; trace pebbles (gravel)
12	272-284	Clay, greenish-gray, shell fragments
19	284-303	Clay, dark-gray and brown
6	303-309	Clay, green
17	309-326	Sand, green; shell fragments
22	326-348	Clay, dark-gray
14	348-362	Sand, fine to medium, gray; shells
9	362-371	Clay, gray
25	371-396	Sand, coarse, clean; gravel; shells; lignite

Well 322

Geographic code: 0112
 Owner or name: Atlantic Company Cranberry Bogs
 Location: N393233 W744700
 Driller: -----
 Quad.: Newtonville Comp. date: 1892
 Atlas Sheet no. 31.45.482 Elevation: 40 ft
 Permit no. 51-137 Depth drilled: 45 ft
 From Woolman, 1893, p. 295.

Thickness (ft)	Depth (ft)	Lithology
6	0-6	Clay, white
8	6-14	Iron crust (bog iron)
31	14-45	Clay, sandy, diatomaceous

Well 323

Geographic code: 0112
 Owner or name: Horner's Bog
 Location: N393407 W744700
 Driller: -----
 Quad.: Newtonville Comp. date: 1892
 Atlas Sheet no. 31.45.188 Elevation: 50 ft
 Permit no. 51-138 Depth drilled: 106 ft
 From Woolman, 1893, p.295.

Thickness (ft)	Depth (ft)	Lithology
4	0-4	Sand, white
2	4-6	Hardpan, yellow
6	6-12	Clay, white
65	12-77	Quicksand and gravel
18	77-95	Clay, blue; pebbles (gravel)
11	95-106	Gravel, white

Hammonton Town

Well 087		Geographic code: 0113
Owner or name: P.E. Wolfe		
Location: N393941		W744426
Driller: Delmarva Drilling		
Quad.: Atsion		Comp. date: 05/23/1967
Atlas Sheet no. 32.31.432		Elevation: 75 ft
Permit no. 32-533		Depth drilled: 218 ft
Thickness (ft)	Depth (ft)	Lithology
8	0-8	Berm
1	8-9	Topsoil
7	9-16	Sand, fine to coarse, tan; gravel
4	16-20	Sand, mostly coarse, tan; gravel; gray clay layers, 16-19 ft; brown clay layers, 19-20 ft
4	20-24	Sand, fine to medium, white and tan; gray and brown clay layers at 20-23 ft; gray clay layers at 23-24 ft
7	24-31	Sand, fine to coarse; some gravel; thin gray clay layers; tan sand at 24-30 ft; white sand at 30-31 ft
4	31-35	Sand, mostly coarse, tan; gravel; bog iron
5	35-40	Sand, tan; some gravel; medium to coarse at 35-38 ft; fine to coarse at 38-40 ft
4	40-44	Sand, mostly fine, tan; brown clay
5	44-49	Clay, mostly tan and gray
2	49-51	Sand, fine to coarse, tan
2	51-53	Clay, brown
4	53-57	Clay, gray
3	57-60	Mud (silt), black, hard
2	60-62	Sand, fine to coarse, gray; small gray clay layers
9	62-71	Mud (silt), black, hard
16	71-87	Sand, white; gravel; mostly coarse at 71-76 ft; fine to coarse at 76-87 ft
2	87-89	Clay, gray
31	89-120	Sand, white; fine at 89-99 ft and 109-120 ft; fine to coarse at 99-109 ft; trace white clay at 113-120 ft
1	120-121	Clay, gray and tan, mixed
1	121-122	No record
4	122-126	Clay, yellow
4	126-130	Sand, fine, tan
7	130-137	Sand, fine to coarse, white and tan; gravel
5	137-142	Sand, fine, tan
8	142-150	Mud (silt), black
1	150-151	Sand, fine to coarse, gray
3	151-154	Mud (silt), black
37	154-191	Sand, fine to coarse; white at 154-158 ft and 170-174 ft; tan at 158-170 ft and 174-183 ft; some gravel at 158-191 ft; brown, 183-191 ft
3	191-194	Sand, mostly coarse, brown; some gravel; bog iron
3	194-197	Sand, fine to coarse, white; gravel
5	197-202	Sand, fine to medium, white
1	202-203	Sand, fine to coarse, tan; some gravel
15	203-218	Sand, mostly coarse, tan; gravel

Well 095		Geographic code: 0113
Owner or name: Board of Water Commissioners		
Location: N393828		W744932
Driller: Layne-N.Y.		
Quad.: Hammonton		Comp. date: 01/18/1978
Atlas Sheet no. 31.34.676		Elevation: 115 ft
Permit no. 31-12437		Depth drilled: 298 ft
Thickness (ft)	Depth (ft)	Lithology
5	0-5	Clay, yellow, sandy
18	5-23	Sand, yellow; clay
8	23-31	Sand and gravel
21	31-52	Sand; gravel; clay streaks
40	52-92	Clay, sandy; sand streaks; clay, 52-72 ft
21	92-113	Clay, sand streaks
12	113-125	Sand and gravel
29	125-154	Clay; sand and gravel streaks at 125-135 ft; hard streaks, 135-154 ft
20	154-174	Sand, coarse; gravel; clay streak
32	174-206	Sand, fine to coarse; gravel, 195-206 ft
9	206-215	Sand, fine to medium; gravel; clay streaks
10	215-225	Sand, coarse to medium; gravel
4	225-229	Clay, gray
6	229-235	Sand, fine
63	235-298	Clay; gray at 235-256 ft; grayish-yellow at 256-277 ft; grayish-brown at 277-293 ft; hard, gray at 293-298 ft

Well 096		Geographic code: 0113
Owner or name: Board of Water Commissioners		
Location: N393842		W744641
Driller: Layne-N.Y.		
Quad.: Hammonton		Comp. date: 07/14/1967
Atlas Sheet no. 31.35.483		Elevation: 90 ft
Permit no. 31-5022		Depth drilled: 245 ft
Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand, fine, light-brown
13	10-23	Clay, light-gray and yellow, sandy
67	23-90	Sand, fine to coarse, brown; gravel; yellow and white clay streaks, 43-90 ft
95	90-185	Sand, fine to medium, brown; gravel
60	185-245	Sand, fine to coarse, brown

Well 097		Geographic code: 0113
Owner or name: Atlantic City Expressway		
Location: N393700		W744926
Driller: A. C. Schultes		
Quad.: Newtonville		Comp. date: 05/04/1964
Atlas Sheet no. 31.34.946		Elevation: 85 ft
Permit no. 31-4701		Depth drilled: 256 ft
Thickness (ft)	Depth (ft)	Lithology
3	0-3	Clay, yellow; stone (gravel)
21	3-24	Clay, yellow and gray
8	24-32	Sand and gravel
34	32-66	Clay, black
48	66-114	Clay, yellow; some sand and gravel
13	114-127	Sand and gravel
93	127-220	Clay, black
18	220-238	Sand and gravel
36	238-256	Sand and gravel; black clay at 238-256 ft

Hammonton Town

Well 326

Geographic code: 0113

Owner or name: Hammonton

Location: N393759

W744824

Driller: Kisner and Bennett

Quad.: Hammonton

Comp. date: 1902

Atlas Sheet no. 31.34.698

Elevation: 110 ft

Permit no. 51-139

Depth drilled: 316 ft

From Woolman, 1903, p. 74.

Thickness (ft)	Depth (ft)	Lithology
6	0-6	Gravel, yellow; ironstone conglomerate crusts (coating) near the top
10	6-16	Clay, yellow, stiff
104	16-120	Sand, fine to very coarse, yellow, water-bearing at 25-120 ft
26	120-146	Sand, darker-yellow, clayey
16	146-162	Clay, black, stiff; somewhat sandy at 146-156 ft; very sandy at 156-162 ft
20	162-182	Sand, orange-yellow, water-bearing
14	182-196	Clay, black, stiff
34	196-230	Clay, dark, very sandy
8	230-238	Sand, brownish, water-bearing
6	238-244	Sand, very peculiar red, water-bearing
71	244-315	Sand, coarse, somewhat yellowish; water-bearing at 244-310 ft
1	315-316	Clay, black, tenacious

Well 400

Geographic code: 0113

Owner or name: Hammonton Water Department

Location: N393759

W744824

Driller: ----

Quad.: Hammonton

Comp. date: 1920

Atlas Sheet no. 31.34.698

Elevation: 110 ft

Permit no. 51-140

Depth drilled: 304 ft

Log by Peter Sugarman, N.J. Geological Survey.

Thickness (ft)	Depth (ft)	Lithology
3	0-3	Sand, fine to coarse, dark-yellowish-brown (10YR 4/2), angular, micaceous; silty organic matrix
12	3-15	Sand, coarse, dark-yellowish-orange (10YR 6/6), subangular, waxy quartz, some medium; silty matrix
7	15-22	Silt, light-brown (5YR 6/4); 20 percent sand, fine to medium, subangular, quartz, some feldspar
21	22-43	Sand, fine to medium, grayish-orange (10YR 7/4), quartz, subangular
4	43-47	Sand, very fine to fine, moderate-yellowish-brown (10YR 5/4), quartz; some silty matrix
21	47-68	Sand, medium to coarse, pale-yellowish-orange (10YR 8/6); trace gravel, angular to subangular; some silt
1	68-69	Sand, medium, dark-yellowish-orange (10YR 6/6), some indurations; silty matrix
55	69-124	Sand, coarse, very-pale-orange (10YR 8/2), subangular; some very coarse gravel

Transitional, Cohansey Sand, Kirkwood Formation:

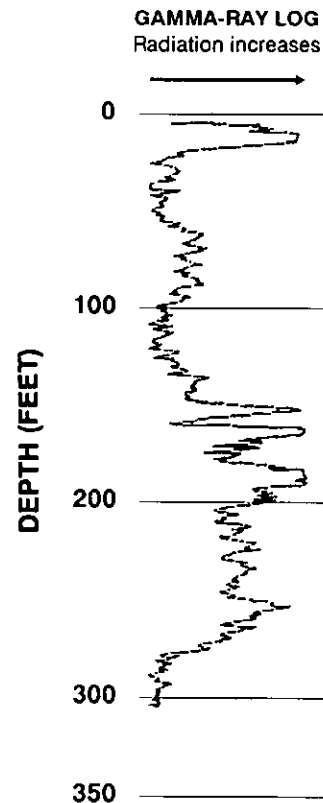
10	124-134	Sand, fine, pale-yellowish-brown (10YR 6/2), subangular, vitreous quartz, silty; very fine sand matrix
9	134-143	Sand, coarse, dark-yellowish-brown (10YR 4/2), angular; silty matrix
24	143-167	Clay, dark-yellowish-brown (10YR 4/2), hard, micaceous; trace sand
15	167-182	Sand, medium, pale-yellowish-brown (10YR 6/2), subangular; some mica

Kirkwood Formation:

17	182-199	Silty clay, pale-yellowish-brown (10YR 6/2); some mica and quartz
20	199-219	Sand, dark-yellowish-brown (10YR 6/20); silty matrix; some interbedded siltstone
9	219-228	Sand, fine to very coarse, dark-yellowish-brown (10YR 6/2); some mica; trace gravel
20	228-248	Clay, pale-yellowish-brown (10YR 6/2); some mica and fine quartz sand
56	248-304	Sand, coarse to very coarse, pale-yellowish-brown (10YR 6/2), subround, quartz; some gravel

Well 400

Hammonton Water Department



Longport Borough

Well 210 (cont.)

Thickness (ft)	Depth (ft)	Lithology
100	140-240	Sand, fine to medium, gray; gravel
30	240-270	Sand, coarse to fine, gray and black; gray clay streaks
38	270-308	Sand, fine to medium
30	308-338	Sand, fine to coarse; gravel
27	338-365	Sand, fine to medium
15	365-480	Clay, greenish-gray, sandy
73	480-553	Sand and gravel
88	553-641	Sand and clay
99	641-740	Clay, gray; some sand streaks at 641-707 ft
66	740-806	Sand, fine to medium, brown and gray
34	806-840	Clay, gray

Well 307

Geographic code: 0115

Owner or name: M.S. McCullough

Location: N391847

W743126

Driller: Uriah White

Quad.: Ocean City

Comp. date: 1895

Atlas Sheet no. 36.23.249.

Elevation: 10 ft

Permit no. 56-79

Depth drilled: 803 ft

From Woolman, 1896, p. 83.

Thickness (ft)	Depth (ft)	Lithology
55	0-55	Ordinary beach sand; some shell fragments, 45-55 ft
20	55-75	Mud or clay, diatoms
50	75-125	Sand, whitish
5	125-130	Sand, clayey; no microorganisms
38	130-168	Sand, yellowish-white
6	168-174	Sand, clayey
86	174-260	Sand, drab
12	260-272	Clay, sandy
20	272-292	Sand
18	292-310	Clay, sandy, diatoms
10	310-320	Sand, clay
10	320-330	Clay, diatoms; mollusk fragments
44	330-374	Sand, clayey
126	374-500	Clay, diatoms; sandy at 480-500 ft
5	500-505	Clay, sand and shells
159	505-664	Clay, diatoms; sandy at 505-613 ft
56	664-720	Clay, sandy; shells
83	720-803	Sand, brown, water-bearing; lower 23 ft finer, lighter-brown than above

Well 376

Geographic code: 0115

Owner or name: Longport Water Department

Location: N391821

W743208

Driller: ----

Quad.: Ocean City

Comp. date: 06/26/1961

Atlas Sheet no. 36.23.196

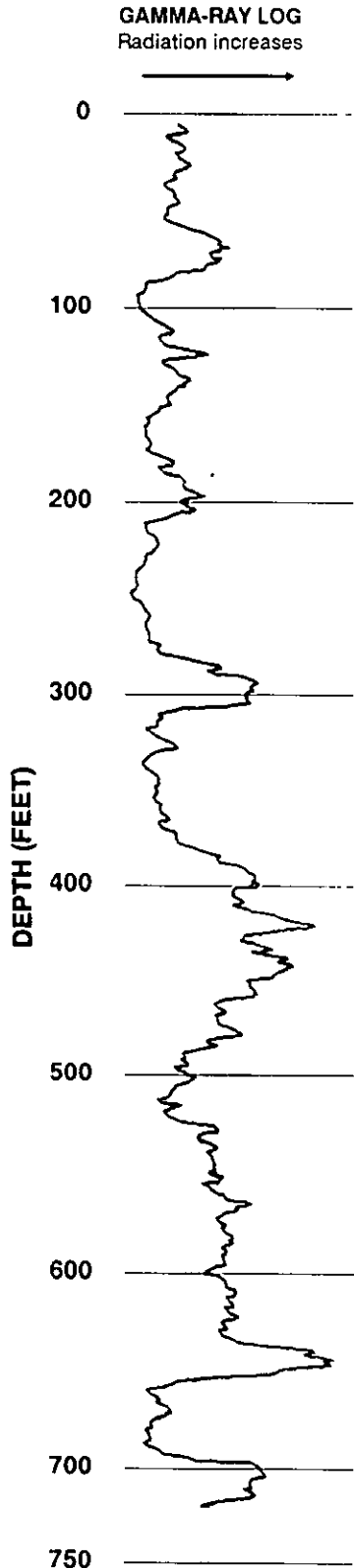
Elevation: 6 ft

Permit no. 56-80

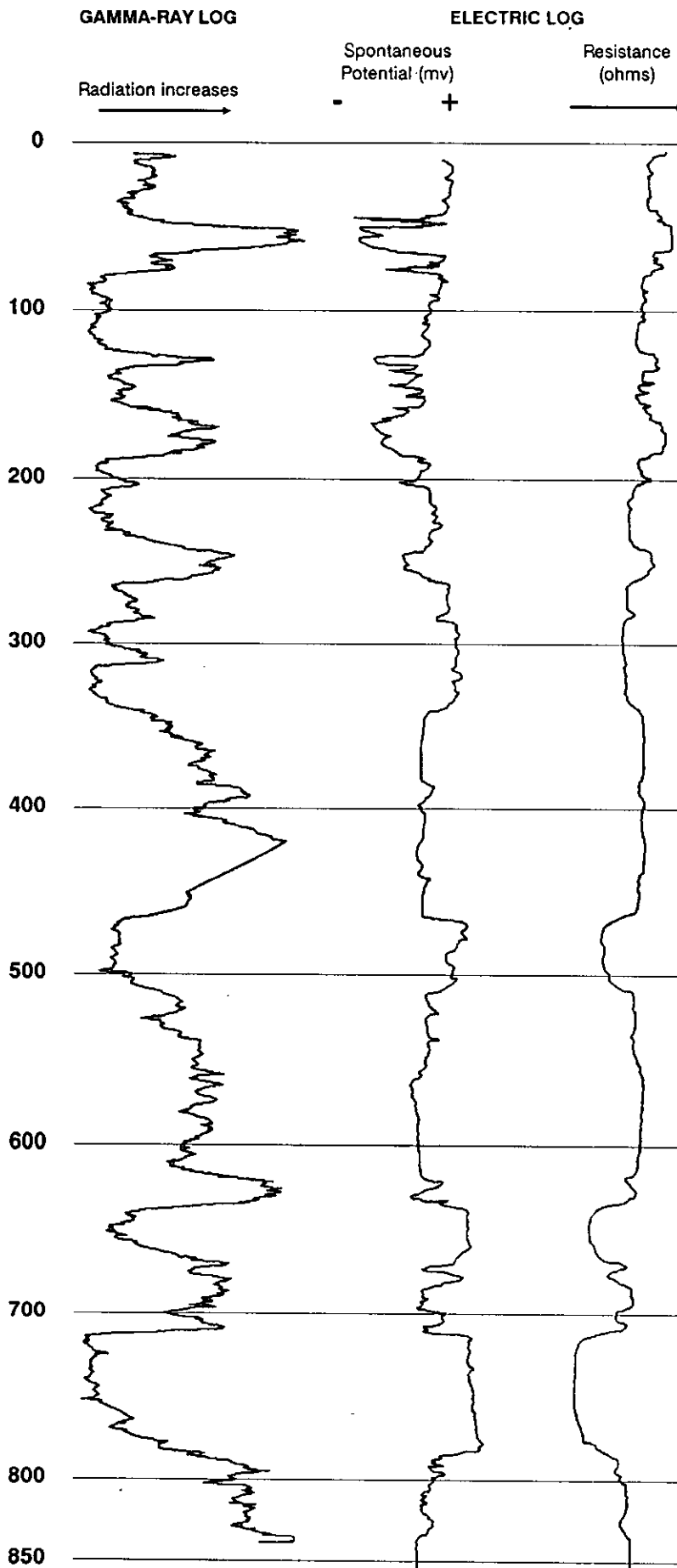
Depth drilled: 803 ft

No lithologic log available.

Well 376 Longport Water Department



WELL 018
U.S. GEOLOGICAL SURVEY



Well 018 (Cont.)

Thickness (ft)	Depth (ft)	Lithology
10	330-340	Clay, grayish-olive-green (SGY 3/2), soft, blocky; abundant sand, fine to coarse, pyrite coating on some grains; trace ironstone in clay; some fine lignite
10	340-350	Clay, grayish-olive-green (SGY 3/2), soft, blocky, uniform, becoming more silty; some sand, fine to very coarse; trace dolomitic shells and lignite
10	350-360	Clay, grayish-olive-green (SGY 3/2), very soft to soft, blocky; decreasing silt and coarse sand; some fossil fragments; trace pyritic crystals
10	360-370	Clay, grayish-olive-green (SGY 3/2) to olive-gray (SY 3/2), soft to firm, blocky, uniform, silty; trace sand, fine to coarse, subangular; some dark-brown to black lignitic flakes; some pyritic inclusions; trace mica
10	370-380	Clay, olive-gray (SY 3/2) to grayish-olive-green (SGY 3/2), soft, blocky; abundant angular quartz sand; trace dolomitic fossils; some very fine mica
10	380-390	Clay, olive-gray (SY 3/2), soft, sticky when wet, very silty; sand, medium to coarse; some pyrite flakes and crystals; some lacey pyrite on sand; occasional calcareous shell fragments, pelecypod fragments; 1 percent mica
10	390-400	Clay and silt, olive-gray (SY 3/2); clay, soft to firm, blocky to fissile, less uniform, very silty grading to clayey silt at base; some calcareous pelecypod shells; increasing sand; mica; trace pyrite
10	400-410	Clay, olive-gray (SY 3/2) to light-olive-gray (SY 5/2), soft, round to blocky, sticky; some pelecypod and gastropod shells; silty with trace silt-sized glauconite; pyrite and very fine clear mica; grading to sand at base
10	410-420	Sand, fine to very coarse, light-olive-gray (SY 5/2), very silty, subangular small grains to subround large grains, coarse to very coarse grains are silica-cemented fine to medium sand which have pyritic and argillaceous coating on grains; some mica; trace shell fragments
10	420-430	Clay, olive-gray (SY 3/2), soft, sticky, dense, silty in part; decreasing sand, very fine to medium, subround; some lignite, fine mica; trace glauconite, fine mica; trace shell fragments in very thin noncalcareous clay
10	440-450	Clay, light-olive-gray (SY 5/2) to grayish-olive-green (SGY 3/2), firm, blocky to slightly fissile; very silty grading to sand; sand, very fine to fine with trace coarse; glauconite and isolated pyrite; some black carbonaceous flakes; mica; trace shell fragments
10	450-460	Clay, olive-gray (SY 3/2) to grayish-olive-green (SGY 3/2), soft, sticky, blocky, dense, uniform in appearance, some sand, fine to coarse, round; some pelecypod fragments; mica; trace silt
10	460-470	Clay, olive-gray (SY 3/2), soft to very soft "when wet," blocky, dense, massive; trace silt; some glauconite; white clay; pyrite
10	470-480	and mica; trace sand, round to subround; black lignite flakes Clay, olive-gray (SY 3/2), grayish-olive-green (SGY 3/2) mottled streaks, soft to firm, blocky; silt and fine sand; glauconite; trace black lignite; some shells; pyrite increasing on shells and sand
10	480-490	Clay, olive-gray (SY 3/2) to light-olive-gray (SY 5/2), soft, dense, massive; sand, very fine to coarse, round; some black carbonaceous flakes (lignite), some flakes pyritized; some fine clear mica
10	490-500	Shells and sand; shells very-pale-orange (10YR 8/2) to grayish-orange-pink (5YR 7/2), partial and whole specimens, <i>Turriella</i> sp., <i>Corbula</i> sp., <i>Astarte</i> sp., and other gastropods and pelecypods, etc.; trace sand, very fine to very coarse sand; clay; some glauconite,
10	500-510	Sand, medium to coarse, dusky-yellow-green (SGY 5/2) to grayish-olive-green (SGY 3/2), subround; trace glauconite, silt, and black carbonaceous flakes (lignite); pyritic growths on flakes and sand; iron stained clay
10	510-520	Sand, medium to very coarse, dusky-yellow-green (SGY 7/2) to grayish-olive-green (SGY 3/2), subround, some gravel, 3-5 percent glauconite with trace pyritic growth on larger grains; trace iron staining and ironstone (bog iron); grading to clay at base, soft; locally abundant black lignite; trace shells
10	520-530	Clay, grayish-olive-green (SGY 3/2) to olive-gray (SY 3/2), soft, sticky, lignitic; trace calcareous shells; some mica; sand, very fine to gravelly at top of section; some iron staining; trace glauconite and pyrite
10	530-540	Clay, olive-gray (SY 3/2), soft to very soft, sticky, dense; some angular silt; shells; glauconite; trace pyrite; decreasing sand
10	540-550	Clay, olive-gray (SY 3/2), soft, dense, massive; some silt and sand; trace shells, mostly pelecypods; slightly glauconitic; trace pyrite and mica
10	550-560	Clay, olive-gray (SY 3/2) with trace light-olive-gray (SY 5/2) streaks, soft, blocky; some shells and fine mica; pyritic
10	560-570	Clay, olive-gray (SY 3/2), soft, dense, massive, sticky; trace angular silt; some coarse sand with pyrite coated finer sand; trace fine clear mica; black lignite
10	570-580	Clay, olive-gray (SY 3/2), soft to very soft, blocky, dense, massive, uniform; some silt and pyrite; 2-3 percent calcareous shells; trace glauconite, pyrite and mica
10	580-590	Clay, olive-gray (SY 3/2), soft; trace silt and sand; very pale-orange to pink pelecypod and gastropod shell debris; trace glauconite; mica
10	590-600	Clay, olive-gray (SY 3/2), soft, blocky, massive, dense, uniform; mica; shells; trace glauconite and pyrite; some sand; mica flakes
10	600-610	Clay, olive-gray (SY 3/2), soft, dense, uniform; 5 percent shells, slightly altered to glauconite; some angular silt; pyritic; decreasing lignite; micaceous

Margate City

Well 018 (Cont.)

Thickness (ft)	Depth (ft)	Lithology
10	610-620	Clay, olive-gray (SY 3/2), soft, sticky, blocky; 1-3 percent silt; some pelecypod shells; decreasing pyrite; micaceous
10	620-630	Clay, olive-gray (SY 3/2) with light-olive-gray (SY 5/2) streaks, soft to firm, dense; trace sand, very fine to medium, subround; trace shell fragments; very fine black lignite
10	630-640	Clay, olive-gray (SY 3/2), soft, sticky when wet, dense, massive, very uniform, silty; pelecypod shells 10 percent altered to glauconite; micaceous
10	640-650	Clay and shells; clay, olive-gray (SY 3/2), with very pale-orange (10YR 8/2) streaks, soft, blocky to fissile; abundant pale-orange shells, <i>Turritella</i> sp., <i>Terebra</i> sp., <i>Arca</i> sp., <i>Tellina</i> sp., and others, some alteration to glauconite; trace pyrite and sand
10	650-660	Clay, olive-gray (SY 3/2), soft, blocky, dense; decreasing shells, tan to pale-orange; some mica; trace silt
10	660-670	Clay, olive-gray (SY 3/2) to light-olive-gray, soft, slightly fissile; some coarse shells; sand, fine to medium, subrounded, stained; some clear mica
10	670-680	Sand and clay; sand, fine to coarse, light-olive-gray (SY 5/2) to olive-gray (SY 3/2), subangular to subround, slight silica cementation; clay, olive-gray, soft; trace glauconite and silt; some light-gray chert; pyrite; coarse 7-8 mm shell fragments, <i>Arca</i> sp. predominates, with few large <i>Turritella</i> sp.; some very fine mica
10	680-690	Sand, medium to coarse, light-olive-gray (SY 5/2), subround, silty; abundant clay, olive-gray; glauconitic; trace fossil fragments and clear biotite mica
10	690-700	Sand, medium becoming fine to very fine, light-olive-gray (SY 5/2), subangular; trace light-olive-gray clay; trace ironstone (bog iron); some pelecypod shells
10	700-710	Clay, olive-gray (SY 3/2), soft, sticky, massive; shells with trace glauconite; sand, fine to coarse; trace iron stone (bog iron); micaceous
10	710-720	Clay, olive-gray (SY 3/2) to (SY 4/1), soft, sticky, not uniform; trace pyritic crystals on shells; sand, fine to medium; trace silt in clay; some ironstone (bog iron)
10	720-730	Clay, olive-gray (SY 3/2) to (SY 4/1), very soft to soft, massive; sand, increasing fine to medium; trace pelecypod shells and glauconite; silty in part; mica
10	730-740	Clay and sand, olive-gray (SY 3/2) becoming light-olive-gray (SY 5/2) at base; clay, soft to firm, blocky; sand, some fine to medium; some mica; trace glauconitic shell fragments
10	740-750	Sand, fine to medium, light-olive-gray (SY 5/2), subround; decreasing very small shell fragments, little or no alteration
10	750-760	Clay, olive-gray (SY 3/2), trace grayish-orange-pink (5YR 7/2), bioclastic streaks, soft to slightly firm, fissile; pelecypod and gastropod shells; trace glauconite; sand, medium to coarse
10	760-770	Sand, medium to coarse, light-olive-gray (SY 5/2), subround; 20 percent or less of olive-gray clays and shell fragments; trace glauconite and mica

CORE DESCRIPTIONS

10	770-780	Sand, medium to coarse, light-olive-gray (SY 5/2), subround; increasing clay; trace angular silt; some shells
10	780-790	Sand and clay, light-olive-gray (SY 5/2) to olive-gray (SY 3/2); sand, medium to coarse, subround, trace fine to medium subangular sand; olive-gray clays; some glauconite
10	790-800	Sand and clay; sand, light-olive-gray (SY 5/2), decreasing fine to coarse, increasing subangular grains; clay, olive-gray (SY 3/2); some very fine to fine shell fragments; glauconitic
10	800-810	Clay, olive-gray (SY 3/2) to (SY 4/1), to dusky-yellowish-brown (10YR 2/2), soft to firm; some shell fragment; trace glauconitic shells; brown iron-stained clay; dense iron stone (bog iron), some pyritic growths on sand
10	810-820	Clay, pale-yellowish-brown (10YR 6/2) to dark-yellowish-brown (10YR 2/2), firm, blocky; trace sand, pyrite and subround silt; iron staining
10	820-830	Clay, dusky-yellowish-brown (10YR 2/2), firm, blocky; very iron stained; pyritic; trace olive-green clay at top of section, few fossil fragments in green clay; some sand
10	830-840	Clay, dusky-yellowish-brown (10 YR 2/2), firm, blocky, not sticky; very silty changing to clayey silt; trace glauconitic silt; some sand; abundant iron staining
250		Clay, olive-gray (SY 3/2), with light-olive-gray (SY 5/2) streaks, soft, blocky to fissile, dense in part; no fossils; black carbonaceous (lignite) flakes, very fine, along bedding planes; sand, 10 percent or less, medium to very coarse, thin partings, poorly sorted; clay, some pyrite crystals disseminated throughout, mica flakes defining bedding, structure-compaction features visible with nonuniformity of sandy partings at high angles and discontinuous clay bedding
390		Clay, olive-gray (SY 3/2), with grayish-olive-green (5GY 3/2) streaks, soft, fissile to subblocky, interbedded with abundant very pale-orange pelecypod and gastropod shells, <i>Ostrea</i> sp., <i>Arca</i> sp., <i>Turritella</i> sp., among others; silty at bioclastic contacts; trace sand, fine to coarse, angular to subround, sand lenses are discontinuous; structure shows differential compaction on lithologic contacts
570		Clay, olive-gray (SY 3/2) to light-olive-gray (SY 5/2), blocky to subblocky, massive; trace angular silt and black very fine carbonaceous (lignite) flakes; some pelecypod shells disseminated throughout, <i>Astarte</i> sp., <i>Arca</i> sp., with fragments of others; micromicaceous structure; discontinuous compaction due to dewatering of clay
685		Clay, olive-black (5Y 2/1) "when dry," firm, blocky, uniform, massive, dense; dolomitic in part; trace sand, medium to coarse, subround, with no discernible structure; some angular silt to very fine pyrite crystals; trace mica; lack of structure due to uniformity of core

Margate City

Well 170 **Geographic code: 0116**

Owner or name: Margate City
 Location: N392003 W743013
 Driller: Layne-N.Y.
 Quad.: Ocean City Comp. date: 06/28/1955
 Atlas Sheet no. 36.13.899 Elevation: 8 ft
 Permit no. 36-197 Depth drilled: 810 ft
 From Clark and others, 1968, p. 34, 48.

Thickness (ft)	Depth (ft)	Lithology
Recent series:		
0	0-11	Fill and fine sand
14	11-25	Sand
Cape May Formation:		
76	25-101	Sand and gravel streaks
Cohansey Sand:		
3	101-104	Clay, soft
41	104-145	Sand; clay streaks at 104-118 ft
6	145-151	Clay
23	151-174	Sand; hard at 161-174 ft
66	174-240	Clay, sandy; wood (lignite) at 216-240 ft
33	240-273	Sand, gravel and clay streaks
Kirkwood Formation:		
37	273-310	Sand, gravel and clay streaks
30	310-340	Sand, fine, gray; clay streaks
305	340-645	Clay; sandy at 340-450 ft and 485-645 ft; hard at 365-450 ft and 485-520 ft
4	645-649	Sand, hard
21	649-670	Clay, tough
55	670-725	Sand and clay streaks
15	725-740	Clay
63	740-803	Sand, medium to coarse
7	803-810	Clay, tough

Well 171 **Geographic code: 0116**

Owner or name: Margate City
 Location: N392008 W743017
 Driller: Layne-N.Y.
 Quad.: Ocean City Comp. date: 06/24/1958
 Atlas Sheet no. 36.13.898 Elevation: 5 ft
 Permit no. 36-278 Depth drilled: 800 ft

Thickness (ft)	Depth (ft)	Lithology
17	0-17	Beach sand and surf mud
13	17-30	Mud and fine sand
70	30-100	Sand and gravel; clay at 65-100 ft
12	100-112	Clay and gravel streaks
50	112-162	Sand and clay streaks
88	162-250	Sandy clay
90	250-340	Sand, clay and shells
135	340-475	Clay
45	475-520	Sand, shells and clay
120	520-640	Clay
60	640-700	Sand and shells
33	700-733	Clay
47	733-780	Sand "good" (water-bearing)
20	780-800	Clay and sand streaks

Well 207 **Geographic code: 0116**

Owner or name: Margate City
 Location: N391932 W743100
 Driller: Layne N.Y.
 Quad.: Ocean City Comp. date: 06/13/1963
 Atlas Sheet no. 36.23.229 Elevation: 5 ft
 Permit no. 36-326 Depth drilled: 804 ft

Thickness (ft)	Depth (ft)	Lithology
20	0-20	Fill and river mud
80	20-100	Sand

5	100-105	Clay
35	105-140	Sand and streaks of clay
180	140-320	Clay; sandy at 145-256 ft; sand streaks, 300-320 ft
19	320-339	Sand
406	339-745	Clay; sandy at 480-745 ft; shells
10	540-550	Sand streaks, 550-640 ft; hard streak, 640-645 ft
59	745-804	Sand, medium to coarse; fine gravel

Well 208 **Geographic code: 0116**

Owner or name: Margate City
 Location: N391928 W743056
 Driller: Layne N.Y.
 Quad.: Ocean City Comp. date: 06/29/1962
 Atlas Sheet no. 36.23.225 Elevation: 5 ft
 Permit no. 36-318 Depth drilled: 804 ft

Thickness (ft)	Depth (ft)	Lithology
2	0-2	Fill
23	2-25	Beach sand
112	25-137	Sand, fine to coarse; gravel and clay streaks
5	137-142	Clay
44	142-186	Sand, fine to coarse; gravel; clay streaks
554	186-740	Clay; sandy at 186-258 ft, 320-393 ft, 490-574 ft, and at 682-740 ft; tough at 393-486 ft and 574-682 ft; sand streaks at 320-393 ft; shells at 529-574 ft and 682-740 ft; hard streaks at 486-490 ft
64	740-804	Sand, fine to coarse; medium gravel

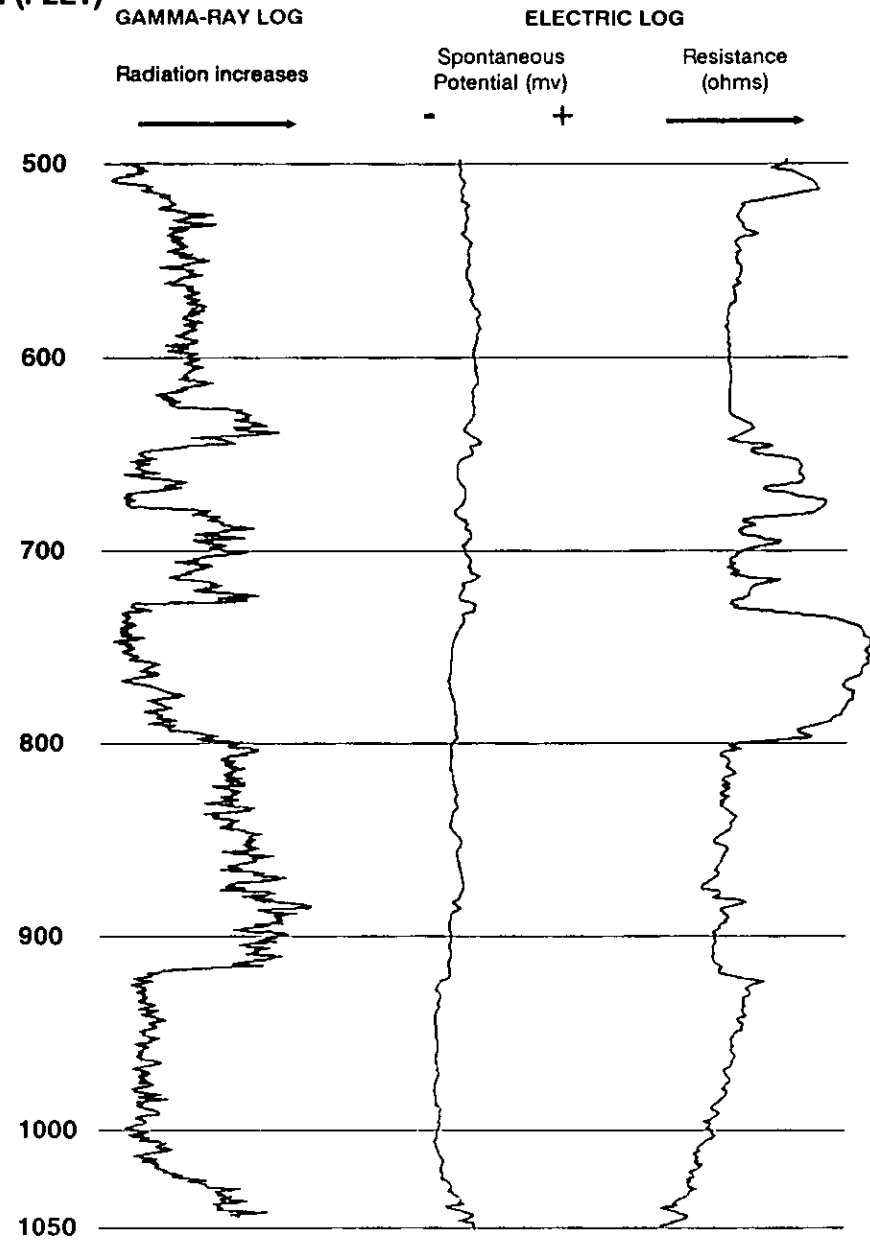
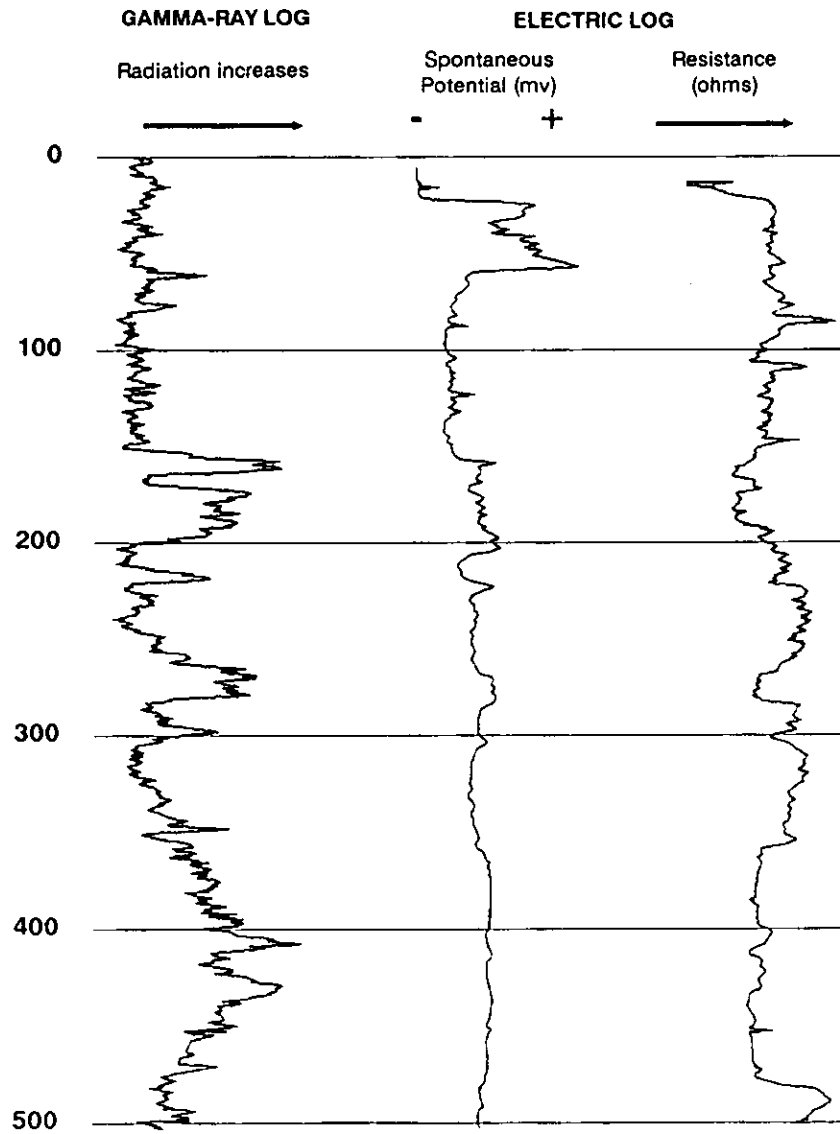
Well 437 **Geographic code: 0116**

Owner or name: U.S. Geological Survey
 Location: N392017 W743002
 Driller: Grassroots Production
 Quad.: Ocean City Comp. date: 05/17/1988
 Atlas Sheet no. 36.13.899 Elevation: 5 ft
 Permit no. 36-10548 Depth drilled: 1,055 ft
 Observation well, at Firehouse no. 2, Fremont Avenue
 Geophysical log on p. 72,

Thickness (ft)	Depth (ft)	Lithology
2	0-2	No sample
3	2-5	Sand
5	5-10	Sand, very fine to fine; shell fragments
5	10-15	Clay and muck, interbedded; clay, olive-gray (5Y 4/2); muck, organic, dark-yellowish-brown (10YR 5/6), foul odor
5	15-20	Silty clay, olive-gray (5Y 4/2), soft, foul odor; slightly sandy
12	20-32	Sandy silty clay, olive-gray (5Y 4/2), foul odor; sand, very fine; increasing clay at 32 ft
8	32-40	Clayey silty sand, olive-gray (5Y 3/2); many small roots and organic matter, foul odor; sand, fine
8	40-48	Sandy clay, olive-gray (5Y 3/2); sand, very fine
2	48-50	Sand, coarse to very coarse, subround; shell fragments
1	50-51	Clay, very hard drilling; into zone of brown organic sandy muck
5	51-56	Peat, olive-brown (5Y 3/4), soft; sand
1	56-57	Sand and gravel, coarse to 4 mm, subangular to subround, mostly clear and white quartz; trace chert
6	57-63	Sand, coarse to very coarse, gray; some shells
10	63-83	Sand and gravel, light-gray (N7); sand, very coarse; interbedded with fine silty sand

WELL 437
U.S. GEOLOGICAL SURVEY

DEPTH (FEET)



Well 437 (cont.)

Thickness (ft)	Depth (ft)	Lithology				
50	83-133	Sand, up to very coarse; light-gray (N7), interbedded with thin layers of dark-gray silt at 83-93 ft; grayish-yellow (SY 7/4) at 93-103 ft; dusky-yellow (SY 6/4) at 103-123 ft; interbedded with white and dark-gray silt at 103-110 ft; fine gravel, up to 3 mm at 110-123 ft; yellowish-brown (10YR 6/4) at 123-133 ft	10	603-613	Silty clay, olive-black (SY 2/1), micaceous; shell fragments	
10	133-143	Sand and gravel, multicolored, yellow, gray and white; interbedded with thin layers of white, tan and gray silt to clayey silt; sand, up to very coarse; gravel, up to 2 mm	10	613-623	Silty clay, dusky-yellowish-brown (10YR 2/2); clay, clumps, olive-black, darker than at 603-613 ft	
14	143-157	Sand, up to very coarse, yellowish-brown (10YR 6/4); lignite, abundant at bottom of interval	7	623-630	Silty clay, dusky-yellowish-brown (10YR 2/2); some mica	
6	157-163	Sand and gravel, multicolored; gravel, to 4 mm; interbedded with white and tan silt	Core	2	630-632	Clayey silt, olive-gray (SY 3/2); some mica and very fine sand; many shell fragments
20	163-183	Sand and gravel, interbedded; sand, fine to medium, silty; gravel, up to 3 mm; lignite, abundant, pale-yellowish-gray (SY 8/2)	11	632-643	Silty clay, olive-gray (SY 3/2); many shell fragments; some quartz pebbles	
15	183-198	Sand, medium to coarse, interbedded with silty sand, sandy clay and silt, white, medium-gray, grayish-green (10GY 5/2) and dark-olive-gray (SY 2/2); decreasing lignite and gravel	10	643-653	Shelly sand, poorly sorted; shells, 5-125 mm, subangular; some silt; hard layer of angular quartz in mud, with some cementation at 645 ft	
25	198-223	Clayey sand to sandy clay, pale-gray (N7), pale-green, light-olive-gray (SY 6/1); lignite, common, up to 77 mm	10	653-663	Shelly sand, well sorted; sand, medium, subangular; some silt	
40	223-263	Clayey sand to sandy clay, various shades of gray, and dark-organic-brown; abundant lignite; some clay, dark-brown, stiff; sand, increasing at 233-243 ft; lots of silt and clay, increasing sand at 243-263 ft	10	663-673	Shells, fragments, large, 35 percent; sand, coarse; increasing silt and clay; some 1-2 mm quartz pebbles, subangular, poorly sorted	
20	263-283	Clay, olive-gray (SY 4/1), stiff, locally silty; clayey silt, olive-gray (SY 4/1), and very fine to fine sand at 273-283 ft	20	673-693	Sand, coarse, poorly sorted; some silt; 20 percent shelly lenses; some subangular 2 mm quartz pebbles at 683-693 ft	
20	283-303	Silty clay, olive-gray (SY 4/1), stiff, blocky; some very fine sand	10	693-703	Clay, dusky-brown (5YR 2/2); some interbedded silt and sand	
17	303-320	Clayey sand, olive-gray (SY 4/1), stiff; sand, very fine to fine; fine grained organic material; interbedded sand, up to coarse	20	703-723	Clay, dusky-brown (5YR 2/2), layered; sand, coarse to medium, subangular; 20 percent shells; some silt	
3	320-323	Sand, medium to very coarse, brown; many quartz grains, orangish and brownish	20	723-743	Sand, medium, subangular; 20 percent shells; some silt	
10	323-333	Silty sand, olive-gray (SY 4/1); sand, very fine to fine, some coarse; clayey sand, olive-gray (SY 4/1), soft	50	743-793	Sand, coarse to medium, subangular; 20 percent shells	
12	333-345	Clayey sand, olive-gray (SY 4/1), increasingly clayey at 338-343 ft; sand, up to coarse	20	793-813	Sand, medium; some clay; small pieces of brown clay at 803-813 ft	
10	345-355	Clayey sand, olive-gray (SY 4/1), soft, stiff; sand, fine; large hard chunks at 353-355 ft	10	813-823	Clay, brown and green; shell fragments; some sand	
48	355-403	Clayey silt to clayey sand, olive-gray (SY 4/1), stiff, blocky; sand, very fine; shell fragments common at 363-403 ft; stiff to soft at 383-403 ft	10	823-833	Clay and sand, equal amounts; clay, green, soft; sand, coarse to medium, subangular; shells	
20	403-423	Clayey silt and clayey sand, olive-gray (SY 4/1) to (SY 4/2), hard to soft, blocky; sand, very fine; trace mica; harder, 413-423 ft	10	833-843	Clay, olive-gray (SY 4/1), soft, shelly, some hard lumps; some sand, medium, less shelly	
60	423-483	Clayey sand, olive-gray (SY 4/1) to (SY 4/2), stiff; sand, very fine; soft to hard, blocky, some layers of small shell fragments, 443-483 ft; sand, fine to medium, 473-483 ft	10	843-853	Clay, olive-gray (SY 4/1), almost-new shells, soft with some hard lumps	
35	483-518	Clayey sand, olive-gray (SY 3/2); sand, fine to medium, some coarse; increasing sand, many shell fragments at 493-518 ft; size of cuttings decreasing at 503-518 ft as opposed to previous confining unit	Core	2	853-855	Clay, dusky-yellowish-brown (10 YR 2/2); some silt; very fossiliferous, <i>Pecten</i> sp. found at top of core barrel
5	518-523	Clayey sand, olive-gray (SY 3/2), stiff, large cuttings; sand, very fine; slower drilling	18	855-873	Clay, olive; shells; sand, poorly sorted; pebbles, up to 2 mm, subangular to angular; clay, olive-gray (SY 3/2), at 863-873 ft	
80	523-603	Clayey sand, olive-gray (SY 3/1), soft to stiff, large cuttings; sand, very fine; blocky, fine mica and shell fragments at 543-563 ft; blocky, stiff, very fine mica and carbonaceous material common, 563-603 ft	10	873-883	Clay; shells and coarse sand, which may have fallen from above; hard layer at 882-883 ft	
			20	883-903	Clay and shells, no large cuttings; hard layer at 883-884 ft; decreased clay at 893-903 ft	
			10	903-913	Clay and shells; some clay, dusky-blue-green (5BG 3/2); fine sand and silt; some green quartz sand; decreasing clay content	
			10	913-923	Shells; sand, fine, black and green, quartz, glauconitic, clayey; quartz grain edges are tinted green	
			10	923-933	Shells and sand; shells, fragments increasing in size; sand, fine to very fine, black, glauconitic; loose quartz grains increasing in size; clay and glauconite clumps, dusky-yellow-green (5GY 5/2) to black	
			10	933-943	Shells and sand; sand, coarse, angular, quartz grain edges are tinted green; some clay, green, glauconitic	

Margate City

Well 437 (cont.)

Thickness (ft)	Depth (ft)	Lithology
20	943-963	Sand, medium, subangular, quartz grains tinted green, glauconitic; some glauconitic sand, medium to fine, black; shell fragments
30	963-993	Sand, medium, slightly finer than at 943-963 ft; driller reported hard zone at 990 ft
50	993-1043	Sand, medium to fine; silt; decreasing shell fragments; increasing silt and clay at 1003-

		1013 ft; darker green, clump of light-green glauconitic silty sand at 1013-1033 ft; olive-gray (5Y 4/1) silty clay in small blocks with black glauconitic sand, some lignite at 1033-1043 ft
	10	1043-1053 Sand and shells; sand, medium, glauconitic; silty clay, grayish-olive-green (5GY 3/2), lumpy; sand, fine, black, glauconitic
Core 2	10	53-1055 Clay, olive-gray; bifurcated zones of medium to coarse fossiliferous sand

Mullica Township

Well 007

Owner or name: Mullica Township Landfill
 Location: N393507
 Driller: A.C. Schultes
 Quad.: Egg Harbor City
 Atlas Sheet no. 32.41.355
 Permit no. 32-10935
 Joint exploratory borehole of N.J. Geological Survey and U.S. Geological Survey.

Geographic code: 0117

W744040

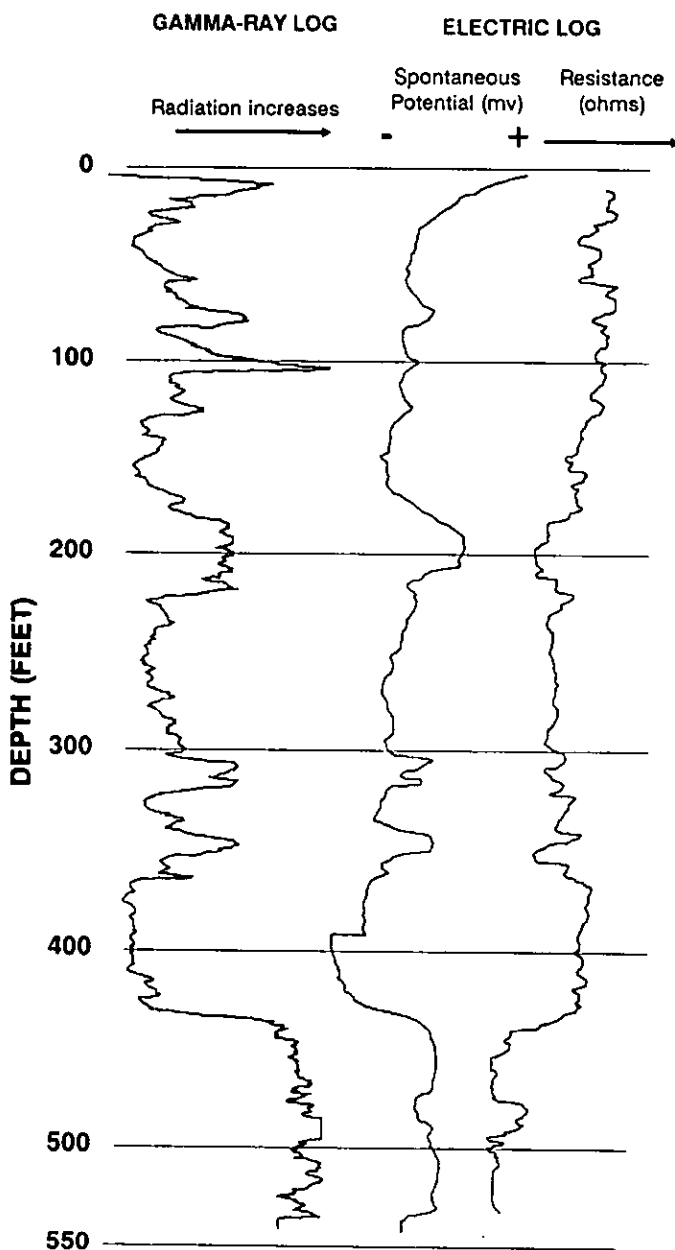
Comp. date: 02/02/1985

Elevation: 95 ft

Depth drilled: 540 ft

Thickness (ft)	Depth (ft)	Lithology
10	0-10	Sand and gravel, very fine to gravel, moderate-yellowish-brown (10YR 5/4), round to subround, frosted grains; clay; trace fine ironstone (bog iron)
10	10-20	Clay, pale-yellowish-brown (10YR 6/2) to moderate-yellowish-brown, very soft, reddish-brown and mottled clay; trace sand, coarse, angular, and silt
10	20-30	Sand, fine to coarse, moderate-yellowish-brown (10YR 6/6), mostly subangular, frosted; abundant yellowish-brown clay; silt; iron stained; trace lignite
10	30-40	Clay, moderate-yellowish-brown (10YR 5/4), becoming dark-yellowish-orange (10YR 6/6), soft; sand, fine to coarse, iron stained; trace ironstone (bog iron); some lignite
10	40-50	Sand, fine to medium, grayish-yellow (5Y 8/4), subround, trace reddish-brown iron stained coarse grains; trace clay, yellowish-brown; few black very fine lignitic flakes
10	50-60	Sand, very fine to medium, grayish-yellow (5Y 8/4) to pale-yellowish-orange (10YR 8/6), subround, larger grains iron oxide cemented; clay, brownish-yellow, with ironstone concretions; silty in part
10	60-70	Sand, very fine, pale-yellowish-orange (10YR 8/6) to dusky-yellow (5Y 6/4), subround, trace iron-stained coarse grains, decreasing clay and silt
10	70-80	Sand, very fine to fine, dusky-yellow (5Y 6/4), subround, trace iron-stained orange clay coating some grains; trace grayish-yellow clay with lignite; some silt
10	80-90	Clay, grayish-yellow (5Y 8/4) to dusky-yellow (5Y 6/4), soft to firm, interlaminated very fine to fine sand; trace sand, coarse, reddish-brown, iron-cemented; some light-brown lignite
10	90-100	Sand, very fine to fine, dusky-yellow (5Y 6/4), some coarse, subangular to subround, iron-stained; clay; trace iron stone (bog iron)

Well 007 Mullica Township Landfill



Mullica Township

10	100-110	Sand, very fine to fine, dusky-yellow (SY 6/4), subround; trace clay and ironstone (bog iron) cementing; increasing clay; light-brown to iron-stained black lignite	10	250-260	Sand, fine to medium, trace coarse, light-olive-gray (SY 5/2) changing to olive-gray (SY 3/2) toward base, subangular; clay, increasingly abundant, olive-gray, soft, blocky, pyritic; trace yellowish-orange ironstone (bog iron); some brown to black lignite
10	110-120	Clay, dusky-yellow (SY 6/4) to olive-gray (SY 3/2), soft to firm, subblocky; silt; trace sand; slightly mottled	10	260-270	Clay, olive-gray (SY 3/2), very soft to soft, subblocky, massive; trace silt, angular, disseminated; sand; black phosphatic fossil debris; lignite
10	120-130	Clay, olive-gray (SY 3/2) with dusky-yellow (SY 6/4), firm; trace pyrite crystals and silt; decreasing yellow clay; trace sand, fine to medium, subround	10	270-280	Clay, olive-gray (SY 3/2), soft, subblocky, massive, uniform, silty, lignitic; trace medium sand; some black phosphatic fossil debris and pellets; micaceous
10	130-140	Sand, fine to coarse, light-olive-gray (SY 5/2), subangular, trace reddish iron oxide stained clay coating coarse grains; iron oxide cement with secondary olive-gray to grayish-yellow iron-stained clay; 30 percent clay; trace silt and pyrite	10	280-290	Sand, fine to coarse, some gravel, light-olive-gray (SY 5/2) to olive-gray (SY 3/2) to (SY 4/1), subround, subangular, very clayey, olive-gray; silt; lignite
10	140-150	Gravel, light-olive-gray (SY 5/2) to grayish-olive (10Y 4/2); some sand, fine to coarse, subangular; some olive-gray clay; pyritic nodules and very fine crystals	10	290-300	Clay, olive-gray (SY 3/2) to (SY 4/1), very soft to soft, subblocky, massive, dense; trace lignite, brown, very fine to fine; some fine phosphate-replaced fossil material; mica
10	150-160	Sand, fine to coarse, grayish-olive (10Y 4/2) to light-olive-brown (SY 5/6); abundant gravel at top of section, subround; increasing olive-gray clay; light-brown lignite; trace silt	10	300-310	Clay, olive-gray (SY 3/2), soft, subblocky to subfissile, massive, dense, very silty; sand, fine to very coarse, micaceous; trace lignite, light-brown to brown, very fine; trace phosphate replaced shell fragments
10	160-170	Sand, fine to medium, light-olive-gray (SY 5/2) to light-olive-brown (10Y 4/2), subround; olive-gray clay and abundant very fine brown lignite; trace iron stained grains and pyrite	10	310-320	Clay, olive-gray (SY 3/2), soft, subblocky, massive; variable density due to increasing fine to coarse sand; some gravel; very silty; lignitic; micaceous
10	170-180	Sand, fine to very coarse, light-olive-gray (SY 5/2) with light-olive-brown (10Y 4/2), subrounded, 40-50 percent iron staining coats sand; some gravel; abundant clay, olive-gray, fissile; brown lignite giving sand and clay a brownish tint	10	320-330	Clay, olive-gray (SY 3/2) to (SY 4/1), soft, subblocky, massive, uniform; silty sand; scattered phosphatic material in fine to medium pellets; angular grains; micaceous
10	180-190	Sand, fine to coarse, light-olive-brown (10Y 4/2), subround to subangular; increasing clay, olive-gray, highly iron stained; brown lignite flakes; some iron stained black flakes; trace angular silt	10	330-340	Clay, olive-gray (SY 3/2), very soft, dense, massive, uniform; trace euhedral pyrite crystals; silty; mica
10	190-200	Clay, olive-gray (SY 3/2), soft, subblocky, sticky when wet, dense, uniform; rare angular silt; decreasing lignite; fine to medium sand at top of section, trace pyrite coatings	10	340-350	Clay, olive-gray (SY 3/2) to grayish-olive-green (SGY 3/2), very soft, sticky; silt; sand at base, grayish-olive-green, angular, disseminated; some pyrite; mica
10	200-210	Clay, olive-gray (SY 3/2), soft, sticky, subblocky, uniform, massive appearance; some sand; trace disseminated silt, pyrite, mica and brown lignite	10	350-360	Sand, very fine to very coarse, with gravel, grayish-olive-green (SGY 3/2) to light-olive-gray (SY 5/2), angular to subangular, subround medium to very coarse grains, finer grains have pyritic and brown argillaceous coatings, coarse grains are siliceous; abundant olive-gray clay; trace glauconitic silt and very finely crystalline pyrite
10	210-220	Clay, olive-gray (SY 3/2), soft, subblocky to blocky, massive, dense; abundant mica; increasingly sandy at base; trace brown to dark-brown lignite	10	360-370	Sand, very fine to fine, grayish-olive-green (SGY 3/2), subround, brown argillaceous stain on most grains, anhedral pyritic coatings, micaceous, very silty; trace glauconitic silt
10	220-230	Sand, fine to medium, light-olive-gray (SY 5/2) to olive-gray (SY 3/2), subround; clay, olive-gray, soft, blocky to fissile; brown lignite flakes and coarser lignite; micaceous	10	370-380	Clay, grayish-olive-green (SGY 3/2), becoming olive-gray (SY 3/2) at base, firm to very soft and sticky at base, silty; trace glauconite; some lignite and mica; very sandy at top with very fine sand
10	230-240	Clay, olive-gray (SY 3/2) to (SY 4/1), soft, sticky, blocky to subblocky, massive; sand, trace pyrite coating on grains and isolated euhedral, very fine crystalline pyrite; trace lignite and mica	10	380-390	Sand, very fine with 10 percent fine, light-olive-gray (SY 5/2), round to subround, olive-brown argillaceous coatings, anhedral pyritic growths on grain surfaces, 5 percent or less medium to very coarse sand; trace light-gray angular chert; lignitic; fine mica
10	240-250	Sand, fine to medium, light-olive-gray (SY 5/2) to olive-gray (SY 4/1), subangular to subround, pyritic and gray argillaceous coating on grains; clay, olive-gray; abundant lignite; micaceous			

Mullica Township

Well 007 (cont.)

Thickness (ft)	Depth (ft)	Lithology
10	390-400	Clay, olive-gray (5Y 3/2), soft, dense, sticky when wet; angular silt; fine sand; brown lignite; mica
10	400-410	Sand, fine to coarse, light-olive-gray (5Y 5/2), subangular to subround, pyritic, silica cement, brown argillaceous coating on some grains, trace iron staining; some fine mica
10	410-420	Sand, very fine to fine, light-olive-gray (5Y 5/2) to light-gray (5Y 6/1), very silty, subangular; chert, fine to medium, gray to light-gray; trace gray clay; brown lignite; some mica
10	420-430	Clay, olive-gray (5Y 3/2) to (5Y 4/1), soft, dense; sand, abundant, very fine to fine, 70 percent pyrite coated and oxidized brown argillaceous streaked; trace gray chert; increasing fine mica
10	430-440	Sand, fine to coarse, light-olive-gray (5Y 5/2), subangular to subround, pyritic, micaceous, trace silica-cemented fine sand; some gray chert; trace gray clay
10	440-450	Clay, light-olive-gray (5Y 5/2), becoming dusky-brown (5YR 2/2), soft to firm, blocky, denser at base; trace silt; mica decreasing toward bottom; abundant light-brown lignite in dusky-brown clay
10	450-460	Clay, dusky-brown (5YR 2/2), firm, blocky, silty; trace orange iron stained sand; very fine to fine lignite; some mica
10	460-470	Clay, dusky-brown (5YR 2/2), firm, dense, trace iron staining; some sand, fine, orange to brownish-orange, iron-stained; lignitic; silty
10	470-480	Clay, dusky-brown (5YR 2/2), firm, blocky to subblocky; sand, very fine to fine, iron-stained; lignitic; pyritic
10	480-490	Clay, dusky-brown (5YR 2/2) to pale yellowish-brown (10YR 6/2), blocky, firm; trace silt; sand; shell fragments; abundant lignite
10	490-500	Clay, pale-yellowish-brown (10YR 6/2), firm, blocky; shells; very lignitic; some silt
10	500-510	Clay, pale-yellowish-brown (10YR 6/2), firm, blocky; increasingly silty and sandy at base; smaller shells; abundant light-brown lignite; trace clear mica
10	510-520	Clay, pale-yellowish-brown (10YR 6/2) to light-olive-brown (5Y 5/6), firm, blocky, silty; decreasing lignite; shells with trace alteration to glauconite; increasingly sandy toward base; micaceous
10	520-530	Sand, predominantly very fine, trace medium to coarse, light-olive-brown (5Y 5/6), changing to light-olive-gray (5Y 5/2), subangular to subround; very clayey, light-olive-brown; glauconitic; silty; abundant dark-brown to black lignite
10	530-540	Sand, fine to medium, light-olive-gray (5Y 5/2), subround, glauconitic; light-gray silt; olive-gray clay; fine black lignite; trace mica

CORE DESCRIPTIONS

200	Clay, olive-gray (5Y 3/2), soft, blocky, sticky, massive, uniform; trace sand, very fine to fine in partings, subround; trace brown lignite and unaltered cream-colored pelecypod shells; scattered silt and mica
350	Clay, alternating bands of olive-gray (5Y 3/2) and dusky-yellowish-brown (10YR 2/2), subblocky to fissile, firm, dense streaks, trace glauconitic silt in olive-gray clay, abundant lignite in brown clay, iron oxide staining; mica; trace of fine to coarse olive sand laminations in gray clays
460	Clay, dusky-yellowish-brown (10YR 2/2), soft, subblocky, dense, massive in appearance; very fine brown to dark-brown lignitic flakes disseminated throughout core; locally abundant mica flakes; trace very fine to fine sand laminations; color apparently due to organic and iron staining seen on the encrustations of ironstone (bog iron) on isolated shell fragments
520	Clay, dusky-yellowish-brown (10 YR 2/2) to grayish-olive-green (5GY 3/2), colors seen both in bands and as mottling; firm, blocky, dense, massive, brown clays contain abundant brown to black lignitic flakes; iron staining and abundant fine mica flakes with silty streaks; trace phosphatic fossil debris; olive-green clay contains fine to coarse sand laminations with glauconite; trace shells showing some alteration to glauconite

Well 008

Geographic code: 0117

Owner or name: Atlantic Loading Company

Location: N393553

W744118

Driller: ----

Quad.: Egg Harbor City

Comp. date: 09/1918

Atlas Sheet no. 32.31.987

Elevation: 69 ft

Permit no. 52-19

Depth drilled: 950 ft

Thickness (ft)	Depth (ft)	Lithology
1	0-1	Surface soil
65	1-66	Sand, yellow; very fine at 7-20 ft; clay at 20-46 ft; less clay at 46-66 ft
50	66-116	Sand, laminated red; clay, gray
20	116-136	Sand, water-bearing; coarse, gray and yellow at 116-121 ft; dark-red at 121-136 ft
4	136-140	Clay, laminated gray; sand, yellow
8	140-148	Sand, grayish-black
20	148-168	Clay, grayish-black; quartz sand; sandstone
32	168-200	Sand, water-bearing; dark-gray at 168-178 ft; light-gray at 178-200 ft
33	200-233	Sand, dark-gray to chocolate; clay
37	233-270	Sand, black; sandy clay; little water in gravel layer at 252 ft
11	270-281	Sand, gray; clay; lignite; some water
15	281-296	Clay, chocolate, or muck (silt)
18	296-314	Sand, brown
6	314-320	Clay, chocolate, or muck (silt)
46	320-366	Sand, very fine, dark-gray, water-bearing
68	366-434	Clay; tenacious, black at 366-375 ft; chocolate, micaceous at 375-434 ft
66	434-500	Sand, greenish; marly to sandy marl
450	500-950	Clay, chocolate, light to dark, sometimes giving a greenish cast to drilling wash water, zone not reported in detail

Pleasantville City

Well 114 **Geographic code: 0119**
 Owner or name: Atlantic City Water Department
 Location: N392438 W743047
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 10/26/1950
 Atlas Sheet no. 36.13.283 Elevation: 8 ft
 Permit no. 36-14 Depth drilled: 680 ft

Thickness (ft)	Depth (ft)	Lithology
14	0-14	Sand and gravel
18	14-32	Sand, yellow; clay
14	32-46	Sand and gravel
23	46-69	Clay, yellow; gravel
6	69-75	Sand and gravel
4	75-79	Clay
25	79-104	Sand, coarse; gravel
39	104-143	Clay; blue at 104-124 ft
85	143-228	Sand and gravel; hard, clay at 165-212 ft
83	228-311	Clay; black at 228-243 ft and 269-311 ft; hard streaks at 243-269 ft
35	311-346	Sand, hard packed; clay
69	346-415	Clay, sand and shells
100	415-515	Clay, black
41	515-556	Clay, sand, and shell streaks
30	556-586	Clay, black
82	586-668	Sand, coarse; fine gravel
12	668-680	Clay, tough

Well 122 **Geographic code: 0119**
 Owner or name: Atlantic City Municipal Utilities Authority
 Location: N392447 W743113
 Driller: H.P. Drilling
 Quad.: Pleasantville Comp. date: 07/16/1981
 Atlas Sheet no. 36.13.257 Elevation: 30 ft
 Permit no. 36-2466 Depth drilled: 301 ft

Thickness (ft)	Depth (ft)	Lithology
5	0-5	Sand, coarse to fine; wood, bricks, metal, etc.
2	5-7	Sand, fine to medium, tan to yellow, trace coarse; fine gravel; silt
2	10-12	Clay, very stiff, light-tan; some fine sand; trace medium sand and silt
2	15-17	Sand, medium to fine, tan to yellow, trace coarse; fine gravel; silt
2	20-22	Sand, fine to medium, tan to yellow, trace coarse; little silt, fine gravel, and clay
2	25-27	Sand, fine to coarse, tan to yellow and black; little silt; trace of fine gravel and clay
2	30-32	Sand, medium to fine, tan to yellow, trace coarse; fine gravel and silt
2	35-37	Same as sample at 30-32 ft
2	40-42	Sand, medium to fine, tan to gray, trace coarse; fine gravel and silt
2	45-47	Sand, fine to medium, red to pink, trace coarse; silt
2	50-52	Clay, orange to yellow to gray, stiff, mottled; little fine sand; trace of silt
2	55-57	Sample no. 1: sand, fine to medium, orange to tan, trace coarse; little silt Sample no. 2: sand, fine to medium, tan to gray, trace silt
2.9	60-62.9	Sand, medium to fine, tan-gray, trace coarse; silt
1.9	65-65.9	Sand, medium to fine, orange to brown, trace coarse; silt
2	70-72	Same as sample at 65-65.9 ft
2	75-77	Sample no. 1: clay, hard, gray to tan to orange; little fine sand

1.9	80-81.9	Sample no. 2: same as sample at 65-65.9 ft Sample no. 1: sand, fine, tan to orange, trace medium; silt Sample no. 2: sand, medium to fine, orange to gray; trace silt and clay
1.9	85-85.9	Sand, fine to medium, tan to orange; trace silt
1.4	90-91.4	Sand, fine to medium, tan, trace coarse; trace silt
1.3	95-96.3	Sand, medium to fine, orange to tan, trace coarse; trace fine gravel and silt
0.9	100-100.9	Sand, medium to fine, orange to pink, trace coarse; trace fine gravel and silt
0.9	110-110.9	Sand, fine to medium, tan to orange, trace coarse; trace silt
1.4	120-121.4	Sand, medium to fine, orange, trace coarse; trace fine gravel and silt
1.5	130-131.5	Sand, fine to medium, gray, trace silt. clay pockets
1.5	140-141.5	Clay, hard, dark-gray, sandy; trace silt
1.5	150-151.5	Sand, fine to medium, gray, clayey
1.5	160-161.5	Clay, hard, gray; some fine sand
1.5	170-171.5	Sand, fine to medium, gray to brown; some clay lenses
1.5	180-181.5	Sand, fine, dark-brown, trace medium to coarse sand and fine gravel; little to some silt
1.5	190-191.5	Sand, fine to medium, dark-gray; little silt
1.5	200-201.5	Sand, medium, dark-gray, little fine, trace coarse sand and fine gravel
0.8	212-212.8	Sand, fine, gray to brown, trace medium; little silt
1.3	220-221.3	Sand, medium to fine, gray to brown, trace coarse; trace silt
1.5	230-231.5	Sand, fine, dark-gray to green, trace medium; little silt
1.5	240-241.5	Same as sample at 230-231.5 ft
5.5	250-255.5	Sand, fine, dark-gray to green, silty; trace mica
1.5	260-261.5	Sand, fine, dark-gray; little to some silt
1.5	270-271.5	Sand, fine, dark-gray; some silt
1	280-281	Sand, fine, dark-gray to green, silty
1.5	290-291.5	Clay, hard, gray to green, silty; trace fine sand
1.5	300-301.5	Same as sample at 290-291.5 ft

Well 211 **Geographic code: 0119**
 Owner or name: Atlantic City Water Department
 Location: N392437 W743049
 Driller: Layne-N.Y.
 Quad.: Pleasantville Comp. date: 10/26/1950
 Atlas Sheet no. 36.13.283 Elevation: 10 ft
 Permit no. 36-18 Depth drilled: 680 ft

Thickness (ft)	Depth (ft)	Lithology
14	0-14	Sand and gravel
18	14-32	Sand, yellow; clay
14	32-46	Sand and gravel
23	46-69	Clay, yellow; gravel
6	69-75	Sand and gravel
4	75-79	Clay
25	79-104	Sand, coarse; gravel
39	104-143	Clay; blue at 104-124 ft
85	143-228	Sand and gravel; hard sand and clay, 165-212 ft
83	228-311	Clay, black; hard streaks at 243-269 ft
35	311-346	Sand, hard packed; clay
240	346-586	Clay; sand and shells at 346-415 ft and 515-556 ft; black at 415-515 ft and 556-586 ft
82	586-668	Sand, coarse; fine gravel
12	668-680	Clay, tough

WELL 019
JOBS POINT

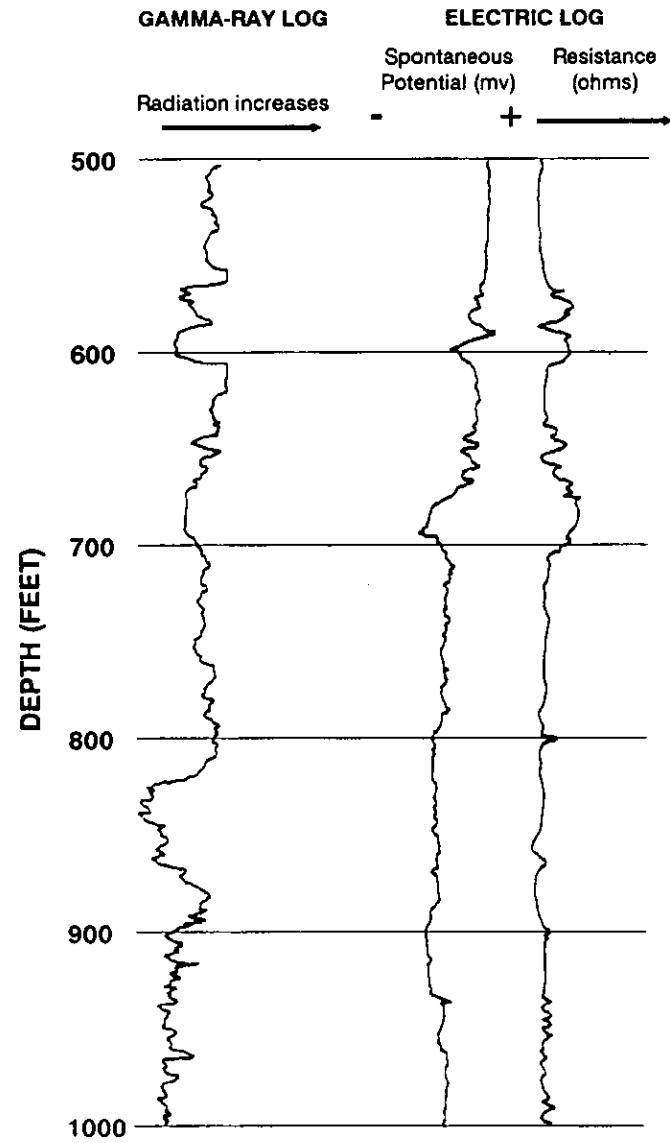
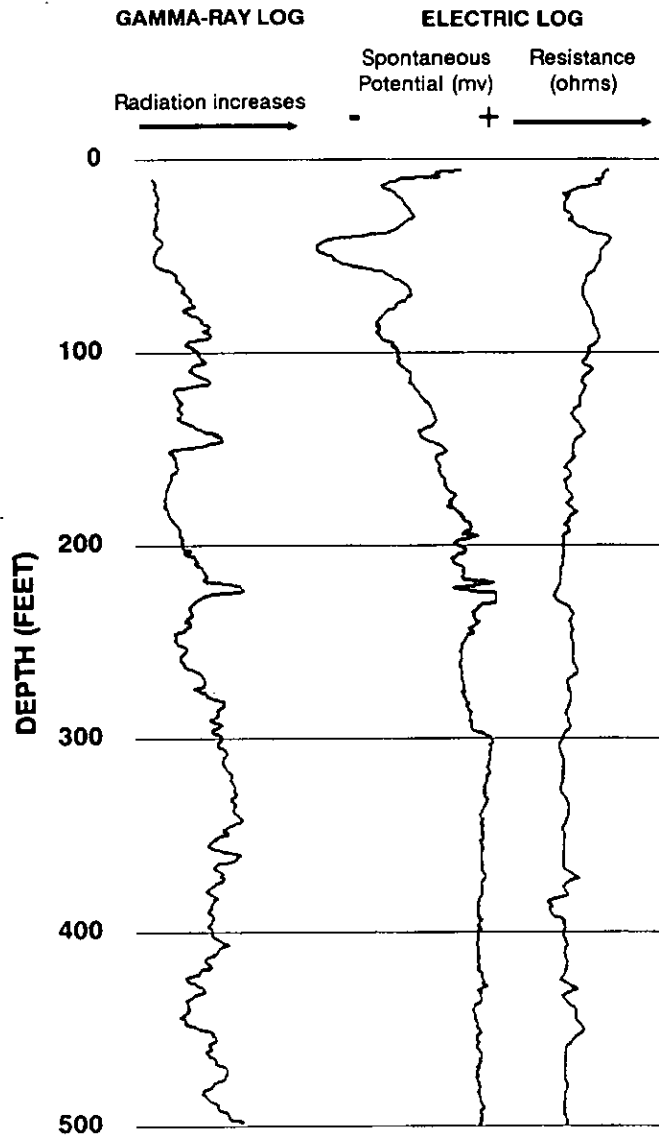


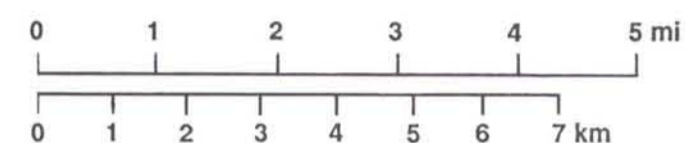
PLATE 1. ATLANTIC COUNTY WELL LOCATION MAP

EXPLANATION

● 42 Well (refer to Table 3)

Scale 1:100,000

Contour interval 5 meters



Base map from U.S. Geological Survey, 1984
Atlantic City 30x60 Minute Series Quadrangle
Hammonton 30x60 Minute Series Quadrangle

