

# **Lithologic and Ground-Water Data for Monitoring Wells in the Santa Clara–Calleguas Ground-Water Basin, Ventura County, California, 1989–95**

*By* Jill N. Densmore

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### CONVERSION FACTORS, VERTICAL DATUM, AND WELL-NUMBERING SYSTEM

Multiply	By	To obtain
foot (ft)	0.3048	meter
inch (in.)	25.4	millimeter
mile (mi)	1.609	kilometer
square inch (in <sup>2</sup> )	25.4	square millimeter
square mile (mi <sup>2</sup> )	259.0	hectare
square mile (mi <sup>2</sup> )	2.590	square kilometer

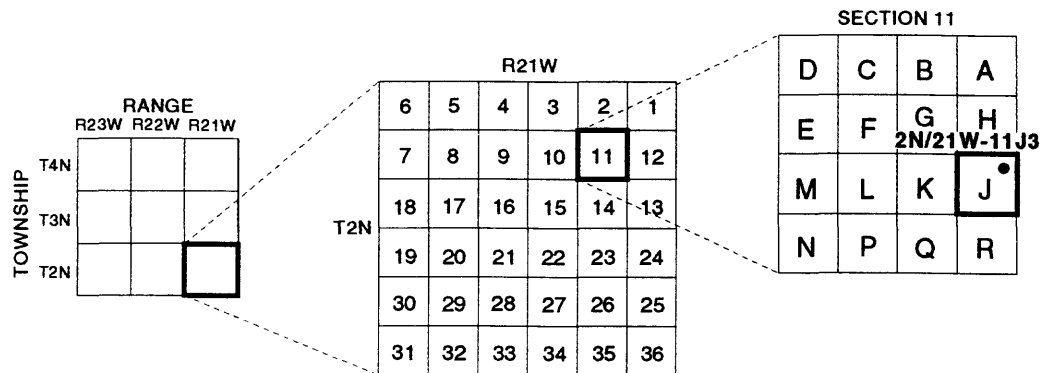
Temperature is given in degrees Celsius (°C), which can be converted to degrees Fahrenheit (°F) by the following equation:

$$^{\circ}\text{F}=1.8(^{\circ}\text{C})+32$$

**Sea Level:** In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

## Well-Numbering System

Wells are identified and numbered by the State of California according to their location in the system for the subdivision of public lands. Identification consists of the township number, north or south; the range number, east or west; and the section number. Each section is divided into sixteen 40-acre tracts lettered consecutively (except I and O), beginning with "A" in the north-east corner of the section and progressing in a sinusoidal manner to "R" in the southeast corner. Within the 40-acre tract, wells are sequentially numbered in the order they are inventoried. The final letter refers to the base line and meridian. In California, there are three base lines and meridians: Humboldt (H), Mount Diablo (M), and San Bernardino (S). All wells in the study area are referenced to the San Bernardino base line and meridian (S). Well numbers consist of 15 characters and follow the format 002N021W11J003S. In this report, well numbers are abbreviated and written 2N/21W-11J3. The following diagram shows how the number for well 2N/21W-11J3 is derived.



Well-numbering diagram



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## **ABSTRACT**

Twenty-three multiple-well (nested) monitoring sites were constructed in the western part of the Santa Clara–Calleguas Hydrologic Unit and ground-water basin between October 1989 and May 1994. This report is a compilation of the data collected at these sites from October 1989 through April 1995 and includes location and design of the monitoring sites, lithologic data, geophysical logs, ground-water-level measurements, and water-quality analyses. Grain-size distribution and mineralogical analyses also are included.

Ninety-nine piezometers were installed at the 23 sites to enable collection of depth-dependent data. Lithologic logs were compiled from descriptions of drill cuttings for each site and from observations recorded during logging. Generalized stratigraphic columns were compiled by grouping similar lithologic units. Grain-size and mineralogical analyses were used to identify and characterize the various lithologic units and to distinguish changes among them. Geophysical logs provided information on the character of the lithologic units and on the presence and chemical characteristics of ground water. Water levels were measured periodically during 1989–94. Water-quality data were collected periodically during 1989–95.

## **INTRODUCTION**

### **Purpose and Scope**

The U.S. Geological Survey (USGS) constructed 23 multiple-well monitoring sites in the western part of the Santa Clara–Calleguas Hydrologic Unit between October 1989 and May 1994. The purpose of the monitoring sites was to provide data on geology, water levels, ground-water quality, and aquifer properties at multiple depths in the aquifer system. Most existing data were obtained from wells perforated solely in the upper part of the aquifer system or perforated through several aquifers.

The monitoring sites were constructed as part of two concurrent U.S. Geological Survey studies of the area: (1) a Regional Aquifer-System Analysis (RASA) study of ground-water conditions in the Santa Clara–Calleguas Hydrologic Unit; and (2) a cooperative study with United Water Conservation

District (UWCD) to investigate seawater intrusion in the Oxnard Plain, the coastal part of the Santa Clara–Calleguas Hydrologic Unit. The objectives of the RASA study are (1) to determine the geohydrologic framework of the coastal and desert basins in southern California, and (2) identify and analyze major issues and problems affecting the use of ground water in these basins (Martin, 1986). The Santa Clara–Calleguas basin was selected for intensive study, as a representative coastal basin, under the RASA program. The objective of the cooperative study with UWCD is to develop and apply solute-transport and simulation-optimization modeling techniques for evaluating management options to control seawater intrusion in the Oxnard Plain. Data collected from the monitoring sites will be essential in completing both studies.

The purpose of this report is to present a compilation of the data collected at the monitoring sites from October 1989 (when the first site was constructed) through April 1995 (when data collection for the RASA study was completed). The data presented in this report include location and design of the monitoring sites, lithologic data, geophysical logs, ground-water levels, and water-quality analyses. Also included are grain-size distributions and X-ray diffraction mineralogical analyses of selected drill-cutting samples.

## **Description of the Study Area**

The Santa Clara–Calleguas Hydrologic Unit, about 60 mi northwest of Los Angeles, extends from the Pacific Ocean on the west to the desert basins on the east and covers about 2,010 mi<sup>2</sup> (fig. 1). The basin lies in the western part of the Transverse Ranges geomorphic province, which is characterized by east-west-trending topographic and structural features. Almost 90 percent of the basin has rugged topography; the remainder consists of valley floor and coastal plains. The Santa Clara River, Calleguas Creek, and their tributaries drain to the Pacific Ocean. The study area for the RASA and cooperative studies includes the water-bearing deposits of the coastal part of the Santa Clara–Calleguas Hydrologic Unit (fig. 1) in southwestern Ventura County.

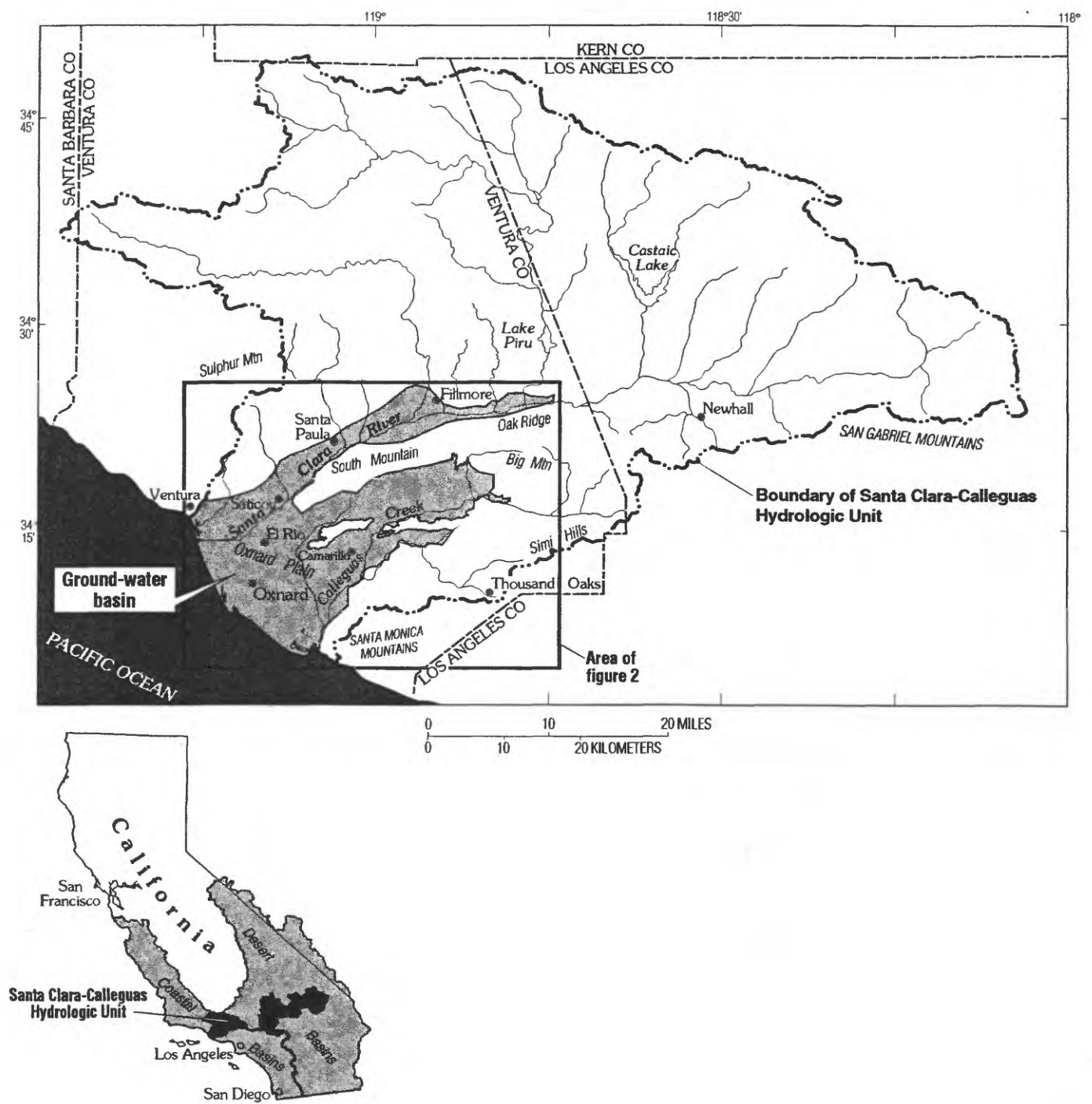
The main water-bearing deposits that make up the Santa Clara–Calleguas ground-water basin are unconsolidated alluvial and fluvial deposits of Holocene age, unconsolidated to partly consolidated alluvial and marine deposits of late Pleistocene age, and continental and marine deposits of Pleistocene age. In places, the combined thickness of these water-bearing deposits is more than 1,000 ft. Consolidated sedimentary rocks of Tertiary age underlie the ground-water basin throughout most of the area. These consolidated rocks, predominantly marine in origin, are considered non-water bearing except for slightly permeable sandstones, and where fractured.

The Santa Clara–Calleguas ground-water basin has been divided into 12 ground-water subbasins (shown in fig. 2). The monitoring sites described in this report were constructed in the Oxnard Plain, Oxnard Forebay, North Pleasant Valley, West Las Posas, East Las Posas, Santa Paula, and Piru subbasins (fig. 2).

## **Acknowledgments**

The author thanks the following people, organizations, and entities for giving permission to drill on their property: The U.S. Navy at Point Mugu Naval Air Station and Port Hueneme Naval Construction Battalion Center; Andy Harpster and Chuck Richards of Southern California Edison; Ray Swift; Don Porteous; Steve Zimmer of Baldwin Company; The city of Oxnard; Bill Kohlmeier of Ventura County Game Preserve; Ventura County; Lee Miller of Pleasant Valley County Water District; United Water Conservation District; TKS Farms; Tad and John Duboni; Robert Mitchell; and Ventura County Water Works. Funding for construction of the monitoring sites was provided by Fox Canyon Groundwater Management Agency, United Water Conservation District, Metropolitan Water District, and the U.S. Department of the Navy.





**Figure 1.** The Santa Clara–Calleguas Hydrologic Unit and ground-water basin, California.



## LOCATION AND DESIGN OF MULTIPLE-WELL MONITORING SITES

Ninety-nine piezometers were installed at 23 monitoring sites (fig. 2) in the Santa Clara–Calleguas ground-water basin in Ventura County, California, between October 1989 and May 1994. Piezometers consist of small-diameter wells that generally are perforated or screened over a specific interval (10–100 ft), thereby enabling one to collect depth- or aquifer-dependent data that can be used to determine various conditions or properties, such as hydraulic head, water quality, and hydraulic properties. A typical multiple-well monitoring site consists of three to five 2-inch-diameter polyvinyl chloride (PVC) piezometers installed at different depths in the same borehole (also called a nested site). At several of the sites, single piezometers were installed adjacent to the nested piezometers. Well-construction diagrams for these sites are included in figures 3–25, which follow the "References Cited" section of this report. Pertinent information about the 23 sites is given in table 1 (tables are at end of report) and includes the common name of the well (piezometer), State well number, type of well site, total depth of well, sand-pack interval, seal interval and type of seal, perforated interval, land-surface altitude, and date drilled.

Most (14) of the sites were constructed near the coast to help define the areal and vertical extent of seawater intrusion; seven of the sites (TKS, SAT, SG, P7, SP1, SP2, RP1) were constructed near potential recharge areas to monitor the movement of applied or injected recharge through the different aquifers; and the two remaining sites (LP1, PV1) were constructed adjacent to existing deep production wells to provide observation wells for long-term multiple-well aquifer tests.

The boreholes at the monitoring sites were drilled by the USGS using a mud rotary rig and roller-cone bits. The diameter of the boreholes ranged from 6 1/2 to 20 in. The larger diameter boreholes were drilled in the shallow partly consolidated to unconsolidated deposits to allow for installation of surface casing to prevent cave-in of the loose material. The depth to which the surface casing was installed depended on the depth of loosely compacted material in the upper part of the borehole. The coastal wells required about 100 ft of surface casing; however, the wells farther inland needed as little as 20 ft of surface casing.

Once the surface casing was installed, the borehole diameter was decreased to 9 7/8 in. to cut down on the drilling time yet still allow for installation of as many as five piezometers. The diameter of the holes at four sites (LP1, P7, SP1, SP2) was decreased to 7 7/8, 8 5/8, 8 1/2, and 9 in., respectively, because fewer piezometers were installed at depth at these sites.

The design of each multiple-well monitoring site was determined on the basis of close examination of the cuttings collected from each hole during drilling and the geophysical logs run on each hole. The analysis of drill cuttings and geophysical logs is discussed in further detail in subsequent sections of this report. The multiple-well monitoring sites were constructed by installing the piezometers one at a time, starting with the deepest one. The screened interval of the piezometers ranges from 10 to 100 ft and consists of 0.020-inch slots on 0.125-inch spacing. The total open area for a 2-inch piezometer screen is 7.6 in<sup>2</sup> per foot. Once the deepest piezometer was in position, a filter pack was tremied around and slightly above the screened interval. Monterey Sand #3 was used as the filter pack at all of the monitoring sites. After the filter pack was installed, low-permeability bentonite grout was tremied into place above the filter pack to isolate the screened interval of the different piezometers from one another. This process was repeated for each piezometer. Following installation of the uppermost piezometer and filter pack, the remainder of the annulus from the top of the uppermost filter pack to land surface was filled with cement to provide a sanitary seal as required by Ventura County.

After installation, the individual piezometers were developed using compressed air to blow the drilling mud out of the piezometer and break down the mudcake that is developed between the borehole and the surrounding formation during drilling. Development was continuous until the water from the piezometer contained no discernible drilling mud and the specific conductance of the water stabilized.

## LITHOLOGIC DATA

Detailed lithologic logs (given in tables 2–24 at the end of this report) were compiled from descriptions of drill cuttings collected at each borehole and from observations recorded during logging. The cuttings, collected at 20-foot intervals and at distinguishable changes in lithology, were described by rock type, texture, sorting, rounding, color, mineralogy, and any other significant features. Texture descriptions follow the National Research Council (National Research Council, 1947) grain-size classification (table 25). This classification allows for correlation of general grain-size terms (such as "sand") to size limits in millimeters or inches. Color, determined on moist samples, follows the numerical color designations in the Munsell Soil Color Charts (Munsell Color, 1975).

Generalized stratigraphic columns (included in figs. 3–25) for each site were compiled by grouping similar lithologic units determined from the detailed lithologic logs. Borehole geophysical logs were used to identify the depths of contacts between the lithologic units. The lithologic units were categorized into textural groups (fig. 26)—on the basis of estimated percentages of gravel and (or) sand and the ratios of sand, silt, and clay present—following the nomenclature of Folk (1954, 1980).

Grain-size and mineralogical analyses were done for selected samples to help identify and characterize the different lithologic units and to distinguish changes among them. Grain-size analyses were done by the Quaternary soils laboratory at San Diego State University, San Diego, California, using sieves to determine the sand and gravel fractions and a hydrometer to determine the silt and clay fractions. Mineralogy was determined, using X-ray diffraction, by the U.S. Geological Survey, Geologic Division, Branch of Geochemistry, Denver, Colorado. The grain-size distribution at selected depths is given in table 26 (at the end of this report), and mineralogy (the most common minerals determined from selected samples) is shown in table 27.

## GEOPHYSICAL LOGS

Geophysical logs were made in the borehole at each monitoring site immediately following completion. The logs were made in the uncased borehole, which was filled with drilling mud, and generally included 16-inch and 64-inch normal resistivity, lateral (6-foot) resistivity, spontaneous potential, natural gamma, and caliper logs (figs. 3–25). The geophysical logs are continuous from the bottom of the hole to the top of the drilling mud, which may be lower than the top of the hole. These logs provide information on the character of the formations and on the presence and chemical characteristics of ground water. Data derived from the geophysical logs were used in conjunction with the lithologic logs to determine the placement of the piezometers.

Resistivity devices measure the apparent resistivity of a volume of rock under the direct application of an electric current (Keys and MacCary, 1983). These logs are used to determine formation resistivity, formation porosity, and fluid resistivity. In general, low resistivity indicates water higher in dissolved solids, and (or) fine-grained deposits such as silt, clay, and shale; whereas high resistivity indicates water lower in dissolved solids, and (or) coarser materials such as sand and gravel. Therefore, resistivity can be used as an indicator of water quality: As dissolved-solids concentration increases, resistivity decreases. For example, the presence of high-dissolved-solids water (such as seawater) in a formation would result in a low value of apparent resistivity.

Spontaneous potential (SP) devices measure voltage differences that exist between non-porous and porous beds. The log usually has a baseline, which corresponds to impermeable beds such as clay or shale. Deflections to the left of this baseline correspond to the positions of permeable strata if the formation water is less resistive (more saline) than the drilling mud. Deflections to the right of the baseline correspond to the positions of permeable strata if the formation water is more resistive (less saline) than the drilling mud.

Natural gamma logs measure the intensities of gamma-ray emissions resulting from the natural decay of potassium-40 and daughter products of uranium and thorium. These logs are used primarily as lithology indicators, and for geologic correlation. Clay, as well as feldspar-rich gravel and granite, generally emits higher intensity gamma rays (Driscoll, 1986). In the logs completed for this study, an increase in gamma intensity generally corresponds with an increase in clay or shale.

Caliper devices measure the diameter of the borehole. The caliper log can be used to show the existence of cave-in in unconsolidated sands or the presence of swelling clay. The caliper log of the boreholes at three sites (CM3, CM4, CM5, figures 16, 12, and 14 respectively) shows a 2-inch-diameter hole at the bottom part of these boreholes. It was determined that this 2-inch-diameter measurement was an error when the casing and tremie were inserted without obstruction to the full depth of the borehole. These false results may have been due to failure of the instrument to fully deploy the sensor arms. The cause of this may have been the accumulation of borehole material (such as clay) that formed on the end of the caliper tool as it was lowered down the borehole preventing the sensor arms from opening fully. As the tool was raised, the clay ball gradually wore away. Once the clay ball was gone, the caliper tool measured the actual diameter of the borehole.

## **WATER-LEVEL DATA**

Ground-water levels were measured periodically for each piezometer at the 23 multiple-well monitoring sites. The depth to water was measured using either a calibrated electric tape or steel tape. Water-level data for the period 1989–94 for the multiple-well monitoring sites are given in table 28 at the end of this report.

## **WATER-QUALITY DATA**

Water-quality samples were collected periodically at the multiple-well monitoring sites after the sites were adequately developed (when drilling mud was eliminated and water quality stabilized, as previously described). At the time when each sample was collected, the piezometer was purged using a portable pump to evacuate at least 3 casing volumes. The samples were collected after the specific conductance of the purged water had stabilized, and were analyzed in the field immediately after sample collection for temperature, pH, alkalinity, and specific conductance. Aliquots were collected, using methods given by Brown and others (1970), and sent in polyethylene bottles to the USGS National Water Quality Laboratory in Arvada, Colorado, for analysis of the major cations and anions and selected trace elements, using methods given by Fishman and Friedman (1985). Selected samples were analyzed for tritium and the stable isotopes of oxygen and hydrogen at the USGS laboratory in Reston, Virginia. Water-quality data were collected periodically at the multiple-well monitoring sites from October 1989 through April 1995 and are given in table 29 at the end of this report.

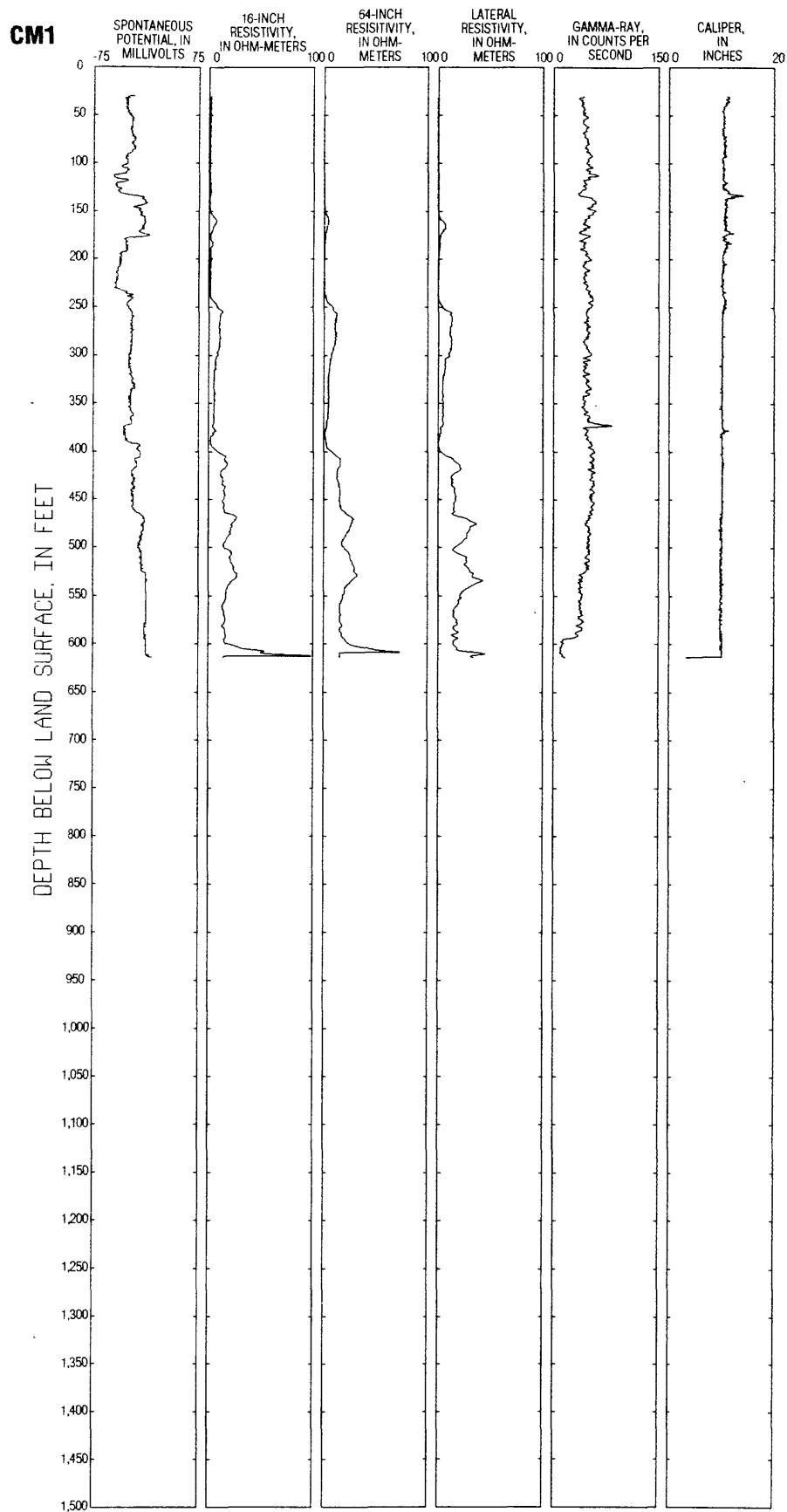
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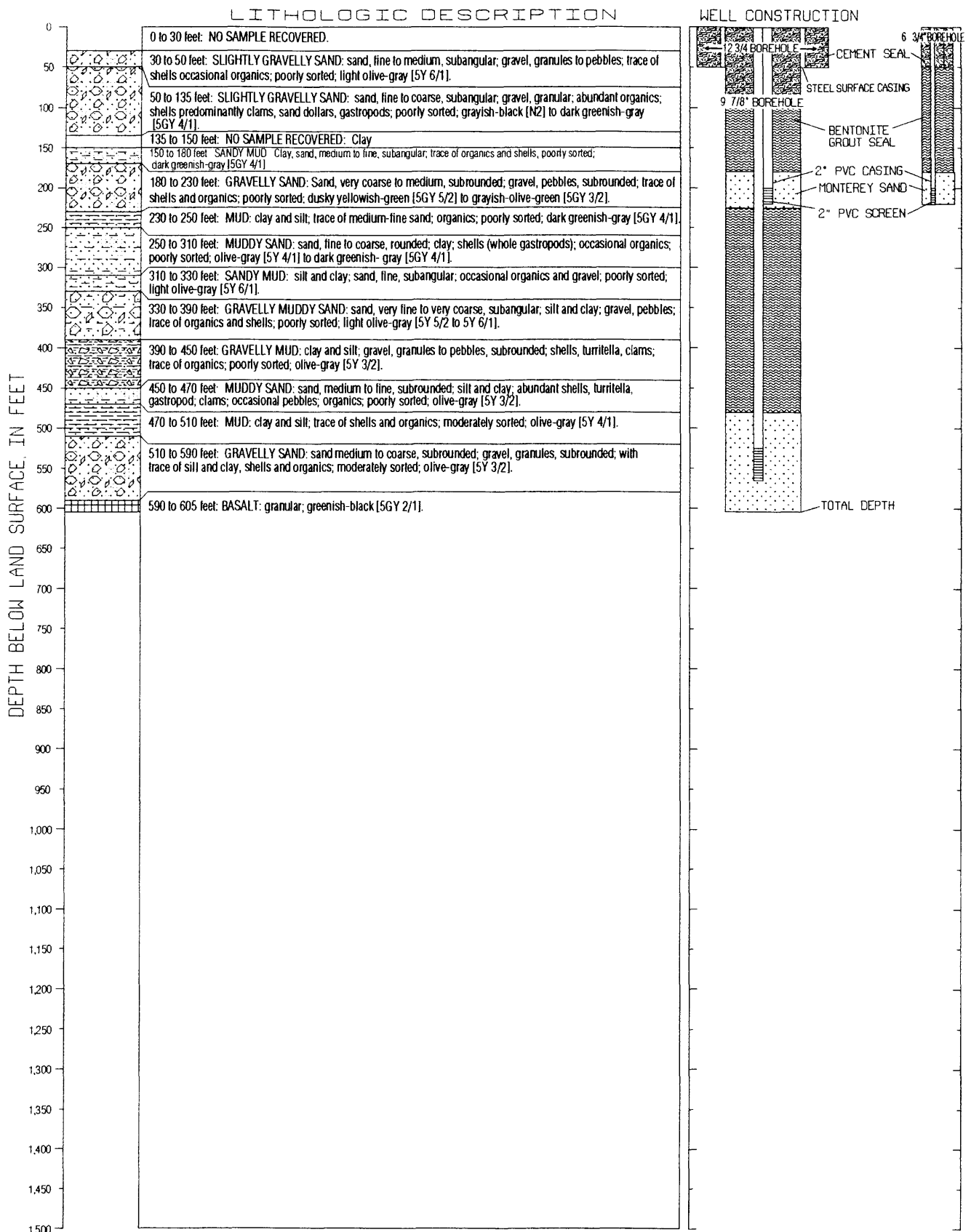
**FIGURES 3-26**

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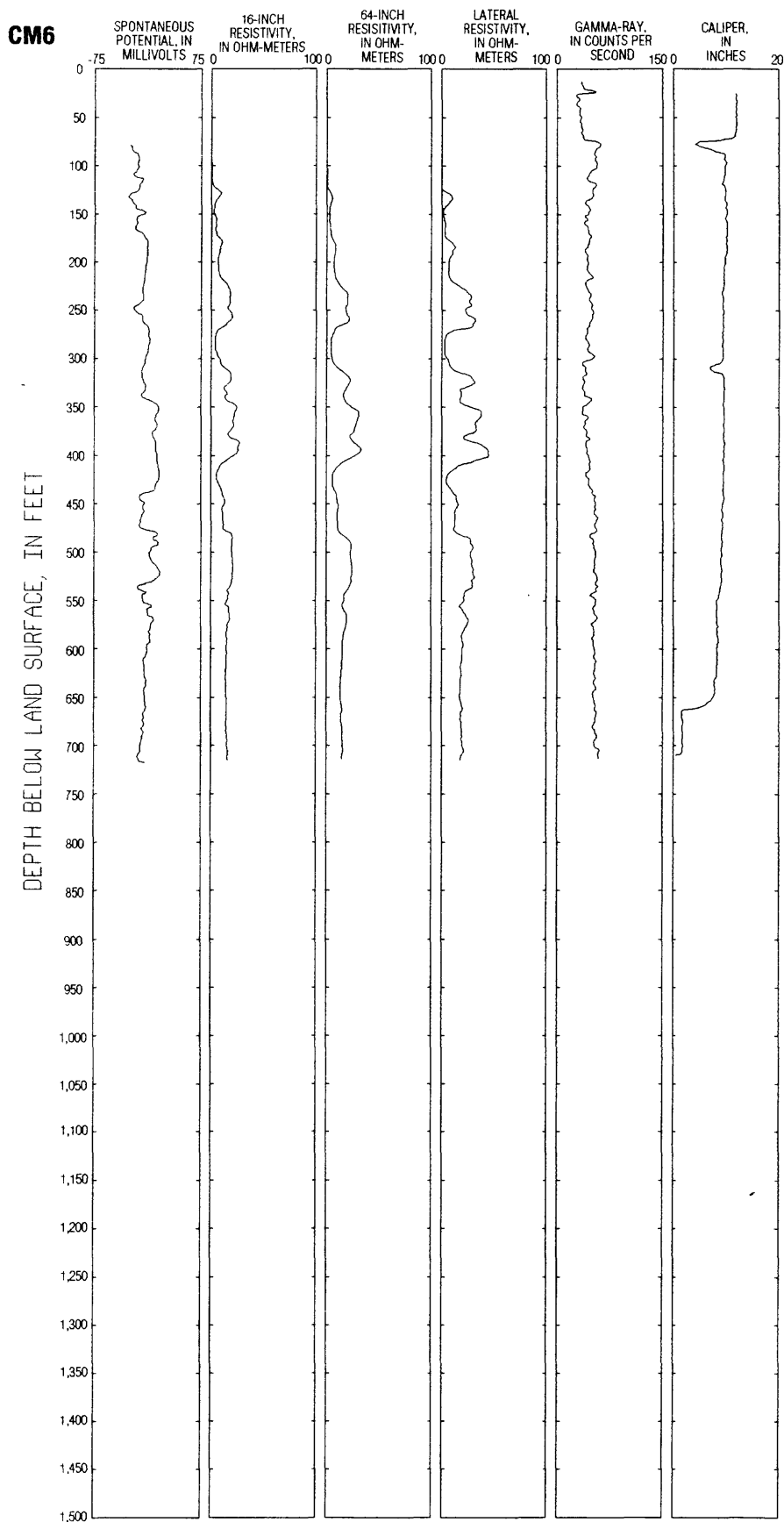


**FIGURE 3.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM1 (1S/21W-8L3, 4, 5).

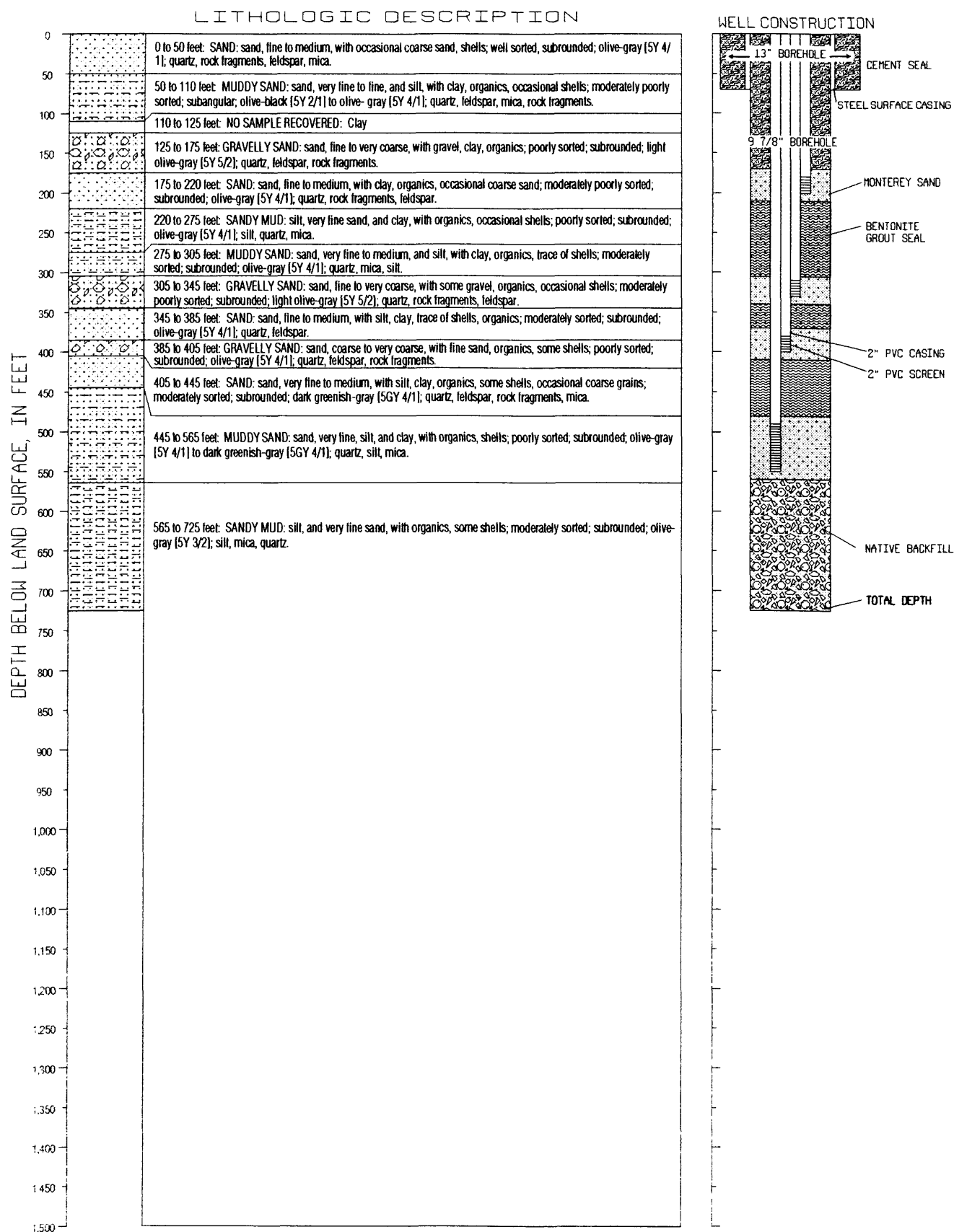




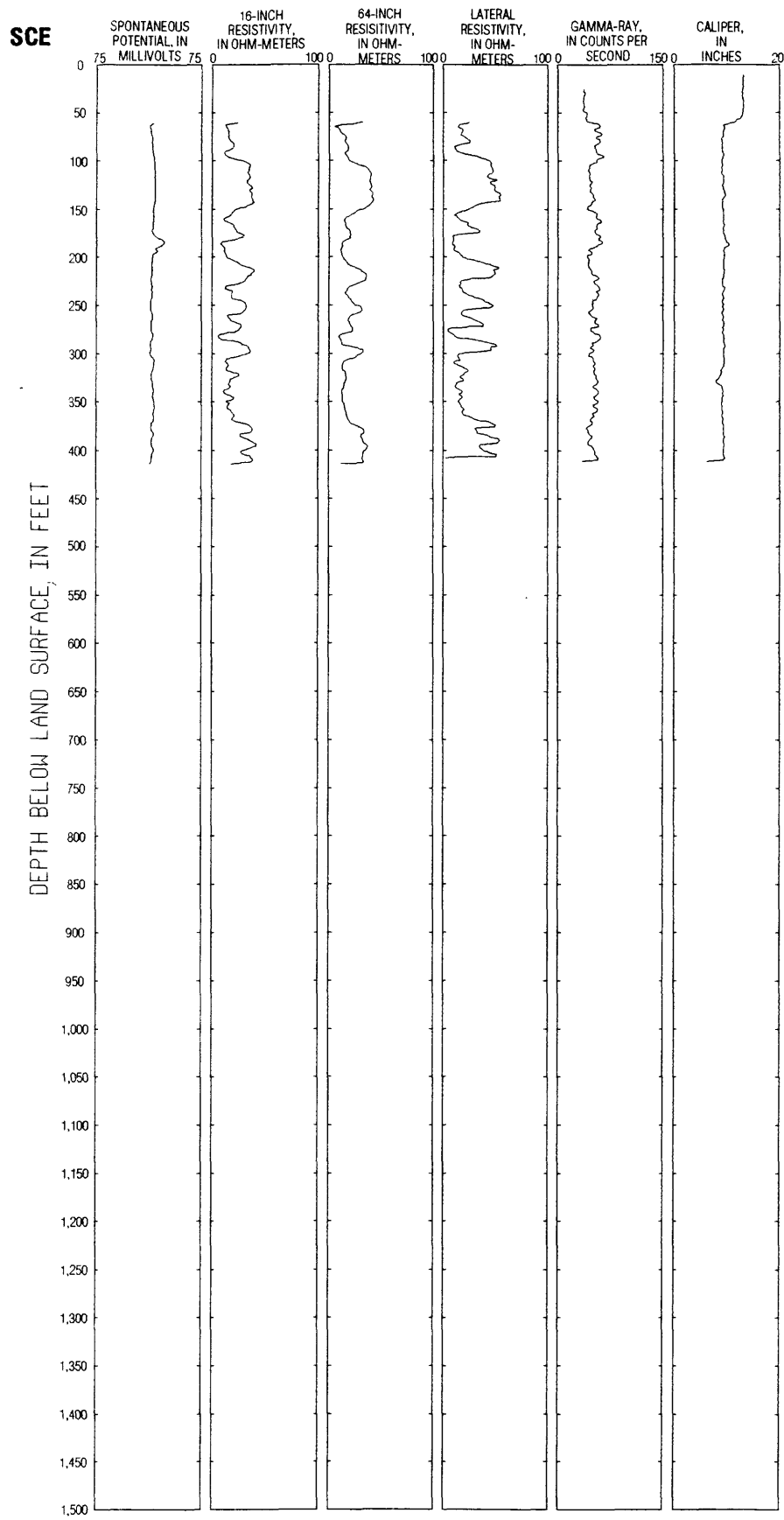
**FIGURE 3. Continued.**



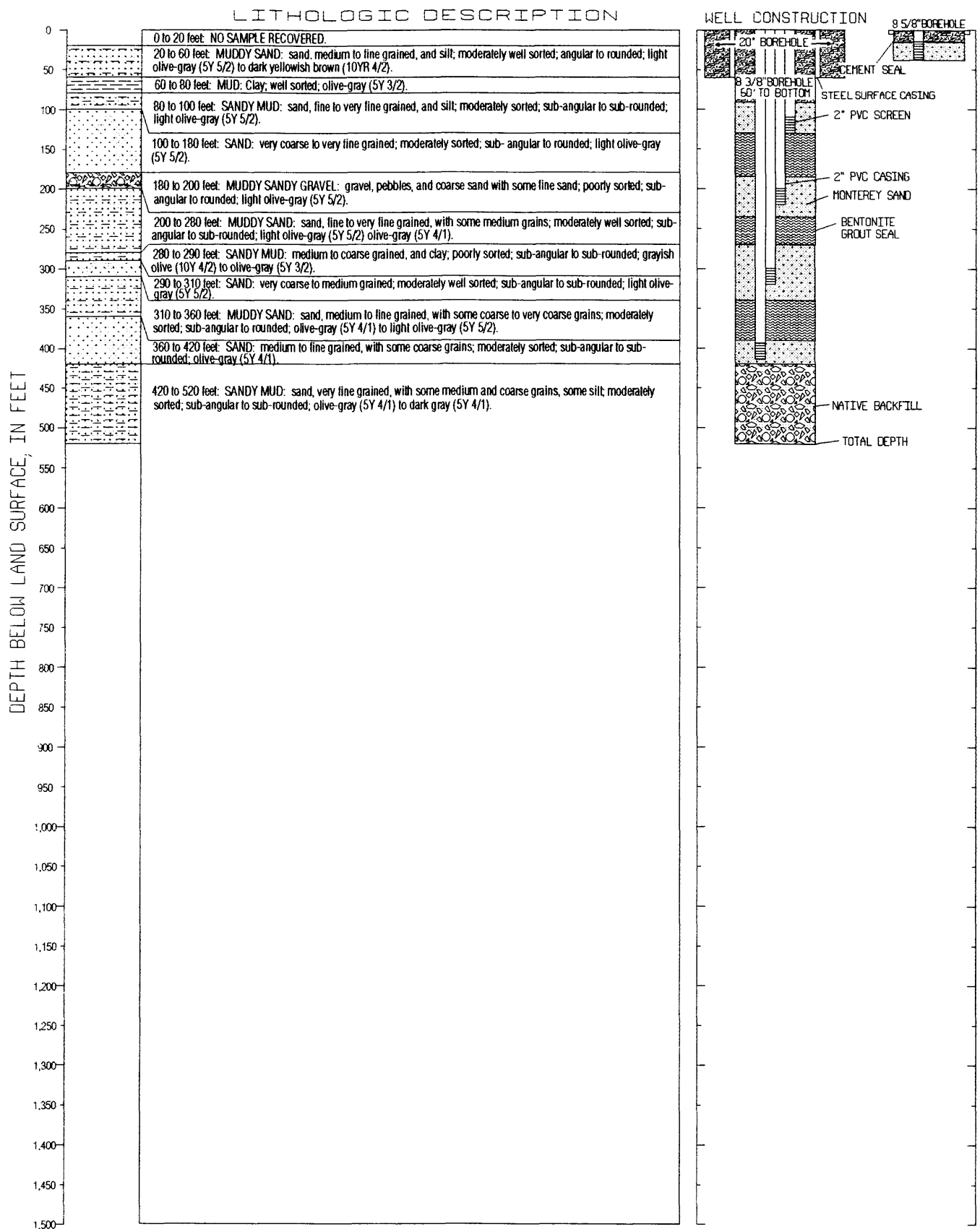
**FIGURE 4.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM6 (1S/22W-1H1, 2, 3, 4).



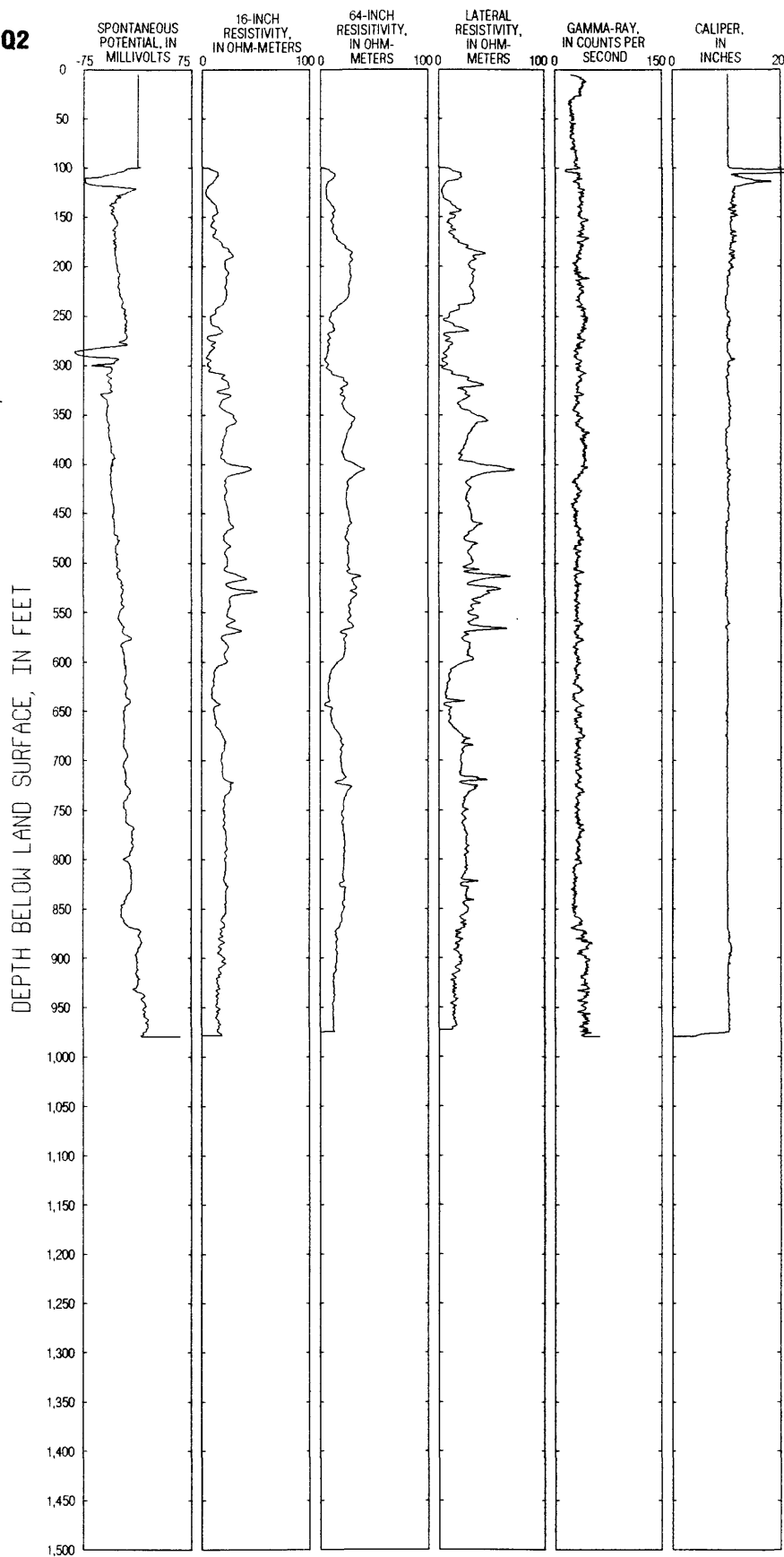
**FIGURE 4. Continued.**



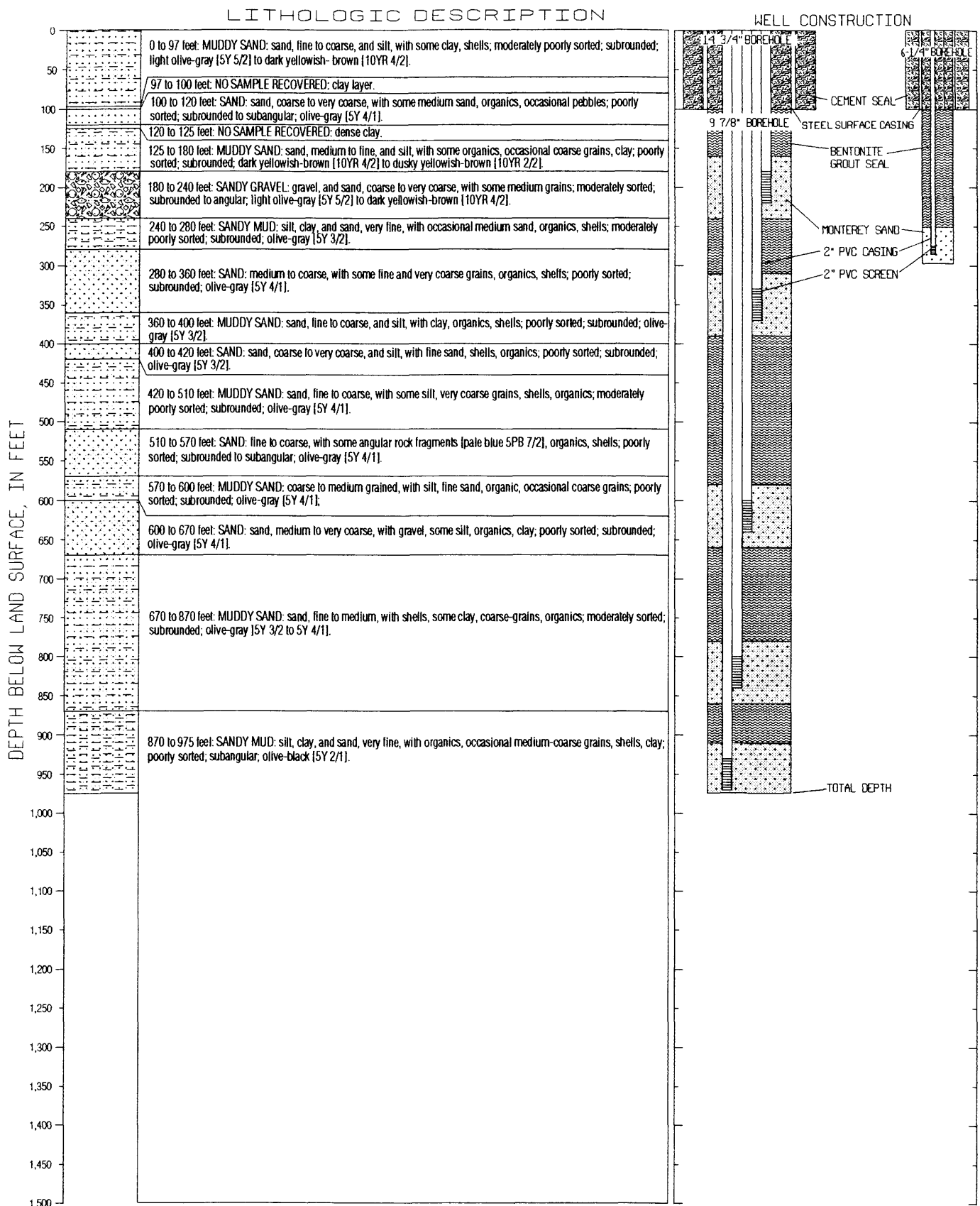
**FIGURE 5.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SCE (1N/21W-19L10, 11, 12, 13, 14).



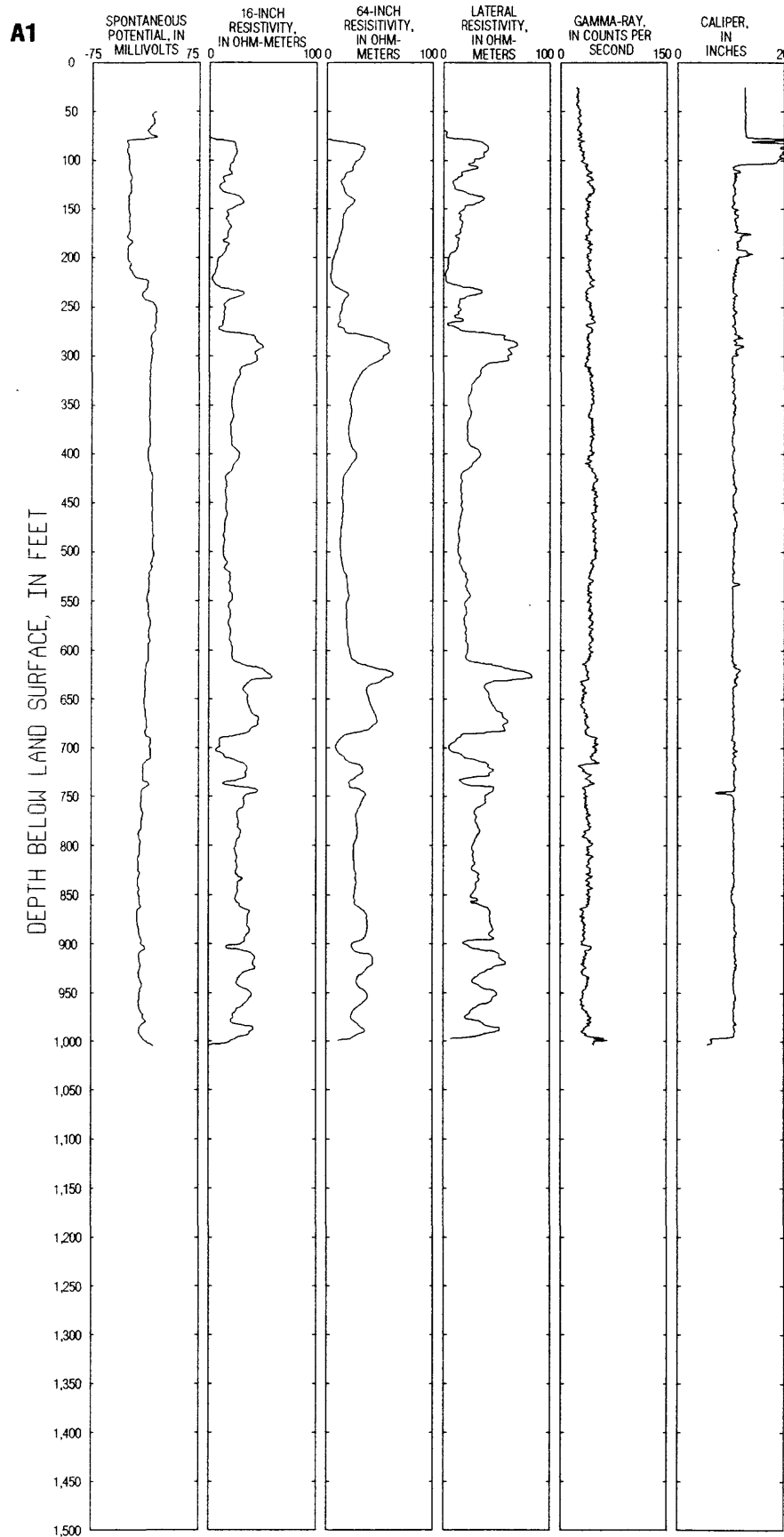
**FIGURE 5. Continued.**

**Q2**

**FIGURE 6.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site Q2 (1N/21W-32Q2, 3, 4, 5, 7).

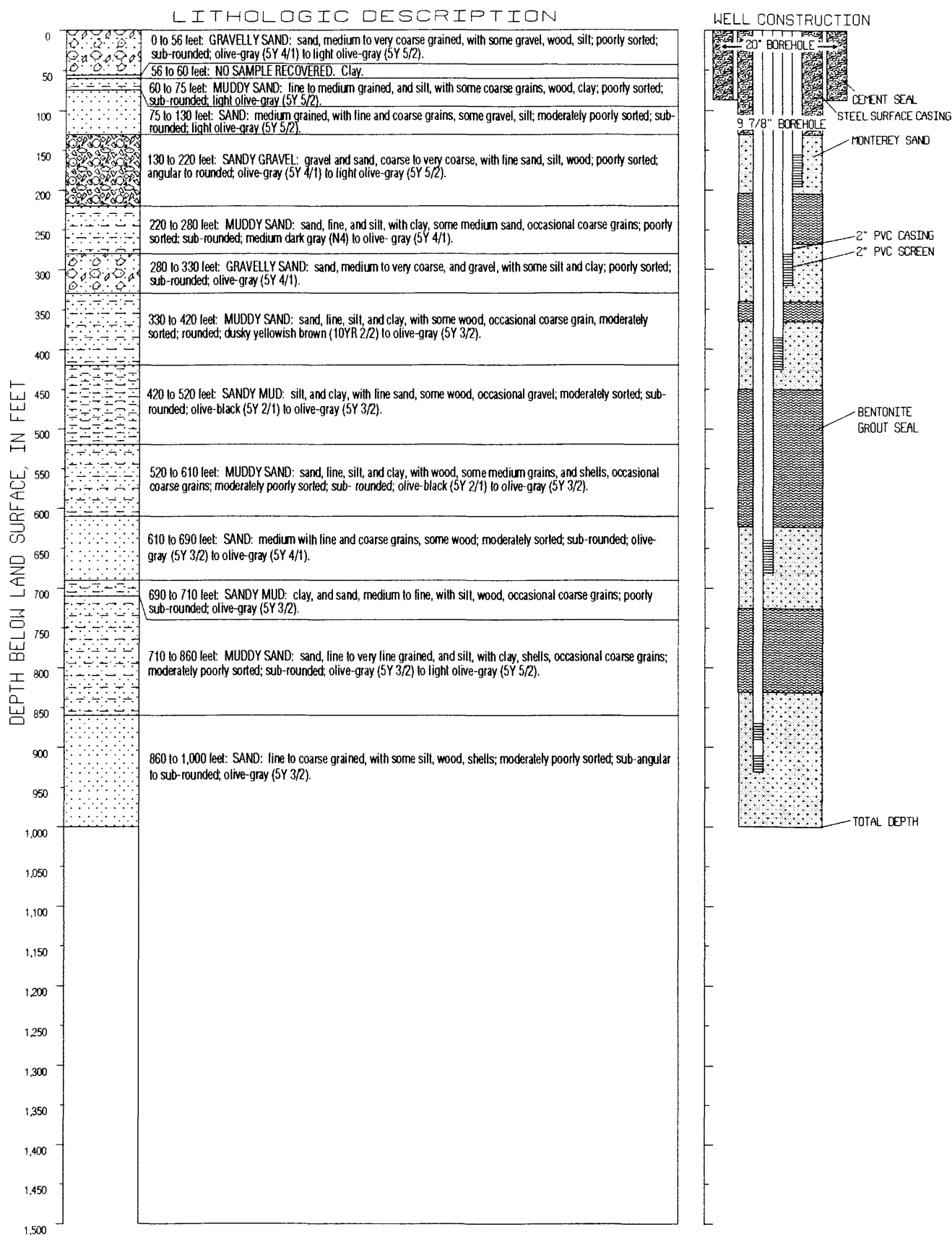


**FIGURE 6. Continued.**

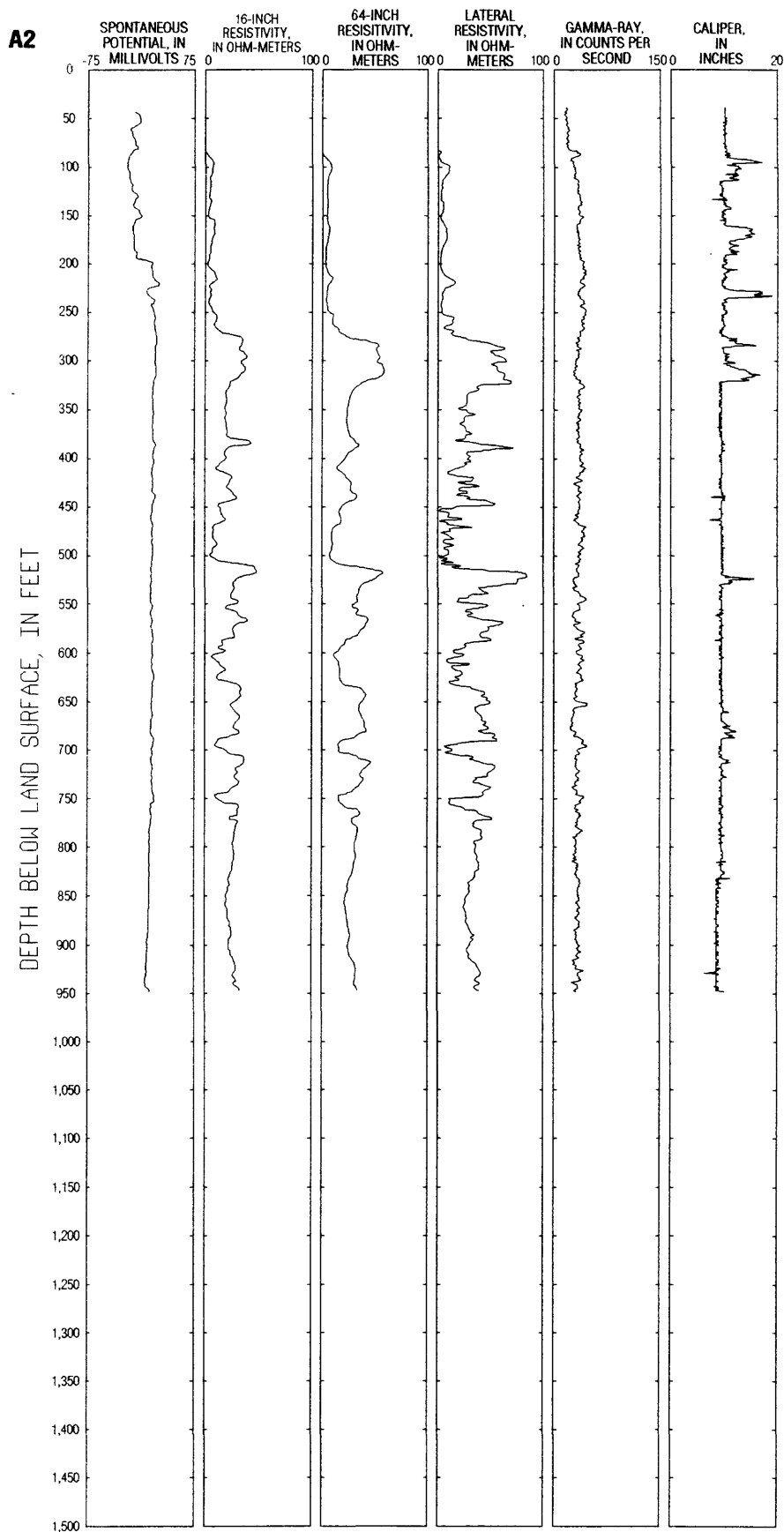


**FIGURE 7.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site A1 (1N/22W-20J4, 5, 6, 7, 8).

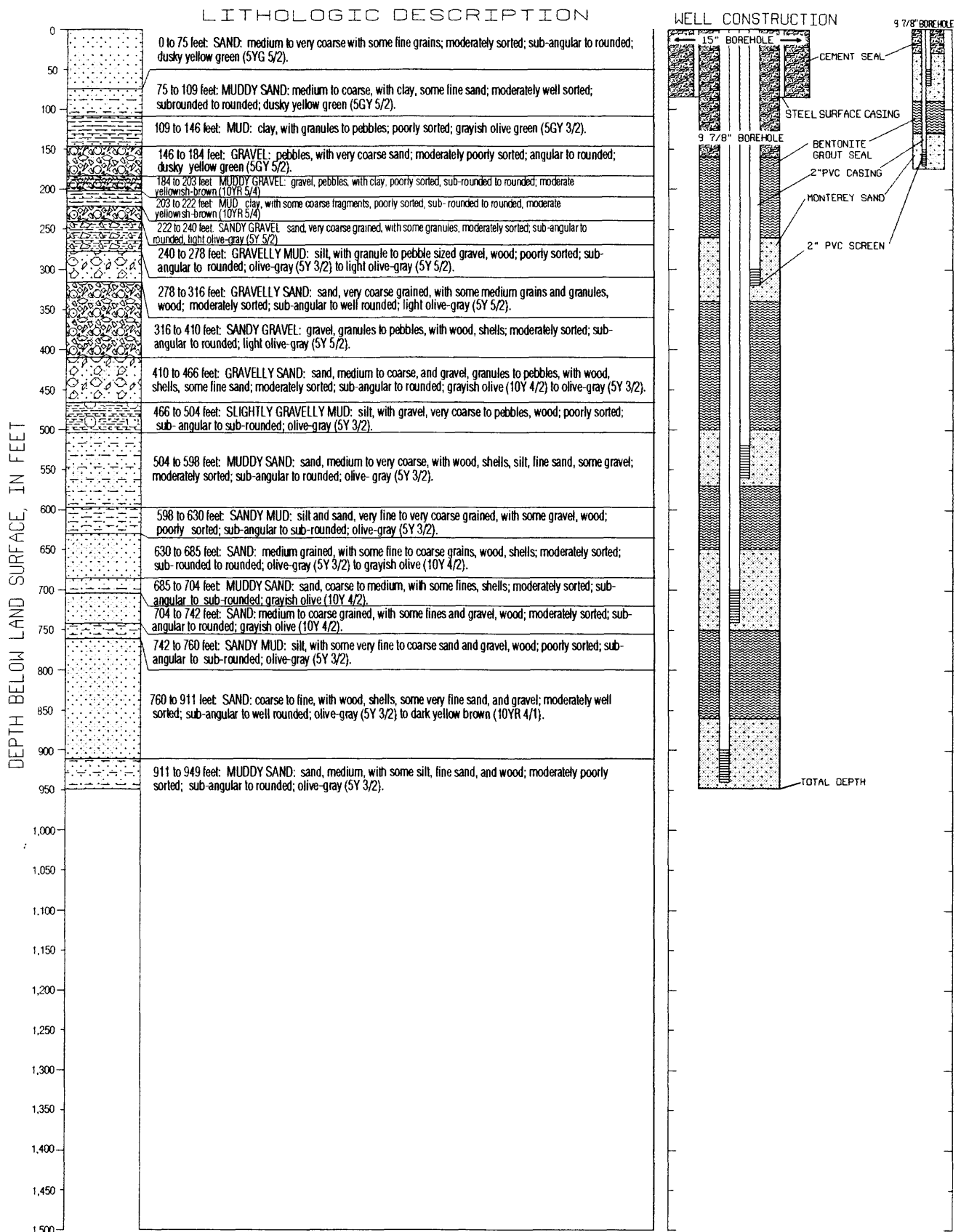




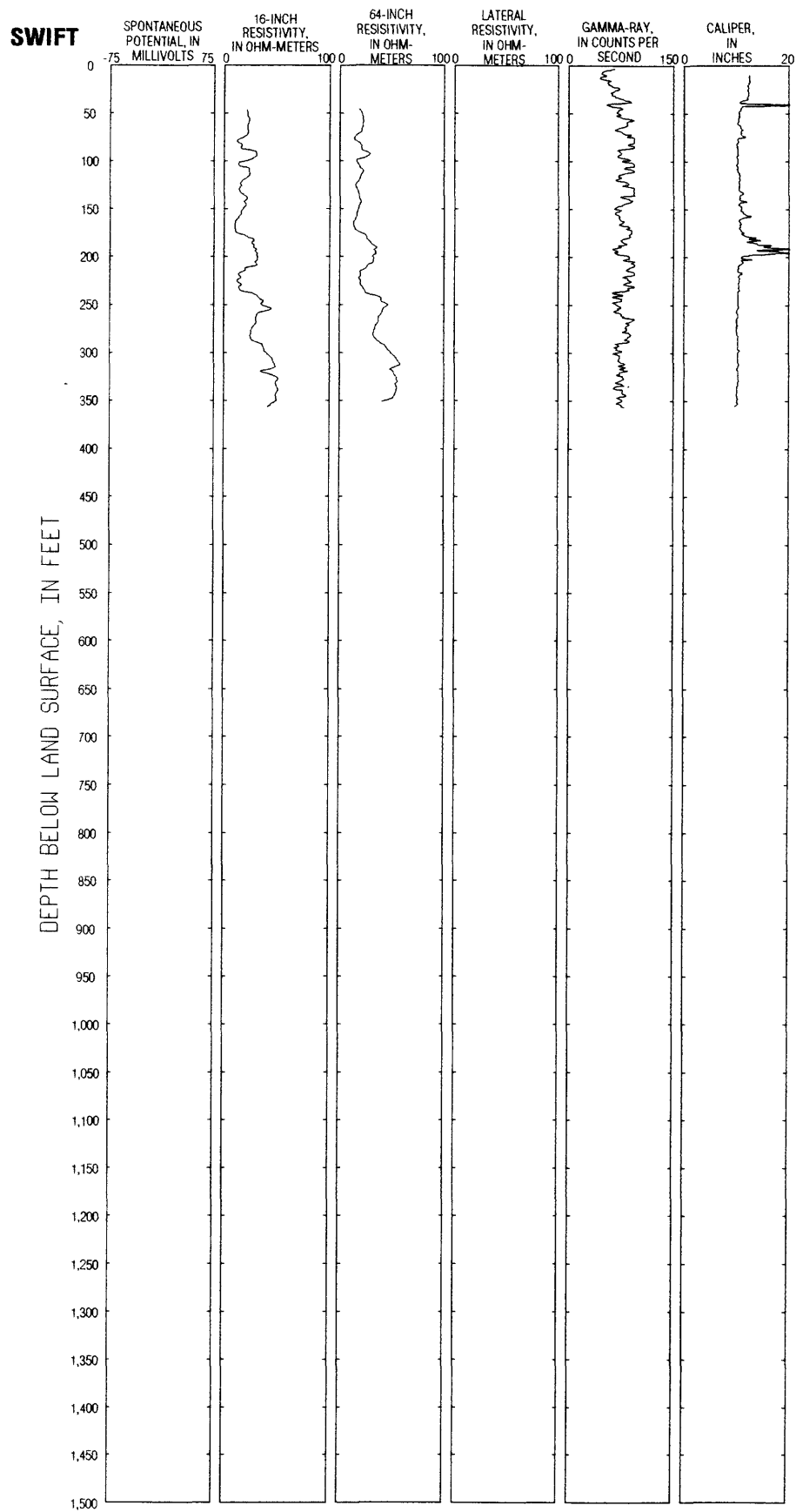
**FIGURE 7. Continued.**



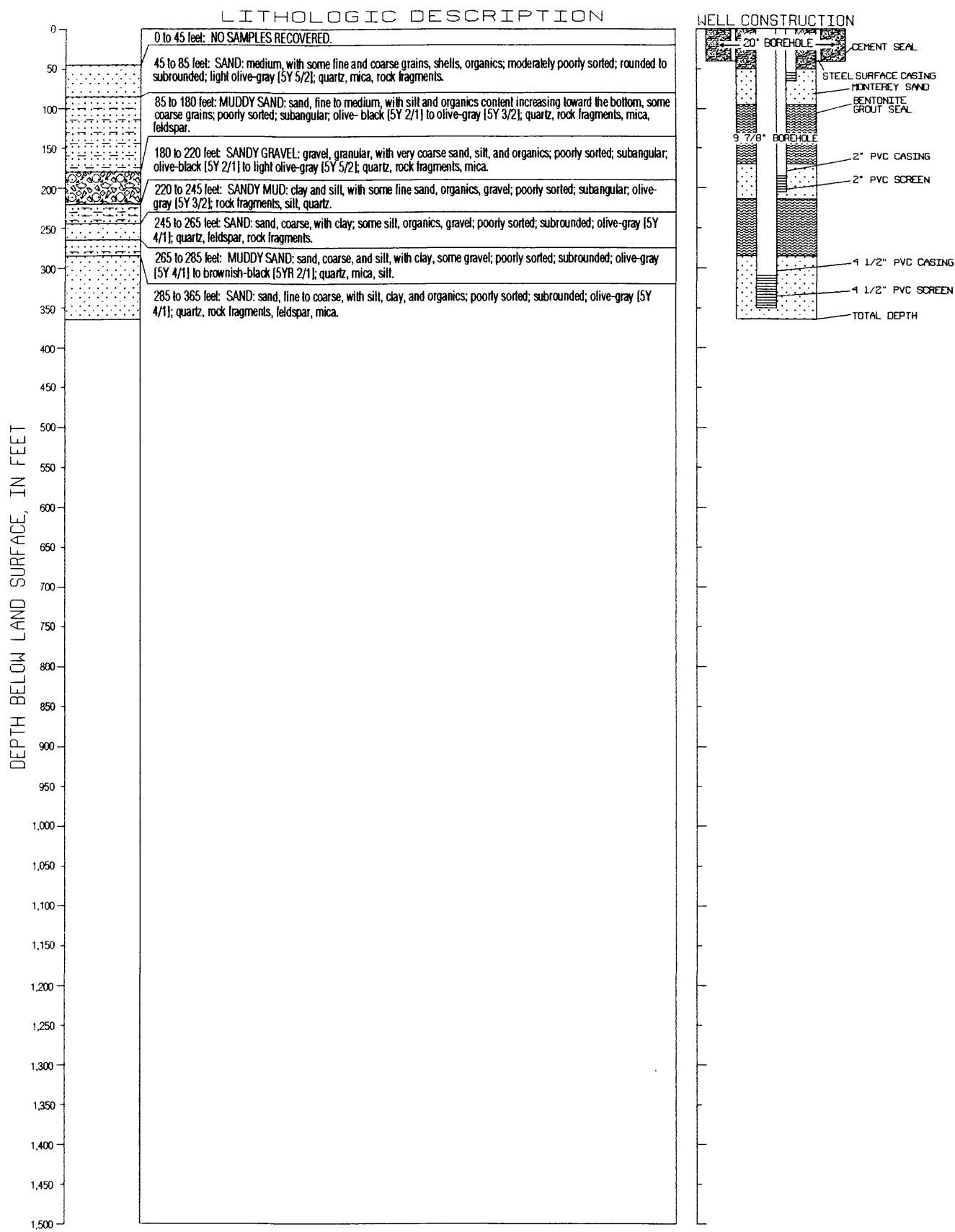
**FIGURE 8.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site A2 (1N/22W-20M1, 2, 3, 4, 5, 6).



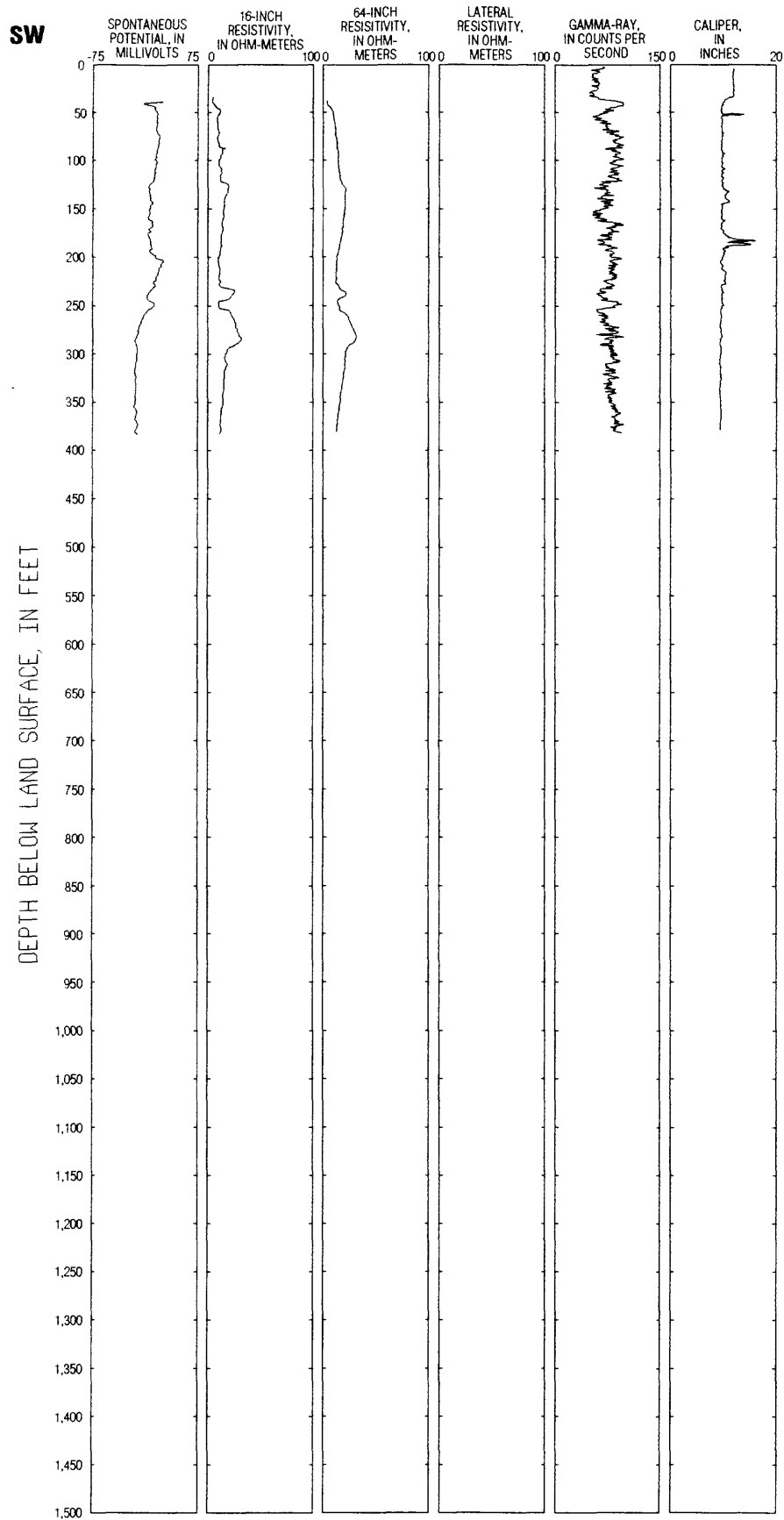
**FIGURE 8. Continued.**



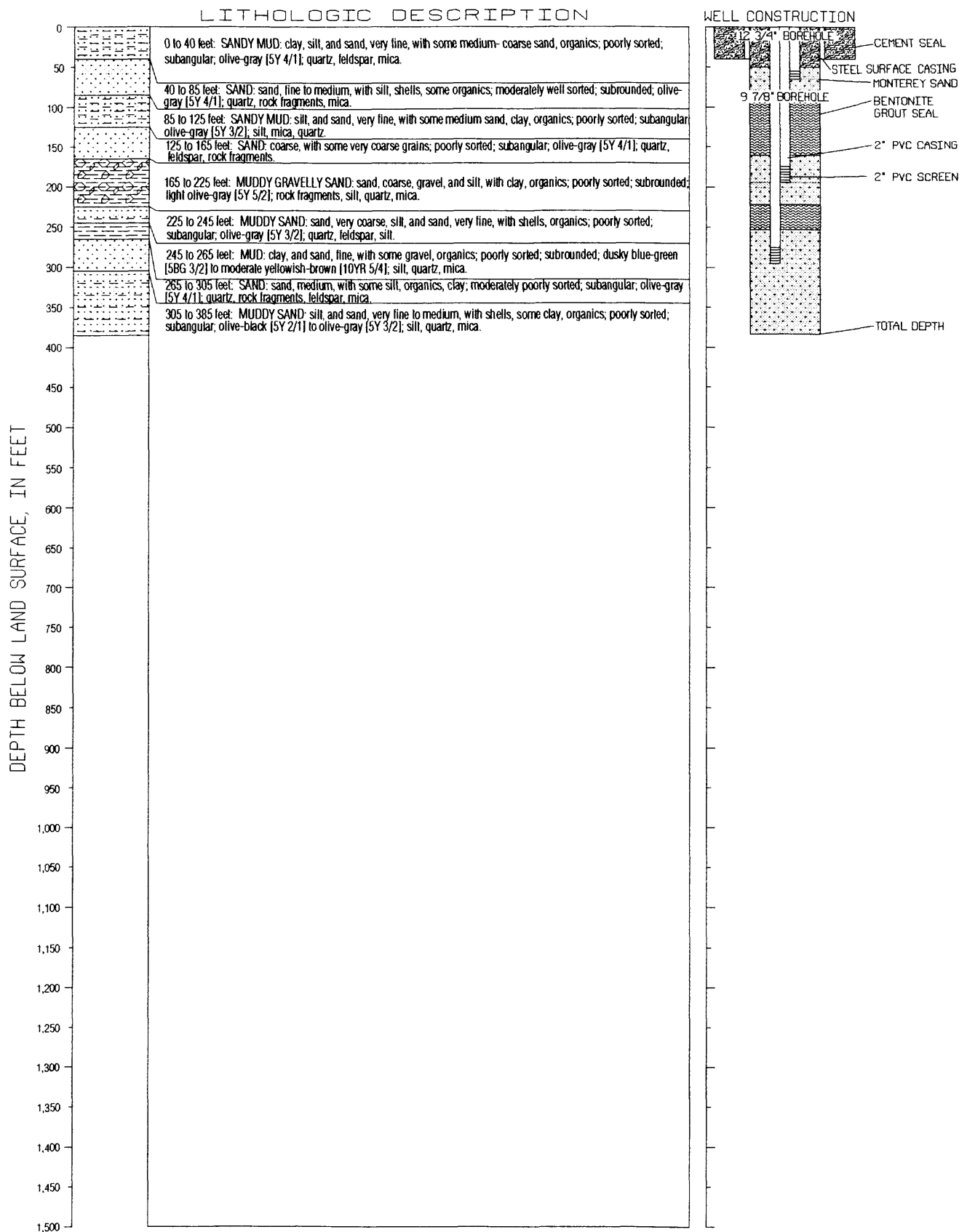
**FIGURE 9.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SWIFT (1N/22W-26J3, 4, 5).



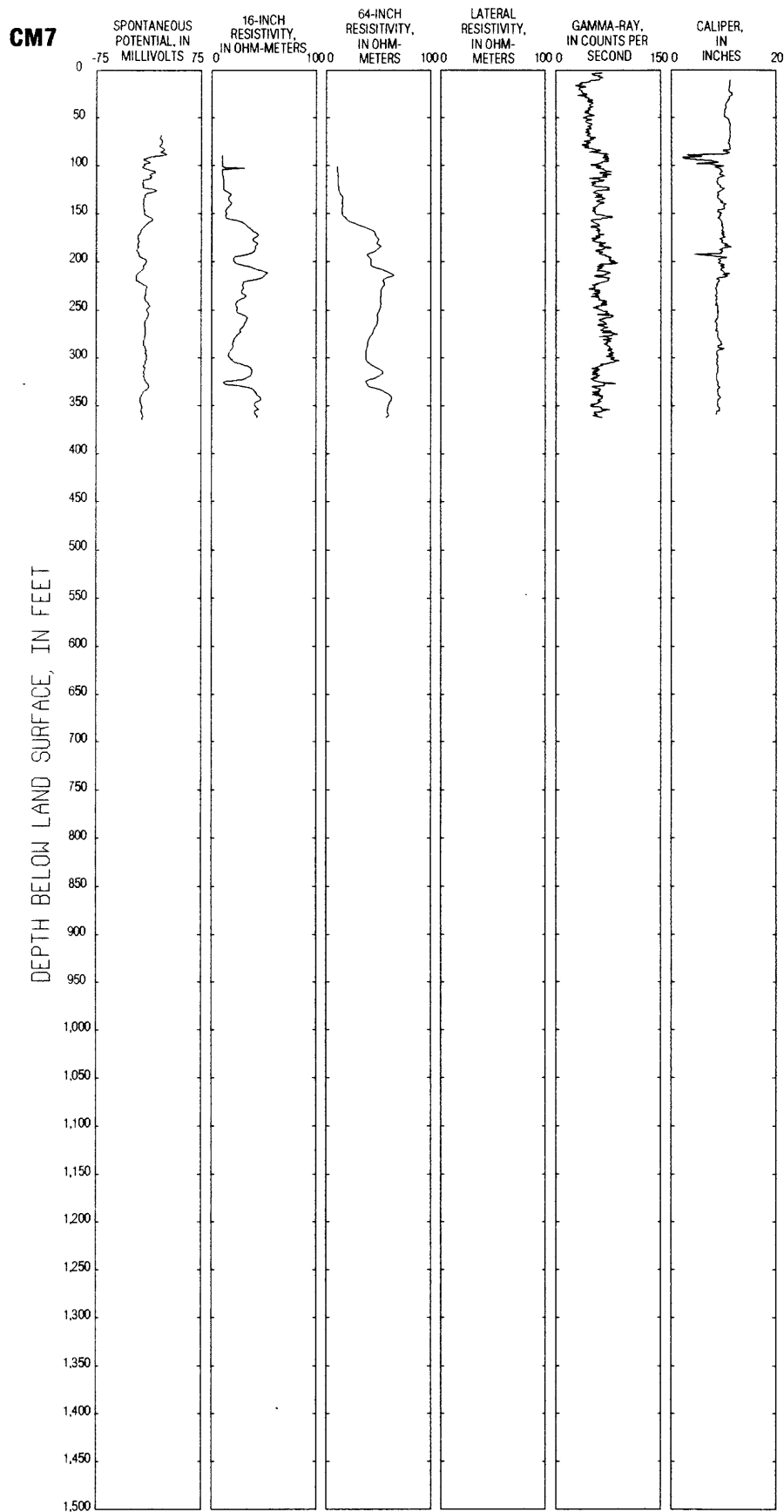
**FIGURE 9. Continued.**



**FIGURE 10.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SW (1N/22W-27C2, 3, 4).

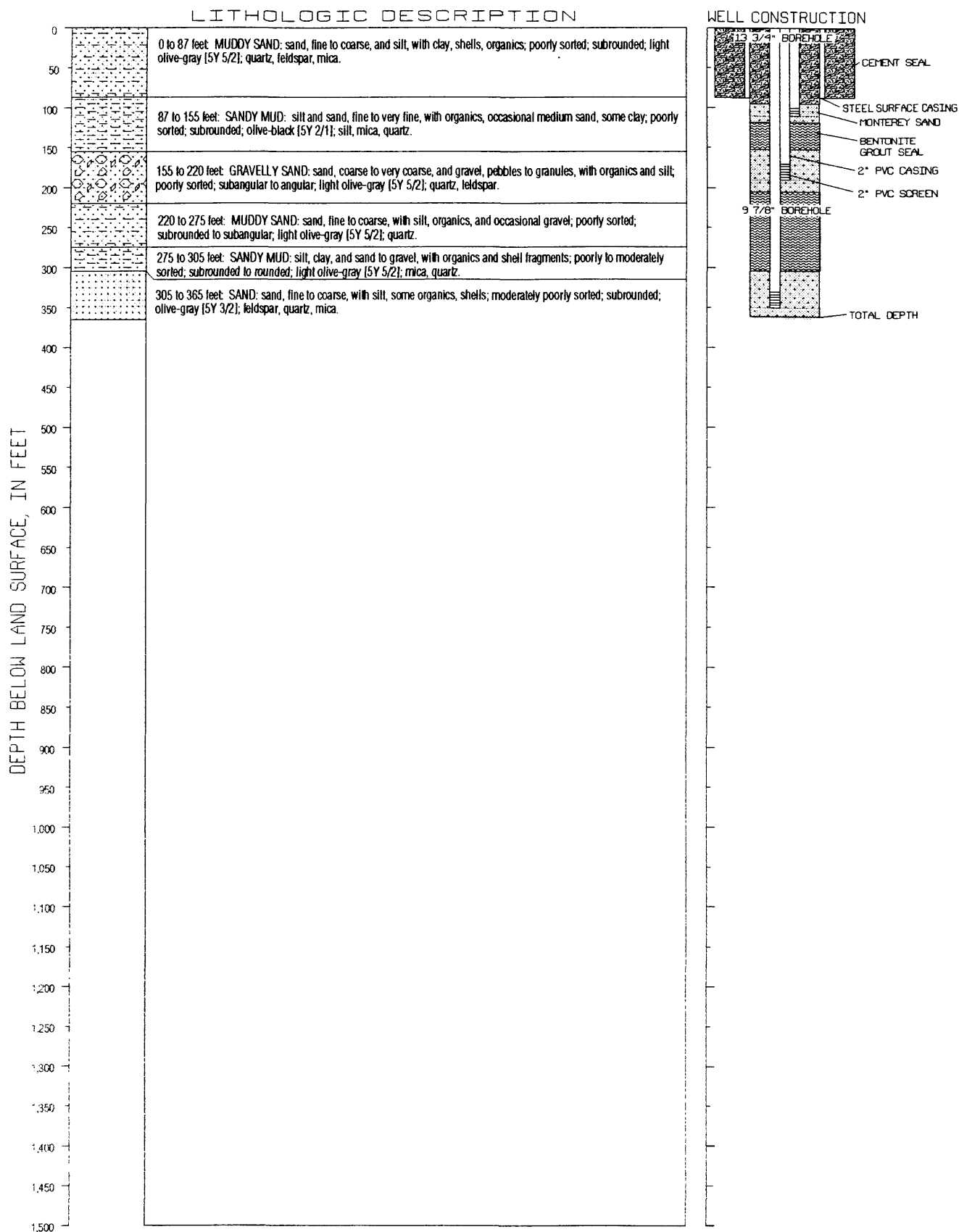


**FIGURE 10. Continued.**

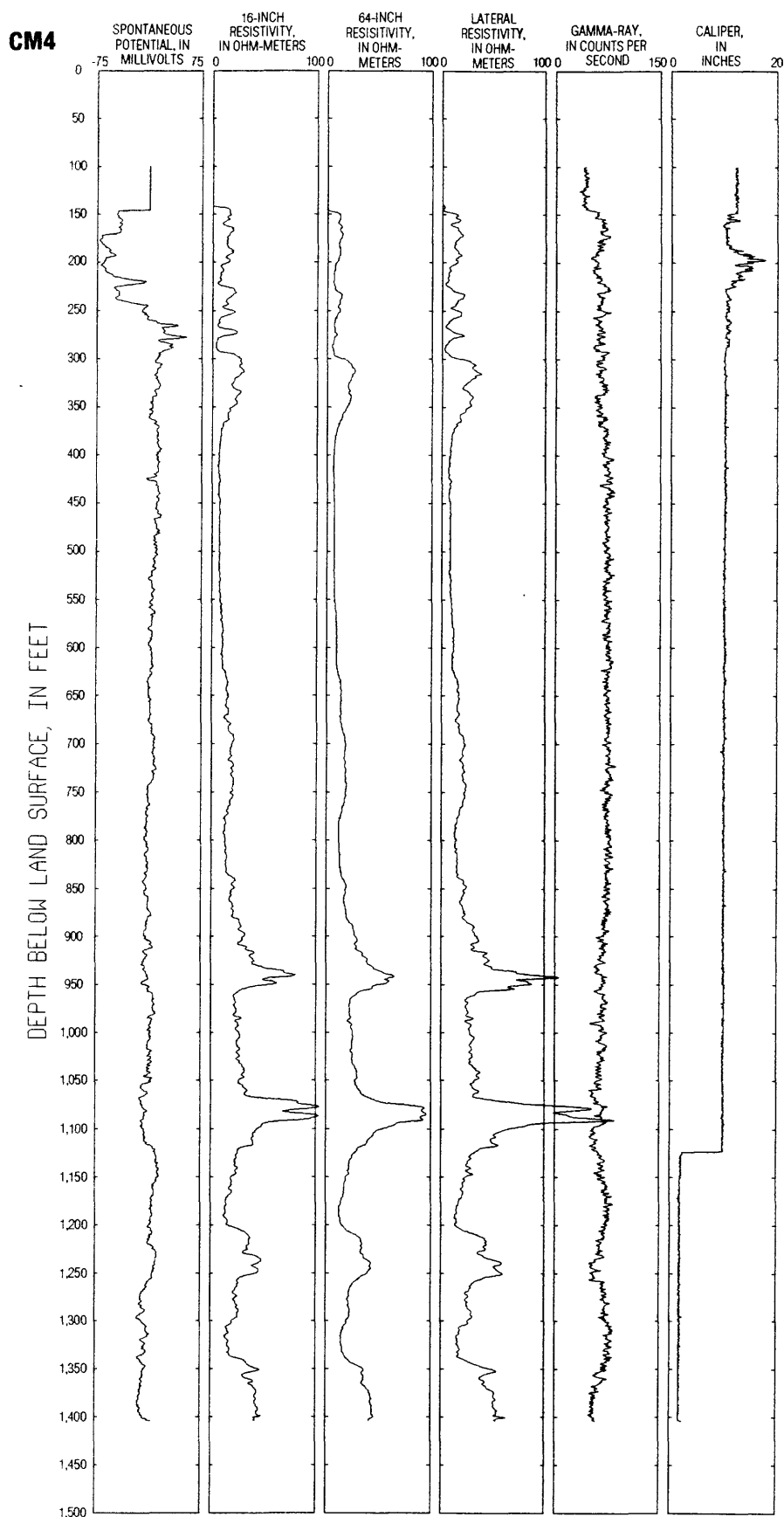


**FIGURE 11.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM7 (1N/22W-27R3, 4, 5).

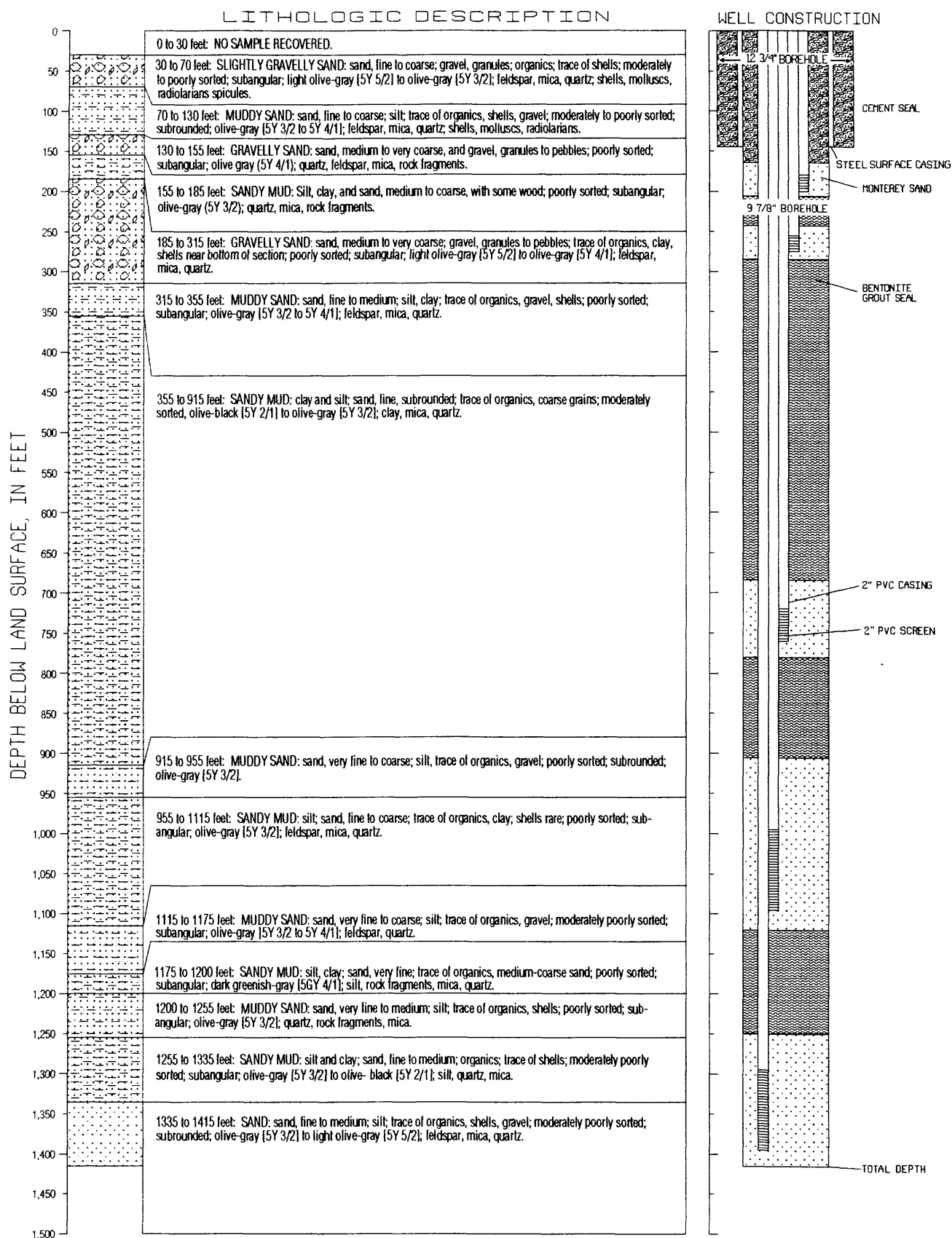




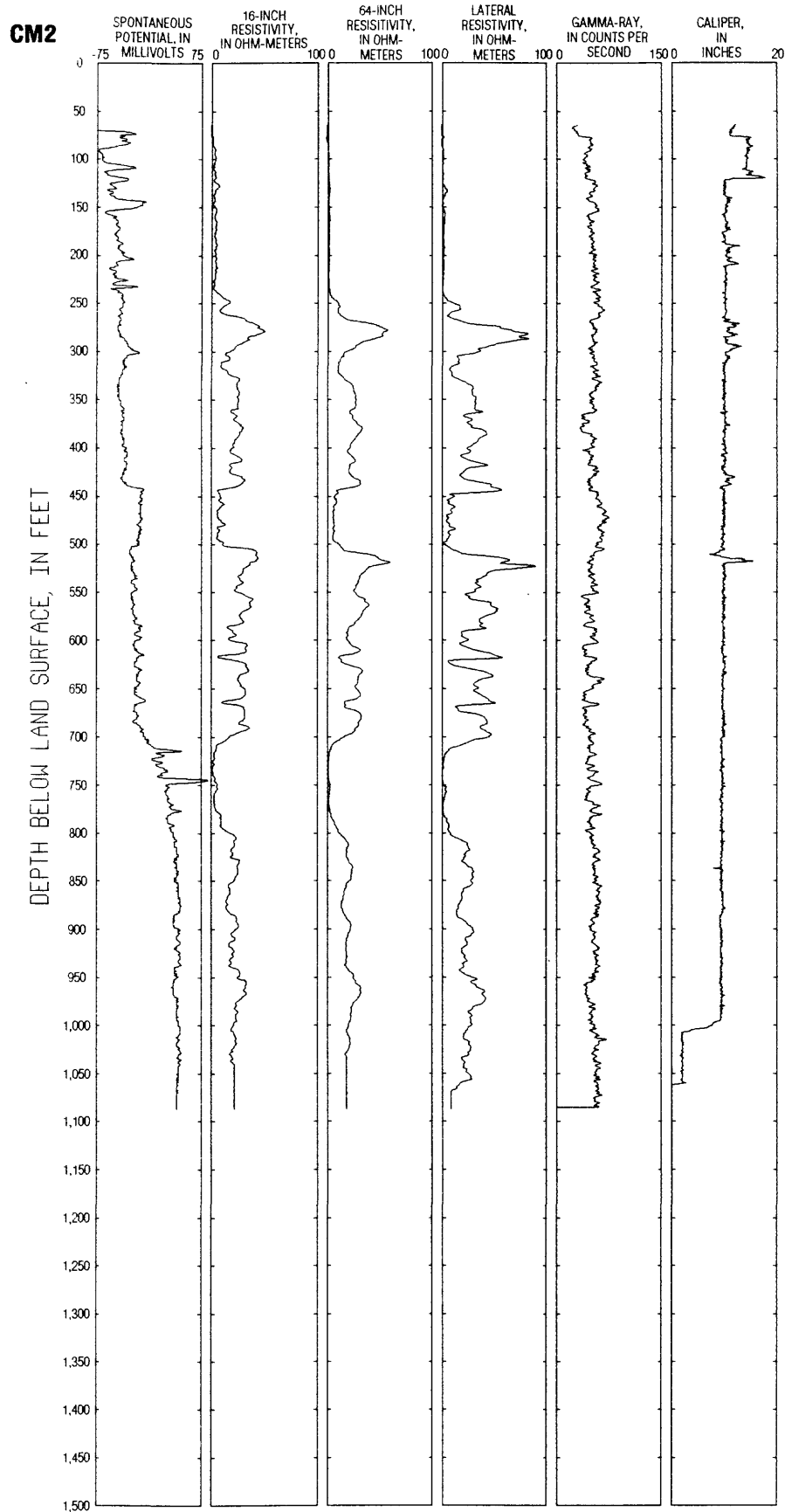
**FIGURE 11. Continued.**



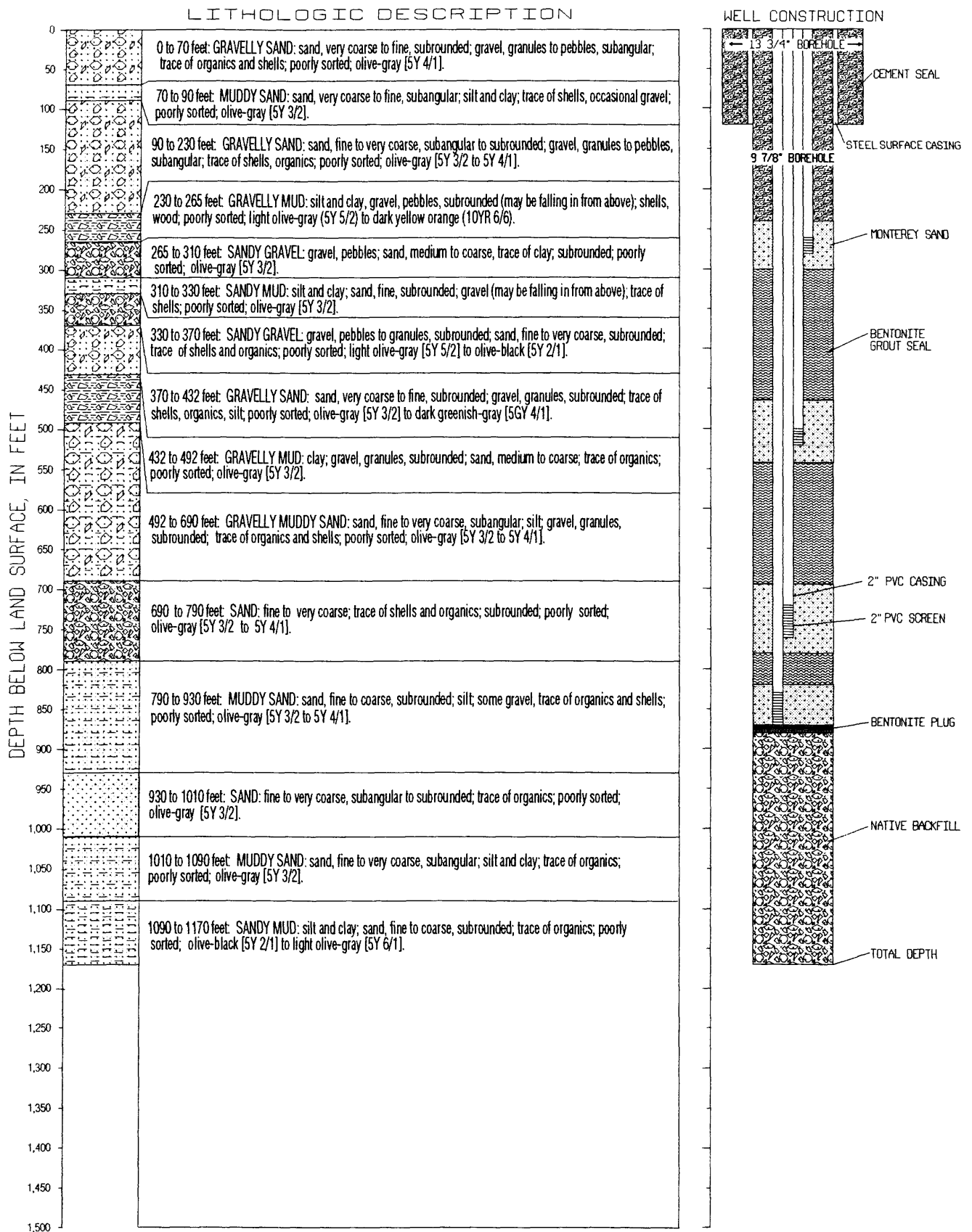
**FIGURE 12.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM4 (1N/22W-28G1, 2, 3, 4, 5).



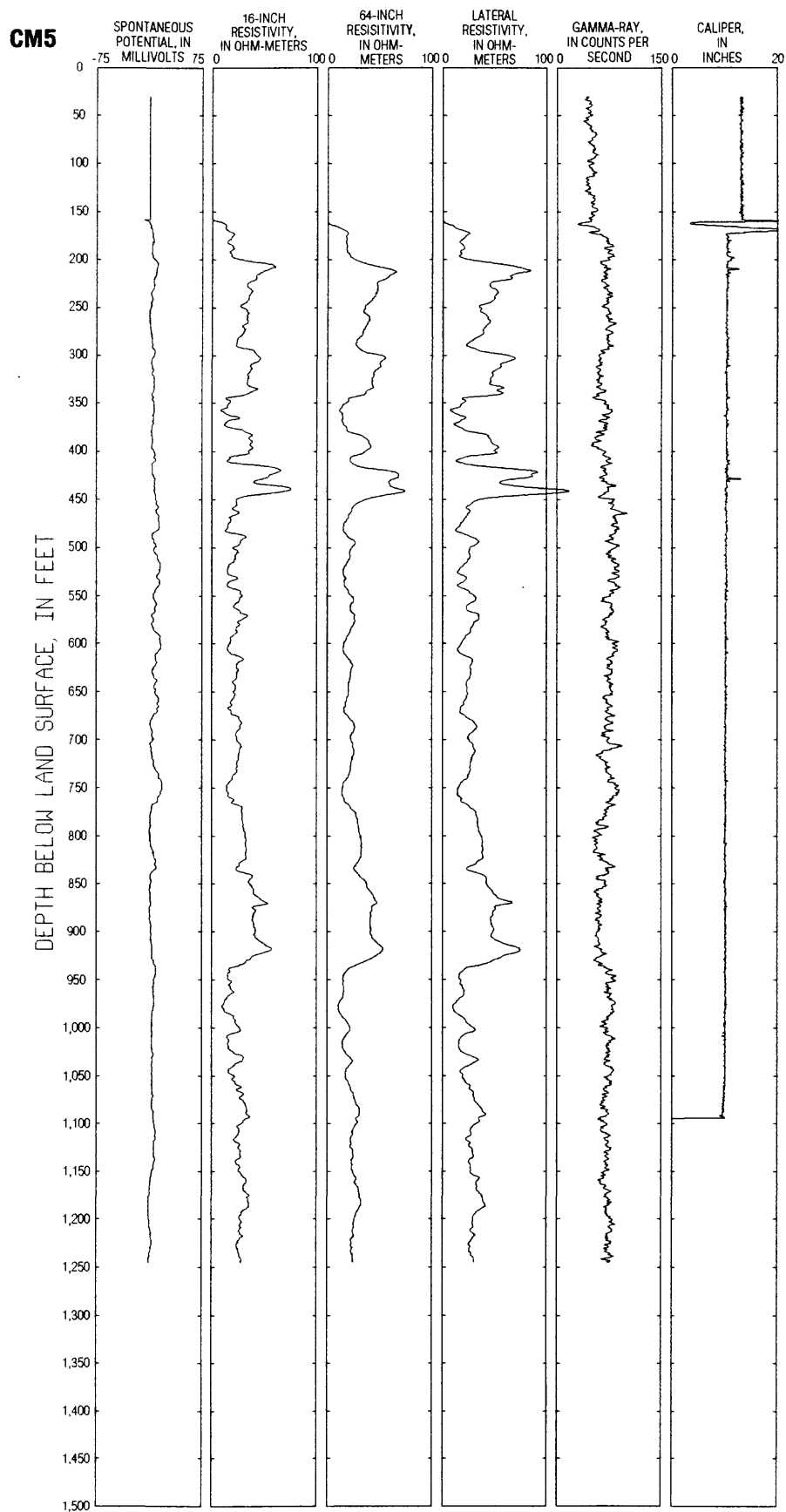
**FIGURE 12. Continued.**



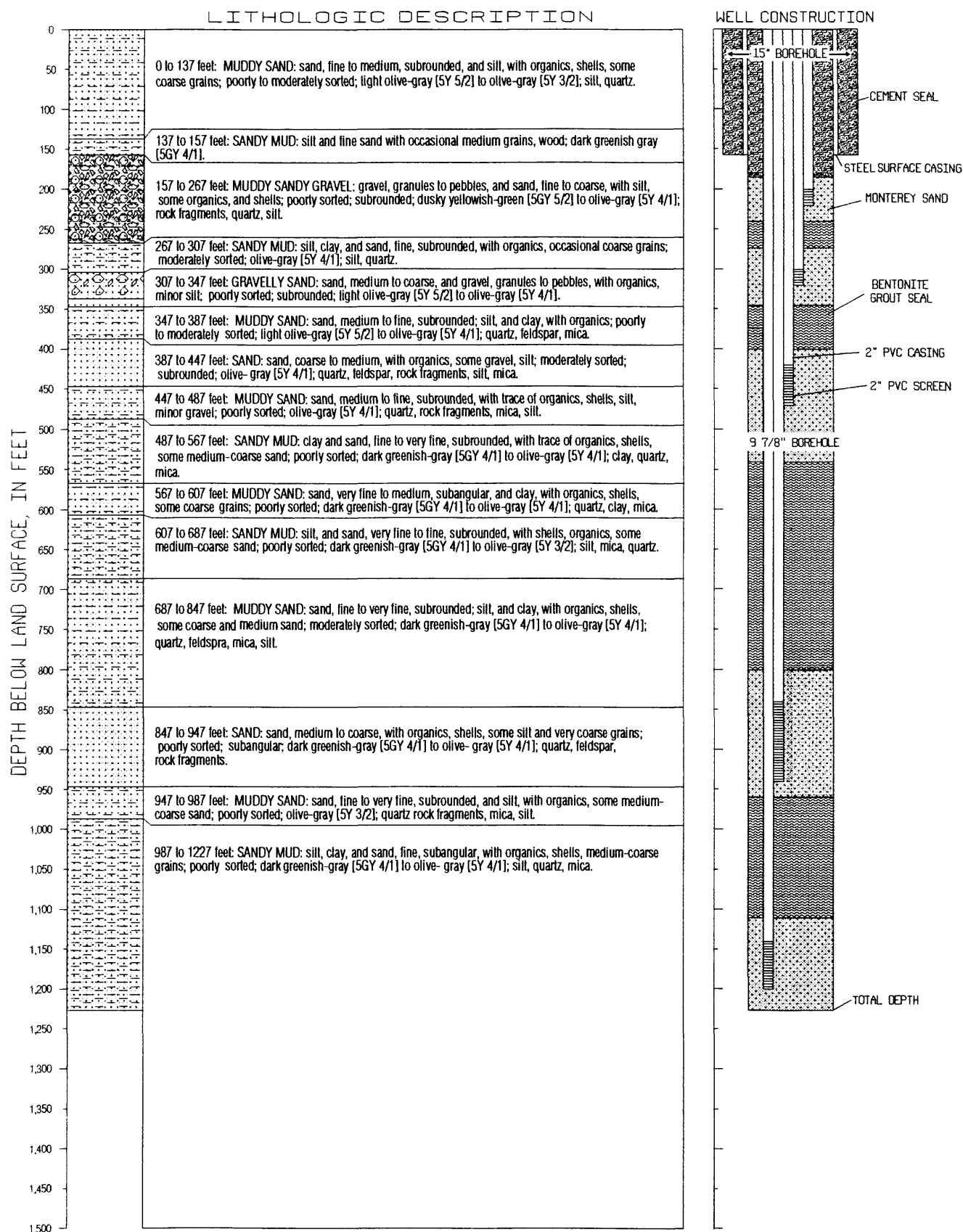
**FIGURE 13.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM2 (1N/22W-29D1, 2, 3, 4).



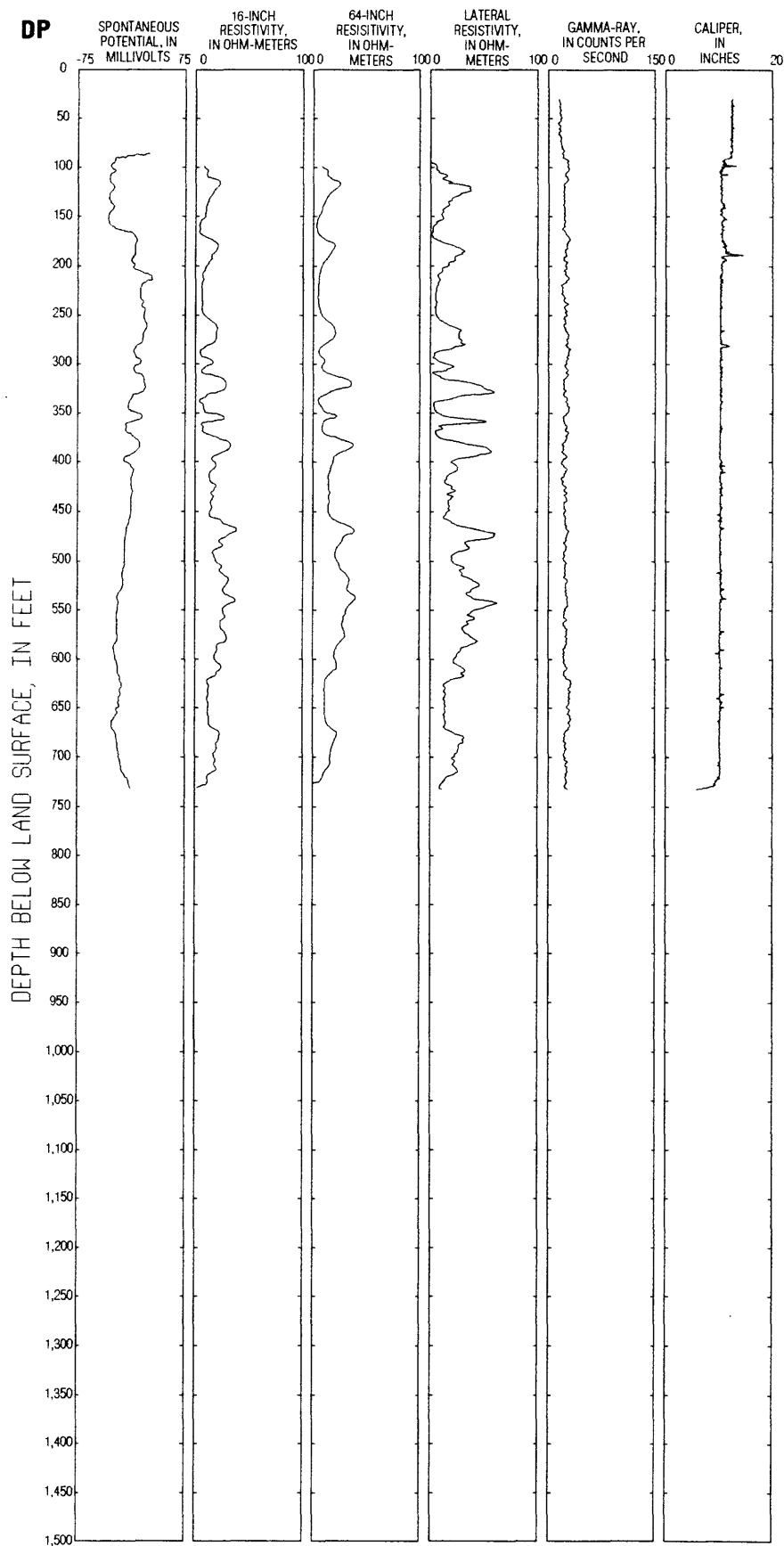
**FIGURE 13. Continued.**



**FIGURE 14.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM5 (1N/22W-35E1, 2, 3, 4, 5).

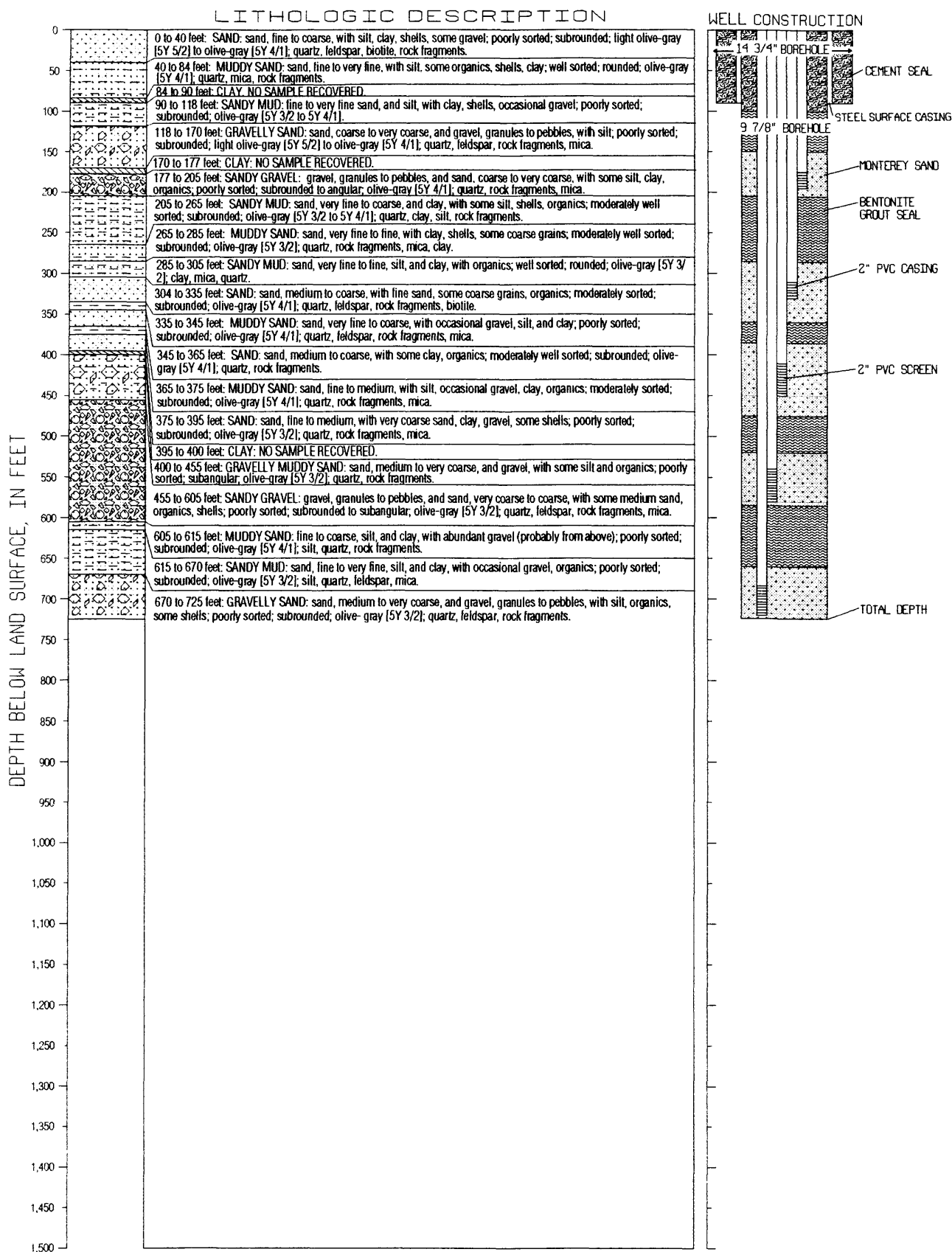


**FIGURE 14. Continued.**

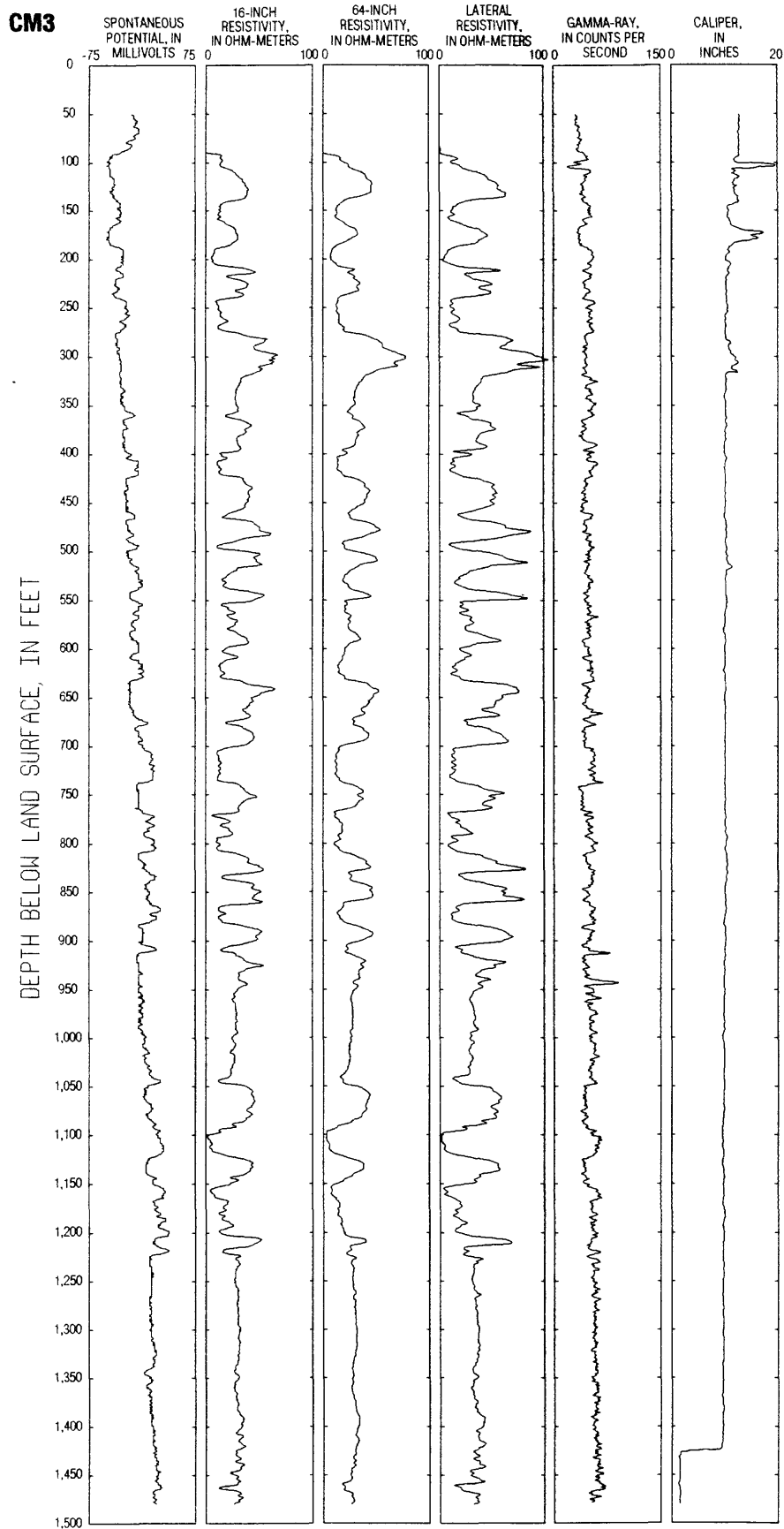


**FIGURE 15.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site DP (1N/22W-36K5, 6, 7, 8, 9).

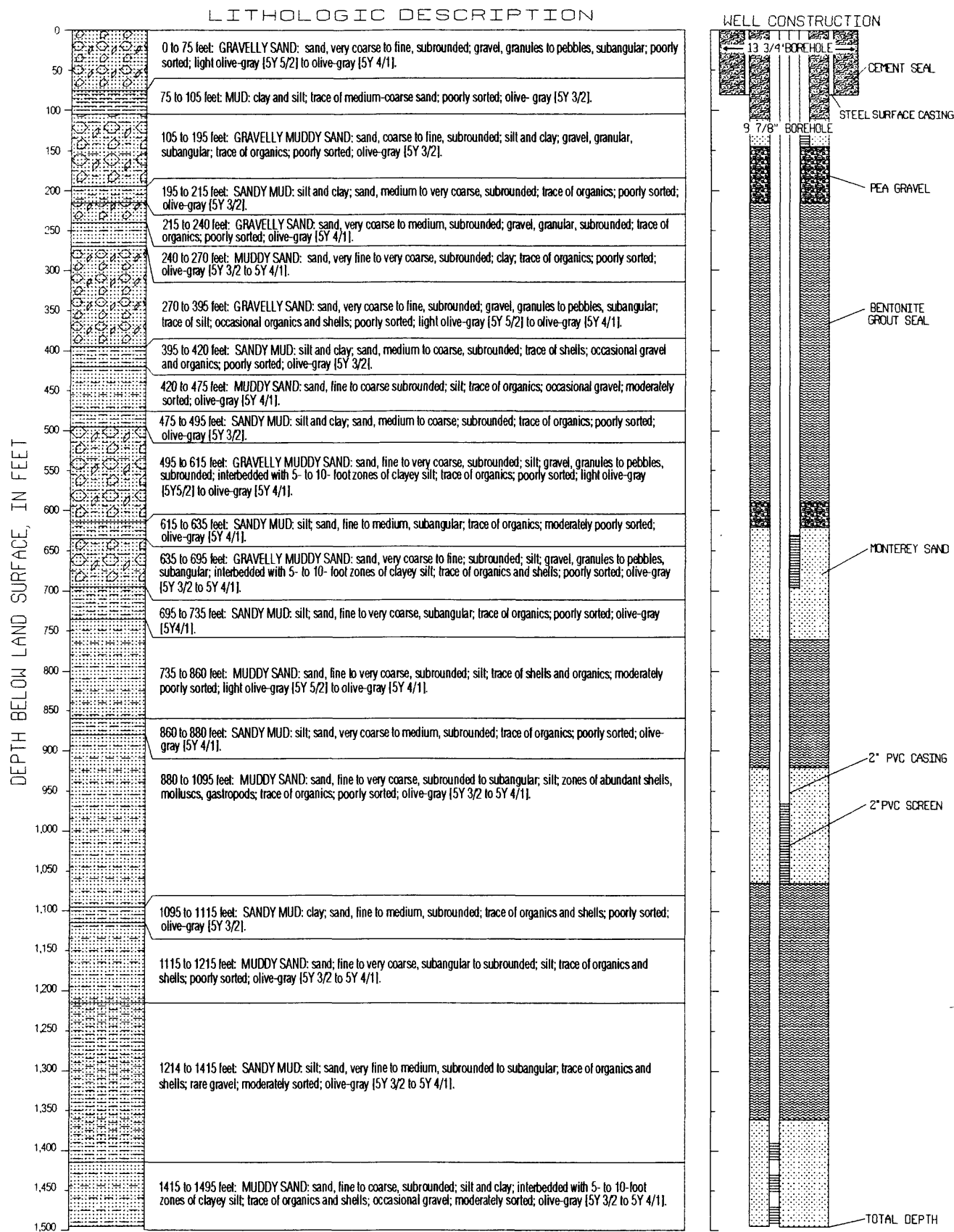




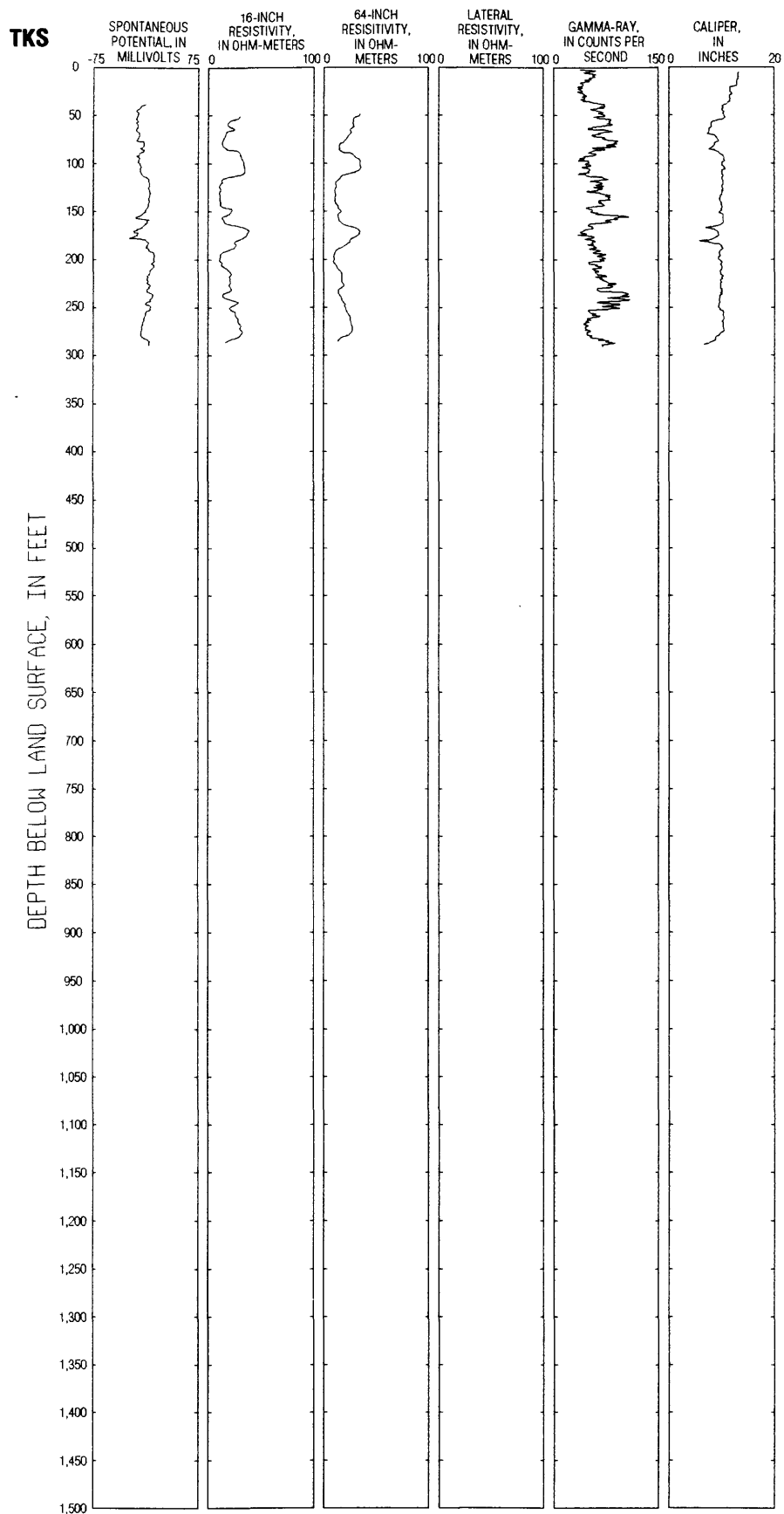
**FIGURE 15. Continued.**



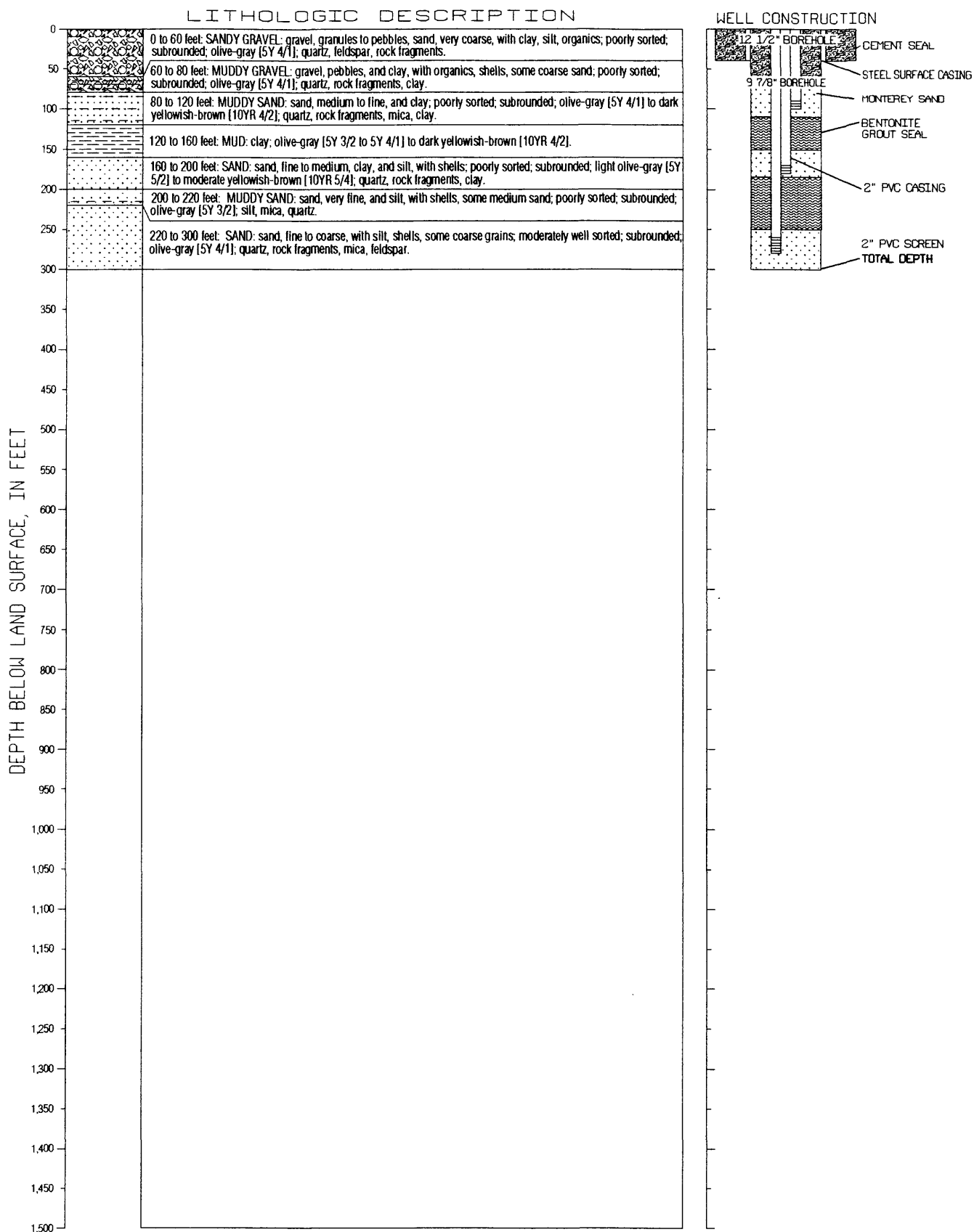
**FIGURE 16.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site CM3 (1N/23W-1C2, 3, 4, 5).



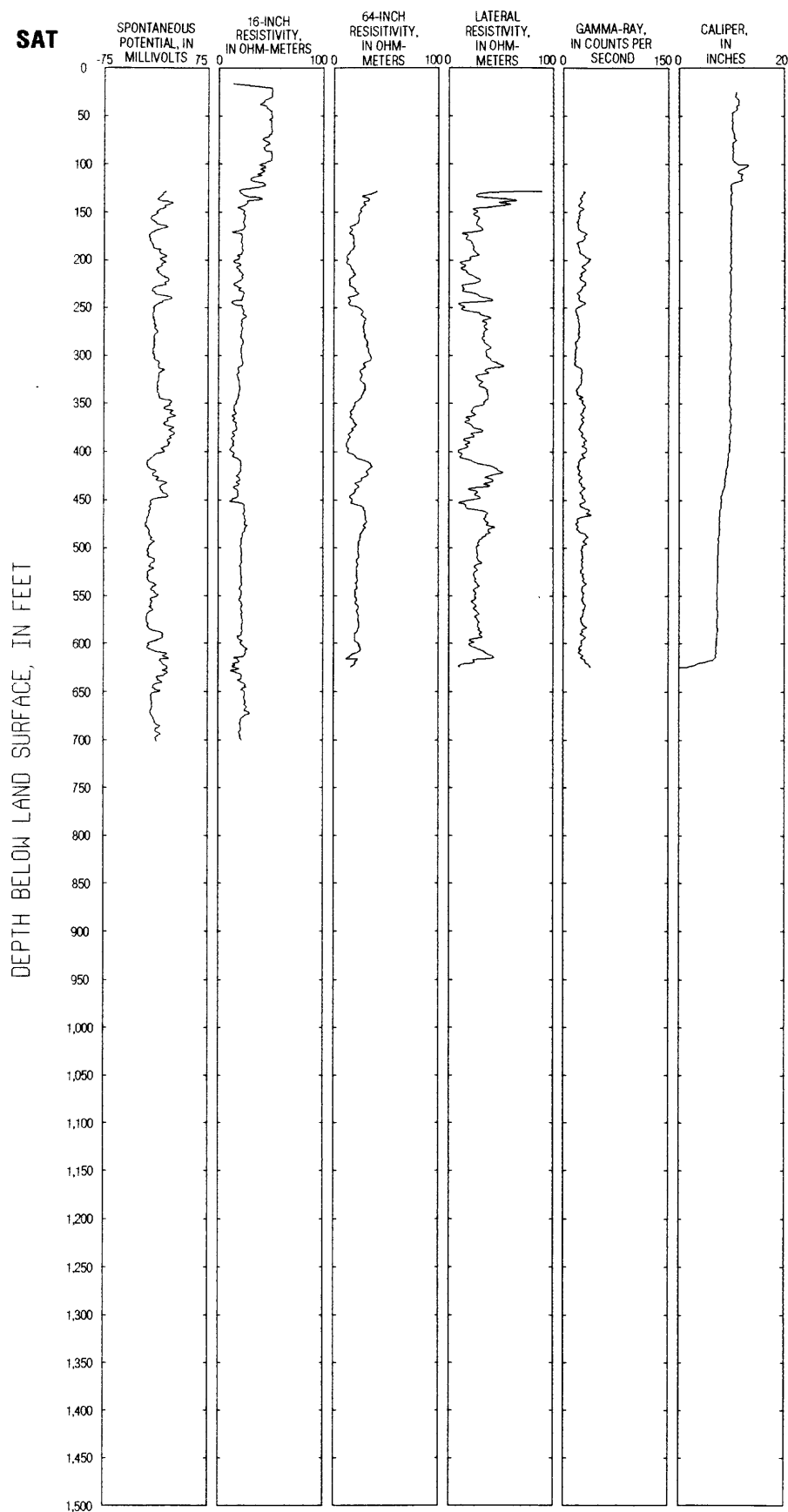
**FIGURE 16. Continued.**



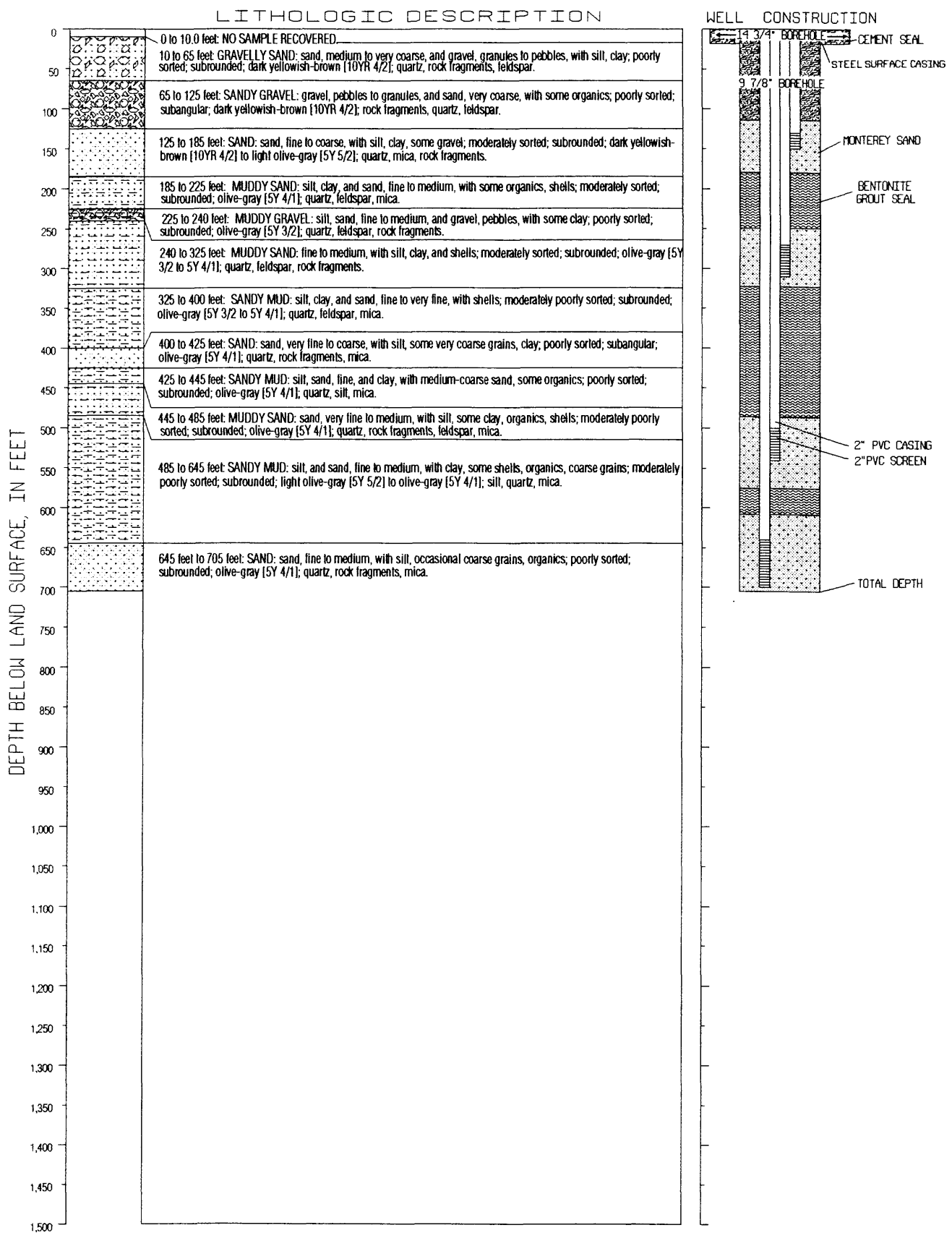
**FIGURE 17.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site TKS (2N/20W-16A2, 3, 4).



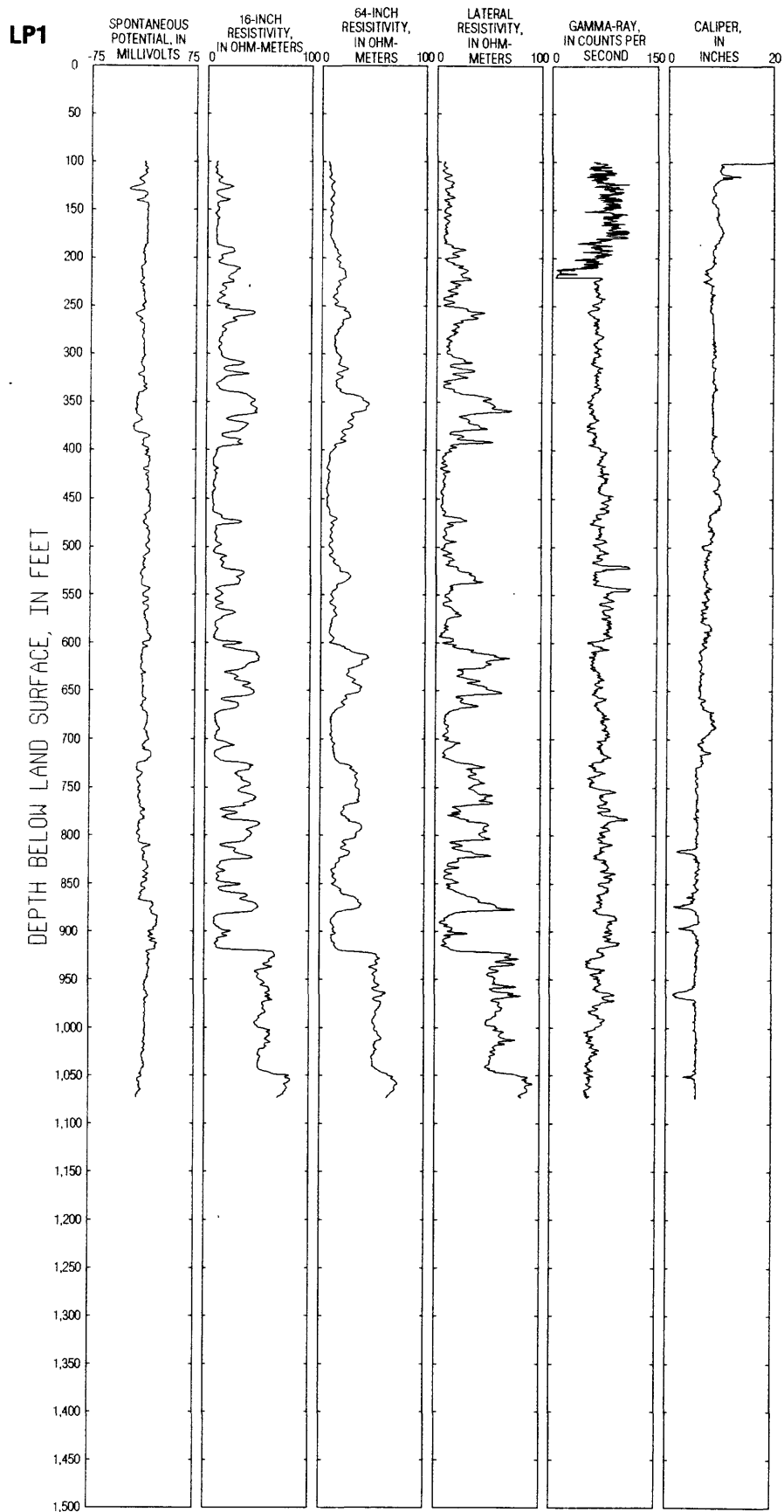
**FIGURE 17. Continued.**



**FIGURE 18.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SAT (2N/21W-7L3, 4, 5, 6).

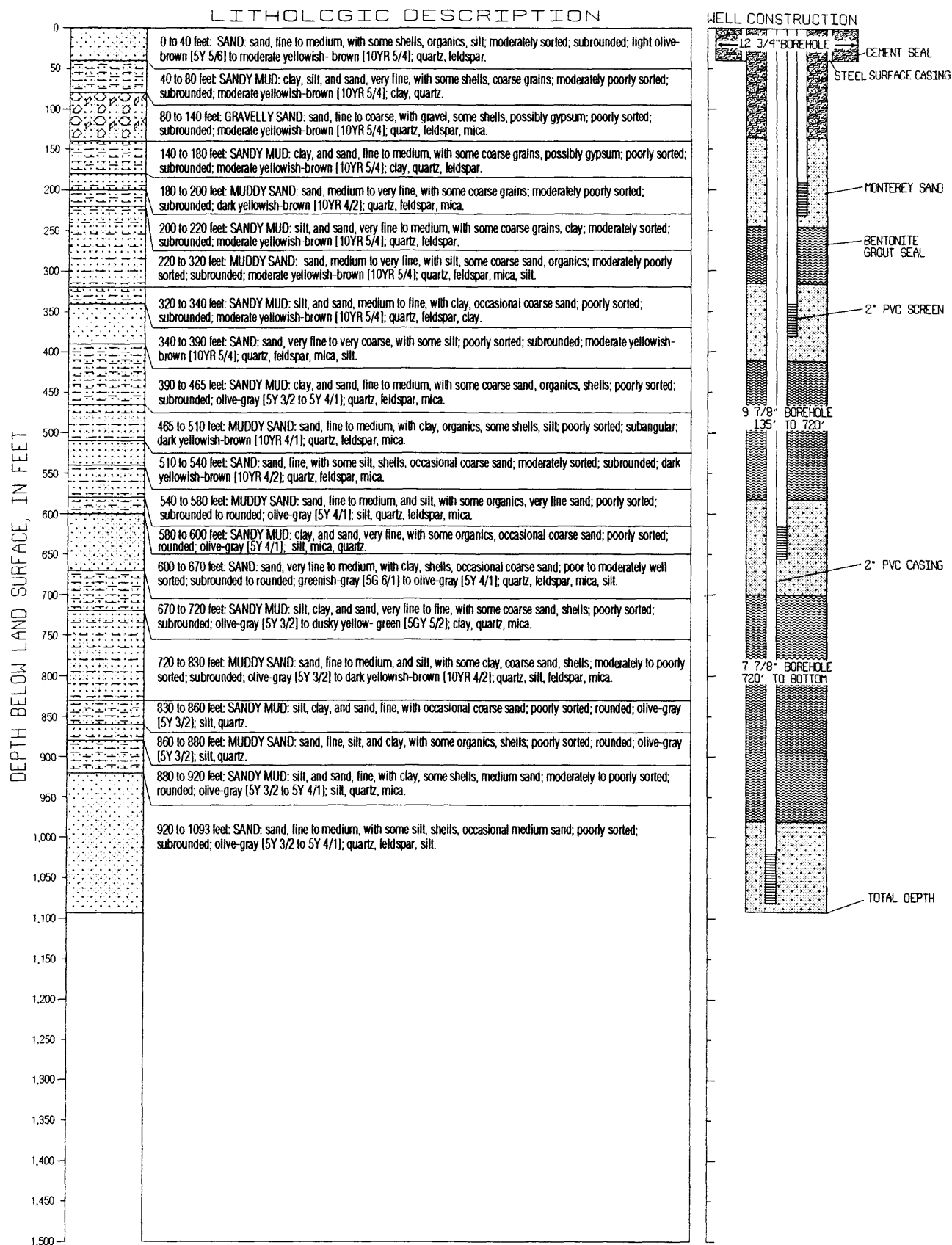


**FIGURE 18. Continued.**

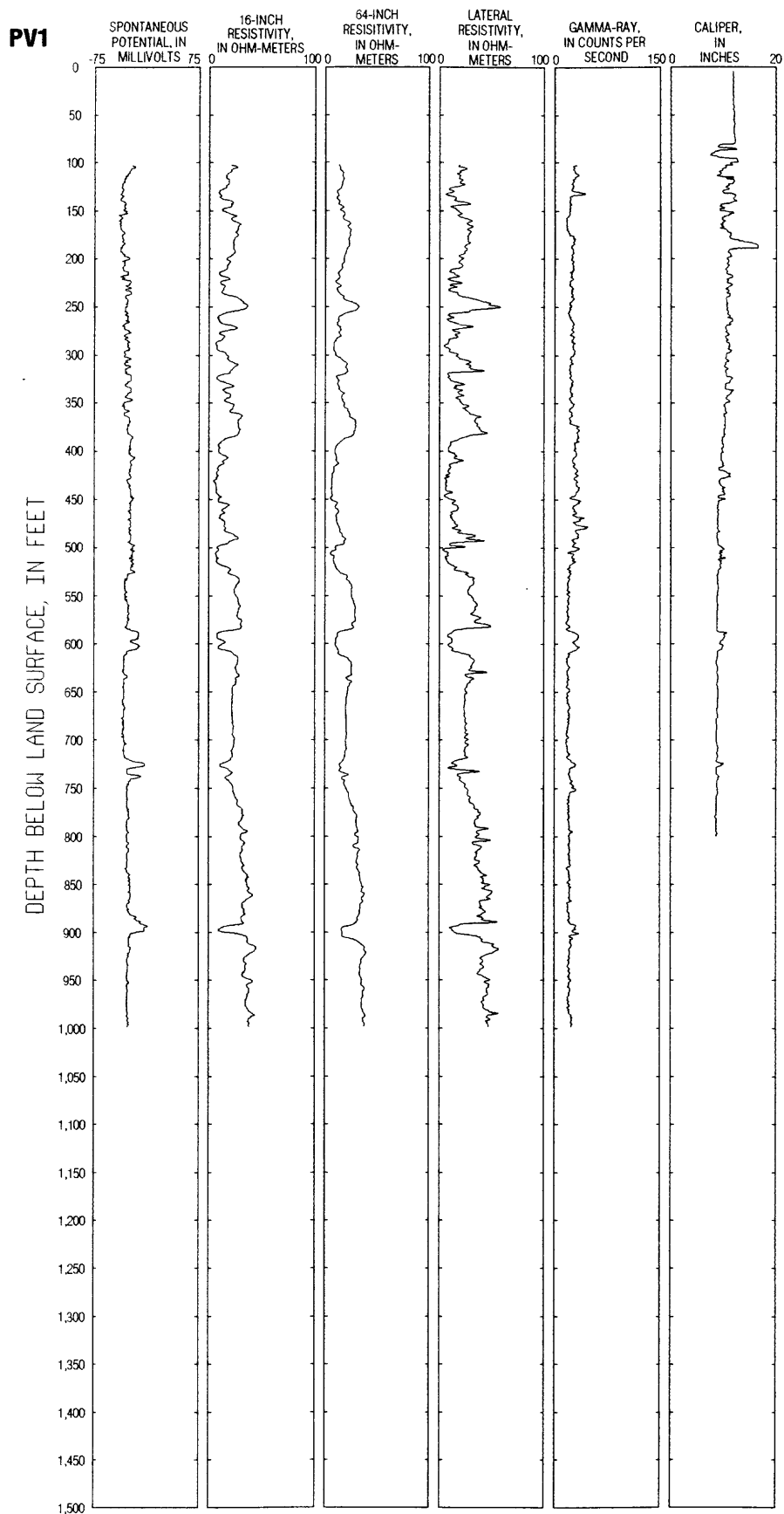


**FIGURE 19.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site LP1 (2N/21W-11J3, 4, 5, 6).

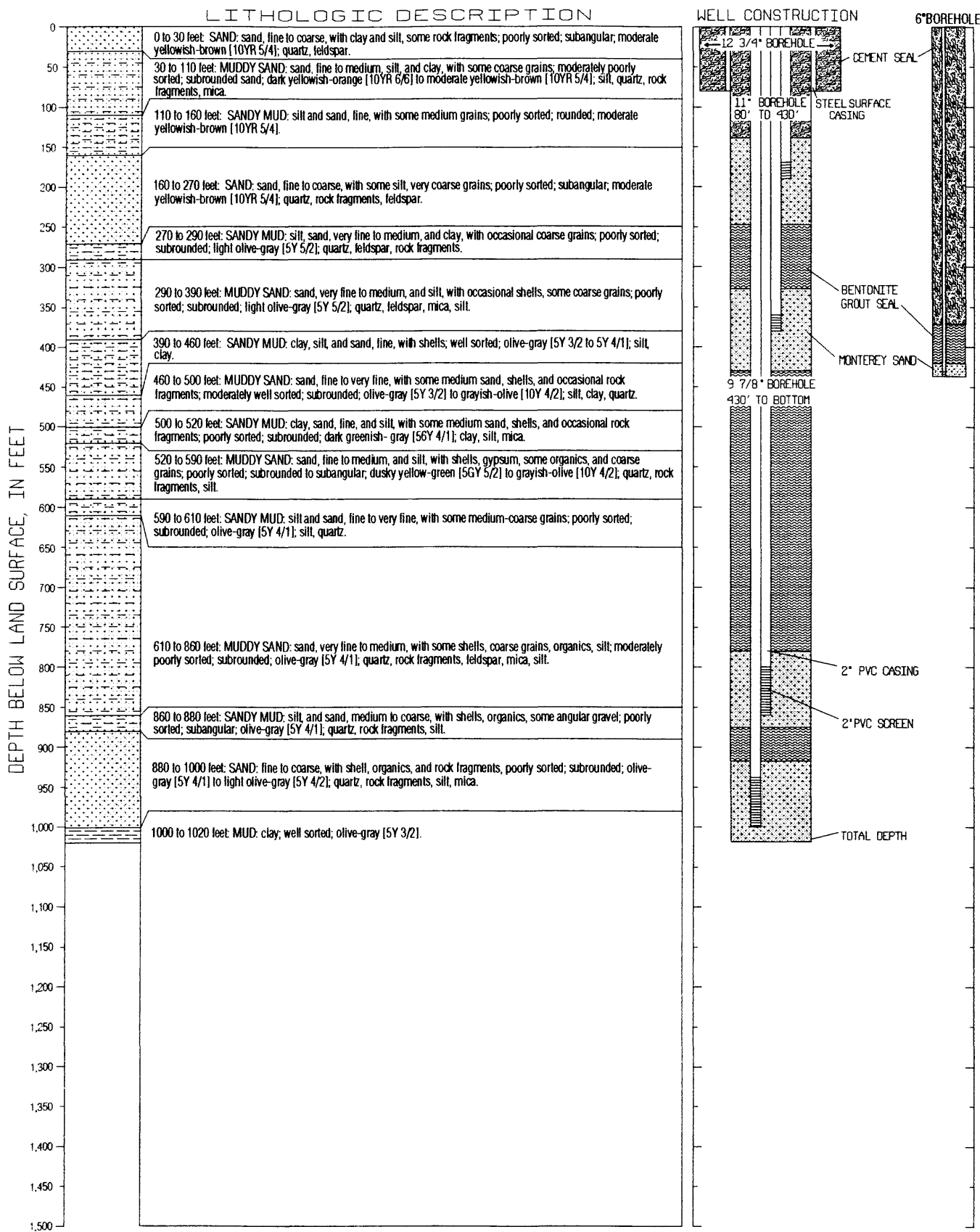




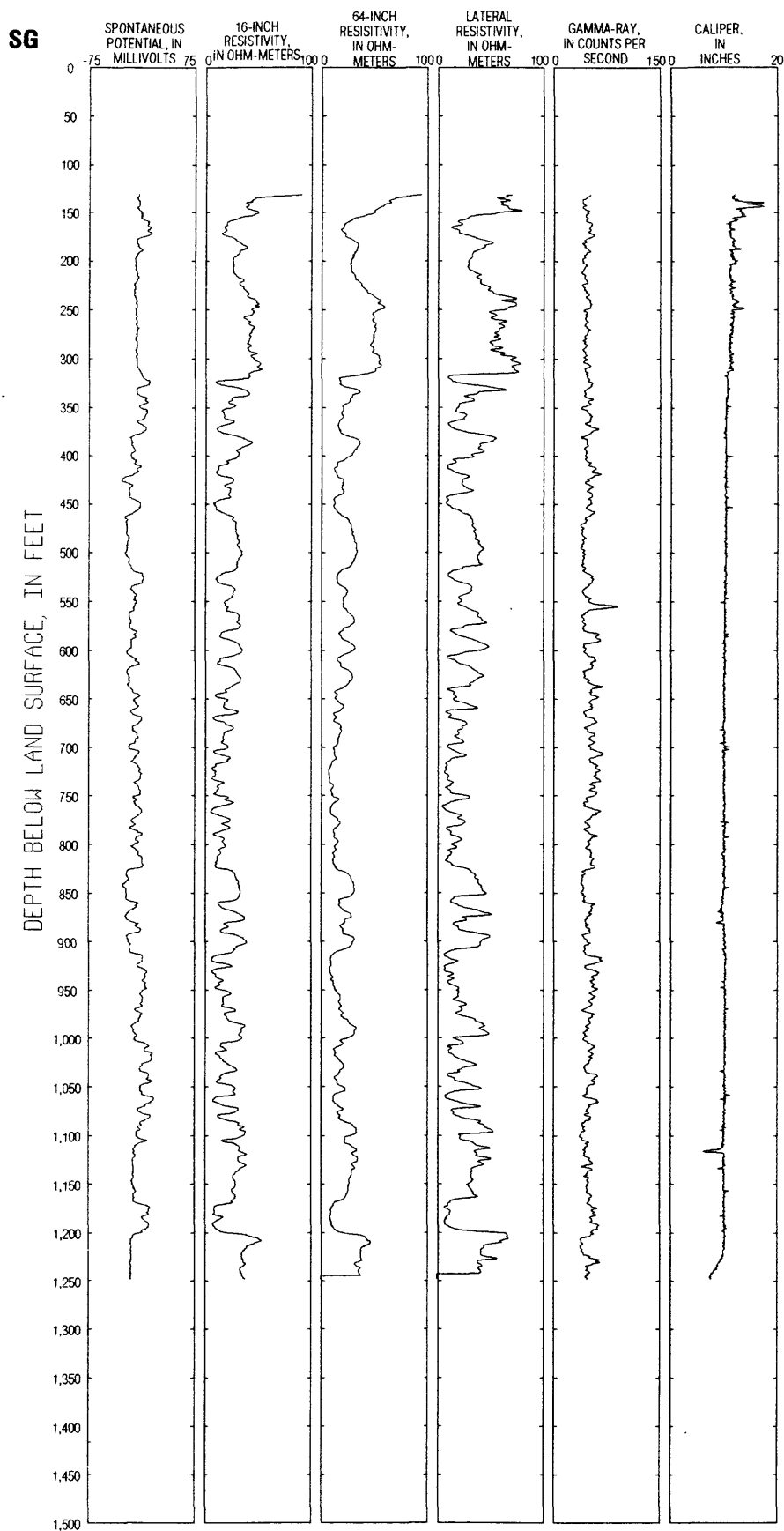
**FIGURE 19. Continued.**



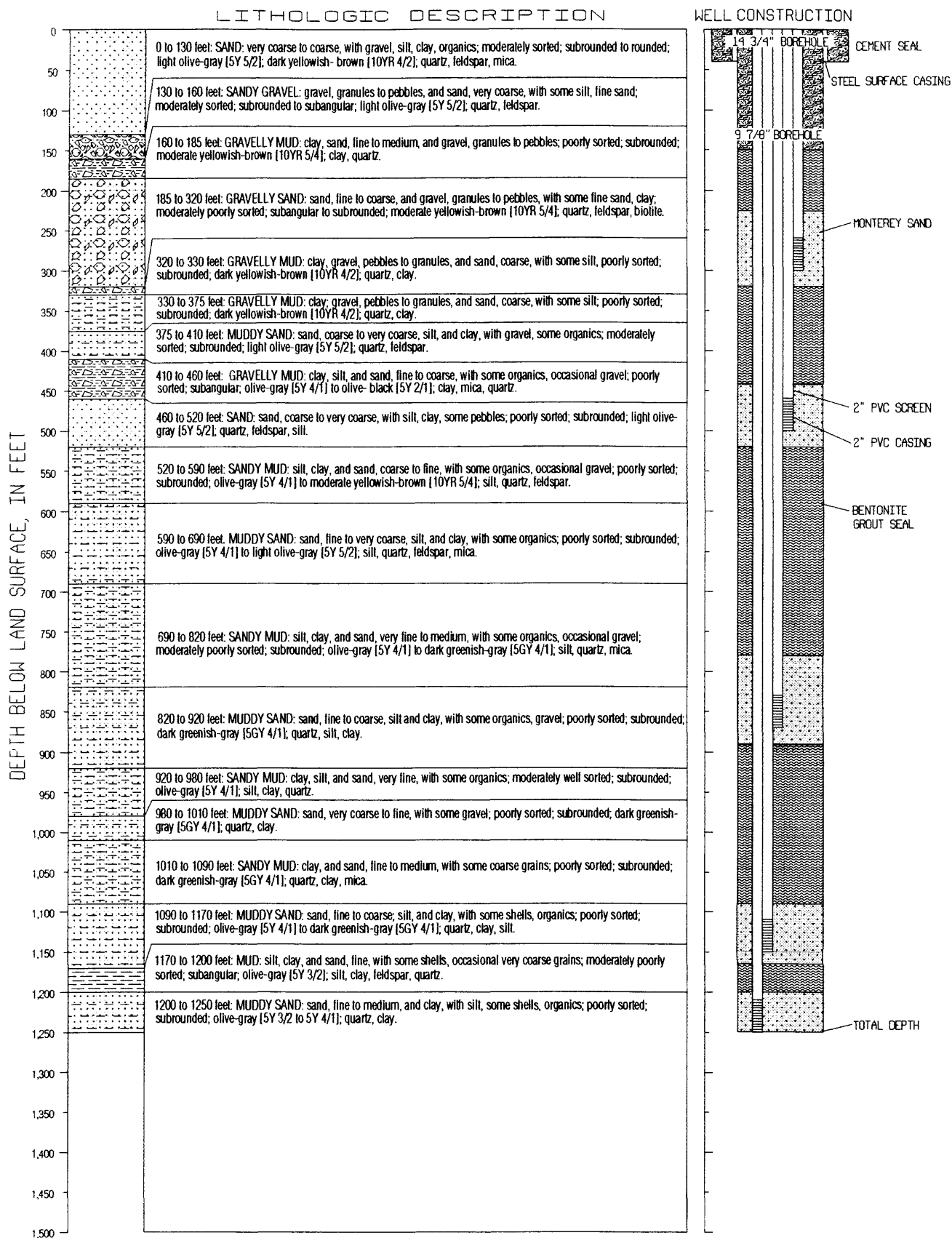
**FIGURE 20.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site PV1 (2N/21W-34G2, 3, 4, 5, 6).



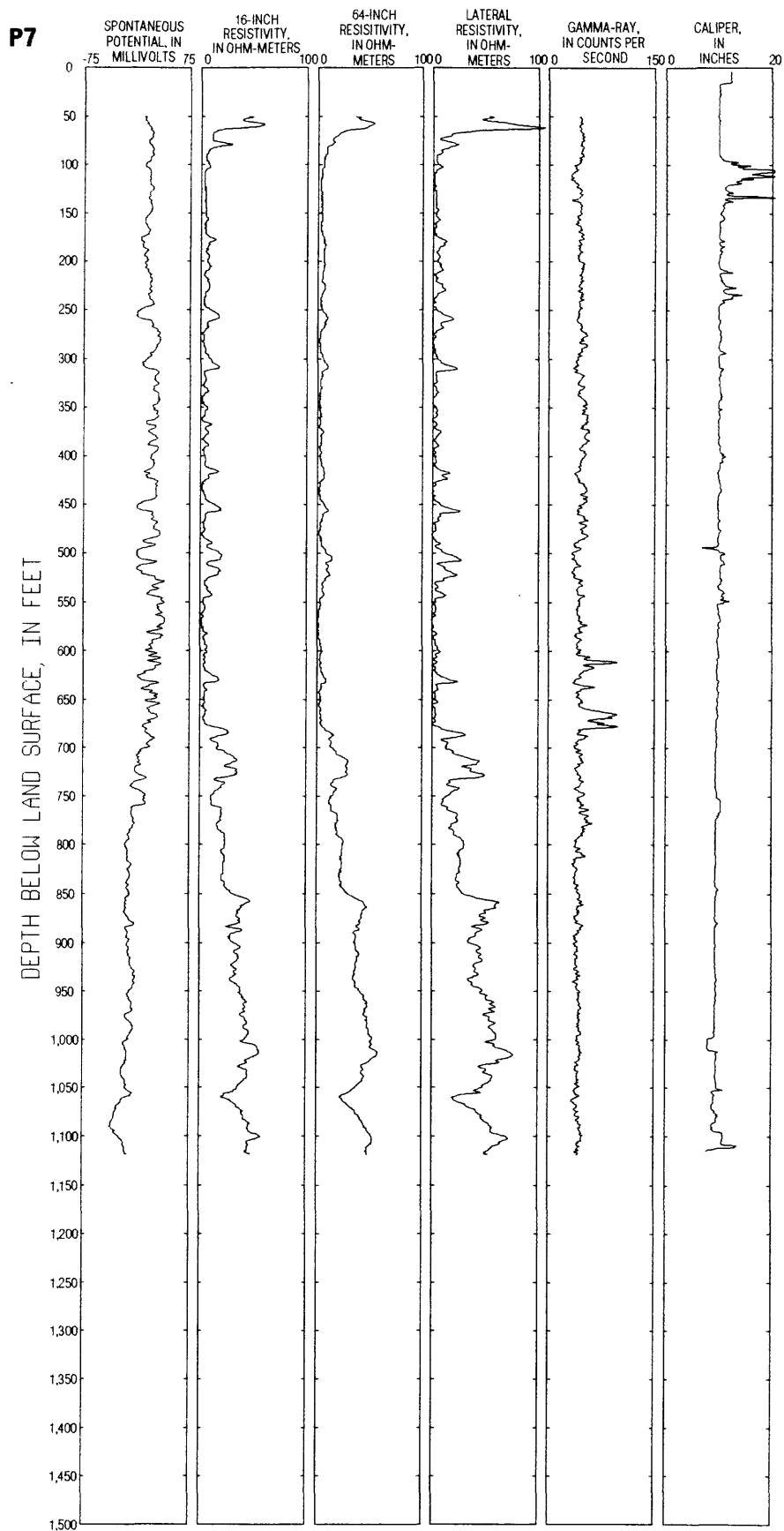
**FIGURE 20. Continued.**



**FIGURE 21.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SG (2N/22W-23B3, 4, 5, 6, 7).



**FIGURE 21. Continued.**



**FIGURE 22.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site P7 (3N/20W-35R2, 3, 4).

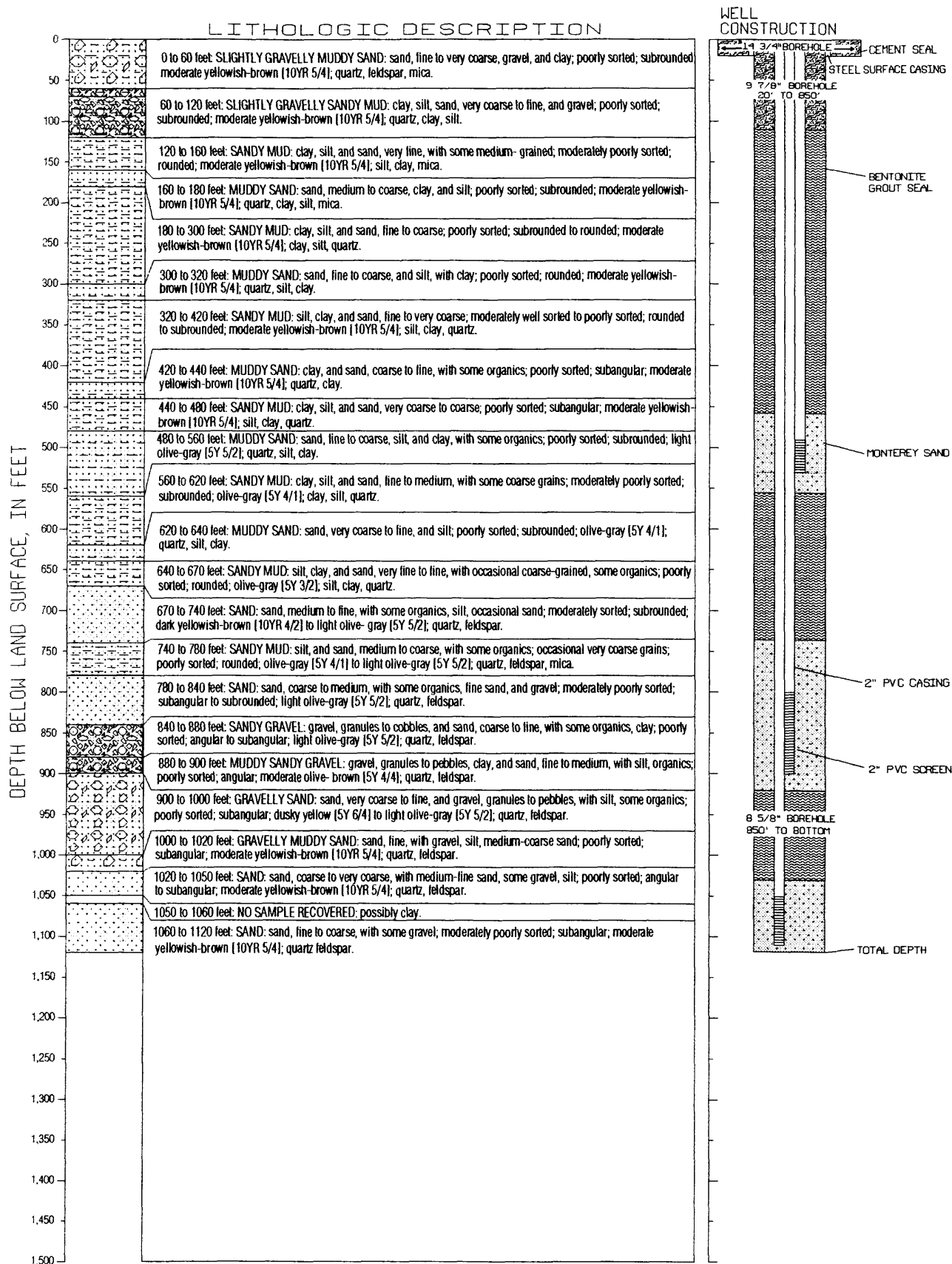
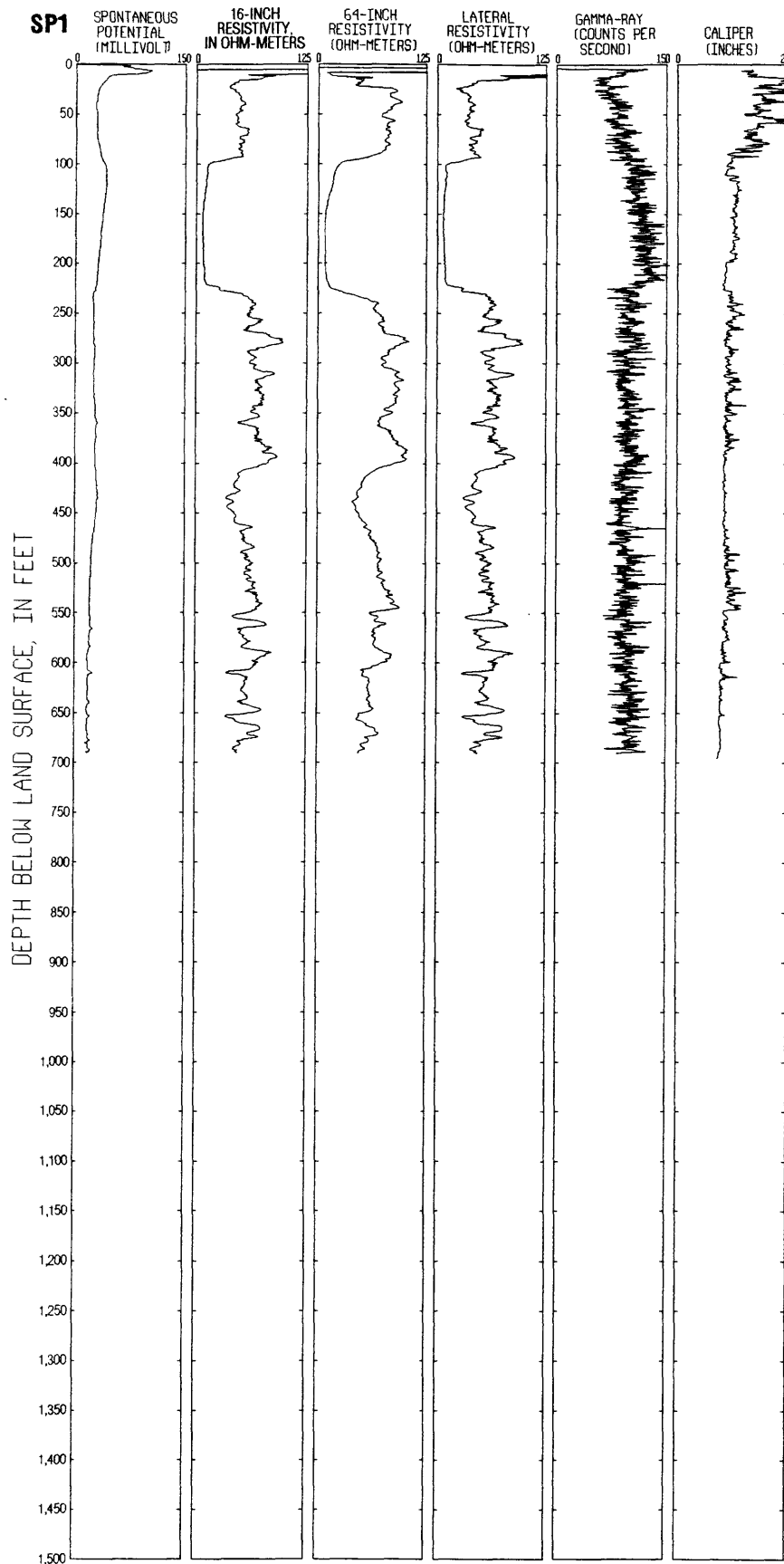


FIGURE 22. Continued.



**FIGURE 23.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SP1 (3N/21W-15G1, 2, 3, 4, 5).



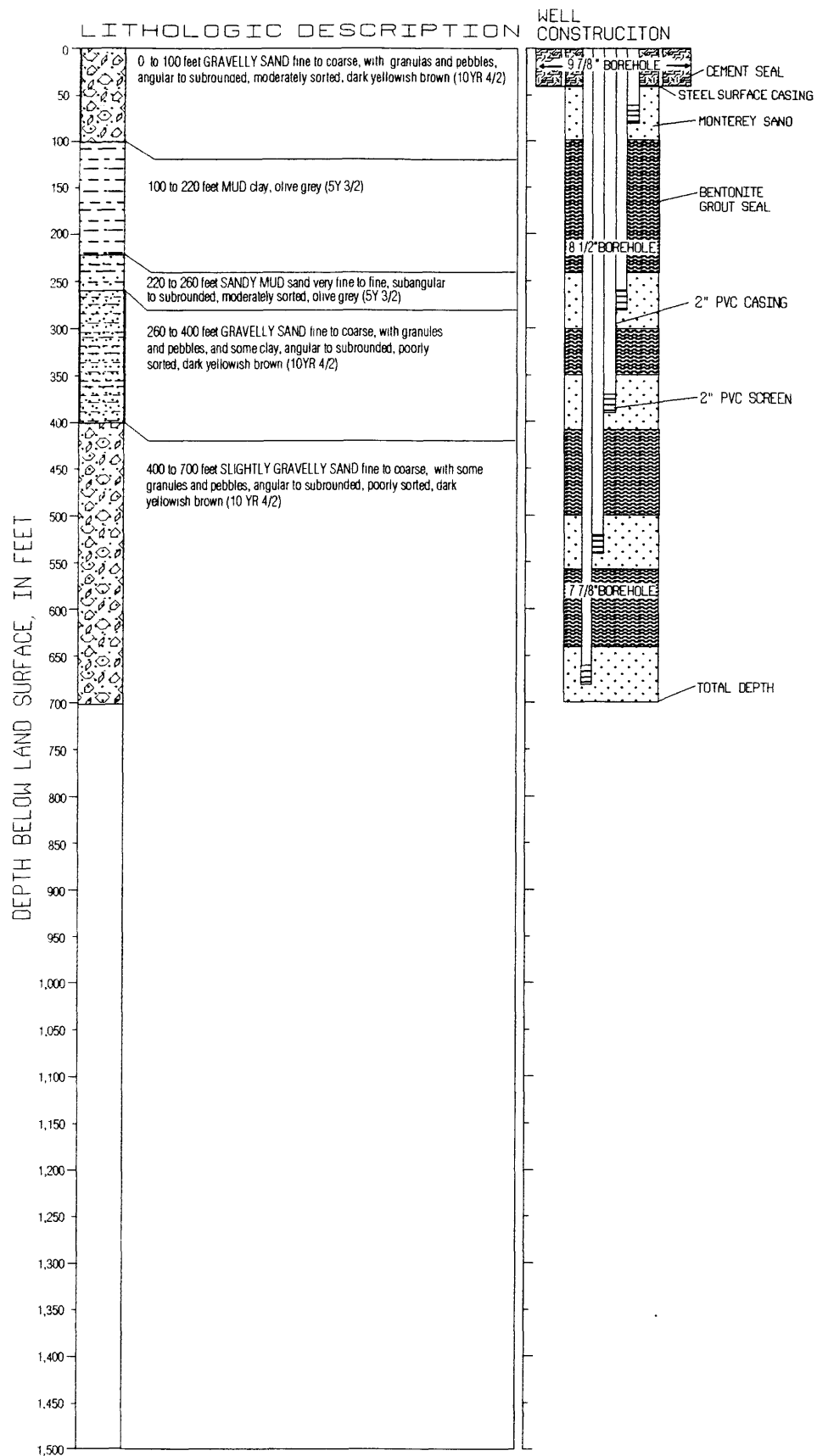
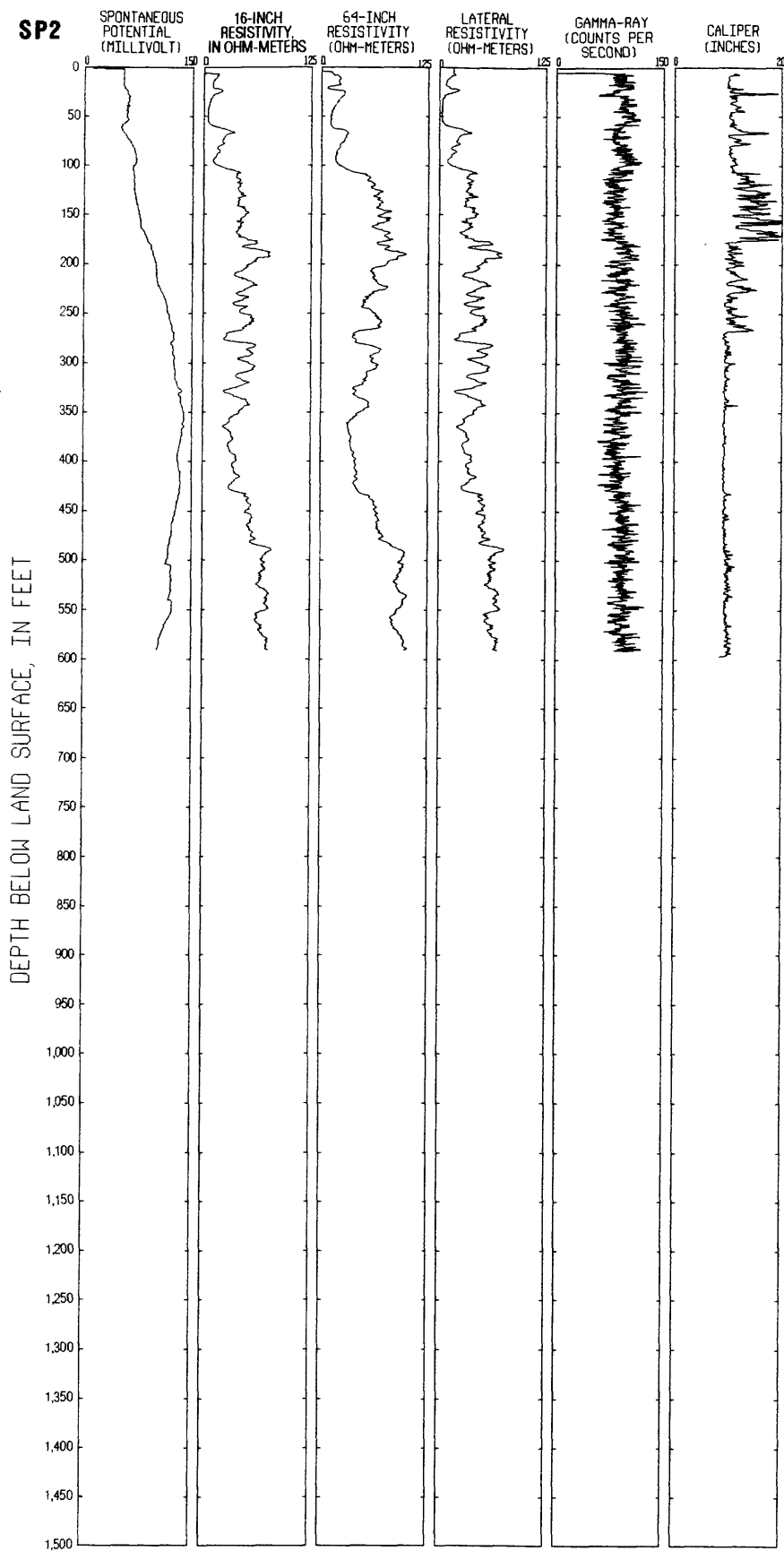
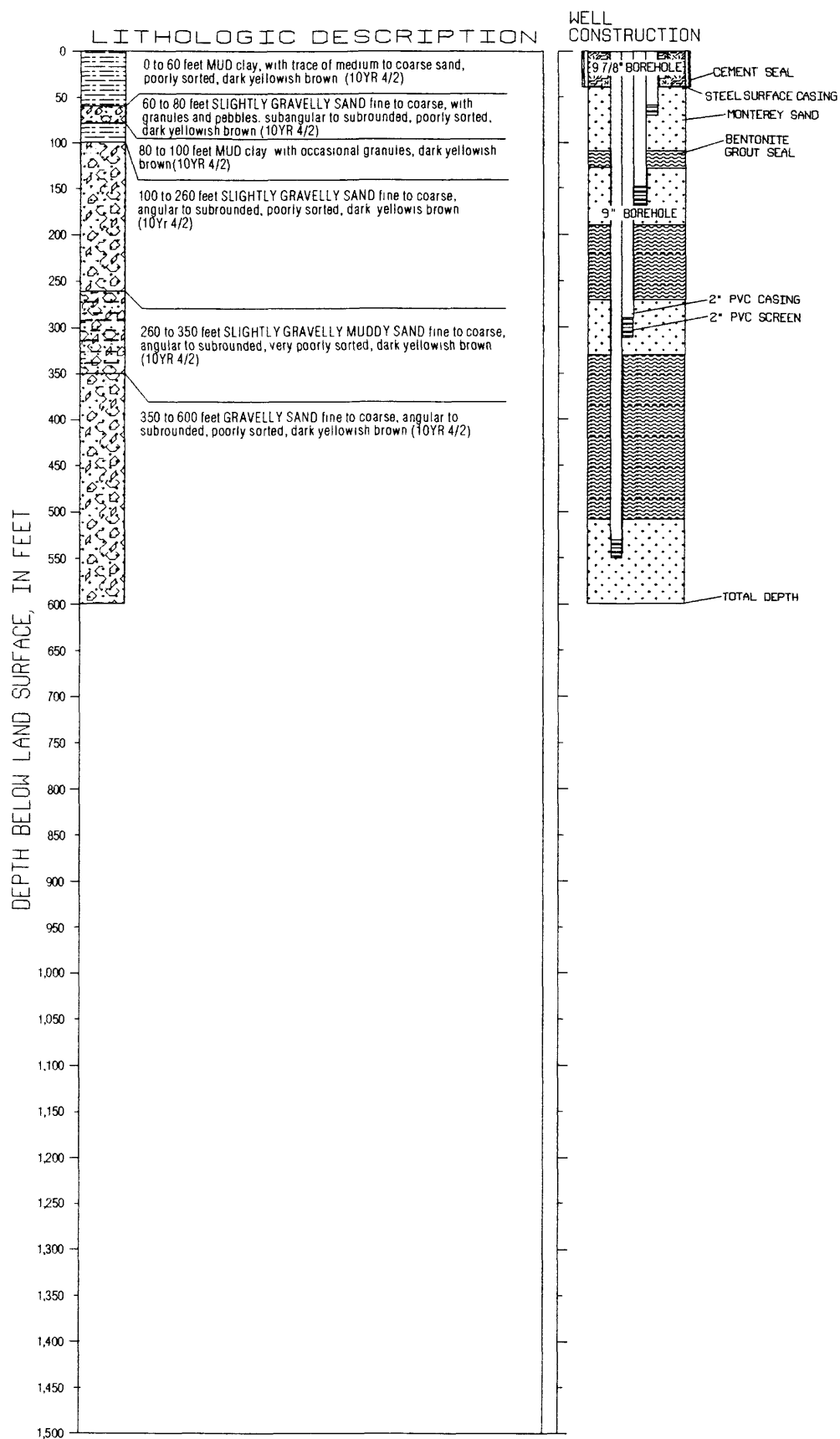


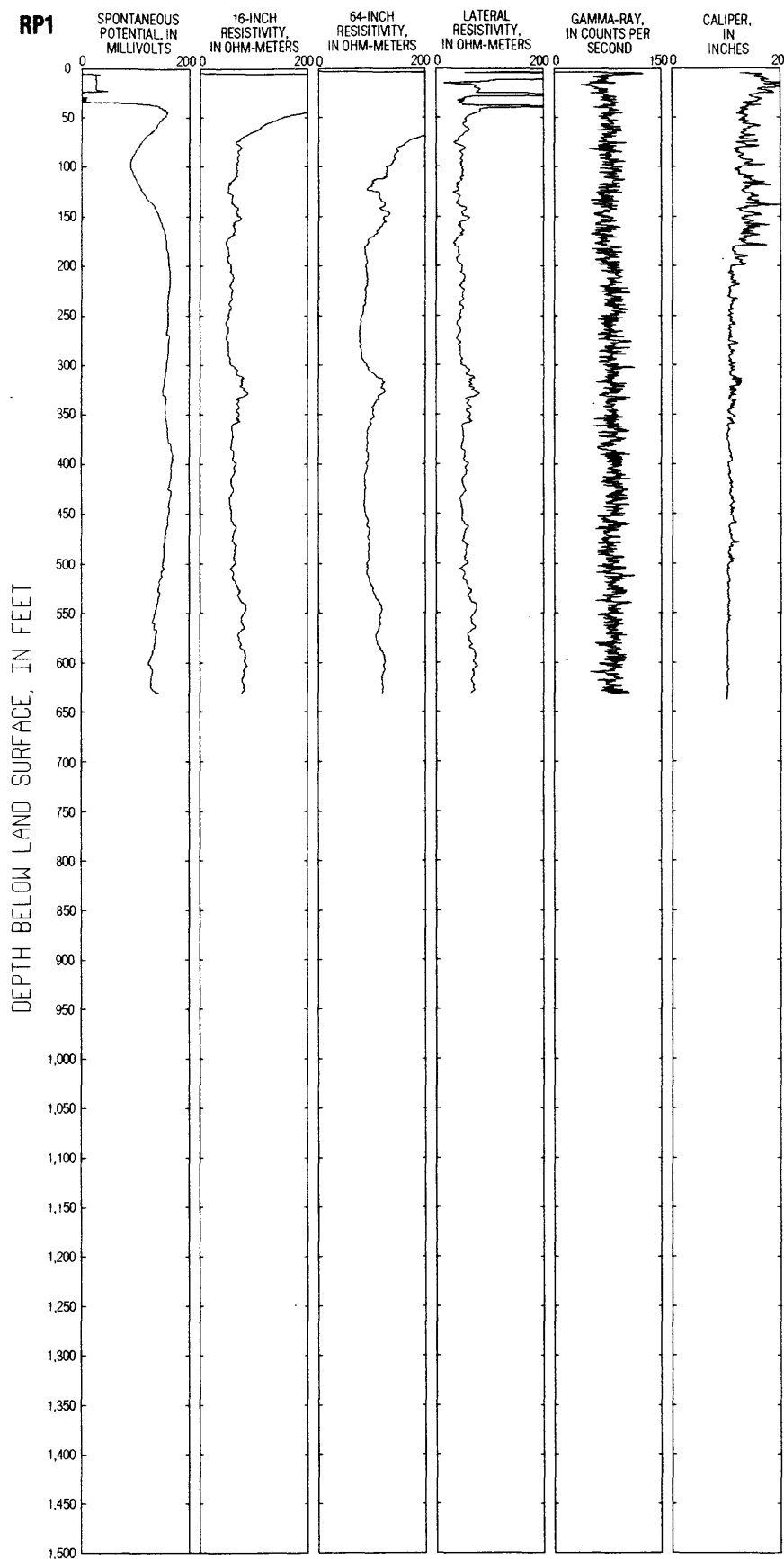
FIGURE 23. Continued.



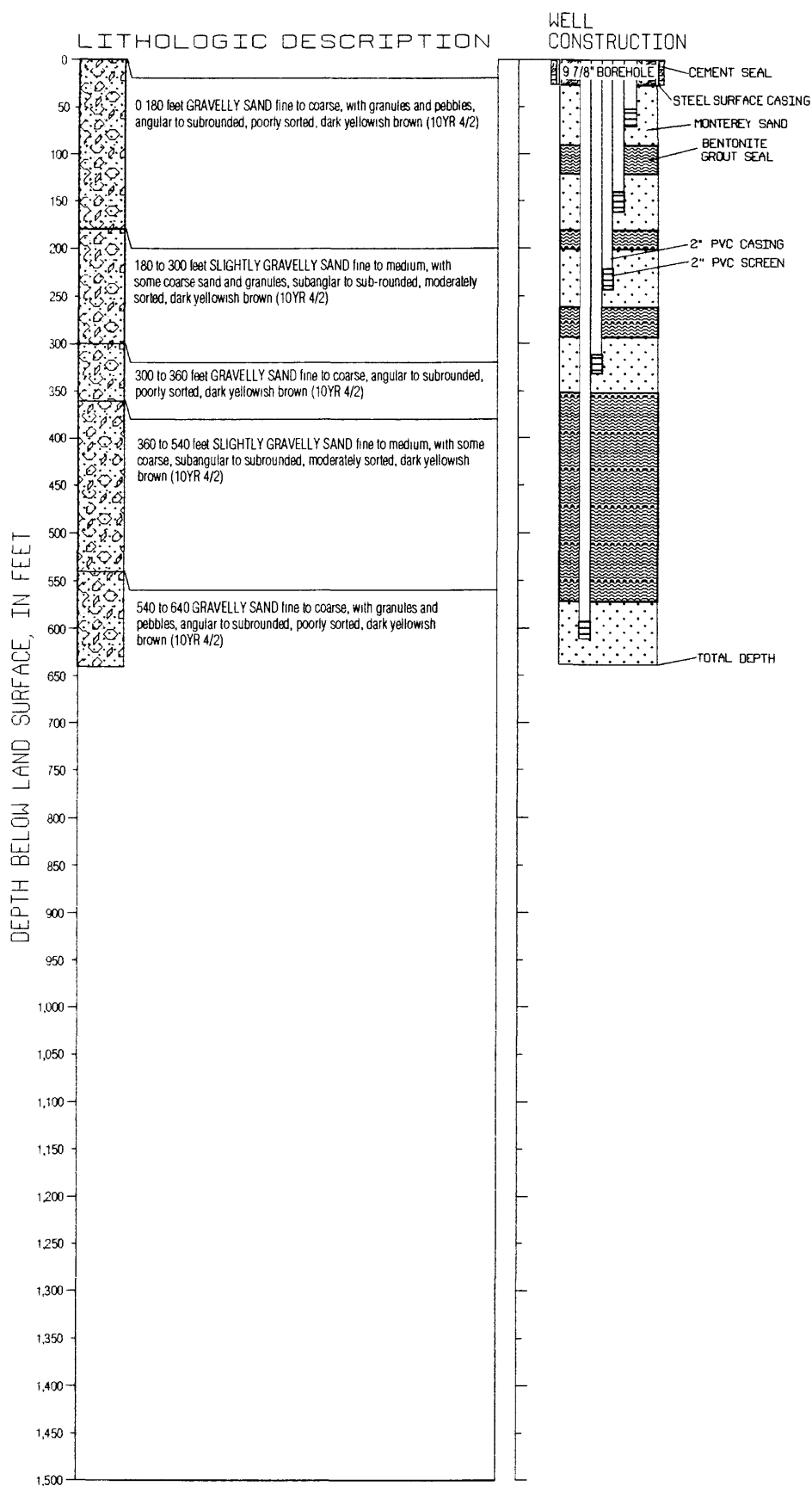
**FIGURE 24.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site SP2 (3N/21W-16H5, 6, 7, 8).



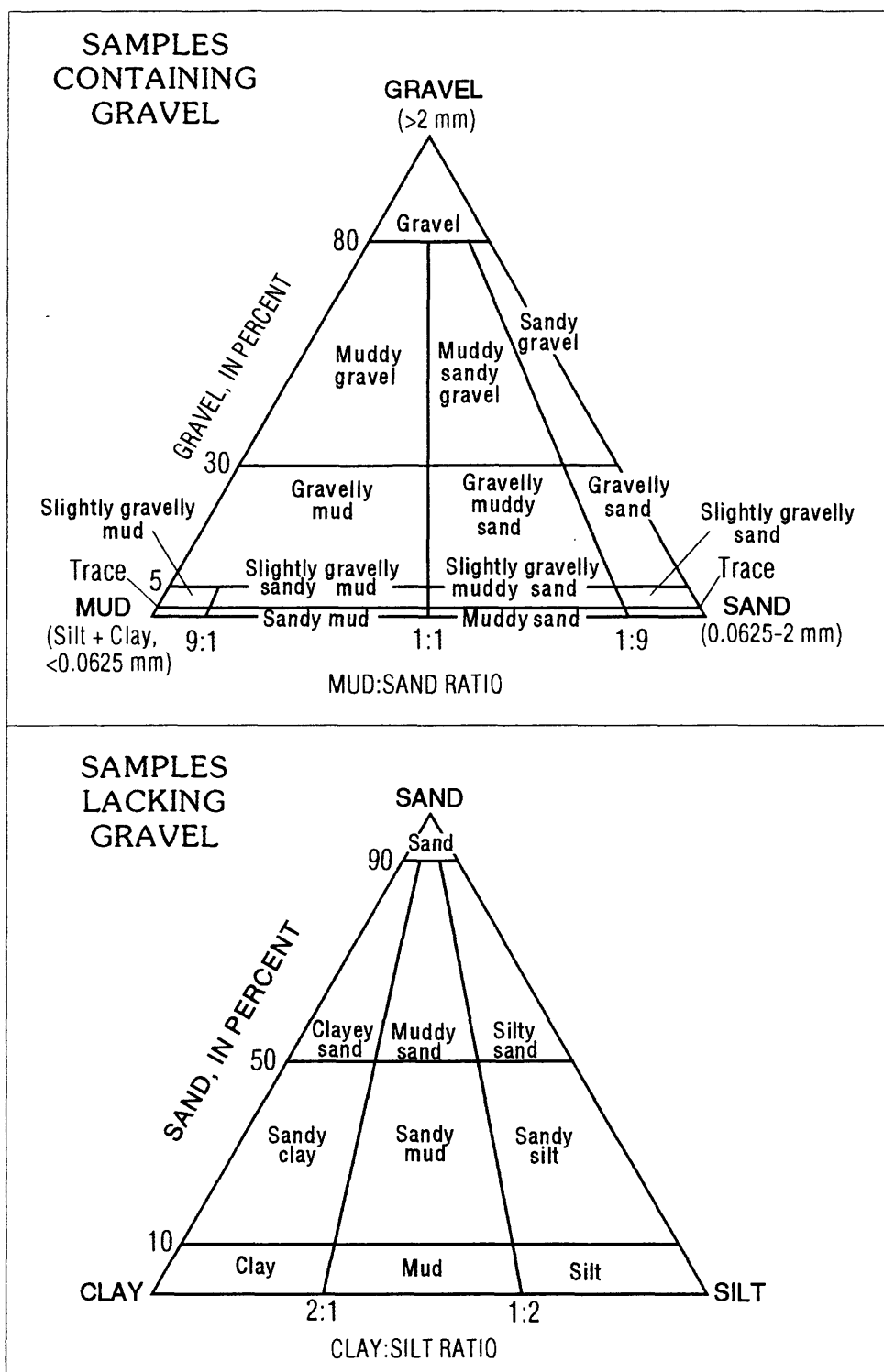
**FIGURE 24. Continued.**



**FIGURE 25.** Geophysical logs, stratigraphic column, and well-construction diagram for multiple-well monitoring site RP1 (4N/18W-31D3, 4, 5, 6, 7).



**FIGURE 25. Continued.**



**FIGURE 26.** Rock-type nomenclature used for stratigraphic columns (figs. 3-25). (From Folk, 1954, fig.1.)

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**TABLES 1-29**

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**Table 1.** Well-construction data for multiple-well monitoring sites

[All wells are 2-inch-diameter polyvinyl chloride casing, except SWIFT-350 (4 inches) and A2-70 (6 inches). Altitudes were estimated from a topographic map]

Common name	State well number	Type of well site	Depth of well (feet)	Sand-pack interval (feet)	Seal interval (feet)	Type of seal	Perforated interval (feet)	Altitude of land-surface datum (feet above sea level)	Date drilled
<b>Site CM1</b>									
CM1A-565	1S/21W-8L3	Multiple	565	480-605	225-480	Grout	525-565	10	10-9-89
CM1A-220	1S/21W-8L4	Multiple	220	180-225	0-180	Grout and cement	200-220	10	10-9-89
CM1-220	1S/21W-8L5	Single	220	180-220	0-180	Cement	200-220	10	10-4-89
<b>Site CM6</b>									
CM6-550	1S/22W-1H1	Multiple	550	480-560	410-480	Grout	490-550	3	10-3-90
CM6-400	1S/22W-1H2	Multiple	400	370-410	340-370	Grout	380-400	3	10-3-90
CM6-330	1S/22W-1H3	Multiple	330	305-340	210-305	Grout	310-330	3	10-3-90
CM6-200	1S/22W-1H4	Multiple	200	170-210	0-170	Cement	180-200	3	10-3-90
<b>Site SCE</b>									
SCE-414	1N/21W-19L10	Multiple	414	390-420	340-390	Grout	394-414	21	5-14-91
SCE-320	1N/21W-19L11	Multiple	320	270-340	235-270	Grout	300-320	21	5-14-91
SCE-220	1N/21W-19L12	Multiple	220	185-235	130-185	Grout	200-220	21	5-14-91
SCE-130	1N/21W-19L13	Multiple	130	91-130	0-91	Cement	110-130	21	5-14-91
SCE-38	1N/21W-19L14	Single	38	15-38	0-15	Cement	18-38	21	5-25-91
<b>Site Q2</b>									
Q2-970	1N/21W-32Q2	Multiple	970	910-975	860-910	Grout	930-970	10	5-29-91
Q2-840	1N/21W-32Q3	Multiple	840	780-860	660-780	Grout	800-840	10	5-29-91
Q2-640	1N/21W-32Q4	Multiple	640	580-660	390-580	Grout	600-640	10	5-29-91
Q2-370	1N/21W-32Q5	Multiple	370	310-390	240-310	Grout	330-370	10	5-29-91
Q2-220	1N/21W-32Q6	Multiple	220	160-240	0-160	Grout and cement	180-220	10	5-29-91
Q2-285	1N/21W-32Q7	Single	285	250-300	0-250	Grout and cement	275-285	10	6-6-91
<b>Site A1</b>									
A1-930	1N/22W-20J4	Multiple	930	830-1000	725-830	Grout	870-890	10	5-8-91
							910-930	10	5-8-91
A1-680	1N/22W-20J5	Multiple	680	623-725	450-623	Grout	640-680	10	5-8-91
A1-425	1N/22W-20J6	Multiple	425	365-450	340-365	Grout	385-425	10	5-8-91
A1-320	1N/22W-20J7	Multiple	320	267-340	204-267	Grout	280-320	10	5-8-91
A1-195	1N/22W-20J8	Multiple	195	130-204	0-130	Cement	155-195	10	5-8-91
<b>Site A2</b>									
A2-940	1N/22W-20M1	Multiple	940	860-949	750-860	Grout	900-940	14	10-14-91
A2-740	1N/22W-20M2	Multiple	740	650-750	570-650	Grout	700-740	14	10-14-91
A2-560	1N/22W-20M3	Multiple	560	500-570	340-500	Grout	520-560	14	10-14-91
A2-320	1N/22W-20M4	Multiple	320	260-340	0-260	Grout and cement	300-320	14	10-14-91
A2-170	1N/22W-20M5	Double	170	130-179	90-130	Grout	150-170	14	11-1-91
A2-70	1N/22W-20M6	Double	70	30-90	0-30	Cement	50-70	14	11-1-91
<b>Site SWIFT</b>									
SWIFT-350	1N/22W-26J3	Multiple	350	285-365	214-285	Grout	310-350	13	9-19-90
SWIFT-205	1N/22W-26J4	Multiple	205	170-214	95-170	Grout	185-205	13	9-19-90
SWIFT-65	1N/22W-26J5	Multiple	65	50-95	0-50	Cement	55-65	13	9-19-90

**Table 1.** Well-construction data for multiple-well monitoring sites—*Continued*

Common name	State well number	Type of well site	Depth of well (feet)	Sand-pack interval (feet)	Seal interval (feet)	Type of seal	Perforated interval (feet)	Altitude of land-surface datum (feet above sea level)	Date drilled
<b>Site SW</b>									
SW-295	1N/22W-27C2	Multiple	295	253-385	222-253	Grout	275-295	11	9-22-90
SW-195	1N/22W-27C3	Multiple	195	160-222	80-160	Grout	175-195	11	9-22-90
SW-65	1N/22W-27C4	Multiple	65	50-80	0-50	Cement	55-65	11	9-22-90
<b>Site CM7</b>									
CM7-350	1N/22W-27R3	Multiple	350	304-365	205-304	Grout	330-350	10	10-16-90
CM7-190	1N/22W-27R4	Multiple	190	152-205	118-152	Grout	170-190	10	10-16-90
CM7-110	1N/22W-27R5	Multiple	110	95-118	0-95	Cement	100-110	10	10-16-90
<b>Site CM4</b>									
CM4-1,395	1N/22W-28G1	Multiple	1,395	1,250-1,415	1,120-1,250	Grout	1,295-1,395	5	11-28-89
CM4-1,095	1N/22W-28G2	Multiple	1,095	906-1,120	780-906	Grout	995-1,095	5	11-28-89
CM4-760	1N/22W-28G3	Multiple	760	684-780	285-684	Grout	720-760	5	11-28-89
CM4-275	1N/22W-28G4	Multiple	275	243-285	206-243	Grout	255-275	5	11-28-89
CM4-200	1N/22W-28G5	Multiple	200	165-206	0-165	Cement	180-200	5	11-28-89
<b>Site CM2</b>									
CM2-870	1N/22W-29D1	Multiple	870	819-870	780-819	Grout	830-870	7	10-17-89
CM2-760	1N/22W-29D2	Multiple	760	694-780	542-694	Grout	720-760	7	10-17-89
CM2-520	1N/22W-29D3	Multiple	520	464-542	300-464	Grout	500-520	7	10-17-89
CM2-280	1N/22W-29D4	Multiple	280	240-300	0-240	Cement	260-280	7	10-17-89
<b>Site CM5</b>									
CM5-1,200	1N/22W-35E1	Multiple	1,200	1,110-1,227	960-1,110	Grout	1,140-1,200	6	2-20-90
CM5-940	1N/22W-35E2	Multiple	940	800-960	540-800	Grout	840-940	6	2-20-90
CM5-470	1N/22W-35E3	Multiple	470	400-540	345-400	Grout	420-470	6	2-20-90
CM5-320	1N/22W-35E4	Multiple	320	273-345	240-273	Grout	300-320	6	2-20-90
CM5-220	1N/22W-35E5	Multiple	220	185-240	0-185	Cement	200-220	6	2-20-90
<b>Site DP</b>									
DP-720	1N/22W-36K5	Multiple	720	660-725	585-660	Grout	680-720	7	9-4-90
DP-580	1N/22W-36K6	Multiple	580	520-585	475-520	Grout	540-580	7	9-4-90
DP-450	1N/22W-36K7	Multiple	450	385-475	360-385	Grout	410-450	7	9-4-90
DP-330	1N/22W-36K8	Multiple	330	285-360	205-285	Grout	310-330	7	9-4-90
DP-195	1N/22W-36K9	Multiple	195	150-205	0-150	Grout and cement	175-195	7	9-4-90
<b>Site CM3</b>									
CM3-1,490	1N/23W-1C2	Multiple	1,490	1,360-1,495	1,065-1,360	Grout	1,470-1,490 1,430-1,450 1,390-1,410	10	11-7-89
CM3-1,065	1N/23W-1C3	Multiple	1,065	920-1,065	760-920	Grout	965-1,065	10	11-7-89
CM3-695	1N/23W-1C4	Multiple	695	590-760	215-590	Grout	630-695	10	11-7-89
CM3-145	1N/23W-1C5	Multiple	145	110-215	0-110	Cement	120-145	10	11-7-89
<b>Site TKS</b>									
TKS-280	2N/20W-16A2	Multiple	280	250-300	185-250	Grout	260-280	285	9-25-90
TKS-180	2N/20W-16A3	Multiple	180	151-185	110-151	Grout	170-180	285	9-25-90
TKS-100	2N/20W-16A4	Multiple	100	70-110	0-70	Cement	90-100	285	9-25-90

**Table 1.** Well-construction data for multiple-well monitoring sites—*Continued*

Common name	State well number	Type of well site	Depth of well (feet)	Sand-pack interval (feet)	Seal interval (feet)	Type of seal	Perforated interval (feet)	Altitude of land-surface datum (feet above sea level)	Date drilled
<b>Site SAT</b>									
SAT-700	2N/21W-7L3	Multiple	700	608-705	575-608	Grout	640-700	142	9-9-90
SAT-540	2N/21W-7L4	Multiple	540	486-575	323-486	Grout	500-540	142	9-9-90
SAT-310	2N/21W-7L5	Multiple	310	249-323	180-249	Grout	270-310	142	9-9-90
SAT-155	2N/21W-7L6	Multiple	155	114-180	0-114	Cement	135-155	142	9-9-90
<b>Site LP1</b>									
LP1-1,078	2N/21W-11J3	Multiple	1,080	980-1,093	700-980	Grout	1,018-1,078	378	12-3-90
LP1-655	2N/21W-11J4	Multiple	655	582-700	411-582	Grout	615-655	378	12-3-90
LP1-380	2N/21W-11J5	Multiple	380	315-411	245-315	Grout	340-380	378	12-3-90
LP1-230	2N/21W-11J6	Multiple	230	135-245	0-135	Cement	190-230	378	12-3-90
<b>Site PV1</b>									
PV1-998	2N/21W-34G2	Multiple	1,000	917-1,020	875-917	Grout	938-998	95	7-16-90
PV1-860	2N/21W-34G3	Multiple	860	780-875	430-780	Grout	800-860	95	7-16-90
PV1-380	2N/21W-34G4	Multiple	380	327-430	248-327	Grout	360-380	95	7-16-90
PV1-190	2N/21W-34G5	Multiple	190	139-248	0-139	Cement	170-190	95	7-16-90
PV1-436	2N/21W-34G6	Single	436	424-438	0-424	Grout and cement	431-436	95	7-24-90
<b>Site SG</b>									
SG-1,250	2N/22W-23B3	Multiple	1,250	1,200-1,250	1,165-1,200	Grout	1,210-1,250	107	10-24-90
SG-1,150	2N/22W-23B4	Multiple	1,150	1,090-1,165	890-1,090	Grout	1,110-1,150	107	10-24-90
SG-870	2N/22W-23B5	Multiple	870	780-890	520-780	Grout	830-870	107	10-24-90
SG-500	2N/22W-23B6	Multiple	500	442-520	320-442	Grout	460-500	107	10-24-90
SG-300	2N/22W-23B7	Multiple	300	226-320	0-226	Grout and cement	260-300	107	10-24-90
<b>Site P7</b>									
P7-1,100	3N/20W-35R2	Multiple	1,110	1,030-1,120	920-1,030	Grout	1,050-1,110	590	12-12-90
P7-900	3N/20W-35R3	Multiple	900	736-920	555-736	Grout	800-900	590	12-12-90
P7-530	3N/20W-35R4	Multiple	530	458-555	0-458	Grout and cement	490-530	590	12-12-90
<b>Site SP1</b>									
SP1-680	3N/21W-15G1	Multiple	680	640-700	560-640	Grout	660-680	236	4-27-94
SP1-540	3N/21W-15G2	Multiple	540	500-560	410-500	Grout	520-540	236	4-27-94
SP1-390	3N/21W-15G3	Multiple	390	350-410	300-350	Grout	370-390	236	4-27-94
SP1-280	3N/21W-15G4	Multiple	280	240-300	100-240	Grout	260-280	236	4-27-94
SP1-80	3N/21W-15G5	Multiple	80	40-100	0-40	Cement	60-80	236	4-27-94
<b>Site SP2</b>									
SP2-550	3N/21W-16H5	Multiple	550	508-600	330-508	Grout	530-550	240	5-2-94
SP2-310	3N/21W-16H6	Multiple	310	270-330	190-270	Grout	290-310	240	5-2-94
SP2-170	3N/21W-16H7	Multiple	170	130-190	110-130	Grout	150-170	240	5-2-94
SP2-70	3N/21W-16H8	Multiple	70	40-110	0-40	Cement	50-70	240	5-2-94
<b>Site RP1</b>									
RP1-610	4N/18W-31D3	Multiple	610	570-640	350-570	Grout	590-610	592	5-11-94
RP1-330	4N/18W-31D4	Multiple	330	290-350	260-290	Grout	310-330	592	5-11-94
RP1-240	4N/18W-31D5	Multiple	240	200-260	180-200	Grout	220-240	592	5-11-94
RP1-160	4N/18W-31D6	Multiple	160	120-180	90-120	Grout	140-160	592	5-11-94
RP1-70	4N/18W-31D7	Multiple	70	20-90	0-20	Cement	50-70	592	5-11-94

**Table 2.** Lithologic log for multiple-well monitoring site CM1 (1S/21W-8L3, -8L4, -8L5)

[Because of proximity, two boreholes were used to compile this log. **Borehole 1S/21W-8L3, -8L4:** Altitude of land surface approximately 10 feet. Drilled by U.S. Geological Survey using mud-rotary method, October 9, 1989. Total depth drilled, 605 feet. Screened intervals, 525-565 and 200-220 feet. **Borehole 1S/21W-8L5:** Drilled by U.S. Geological Survey using mud-rotary method, October 4, 1989. Total depth drilled, 220 feet. Screened interval, 200-220 feet]

Depth (feet)		Description
From	To	
0	30	No Sample
30	50	Sand, fine to medium, with very coarse fragments, gravel, shells, and wood; poorly sorted; angular; light olive-gray (5Y 6/1); quartz, feldspar, biotite, muscovite, organic matter.
50	70	Sand, fine to medium, with wood, 3 mm shells (clams), and coarse rock fragments; poorly sorted; angular; grayish black (N2); wood, feldspar, quartz, biotite, muscovite.
70	90	Sand, fine to medium, with wood, shells, and coarse rock fragments; poorly sorted; angular; grayish black (N2); wood, feldspar, quartz, biotite.
90	110	Sand, fine to medium, with abundant wood and shells, (clams, sand dollars, gastropods), some pebbles; poorly sorted; angular; grayish black (N2); wood, feldspar, quartz, biotite.
110	130	Sand, medium to coarse, with some wood and shells (not as much as previous samples); poorly sorted; sub-angular; dark greenish gray (5GY 4/1); quartz, feldspar, wood, and shells.
130	150	Clay with medium to fine sand, some wood, shells; poorly sorted; angular; dark greenish gray (5GY 4/1); clay, feldspar, quartz, wood, biotite.
150	170	Sand, medium to fine, with clay (15%) with a few very small black shells, occasional rock fragments, some dark yellowish orange (10YR 6/6) silt chunks; poorly sorted; sub-angular; dark greenish gray (5GY 4/1); quartz, feldspar, shells, wood.
170	190	Sand, coarse to very coarse, with occasional pebbles; poorly sorted; sub-rounded; dusky yellowish green (10GY 3/2); quartz, feldspar, biotite, hornblende.
190	210	Sand, very coarse to medium, with pebbles; poor to moderately well sorted; sub-rounded; dusky yellow green (5GY 5/2); quartz, feldspar, biotite, hornblende.
210	230	Sand, medium to very coarse, with wood, occasional silt blebs, some shells; poorly sorted; sub-rounded; grayish olive green (5GY 3/2); quartz, feldspar, biotite, wood, hornblende.
230	250	Clay with silt and fine sand, some medium sand, and wood; poorly sorted; sub-rounded sand grains; dark greenish gray (5GY 4/1); sand consists of quartz, feldspar, mica, wood.
250	270	Sand, medium to coarse, with clay blebs, abundant whole gastropods and shells, occasional gravel; poorly sorted; sub-rounded to sub-angular; quartz, feldspar, biotite, muscovite, shells, wood.
270	290	Sand, medium to fine, with occasional silt/clay blebs and coarse sand, wood; poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 4/1); quartz, biotite, muscovite, rock fragments.
290	310	Sand, medium to fine, with clay blebs and occasional pebbles, wood; moderately sorted; moderately well rounded; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); quartz, feldspar.
310	330	Clay with fine sand, occasional rock and wood; poorly sorted; sub-angular; light olive-gray (5Y 6/1); clay, some mica.

**Table 2.** Lithologic log for multiple-well monitoring site CM1 (1S/21W-8L3, -8L4, -8L5)—*Continued*

Depth (feet)		Description
From	To	
330	350	Sand, medium to very fine, with clay, wood, occasional rock fragments; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, biotite.
350	370	Sand, medium to coarse, with silt, clay, wood, shells, and rock fragments; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, mica.
370	390	Sand, very coarse to medium, with pebble-sized gravel, some shells; poorly sorted; sub-angular to angular; light olive-gray (5Y 6/1); quartz, feldspar, rock fragments.
390	410	Clay and silt with fine sand, pebble-sized gravel, shells, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay.
410	430	Clay with pebbles; shells, turritella, clams; poorly sorted; angular shells and gravel; olive-gray (5Y 3/2); clay.
430	450	Clay with shells and wood, some fine sand; poorly sorted; sub-angular shells; olive-gray (5Y 3/2); clay.
450	470	Sand, medium to fine, with more shells, gravel, clay; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, wood.
470	490	Clay and silt with wood and shells; poorly sorted; angular shells; olive-gray (5Y 4/1).
490	510	Clay and silt with wood and shells, occasional medium-coarse gravel; poorly sorted; angular shells; olive-gray (5Y 4/1).
510	530	Sand, medium to fine; trace of clay, shells, wood, and gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica.
530	550	Silt, clay, and sand, medium to fine, with wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar.
550	570	Sand, medium to coarse, with occasional gravel; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar.
570	590	Sand, medium to fine, with occasional coarse grains; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar.
590	605	Basalt; coarse- to granule-sized fragments; greenish black (5GY2/1).

**Table 3.** Lithologic log for multiple-well monitoring site CM6 (1S/22W-1H1, -H2, -1H3, -1H4)

[Altitude of land surface approximately 3 feet. Drilled by U.S. Geological Survey using mud-rotary method, October 3, 1990. Total depth drilled, 725 feet. Screened intervals, 490-550, 380-400, 310-330, and 180-200 feet]

Depth (feet)		Description
From	To	
0	20	Sand, fine to medium; well sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
20	50	Sand, fine to medium, with occasional coarse sand, shells; well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
50	85	Sand, very fine, silt, and clay, with wood, occasional shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); quartz, mica, feldspar.
85	105	Sand, fine, and silt, with clay, medium sand, wood; poorly sorted; sub-angular; olive black (5Y 2/1); quartz, feldspar, mica, rock fragments.
105	125	Sand, very fine to fine, silt, and clay, with wood, occasional shells; poorly sorted; sub-angular; olive black (5Y 2/1) to olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
125	145	Sand, fine to very coarse, with some clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
145	165	Sand, medium to very coarse, with wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica.
165	185	Sand, fine to very coarse, with gravel; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
185	205	Sand, fine to medium, with clay, wood, occasional coarse grains; moderately sorted; sub-rounded; light olive-gray (5Y 5/2) to olive-gray (5Y 4/1); quartz, feldspar, mica.
205	220	Sand, very fine to fine, with wood, medium-coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
220	245	Sand, very fine, and silt, with wood, trace of clay, shells; poorly sorted; sub-rounded; olive black (5Y 2/1); silt, quartz, mica.
245	275	Silt, sand, very fine, and clay, with wood, trace of shells (gastropods); poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, mica.
275	285	Sand, fine to medium, with trace of wood, shells; well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
285	305	Sand, very fine to fine, silt, and clay, with wood, trace of shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, silt.
305	325	Sand, fine to very coarse, with some gravel, wood, occasional shells; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
325	345	Sand, fine to very coarse, with some wood, gravel, occasional shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments.
345	385	Silt, sand, fine to medium, and clay, with trace of shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, silt.

**Table 3.** Lithologic log for multiple-well monitoring site CM6 (1S/22W-1H1, -H2, -1H3, -1H4)—*Continued*

Depth (feet)		Description
From	To	
385	405	Sand, coarse to very coarse, with fine sand, wood, some shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
405	425	Sand, fine to medium, with wood, trace of clay, shells; well sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, rock fragments, mica.
425	445	Sand, very fine to fine, silt, and clay, with wood, some shells, occasional coarse grains; moderately sorted; dark greenish gray (5GY 4/1); quartz, feldspar, rock fragments, mica.
445	465	Silt and sand, very fine, with clay, wood, occasional shells; moderately sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, mica, quartz.
465	485	Sand, very fine, silt, and clay, with shells, wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, mica, quartz.
485	505	Sand, very fine, silt, and clay, with shells, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
505	525	Silt and clay, with fine to very fine sand, wood, some shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
525	545	Sand, very fine to fine, and silt, with clay, wood, trace of shells (sand dollars); poorly sorted; sub-rounded; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); quartz, silt, mica
545	565	Sand, very fine to fine, silt, and clay, with wood, some shells (turritella); poorly sorted; sub-rounded; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); quartz, silt, mica.
565	585	Silt and sand, very fine, with wood, some shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
585	605	Silt and sand, very fine, with wood, some shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
605	625	Silt and sand, very fine, with wood, some medium sand, occasional shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
625	645	Silt and sand, very fine, with wood, clay; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
645	665	Sand, very fine, and silt, with wood; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
665	725	Silt and sand, very fine, with wood; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.

**Table 4.** Lithologic log for multiple-well monitoring site SCE (1N/21W-19L10, -19L11, -19L12, -19L13, -19L14)

[Altitude of land surface, approximately 21 feet. Drilled by U.S. Geological Survey using mud rotary, May 14, 1991. Total depth drilled, 520 feet. Screened intervals, 394-414, 300-320, 200-220, 110-130, and 18-38 feet (separate hole drilled May 25, 1991)]

Depth (feet)		Description
From	To	
0	20	No sample recovered.
20	40	Sand, silt, medium, with some fines; other minerals include hornblende and biotite; moderately poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
40	60	Sand; medium, with some fines; other minerals include hornblende, biotite and muscovite; moderately well sorted; angular to rounded; light olive-gray (5Y 5/2).
60	80	Clay; other minerals include biotite; well sorted; olive-gray (5Y 3/2).
80	100	Sand, fine, with some very fine sand and silt; other minerals include hornblende and biotite; moderately sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
100	120	Sand, coarse, with some very coarse to very fine and silt; other minerals include hornblende and biotite; poorly sorted; sub-angular to rounded; light olive-gray (5Y 5/2).
120	140	Sand, medium, with some fines; other minerals include hornblende; moderately well sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2).
140	160	Sand, coarse, with some very coarse to medium sands, and little silt; moderately poorly sorted; sub-angular to rounded; light olive-gray (5Y 5/2).
160	180	Sand, fine, with some medium and very fine sand; other minerals include biotite and hornblende; moderately well sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2).
180	200	Gravel, with some pebbles to coarse sand; other minerals include biotite, hornblende, and feldspar; poorly sorted; sub-angular to rounded; light olive-gray (5Y 5/2).
200	220	Sand, fine, with some medium; minerals include biotite and hornblende; moderately well sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2).
220	240	Sand, fine, with some granules to very fine material; moderately poorly sorted; sub-angular to rounded; light olive-gray (5Y 5/2).
240	260	Sand, fine; well sorted; angular to sub-rounded; grayish olive (10Y 4/2).
260	280	Sand, fine; well sorted; angular to sub-rounded; grayish olive (10Y 4/2).
280	300	Sand, medium, with some coarse material, and clay; biotite; poorly sorted; sub-angular to sub-rounded; sand is grayish olive (10Y 4/2), clay fragments are olive-gray (5Y 3/2).
300	320	Sand, coarse, with some very coarse and medium sand; some hornblende; moderately well sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2).
320	340	Sand, medium; well sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2).
340	360	Sand, fine to very fine, with coarse and very coarse grains; biotite; moderately poorly sorted; sub-rounded to rounded; grayish olive (10Y 4/2).



**Table 4.** Lithologic log for multiple-well monitoring site SCE (1N/21W-19L10, -19L11, -19L12, -19L13, -19L14)  
—Continued

Depth (feet)		Description
From	To	
360	380	Sand, medium to fine; hornblende; moderately well sorted; sub-angular to sub-rounded; grayish olive (10Y 4/2).
380	400	Sand, medium, with some fine to coarse; biotite, hornblende, and possibly organics; moderately well sorted; sub-angular to sub-rounded; olive-gray (5Y 5/2).
400	420	Sand, medium, with sizes from small pebble to fine sand; poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 5/2).
420	440	Sand, very fine, with some coarse silt to coarse sand size; moderately poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 4/2).
440	460	Sand, very fine, with some silt to medium sands; moderately well sorted; sub-angular to sub-rounded; grayish olive (10Y 4/2).
460	480	Sand, very fine, with some silt to fine sand; moderately well sorted; sub-angular to sub-rounded; olive-gray (5Y 3/2).
480	500	Sand, very fine, with some fines and silts; moderately well sorted; sub-angular to sub-rounded; dark gray (5Y 4/1).
500	520	Silt, with some very fine sand; well sorted; sub-angular to sub-rounded; olive-gray (5Y 4/2).

**Table 5.** Lithologic log for multiple-well monitoring site Q2 (1N/21W-32Q2, -32Q3, -32Q4, -32Q5, -32Q6, -32Q7)

[Altitude of land surface approximately 10 feet. Drilled by U.S. Geological Survey using mud-rotary method, May 29, 1991. Total depth drilled, 975 feet. Screened intervals, 930-970, 800-840, 600-640, 330-370, 180-220, and 275-285 feet (separate hole drilled June 6, 1991)]

Depth (feet)		Description
From	To	
0	20	Sand, very fine, and silt, with some medium-coarse grains, clay; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
20	40	Sand, coarse to medium, with some fine sand, clay, shells, organic matter; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2) to light olive-gray (5Y 5/2).
40	60	Sand, medium to fine, with some coarse grains, shells, clay; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2).
60	80	Sand, coarse to very coarse, with silt and fine sand, some shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
80	97	Sand, fine, silt, and clay, with some shells, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
97	100	No sample recovered; clay layer.
100	120	Sand, coarse to very coarse, with some medium sand, organic matter, occasional pebbles; poorly sorted; sub-rounded to sub-angular; olive-gray (5Y 4/1).
120	125	No sample recovered; dense clay.
125	140	Sand, medium to fine, and silt, with some organic matter, occasional coarse grains; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2).
140	160	Sand, medium to fine, and silt, with clay, some coarse sand, organic matter; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2) to dusky yellowish brown (10YR 2/2).
160	180	Sand, fine to medium, with silt and clay, some coarse grains, organic matter; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2) to olive-gray (5Y 3/2).
180	200	Gravel and sand, very coarse, with some medium sand; moderately well sorted; sub-rounded to angular; light olive-gray (5Y 5/2).
200	220	Sand, coarse to very coarse, with some gravel; moderately sorted; sub-rounded; light olive-gray (5Y 5/2) to dark yellowish brown (10YR 4/2).
220	240	Sand, fine to medium, with silt, some coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
240	260	Silt, clay, and sand, very fine, with occasional medium sand, some shells; moderately sorted; rounded; olive black (5Y 2/1).
260	280	Silt, sand, very fine, and clay, with organic matter, occasional medium sand; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
280	290	Sand, coarse to medium, with occasional coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
290	320	Sand, medium to coarse, with some fine and very coarse sand, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).

**Table 5.** Lithologic log for multiple-well monitoring site Q2 (1N/21W-32Q2, -32Q3, -32Q4, -32Q5, -32Q6, -32Q7)  
—Continued

Depth (feet)		Description
From	To	
320	340	Sand, medium to coarse, with fine sand, silt, some organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
340	360	Sand, coarse to medium, with very coarse grains, shells, some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
360	380	Sand, fine to very coarse, and silt, with clay, shells, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
380	400	Sand, fine, and silt, with gravel, organic matter, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
400	420	Sand, coarse to very coarse, and silt, with fine sand, shells, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
420	440	Sand, fine to medium, with some very coarse grains, silt, shells, organic matter; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1).
440	460	Sand, fine and coarse to very coarse, with silt, shells, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
460	480	Sand, very coarse to fine, with shells, organic matter, some silt; poorly sorted; sub-angular; olive-gray (5Y 4/1).
480	510	Sand, medium to fine, with some silt, shells, organic matter; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1).
510	520	Sand, medium to fine, with some angular rock fragments (pale blue 5PB 7/2), organic matter, occasional coarse grains; poorly sorted; sub-angular; olive-gray (5Y 4/1).
520	540	Sand, fine to coarse, with silt, organic matter, shells, some very coarse grains; poorly sorted; sub-rounded; drilling color pale blue (5PB 7/2), color now is olive-gray (5Y 4/1).
540	570	Sand, fine to coarse, with some silt, occasional rock and shell fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
570	580	Sand, coarse to medium, with silt, fine sand, organic matter, shells, occasional very coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
580	600	Sand, medium to fine, with some silt and clay, organic matter, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
600	620	Sand, medium to very coarse, with gravel, some silt, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
620	640	Sand, medium to very coarse, with some silt, clay, organic matter; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
640	670	Sand, medium, with some organic matter, silt, occasional very coarse grains; moderately poorly sorted; sub-rounded to sub-angular; olive-gray (5Y 4/1).
670	680	Sand, fine to medium, with shells, some coarse-very coarse grains; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1).

**Table 5.** Lithologic log for multiple-well monitoring site Q2 (1N/21W-32Q2, -32Q3, -32Q4, -32Q5, -32Q6, -32Q7)  
—Continued

Depth (feet)		Description
From	To	
680	700	Sand, fine, and silt, with some clay, coarse grains, shells, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
700	720	Sand, fine to very fine, and silt, with some medium, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
720	740	Sand, medium to fine, with some coarse grains, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
740	760	Sand, fine to medium, with some coarse grains, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
780	800	Sand, medium, with some coarse grains, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
800	820	Sand, medium, with some coarse grains, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
820	840	Sand, medium, with some coarse grains, shells, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
840	860	Sand, medium, with some coarse grains, shells, organic matter; moderately sorted; sub-rounded; olive-gray (5Y 4/1).
860	870	Sand, medium to fine, with abundant shells, some silt, occasional coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
870	900	Silt, clay, and sand, fine, with organic matter, occasional coarse grains; poorly sorted; sub-angular; olive black (5Y 2/1).
900	920	Silt, sand, very fine, and clay, with organic matter, some medium sand, shells; poorly sorted; sub-angular; olive black (5Y 2/1).
920	940	Silt, sand, very fine, and clay, with organic matter, some medium-coarse sand, shells; poorly sorted; sub-angular; olive black (5Y 2/1).
940	960	Silt, sand, medium-fine, and clay, with organic matter, occasional coarse fragments(probably shale); poorly sorted; sub-angular; olive black (5Y 2/1).
960	975	Silt, sand, fine, and clay, with organic matter, occasional coarse grains; poorly sorted; sub-angular; olive black (5Y 2/1).

**Table 6.** Lithologic log for multiple-well monitoring site A1 (1N/22W-20J4, -20J5, -20J6, -20J7, -20J8)

[Altitude of land surface approximately 10 feet. Drilled by U.S. Geological Survey using mud-rotary method, May 8, 1991. Total depth drilled, 1,000 feet. Screened intervals, 870-890 and 910-930, 640-680, 385-425, 280-320, and 155-195 feet]

Depth (feet)		Description
From	To	
0	20	No sample recovered. Loose beach sand, some clay.
20	40	Sand, very coarse to coarse, with gravel, some medium-fine sand, and silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
40	56	Sand, medium to very coarse, with some slightly consolidated blobs of a fine sand core, and dark and light layered silt shell, dark layers have organics, some gravel; poorly sorted; sub-rounded; light olive-gray (5Y 5/2).
56	60	Clay (no sample).
60	80	Sand, fine to medium, with silt, some coarse grains, organics, clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2).
80	100	Sand, medium to coarse, with some gravel, fine sand; moderately sorted; sub-rounded; light olive-gray (5Y 5/2).
100	120	Sand, medium to fine, with some silt and coarse grains; poorly sorted; sub-rounded; light olive-gray (5Y 5/2).
120	140	Sand, fine to coarse, with silt, some gravel; poorly sorted; sub-rounded; cement in sample is yellowish gray (5Y 7/2); probably was light olive-gray (5Y 5/2).
140	160	Gravel and sand, very coarse; poorly sorted; rounded; olive-gray (5Y 4/1).
160	180	Gravel and sand, coarse to medium; poorly sorted; rounded to sub-angular; olive-gray (5Y 4/1).
180	200	Gravel and sand, very coarse to coarse, with some fine sand, organics; poorly sorted; sub-rounded; light olive-gray (5Y 5/2).
200	220	Gravel and sand, very coarse to coarse, with some fine sand; poorly sorted; angular; light olive-gray (5Y 5/2).
220	240	Sand, fine, and silt, with clay, some coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
240	260	Sand, fine to medium, with silt, clay, occasional coarse grains; poorly sorted; sub-rounded; medium dark gray (N4) to olive-gray (5Y 4/1).
260	280	Sand, fine, silt, and clay, with some medium sand; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
280	300	Sand, coarse to medium, and gravel, with some silt and clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
300	320	Sand, coarse to very coarse, and gravel, with some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
320	340	Sand, medium to coarse, with some silt and very fine sand, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1).
340	360	Silt and sand, fine, with some clay, organics; occasional coarse grains; moderately sorted; rounded; dusky yellowish brown (10YR 2/2).

**Table 6.** Lithologic log for multiple-well monitoring site A1 (1N/22W-20J4, -20J5, -20J6, -20J7, -20J8)—*Continued*

Depth (feet)		Description
From	To	
360	380	Silt and sand, fine, with some clay, organics; moderately well sorted; rounded; dusky yellowish brown (10YR 2/2).
380	400	Sand, fine, silt, and clay, with some organics, occasional very coarse grains; moderately well sorted; rounded; olive black (5Y 2/1).
400	420	Sand, fine, silt, and clay, with some organics, rare coarse grains; moderately sorted; rounded; olive-gray (5Y 3/2).
420	440	Silt and clay, with some fine sand, some organics, occasional gravel; moderately poorly sorted; rounded; olive-gray (5Y 3/2).
440	460	Silt and clay, with some fine sand, organics; well sorted; rounded; olive-gray (5Y 3/2).
460	480	Silt and clay, with some fine sand, organics, occasional coarse grains; moderately well sorted; rounded; olive black (5Y 2/1).
480	500	Sand, fine, silt, and clay, with some organics; moderately well sorted; rounded; olive-gray (5Y 3/2).
500	520	Sand, fine, silt, and clay, with some organics; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
520	540	Sand, fine, and silt, with some shells, organics, occasional coarse grains; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
540	560	Silt, clay, and sand, fine to medium, with organics, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
560	580	Silt and sand, fine to very fine, with abundant organics, occasional coarse grains; poorly sorted; sub-rounded; olive black (5Y 2/1).
580	600	Silt and sand, very fine, with abundant organics; moderately poorly sorted; sub-rounded; olive black (5Y 2/1).
600	620	Sand, fine to very fine, and clay, with silt, organics; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
620	640	Sand, medium to coarse, and clay, with silt, some organics; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
640	660	Sand, medium, and silt, with some coarse sand, organics; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
660	680	Sand, medium to fine, with occasion coarse sand; well sorted; sub-rounded; olive-gray (5Y 4/1).
680	700	Sand, medium to fine, with some organics, occasional coarse sand; well sorted; sub-rounded; olive-gray (5Y 4/1).
700	720	Sand, medium to fine, and clay, with silt, organics, occasional coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
720	740	Sand, very fine to fine, with shells, some clay, organics; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
740	760	Sand, fine, and silt, with some medium sand, shells; poorly sorted; sub-rounded; light olive-gray (5Y 5/2).

**Table 6.** Lithologic log for multiple-well monitoring site A1 (1N/22W-20J4, -20J5, -20J6, -20J7, -20J8)—*Continued*

Depth (feet)		Description
From	To	
760	780	Sand, medium to fine, with some silt, occasional coarse grains; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
780	800	Sand, fine to very fine, with some shells, occasional coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
800	820	Sand, fine to very fine, and silt, with some coarse grains, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
820	840	Sand, fine to very fine, with some silt, shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
840	860	Sand, fine, with some very fine sand, fewer shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2).
860	880	Sand, fine to medium, with some coarse grains; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2).
880	900	Sand, medium to coarse, with some fine sand, silt; poorly sorted; sub-rounded to sub-angular; olive-gray (5Y 3/2).
900	920	Sand, medium to coarse, with fine sand, some organics; poorly sorted; sub-rounded to sub-angular; olive-gray (5Y 3/2).
920	940	Sand, medium, with coarse grains, some organics, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
940	960	Sand, medium, with coarse sand, some fine sand, organics; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
960	980	Sand, coarse to fine; poorly sorted; sub-angular; olive-gray (5Y 3/2).
980	1,000	Sand, medium to fine, with occasional coarse sand; moderately poorly sorted; sub-angular; olive-gray (5Y 3/2).

**Table 7.** Lithologic log for multiple-well monitoring site A2 (1N/22W-20M1, -20M2, -20M3, -20M4, -20M5, -20M6)

[Altitude of land surface approximately 14 feet. Drilled by U.S. Geological Survey using mud-rotary method, October 14, 1991. Total depth drilled, 949 feet. Screened intervals, 900-940, 700-740, 520-560, 300-320 feet; 150-170 and 50-70 feet (separate hole drilled November 1, 1991)]

Depth (feet)		Description
From	To	
0	15	Sand, medium to fine; quartz, biotite; moderately well sorted; sub-rounded to well rounded; dusky yellow green (5GY 5/2).
15	30	Sand, coarse, with some medium sand to pebbles; quartz, and rock fragments; moderately poorly sorted; sub-angular to rounded; dusky yellow green (5GY 5/2).
30	45	Sand, coarse, with some medium sand to granules; quartz, rock fragments, shells; moderately sorted; angular to well rounded; dusky yellow green (5GY 5/2).
45	60	Sand, medium, with fine sand to pebbles; quartz, rock fragments, shells; moderately poorly sorted; sub-rounded to rounded; dusky yellow green (5GY 5/2).
60	75	Sand, medium, with some fine to very coarse sand; quartz, feldspar, rock fragments; moderately sorted; sub-angular to rounded; dusky yellow green (5YG 5/2).
75	90	Sand, medium, with some fine sand to granules; quartz, rock fragments; moderately sorted; sub-rounded to rounded; dusky yellow green (5YG 5/2).
90	109	Sand, coarse, with medium to very coarse sand; quartz, rock fragments, biotite; moderately well sorted; sub-angular to rounded; dusky yellow green (5YG 5/2).
109	128	No sample recovered.
128	146	Clay, with granules to pebbles; poorly sorted; grayish olive green (5GY 3/2)
146	165	Gravel, granules to pebbles; quartz, rock fragments; moderately poorly sorted; angular to rounded; dusky yellow green (5YG 5/2).
165	184	Sand, very coarse with some medium sand to pebbles; quartz, rock fragments; moderately poorly sorted; angular to rounded; dusky yellow green (5YG 5/2).
184	203	Gravel, granules to pebbles, with clay; poorly sorted; sub-rounded to rounded; moderately yellowish brown (10YR 5/4).
203	222	Clay, with some coarse to very coarse material; poorly sorted; sub-rounded to rounded; moderate yellowish brown (10YR 5/4).
222	240	Sand, very coarse, with some granules to medium sand; quartz, rock fragments; moderately sorted; sub-angular to rounded; light olive-gray (5Y 5/2).
240	259	Silt, with pebbles; poorly sorted; pebbles are sub-angular to rounded; light olive-gray (5Y 5/2) to olive-gray (5Y 3/2).
259	278	Silt, with coarse sand to granules, organics; poorly sorted; sand and gravel are sub-angular to rounded; olive-gray (5Y 3/2).
278	297	Sand, very coarse, with some medium to granular; quartz, rock fragments, organics; moderately sorted; sub-angular to rounded; light olive-gray (5Y 5/2).



**Table 7.** Lithologic log for multiple-well monitoring site A2 (1N/22W-20M1, -20M2, -20M3, -20M4, -20M5, -20M6)  
—Continued

Depth (feet)		Description
From	To	
297	316	Sand, very coarse, with some medium to granules; quartz, rock fragments; moderately sorted; sub-angular to well rounded; light olive-gray (5Y 5/2).
316	335	Gravel, granules, with some pebbles; quartz, rock fragments, shells; moderately sorted; sub-angular to well rounded; light olive-gray (5Y 5/2).
335	353	Gravel, pebbles, with some granules; quartz, rock fragments, organics, biotite, shells; moderately sorted; sub-angular to rounded; grayish black (N2)--due to large amount of organics. Shells fragments: phylum mollusca, class gastropoda.
353	370	Gravel, pebbles, with some granules; quartz, rock fragments, organics; moderately sorted; sub-angular to rounded; grayish black (N2).
370	390	Sand, very coarse with some medium sand to pebbles; rock fragments, quartz, shells, organics; moderately sorted; sub-angular to rounded; medium dark gray (N3).
390	410	Gravel, pebbles; rock fragments, quartz, organics; moderately sorted; sub-angular to sub-rounded; grayish olive (10Y 4/2).
410	428	Sand and gravel with organics and shells; sand, fine to medium; gravel, pebbles; moderately poorly sorted; sub-angular to rounded; grayish olive (10Y 4/2).
428	447	Sand, coarse, with some medium; quartz, rock fragments, shells, organics; moderately well sorted; sub-angular to rounded; grayish olive (10Y 4/2).
447	466	Gravel, coarse sand to pebbles; rock fragments, quartz, organics; moderately sorted; sub-angular to rounded; olive-gray (5Y 3/2).
466	485	Silt, with pebbles, organics; poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 3/2).
485	504	Silt, with some pebbles; organics; poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 3/2).
504	522	Sand, coarse, with some pebbles; quartz, rock fragments, organics, shells; moderately poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
522	541	Sand, coarse, with some silt to pebbles; rock fragments, organics; poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
541	560	Sand, coarse, with some medium to very coarse grains; quartz, rock fragments, shells, organics; moderately well sorted; sub-angular to rounded; olive-gray (5Y 3/2).
560	579	Sand, coarse, with some medium to very coarse grains; quartz, organics, shells, biotite; moderately well sorted; sub-angular to rounded; olive-gray (5Y 3/6).
579	598	Sand, medium, with some fine sand to granules; quartz, rock fragments, organics, shells; moderately sorted; sub-angular to rounded; olive-gray 5Y 3/2).
598	616	Sand, fine, with some very fine sand to pebbles; quartz, rock fragments, muscovite, organics, poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
616	630	Silt, with material up to pebbles; rock fragments; poorly sorted; angular to sub-rounded; olive-gray (5Y 3/2).

**Table 7.** Lithologic log for multiple-well monitoring site A2 (1N/22W-20M1, -20M2, -20M3, -20M4, -20M5, -20M6)  
—Continued

Depth (feet)		Description
From	To	
630	654	Sand, medium, with some fine to medium pebble; quartz, organics; moderately poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
654	666	Sand, medium, with some fine to coarse; quartz, rock fragments, muscovite; moderately well sorted; sub-rounded to rounded; grayish olive (10Y 4/2).
666	685	Sand, medium, with some fines; quartz, rock fragments, biotite; moderately well sorted; sub-rounded to rounded; grayish olive (10Y 4/2).
685	704	Sand, coarse, with some medium to small pebble; moderately sorted; subangular to sub-rounded; grayish olive (10Y 4/1).
704	723	Sand, medium, with some fine sand to pebbles; quartz, rock fragments, organics, biotite; moderately sorted; sub-angular to rounded; grayish olive (10Y 4/2).
723	742	Sand, coarse, with some medium sand to pebbles; quartz, rock fragments, organics; moderately sorted; sub-angular to rounded; grayish olive (10Y 4/1).
742	760	Silt, with some very fine sand to pebbles; organics; poorly sorted; sub-angular to sub-rounded; olive-gray (5Y 3/2).
760	779	Sand, coarse, with some medium sand to pebbles; quartz, rock fragments, organics; moderately sorted; sub-angular to well rounded; olive-gray (5Y 3/2).
779	798	Sand, coarse, with some medium sand to pebbles; quartz, rock fragments, biotite, organics, shells; moderately sorted; sub-angular to rounded; olive-gray (5Y 3/2).
798	817	Sand, medium, with some fine sand to pebbles; quartz, rock fragments, biotite, organics, shells; moderately poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
817	836	Sand, fine, with some medium grains; quartz, biotite, organics, shells; moderately well sorted; sub-angular to rounded; olive-gray (5Y 3/2).
836	855	Sand, very fine, with some silt to fine sand ; quartz, organics, biotite, shells; moderately well sorted; sub-angular to rounded; olive-gray (5Y 4/1).
855	873	Sand, fine; quartz, organics, shells, biotite; well sorted; sub-angular to rounded; olive-gray (5Y 4/1).
873	892	Sand, fine; quartz, organics, biotite, shells; well sorted; sub-angular to rounded; dark yellow brown (10YR 4/2).
892	911	Sand, fine, with some very fine to medium; quartz, organics, biotite; moderately well sorted; sub-angular to rounded; olive-gray (5Y 4/1).
911	930	Sand, medium, with some silt to very coarse grains; quartz, organics; moderately poorly sorted; sub-angular to rounded; olive-gray (5Y 3/2).
930	949	Sand, medium, with some fine to very coarse sand; moderately sorted; sub-angular to rounded; olive-gray (5Y 3/2).

**Table 8.** Lithologic log for multiple-well monitoring site SWIFT (1N/22W-26J3, -26J4, -26J5)

[Altitude of land surface approximately 13 feet. Drilled by U.S. Geological Survey using mud-rotary method, September 19, 1990. Total depth drilled, 365 feet. Screened intervals, 310-350 feet, 185-205 feet, and 55-65 feet]

Depth (feet)		Description
From	To	
0	45	No Sample.
45	65	Sand, medium, with some coarse grains and clay; moderately sorted; rounded; light olive-gray (5Y 5/2); quartz, mica, rock fragments.
65	85	Sand, medium to fine, with some shells, wood, clay, coarse grains; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, mica, rock fragments.
85	105	Sand, medium, with shells, wood, olive-gray clay; poorly sorted; rounded; light olive-gray (5Y 5/2); quartz, rock fragments.
105	125	Sand, medium, with coarse sand, shells, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, mica.
125	145	Sand, fine to medium, with silt, some wood, coarse grains, clay; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, mica.
145	165	Sand, fine to medium, with silt, wood, coarser grains; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
165	180	Sand, medium to coarse, and silt, with abundant wood, some gravel; poorly sorted; sub-angular; olive black (5Y 2/1); quartz, rock fragments.
180	205	Gravel, granules, silt, and sand, very coarse, with wood; poorly sorted; sub-angular; olive black (5Y 2/1); quartz, rock fragments, silt.
205	220	Gravel, pebbles, with some very coarse sand; poorly sorted; sub-angular; light olive-gray (5Y 5/2) to olive-gray (5Y 3/2); rock fragments.
220	245	Gravel, pebbles, with clay and silt, some wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); rock fragments, silt, quartz.
245	265	Sand, coarse, with clay, some silt, wood, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
265	285	Sand, coarse, and silt, with clay, some gravel (may be from above); poorly sorted; sub-rounded; olive-gray (5Y 4/1) to brownish black (5YR 2/1); quartz, mica, silt.
285	305	Sand, very fine to medium, and silt, with clay, wood, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
305	325	Sand, medium to coarse, with silt; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar.
325	345	Sand, medium to coarse, with some silt, wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
345	365	Sand, coarse, with silt, some gravel, clay, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.

**Table 9.** Lithology log for multiple-well monitoring site SW (1N/22W-27C2, -27C3, -27C4)

[Altitude of land surface approximately 11 feet. Drilled by U.S. Geological Survey using mud-rotary method, September 22, 1990. Total depth drilled, 385 feet. Screened intervals, 275-295, 175-195, and 55-65 feet]

Depth (feet)		Description
From	To	
0	20	Sand, very fine to fine, with silt, wood, chalky clay blebs; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar, mica.
20	40	Clay, silt, and sand, very fine, with some medium-coarse sand, wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica.
40	65	Sand, medium, with some fine sand, silt, shells; well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
65	85	Sand, fine to medium, with silt, some wood; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
85	105	Silt, and sand, very fine, with some medium sand, clay, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, mica, quartz.
105	125	Sand, very fine, and silt, with some wood, coarse grains; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, mica, quartz.
125	145	Sand, coarse, with some very coarse grains; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
145	165	Sand, coarse to medium, with some very coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
165	185	Sand, very coarse, silt, and sand, very fine, with shells, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, silt.
185	205	Sand, very coarse to coarse, with some gravel, medium sand; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
205	225	Gravel, pebbles; sand, coarse, and silt, with clay; poorly sorted; sub-angular; light olive-gray (5Y 5/2); rock fragments, silt.
225	245	Sand, medium to fine, silt, and clay, with wood, some coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, rock fragments, mica.
245	265	Clay, and sand, fine, with some gravel, wood; poorly sorted; sub-rounded; dusky blue green (5BG 3/2) to moderately yellowish brown (10YR 5/4); silt, quartz, mica.
265	285	Sand, medium to coarse, with some silt, wood, clay; moderately poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
285	305	Sand, medium, with silt, some coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
305	325	Silt and sand, very fine to medium, with shells, wood, some coarse grains, clay; poorly sorted; sub-angular; olive black (5Y 2/1); silt, quartz, mica.
325	345	Sand, medium to fine, and silt, with some clay and shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, silt, mica.
345	385	Sand, very fine to fine, and silt, with wood, shells, some medium sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica.

**Table 10.** Lithologic log for multiple-well monitoring site CM7 (1N/22W-27R3, -27R4, -27R5)

[Altitude of land surface approximately 10 feet. Drilled by U.S. Geological Survey using mud rotary, October 16, 1990. Total depth drilled, 365 feet. Screened intervals, 330-350, 170-190, and 100-110 feet]

Depth (feet)		Description
From	To	
0	20	Sand, medium to coarse, with silt, clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
20	40	Sand, fine to medium, with some silt, occasional shells (forams); poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica.
40	60	Silt and sand, very fine, with some medium sand, wood, shells; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, mica, rock fragments.
60	80	Silt and sand, very fine, with shells (gastropod), wood, some clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, rock fragments.
80	87	Silt and sand, fine, with wood, some shells, occasional medium-coarse grains; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, mica, quartz.
87	105	Sand, fine to medium, with silt, wood, some clay, shells; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica, silt.
105	125	Silt and sand, fine to very fine, with wood, occasional medium sand; poorly sorted; sub-rounded; olive black (5Y 2/1); silt, mica, quartz.
125	155	Silt and sand, fine, with wood, some clay, medium sand; poorly sorted; sub-rounded; olive black (5Y 2/1); silt, mica, quartz.
155	165	Gravel, granules to pebbles, and sand, coarse to very coarse, with wood, some fine sand; poorly sorted; sub-angular to angular; light olive-gray (5Y 5/2); rock fragments, quartz, feldspar.
165	185	Gravel, granules to pebbles, and sand, coarse to very coarse, with wood, some silt; poorly sorted; sub-angular; light olive-gray (5Y 5/2); rock fragments, quartz, feldspar.
185	205	Gravel, pebbles, and sand, very coarse to coarse, with some wood, silt; poorly sorted; angular to sub-angular; light olive-gray (5Y 5/2); rock fragments, quartz, feldspar.
205	220	Sand, very coarse to coarse, and gravel, granules, with some wood; poorly sorted; angular to sub-angular; light olive-gray (5Y 5/2); rock fragments, feldspar, quartz.
220	245	Sand, medium to coarse, and silt, with wood; poorly sorted; sub-angular; light olive-gray (5Y 5/2); rock fragments, silt, quartz.
245	275	Sand, fine to coarse, and silt, with some wood, occasional gravel; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, rock fragments, silt.
275	285	Clay and gravel, granules, with some wood, shells; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); clay, mica, rock fragments, quartz.
285	305	Silt and sand, very fine, with some wood, rock, and shell fragments; moderately sorted; rounded; light olive-gray (5Y 5/2); silt, rock fragments.
305	325	Sand, medium to coarse, with some silt, wood, shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, feldspar, mica.
325	365	Sand, very coarse to fine, with silt, some wood, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); rock fragments, quartz, silt, mica.

**Table 11.** Lithologic log for multiple-well monitoring site CM4 (1N/22W-28G1, -28G2, -28G3, -28G4, -28G5)

[Altitude of land surface 5 feet. Drilled by U.S. Geological Survey using mud-rotary method, November 28, 1989. Total depth drilled, 1,415 feet. Screened intervals, 1,295-1,395, 995-1,095, 720-760, 255-275, and 180-200 feet]

Depth (feet)		Description
From	To	
0	30	No Sample.
30	50	Sand, fine to medium, with wood, occasional gravel; moderately sorted; sub-angular; olive-gray (5Y 4/1) to light olive-gray (5Y 5/2); quartz, feldspar, mica.
50	70	Sand, fine to very coarse, and gravel, granules, with wood, and shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica; shells, mollusks, radiolarian spicules.
70	90	Sand, fine to coarse, with silt, wood, some shells, and occasional gravel; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica; shells, gastropods, radiolarian spicules.
90	110	Sand, fine to very fine, and silt with wood, occasional gravel; poorly sorted; rounded; olive-gray (5Y 4/1); silt, mica, rock fragments.
110	130	Sand, medium to coarse, with some wood, silt, gravel; moderately sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
130	155	Sand, medium to very coarse, and gravel, granules to pebbles; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.
155	175	Silt, clay, and sand, medium to coarse, with some wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, mica, rock fragments.
175	185	No Sample (probably Clay and Silt).
185	195	Sand, coarse to very coarse, and gravel, granules to pebbles, with trace of clay and silt; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
195	215	Sand, medium to very coarse, and gravel, granules to pebbles, with some wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
215	235	Sand, coarse to very coarse, and gravel, granules to pebbles, (overall coarser than previous sample); poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
235	255	Sand, medium to very coarse, and gravel, granules to pebbles, with some wood; poorly sorted; sub-rounded to sub-angular; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
255	275	Sand, coarse to very coarse, and gravel, granules to pebbles, with some wood and clay; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments. *large sieve used—fines may have been lost.
275	295	Sand, coarse to very coarse, and gravel, granules to pebbles, with clay blebs, occasional shells; poorly sorted; sub-angular to angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments. *large sieve used—fines may have been lost.
295	315	Sand, fine to medium, with occasional coarse grains and gravel, silt blebs, wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
315	335	Clay, silt, and sand, fine, with occasional shell, rock, and wood fragments; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, quartz, mica, rock fragments.

**Table 11.** Lithologic log for multiple-well monitoring site CM4 (1N/22W-28G1, -28G2, -28G3, -28G4, -28G5)  
—Continued

Depth (feet)		Description
From	To	
335	355	Sand, fine to medium, and silt with some clay, wood, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, feldspar, mica.
355	375	Silt and sand, fine, with clay, some wood, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, rock fragments, mica.
375	395	Clay, silt, and sand, fine, with wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); clay, mica, quartz, rock fragments.
395	415	Clay, silt, and sand, fine, with some wood, occasional medium-coarse, sub-angular grains; moderately sorted; olive black (5Y 2/1); clay, mica, quartz.
415	435	Clay, silt, and sand, fine, with wood, occasional medium-coarse sub-rounded grains; moderately sorted; olive-gray (5Y 3/2); clay, mica.
435	455	Clay, silt, and sand, fine, with wood, occasional gravel; moderately sorted; sub-angular; olive-gray (5Y 3/2); clay, mica, quartz.
455	475	Clay, silt, and sand, fine, with wood, occasional very coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay, mica.
475	495	Clay, silt, and sand, fine, with wood, occasional medium grains; moderately sorted; sub-angular; olive-gray (5Y 3/2); clay, mica.
495	515	Clay and silt, with some fine sand, wood; well sorted; sub-rounded; olive-gray (5Y 3/2); clay, silt, mica.
515	535	Clay and silt, with some sand, and wood; well sorted; olive-gray (5Y 3/2); clay, silt, mica.
535	555	Clay and silt, with wood; trace of sticky yellowish orange substance (organic?); well sorted; olive-gray (5Y 3/2) to grayish black (N2).
555	575	Clay and silt, with wood; well sorted; dark greenish gray (5GY 4/1); clay, silt.
575	595	Clay and silt, with wood, occasional fine-medium sand; well sorted; dark greenish gray (5GY 4/1); clay.
595	615	Clay and silt, with wood, occasional fine sand; well sorted; olive-gray (5Y 3/2); clay.
615	635	Clay and silt, with wood, occasional fine sand; well sorted; olive-gray (5Y 3/2); clay.
635	655	Clay and silt, with occasional fine sand, wood; well sorted; greenish black (5Y 2/1); clay.
655	675	Clay and silt, with occasional medium-fine sand, wood; well sorted; olive black (5Y 2/1) to greenish black (5GY 2/1); clay, mica, quartz.
675	695	Clay and silt, with occasional very coarse sand (from above?) wood; well sorted; olive black (5Y 2/1) to greenish black (5GY 2/1); clay, mica, rounded rock fragments.
695	715	Clay, silt, with occasional broken rock, wood; well sorted; olive black (5Y 2/1) to green black (5GY 2/1); clay.
715	735	Clay and silt, with occasional rock fragments, wood; well sorted; olive-gray (5Y 3/2); clay.

**Table 11.** Lithologic log for multiple-well monitoring site CM4 (1N/22W-28G1, -28G2, -28G3, -28G4, -28G5)  
—Continued

Depth (feet)		Description
From	To	
735	755	Silt, clay, and sand, very fine, with wood; well sorted; olive-gray (5Y 3/2); clay.
755	775	Clay, silt, and sand, fine, with wood; well sorted; olive-gray (5Y 3/2); clay.
775	795	Clay and silt, with wood; well sorted; olive-gray (5Y 3/2); clay.
795	815	Clay and silt, with occasional coarse sand, wood; well sorted; olive-gray (5Y 3/2); clay.
815	835	Silt and clay, with wood; well sorted; olive-gray (5Y 3/2); silt.
835	855	Silt and clay; well sorted; dark greenish gray (5GY 4/1); silt.
855	875	Silt and clay, with minor black organic soil; well sorted; olive-gray (5Y 3/2); silt.
875	895	Silt and clay, with occasional fine-medium sand, wood; well sorted; olive black (5Y 2/1); silt.
895	915	Silt, and sand, very fine; with wood; well sorted; olive-gray (5Y 3/2); silt, sand.
915	935	Sand, very fine to medium, and silt, with occasional shells and gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
935	955	Sand, fine to coarse, and silt, with wood, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
955	975	Silt and sand, fine to medium, with wood, very coarse sand, gravel, and shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
975	995	Silt and sand, very fine to medium, with wood, occasional very coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, feldspar, mica.
995	1,015	Silt and sand, fine, with clay, medium sand, gravel, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, quartz, feldspar.
1,015	1,035	Silt and sand, very fine, with wood and occasional medium-coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, rock fragments.
1,035	1,055	Silt and sand, fine, with some wood, medium sand; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, rock fragments.
1,055	1,075	Sand, medium to very coarse, with silt, gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, silt.
1,075	1,095	Sand, fine to medium, with silt, coarse-very coarse sand, shells rare; poorly sorted; sub-angular; olive-gray (5Y 3/2); rock fragments, feldspar, mica.
1,095	1,115	Silt, clay, and sand, fine to very fine, with wood, occasional gravel; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, quartz, rock fragments.
1,115	1,135	Sand, very fine to coarse, and silt, with wood, occasional gravel; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
1,135	1,155	Sand, very fine to coarse, with silt, wood, some gravel; moderately poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, feldspar.



**Table 11.** Lithologic log for multiple-well monitoring site CM4 (1N/22W-28G1, -28G2, -28G3, -28G4, -28G5)  
—Continued

Depth (feet)		Description
From	To	
1,155	1,175	Silt and sand, fine, with wood, medium sand, occasional very coarse sand; poorly sorted; sub-angular; olive-gray (5Y 4/1); silt, quartz, rock fragments.
1,175	1,200	Silt, sand, very fine, and clay, with wood, some medium-coarse sand; poorly sorted; sub-angular; dark greenish gray (5GY 4/1); silt, rock fragments, mica, quartz.
1,200	1,215	Silt and sand, fine, with wood, some medium sand, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica, rock fragments.
1,215	1,235	Silt and sand, very fine to fine, with medium sand, wood, occasional shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, quartz, mica, rock fragments.
1,235	1,255	Sand, fine to medium, with wood, some very coarse sand, occasional shell fragments; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
1,255	1,275	Silt and sand, fine to medium, with abundant wood, occasional gravel, shells; poorly sorted; sub-angular; olive black (5Y 2/1); silt, quartz, mica.
1,275	1,295	Silt and sand, fine, with clay, some medium to coarse sand, wood, shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, quartz, rock fragments, mica.
1,295	1,315	Silt, clay, and sand, fine, with wood, shells, some medium sand; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay, rock fragments, mica.
1,315	1,335	Clay and silt, with wood, some fine sand, shell; moderately sorted; olive-gray (5Y 3/2); clay.
1,335	1,355	Sand, fine to medium, and silt, with wood, some shells, occasional gravel; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, quartz.
1,355	1,375	Sand, fine to medium, with silt, wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
1,375	1,395	Sand, fine to medium, with silt, wood, some rock fragments; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
1,395	1,415	Sand, fine to medium, with silt, coarse sand, wood; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.

**Table 12.** Lithologic log for multiple-well monitoring site CM2 (1N/22W-29D1, -29D2, -29D3, -29D4)

[Altitude of land surface 7 feet. Drilled by U.S. Geological Survey using mud-rotary method, October 17, 1989. Total depth drilled, 1,170 feet. Screened intervals, 830-870, 720-760, 500-520, and 260-280 feet]

Depth (feet)		Description
From	To	
0	30	Sand, medium to very coarse, with some pebbles, wood, and rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, biotite.
30	50	Sand, coarse to medium, with gravel, wood, and shells; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, biotite.
50	70	Sand, fine to very coarse, with rock, shell, and wood fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
70	90	Sand, very coarse to fine, with silt and clay, shells, and gravel; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, silt.
90	110	Sand, medium to very coarse, with angular rock fragments, shells, occasional clay; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
110	130	Sand, medium to very coarse, with gravel, rock, and shell fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); quartz, feldspar, rock fragments, biotite.
130	150	Sand, very coarse to fine, with gravel, rock fragments, and shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, wood, biotite.
150	170	Sand, medium to coarse, with gravel, silt, rock, wood, and shell fragments; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
170	190	Sand, medium to very coarse, with large shell and rock fragments, occasional clay, minor wood; poorly sorted sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
190	210	Sand, coarse to medium, with gravel, rock fragments, shells; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, biotite, rock fragments.
210	230	Sand, very coarse to coarse, with gravel, large (5-10 mm) sub-angular rock fragments; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
230	250	Gravel, granules to pebbles, with some coarse sand and clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2) and dark yellow orange (10YR 6/6); clay, rock fragments.
250	270	Gravel, pebbles, with some clay, coarse sand, and wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2) to olive-gray (5Y 3/2); clay, rock fragments.
270	290	Sand, medium to very coarse, and gravel, 0.5-3 cm, with some clay; poorly sorted; sub-angular; olive-gray (5Y 3/2); rock fragments, quartz, feldspar.
290	310	Sand, very coarse to medium, with gravel, 0.5-1.5 cm, some clay and wood fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); rock fragments, quartz, feldspar, biotite.
310	330	Sand, medium to very coarse, with gravel, 0.2-1 cm, shells, some wood; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
330	350	Sand, medium to coarse, with shell, wood and occasional gravel; moderately well sorted; sub-rounded to rounded; olive black (5Y 2/1); quartz, wood, feldspar, biotite, rock fragments.

**Table 12.** Lithologic log for multiple-well monitoring site CM2 (1N/22W-29D1, -29D2, -29D3, -29D4)—*Continued*

Depth (feet)		Description
From	To	
350	370	Sand, medium to coarse, with occasional rock, shell, and wood fragments; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, hornblende, rock fragments.
370	390	Sand, fine to coarse, with occasional shells; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.
390	410	Sand, medium to coarse, with some gravel, wood; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
410	430	Sand, medium to coarse, with some gravel, few wood fragments; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
430	450	Sand, very coarse to fine, with silt and clay; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, feldspar, biotite, rock fragments.
450	470	Clay with medium to coarse sand, wood fragments; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, rock fragments.
470	490	Clay and silt with gravel, wood fragments, and fine sand; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, silt, rock fragments.
490	510	Sand, medium to coarse, with some clay, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
510	530	Sand, medium to very coarse, with gravel and wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
530	550	Sand, fine to coarse, silt and clay, with some rock fragments, wood, and shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments; silt, clay.
550	570	Sand, coarse to medium, silt, and clay with wood and shells, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, clay.
570	590	Sand, fine to coarse, with some silt, clay, wood and shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
590	610	Sand, medium to fine, with clay, some wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, feldspar.
610	630	Sand, medium to coarse, with some fine sand, occasional rock fragments, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
630	650	Sand, coarse to fine, with shells, some wood, and occasional rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
650	670	Sand, medium to coarse, with shells, wood, and rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.
670	690	Sand, medium to very coarse, with occasional wood and shell fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
690	710	Sand, medium to very coarse, with occasional shells, gravel appearing near bottom of section; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar.

**Table 12.** Lithologic log for multiple-well monitoring site CM2 (1N/22W-29D1, -29D2, -29D3, -29D4)—*Continued*

Depth (feet)		Description
From	To	
710	730	Sand, fine to very coarse; poorly sorted; sub-rounded to sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica, pyrite.
730	750	Sand, fine to coarse, with shell and wood fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
750	770	Sand, fine to coarse; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
770	790	Sand, fine to very coarse, with some rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
790	810	Sand, medium to very coarse, with some silt, clay, wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, feldspar, rock fragments, mica.
810	830	Sand, fine to coarse, silt and clay, with some wood, occasional rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, mica, clay.
830	850	Sand, fine to coarse, with silt, wood, and few large granitic pebbles and shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, biotite, rock fragments.
850	870	Sand, fine to coarse; silt, and clay with shells, some gravel, and wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, clay.
870	890	Sand, fine to coarse, with some silt, clay, wood, and shell fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica.
890	910	Sand, fine to coarse, with some silt, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
910	930	Sand, fine to coarse, with some silt, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
930	950	Sand, fine to coarse, with some wood, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, rock fragments.
950	970	Sand, fine to coarse, with some wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
970	990	Sand, fine to coarse, with some silt and wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
990	1,010	Sand, medium to very coarse, with silt, clay, and wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar.
1,010	1,030	Sand, medium to coarse, silt and clay with wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar.
1,030	1,050	Sand, fine to coarse, silt and clay with wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
1,050	1,070	Sand, medium to coarse, with some clay, silt, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar.

**Table 12.** Lithologic log for multiple-well monitoring site CM2 (1N/22W-29D1, -29D2, -29D3, -29D4)—*Continued*

Depth (feet)		Description
From	To	
1,070	1,090	Sand, fine to very coarse, silt and clay with some wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, clay.
1,090	1,110	Sand, fine to coarse, silt and clay with some wood; poorly sorted; sub-rounded; olive black (5Y 2/1); quartz, feldspar, clay.
1,110	1,130	Clay, with fine sand, wood, and occasional gravel; poorly sorted; sub-rounded; olive black (5Y 2/1); clay, rock fragments, mica.
1,130	1,150	Sand, very fine, silt, with occasional gravel and wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt.
1,150	1,170	Sand, very fine, silt, with occasional rock fragments; poorly sorted; sub-rounded; light olive-gray (5Y 6/1); rock fragments, silt.

**Table 13.** Lithologic log for multiple-well monitoring site CM5 (1N/22W-35E1, -35E2, -35E3, -35E4, -35E5)

[Altitude of land surface 6 feet. Drilled by U.S. Geological Survey using mud-rotary method, February 20, 1990. Total depth drilled, 1,227 feet. Screened intervals, 1,140-1,200, 840-940, 420-470, 300-320, and 200-220 feet]

Depth (feet)		Description
From	To	
0	37	Sand, medium to fine, with some very coarse grains, occasional gastropod shells; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, mica, feldspar, rock fragments.
37	57	Sand, fine to coarse, and silt with wood, rock, and shell fragments; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica, rock fragments.
57	77	Silt and sand, fine, with abundant shells, some medium sand, wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2) to olive-gray (5Y 3/2); silt, mica, quartz.
77	97	Silt and sand, fine, with wood, shells, occasional medium sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, rock fragments.
97	117	Sand, medium to fine, with some silt, rock, and wood fragments; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
117	137	Sand, medium to fine, with occasional wood and coarse sand; moderately well sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica.
137	167	Silt and sand, fine, with occasional wood and medium sand; poorly sorted; sub-rounded; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); silt, mica, quartz.
167	187	Sand, fine to medium, with gravel, some silt, occasional coarse grains; poorly sorted; sub-rounded; dusky yellow green (5GY 5/2); quartz, feldspar, silt.
187	207	Sand, medium to coarse, with silt, gravel, rock fragments, clay, some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
207	227	Sand, coarse to medium, and gravel, granules to pebbles, with silt, rock fragments, some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
227	247	Sand, fine to medium, with silt, some rock fragments, wood, shells; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica.
247	267	Sand, fine to coarse, with silt, wood, shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, silt.
267	287	Clay and sand, fine, with occasional coarse grains, wood; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); clay, mica, quartz.
287	307	Silt and clay, with wood, occasional coarse sand and gravel; poorly sorted; gravel, sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
307	327	Sand, medium to coarse, with gravel, wood, minor silt; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments.
327	347	Sand, medium to coarse, with gravel, wood, minor silt; moderately sorted; sub-rounded; light olive-gray (5Y 6/1); quartz, feldspar, mica.
347	367	Sand, medium to coarse, with silt, wood, some clay; poorly sorted; sub-rounded; light olive-gray (5Y 6/1); quartz, feldspar, rock fragments, mica.

**Table 13.** Lithologic log for multiple-well monitoring site CM5 (1N/22W-35E1, -35E2, -35E3, -35E4, -35E5)  
—Continued

Depth (feet)		Description
From	To	
367	387	Sand, medium to fine, and silt and clay with abundant wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt, mica.
387	407	Sand, medium to coarse, with wood, some silt, occasional gravel; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, silt.
407	427	Sand, coarse to medium, with silt, wood, some gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt, mica.
427	447	Sand, coarse to medium, with wood, gravel; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
447	467	Sand, medium to fine, with silt, some wood, gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica, silt.
467	487	Sand, very fine to medium, with shells, whole gastropod, clams; some wood, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
487	507	Clay and sand, very fine to medium with wood, shells, some coarse sand; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay, rock fragments, mica.
507	527	Sand, very fine to fine, and clay with wood, some shells; well sorted; sub-rounded; black (N1) in center of sample, olive-gray (5Y 4/1) outer portion exposed to air; quartz, clay, wood.
527	547	Clay and sand, very fine to fine, with wood, some shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); clay, quartz.
547	567	Sand, very fine, and clay with abundant wood, some shells, medium sand; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); clay, quartz.
567	587	Sand, very fine to medium, and clay with wood, some coarse grains, shells; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1) to olive-gray (5Y 4/1); quartz, mica, clay.
587	607	Sand, very fine to coarse, and clay with wood, occasional shells, gravel; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, mica.
607	627	Sand, very fine, and silt with medium-coarse sand, shells, gastropod and clams, wood; poorly sorted; sub-angular; olive-gray (5Y 4/1) to dark greenish gray (5GY 4/1); quartz, rock fragments, mica.
627	647	Silt, and sand, very fine to fine, with wood, some medium sand, occasional shells, gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, mica.
647	667	Sand, very fine, and silt with wood, occasional coarse grains; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, mica, quartz.
667	687	Sand, very fine, and silt with wood, some medium sand, occasional shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica.
687	707	Sand, very fine to medium, and silt with wood, occasional shells, coarse sand; poorly sorted; sub-angular; dark greenish gray (5GY 4/1); quartz, feldspar, mica.
707	727	Sand, very fine to fine, and silt with wood, some medium sand, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, silt.

**Table 13.** Lithologic log for multiple-well monitoring site CM5 (1N/22W-35E1, -35E2, -35E3, -35E4, -35E5)  
—Continued

Depth (feet)		Description
From	To	
727	747	Sand, very fine to fine, and silt with wood, some shells, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, silt.
747	767	Silt and clay and sand, very fine, with wood, occasional medium-coarse sand; moderately sorted; sub-angular; olive-gray (5Y 4/1); silt, mica, quartz.
767	787	Silt and sand, very fine, with wood, occasional shells, medium-coarse sand; moderately sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
787	807	Sand, fine to very fine, and silt with wood, some medium-coarse sand, rare shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, silt.
807	827	Sand, very fine, and silt with wood, some medium-coarse sand, occasional coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, silt.
827	847	Sand, very fine, and silt with wood, some medium-coarse sand, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, silt.
847	867	Sand, fine to coarse, with wood, some silt, occasional very coarse grains, shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar.
867	887	Sand, fine to coarse, with wood, some very coarse grains and gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar.
887	907	Sand, medium to coarse, with some wood, fine sand; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar.
907	927	Sand, medium to coarse, with some very coarse sand, wood, occasional shells; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments.
927	947	Sand, fine to coarse, with some very coarse grains, silt, rare shells; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, rock fragments.
947	967	Sand, fine to very fine, with medium-coarse grains, some silt and clay, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, mica.
967	987	Silt and sand, very fine, with some medium-coarse sand, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, quartz, mica.
987	1,007	Silt and clay with wood, some medium-fine sand, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz.
1,007	1,027	Silt and sand, very fine, with wood, some medium sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz.
1,027	1,047	Silt, sand, very fine, and clay with wood, occasional medium-coarse grains, shell; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
1,047	1,067	Silt, clay, and sand, very fine, with wood, some medium grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz.
1,067	1,087	Silt and sand, very fine, with some medium grains, clay, shells, occasional gravel; poorly sorted; sub-rounded; olivegray (5Y 4/1); silt, quartz, mica.



**Table 13.** Lithologic log for multiple-well monitoring site CM5 (1N/22W-35E1, -35E2, -35E3, -35E4, -35E5)  
—Continued

Depth (feet)		Description
From	To	
1,087	1,107	Silt and sand, very fine, with wood, shells, some medium grains; poorly sorted; sub-angular; olive-gray (5Y 4/1); silt, quartz.
1,107	1,127	Silt and sand, fine, with wood, shells, medium sand; poorly sorted; sub-angular; olive-gray (5Y 4/1); silt, quartz.
1,127	1,147	Silt and sand, fine, with wood, shells, some medium-coarse sand, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz.
1,147	1,167	Silt and sand, fine, with wood, shells, some coarse sand; poorly sorted; sub-angular; dark greenish gray (5GY 4/1); silt, quartz, mica.
1,167	1,187	Silt and sand, fine, with shell fragments, some wood, medium-coarse sand, occasional gravel; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, rock fragments.
1,187	1,207	Silt, sand, fine to very fine, and clay with wood, shells; moderately sorted; sub-rounded; olivegray (5Y 4/1); silt, mica.
1,207	1,227	Silt, sand, fine to very fine, and clay with wood, shells, occasional medium sand; moderately sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, quartz, mica.

**Table 14.** Lithologic log for multiple-well monitoring site DP (1N/22W-36K5, -36K6, -36K7, -36K8, -36K9)

[Altitude of land surface approximately 7 feet. Drilled by U.S. Geological Survey using mud-rotary method, September 4, 1990. Total depth drilled, 725 feet. Screened intervals, 680-720, 540-580, 410-450, 310-330, and 175-195 feet]

Depth (feet)		Description
From	To	
0	20	Sand, medium to coarse, with some silt and clay; poorly sorted; rounded; light olive-gray (5Y 5/2); quartz, biotite, rock fragments.
20	40	Sand, coarse to fine, and silt, with shells, some gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, biotite.
40	50	Sand, fine to very fine, with silt, trace of clay, some wood and shells; well sorted; rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
50	60	Sand, fine to very fine, with silt, some wood, shells; well sorted; rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
60	80	Sand, fine to very fine, with silt, shells; well sorted; rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
80	90	Sand, fine to very fine, and silt, with clay, shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, silt.
90	105	Sand, fine to very fine, and silt and clay, with occasional gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, mica, rock fragments.
105	118	Clay and silt, with very fine sand, some gravel, shells; poorly sorted; olive-gray (5Y 3/2); clay, rock fragments. *Sample collected from shaker.
118	125	Sand, coarse to very coarse, and gravel, with some silt; poorly sorted; rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
125	145	Sand, very coarse to coarse, with gravel, clay, some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
145	165	Gravel, granules to pebbles, and sand, very coarse, with some silt; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
165	170	Sand, very coarse, gravel, and clay, with wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.
170	177	Clay (no sample)
177	185	Sand, very coarse, and gravel, with some silt, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
185	205	Gravel, granules to pebbles, and sand, coarse to very coarse, with clay, minor silt; poorly sorted; sub-angular to angular; olive-gray (5Y 4/1); quartz, rock fragments.
205	225	Gravel, pebbles to granules (may be from above), with coarse sand, and clay; poorly sorted; angular; olive-gray (5Y 4/1); rock fragments, quartz, clay, silt.
225	245	Sand, medium to fine, with some very coarse grains, shells, wood; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, mica, rock fragments.

**Table 14.** Lithologic log for multiple-well monitoring site DP (1N/22W-36K5, -36K6, -36K7, -36K8, -36K9)  
—Continued

Depth (feet)		Description
From	To	
245	265	Sand, very fine to medium, and silt, with shells; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, mica, rock fragments.
265	285	Sand, very fine to fine, with clay, shells, some coarse grains; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, mica, clay.
285	305	Sand, fine to very fine, silt, and clay, with wood; well sorted; olive-gray (5Y 3/2); clay, mica, quartz.
305	335	Sand, medium to coarse, with fine sand, some coarse grains, wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, biotite.
335	345	Sand, very fine to coarse, with occasional gravel, silt, and clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
345	365	Sand, medium to coarse, with some clay blebs, wood; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments.
365	385	Sand, fine to medium, with silt, occasional gravel, clay blebs, and wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
385	405	Sand, fine to medium, with very coarse sand, clay, gravel, some shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, mica.
405	425	Sand, medium to very coarse, and gravel, with some silt and wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments.
425	445	Sand, coarse to very coarse, and gravel, granules to pebbles, with some medium sand, shells, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
445	465	Sand, coarse to very coarse, and gravel, granules, with some angular pebbles, silt; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, mica.
465	485	Sand, very coarse, and gravel, granule to pebble; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, mica.
485	505	Sand, coarse to very coarse, and gravel, granules to pebbles, with some medium sand, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
505	525	Sand, coarse to very coarse, and gravel, granules to pebbles, with some medium sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
525	545	Gravel, granules to pebbles, and sand, coarse to very coarse, with some medium sand, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, mica.
545	565	Gravel, granules to pebbles, and sand, coarse to very coarse, with shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
565	585	Gravel, granules to pebbles, and sand, very coarse; poorly sorted; sub-angular to angular; olive-gray (5Y 3/2); quartz, rock fragments, feldspar.
585	605	Gravel, granule to pebble, and sand, very coarse, with silt; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.

**Table 14.** Lithologic log for multiple-well monitoring site DP (1N/22W-36K5, -36K6, -36K7, -36K8, -36K9)  
—Continued

Depth (feet)		Description
From	To	
605	615	Sand, fine to coarse, silt, and clay, with abundant gravel (probably from above); poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, rock fragments.
615	645	Sand, fine, silt, and clay, with gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, feldspar, mica.
645	670	Sand, very fine, silt, and clay, with occasional gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz, feldspar.
670	685	Sand, medium to coarse, with silt and wood; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
685	705	Sand, medium to coarse, and gravel, granules to pebbles, with some shells, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
705	725	Gravel, granules to pebbles, and sand, coarse to very coarse, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); rock fragments, quartz, feldspar.

**Table 15.** Lithologic log for multiple-well monitoring site CM3 (1N/23W-1C2, -1C3, -1C4, -1C5)

[Altitude of land surface 10 feet. Drilled by U.S. Geological Survey using mud-rotary method, November 7, 1989. Total depth drilled, 1,495 feet. Screened intervals, 1,390-1,490, 965-1,065, 630-695, and 120-145 feet]

Depth (feet)		Description
From	To	
0	20	Sand, very coarse to fine, with dark-colored rock fragments; poorly sorted; sub-angular to sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica, rock fragments.
20	30	Sand, coarse to fine, with sub-angular rock fragments (5 to 10 mm); poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica, rock fragments.
30	60	Sand, coarse to fine, with occasional rock fragments (4-8mm); poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.
60	75	Sand, very coarse to fine, with gravel and clay; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.
75	95	Clay and silt, with some gravel and sand; poorly sorted; sub-angular; olive-gray (5Y 3/2); clay rock fragments.
95	115	Silt and clay, with medium to very coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); clay, rock fragments.
115	140	Sand, very coarse to fine, with rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
140	155	Gravel and sand, coarse to medium, with wood, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); rock fragments, quartz, feldspar.
155	165	Sand, coarse to fine, with wood, silt and clay; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
165	195	Sand, very coarse to fine, with wood, some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar rock fragments, wood.
195	215	Silt and clay, with medium to very coarse sand, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2).
215	240	Sand, very coarse to medium, and gravel, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, biotite, rock fragments.
240	255	Sand, fine to very coarse, and silt with gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
255	270	Sand, very fine to medium, and clay, with wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); clay, quartz, rock fragments.
270	295	Sand, very coarse to fine, with some gravel, wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica, rock fragments.
295	315	Sand, medium to very coarse, and gravel with wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
315	335	Sand, coarse to medium, with wood, gravel; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica, rock fragments.

**Table 15.** Lithologic log for multiple-well monitoring site CM3 (1N/23W-1C2, -1C3, -1C4, -1C5)—*Continued*

Depth (feet)		Description
From	To	
335	355	Silt and sand, fine to medium, with shells, wood, some gravel; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, biotite, silt, clam shells.
355	375	Sand, coarse to fine, with some wood, silt; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, biotite.
375	395	Sand, coarse to fine, with silt, occasional gravel, wood, clay, shell; moderately sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica.
395	420	Silt and sand, medium to coarse, with clay, shells, occasional gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, feldspar.
420	435	Sand, fine to coarse, with some silt; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, biotite, rock fragments.
435	455	Sand, medium to coarse, with silt, wood; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
455	475	Silt and sand, fine to coarse, with some gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
475	495	Silt and clay, with sand, medium to coarse, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, clay, rock fragments.
495	515	Sand, fine to very coarse, with wood, some silt, occasional gravel; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
515	535	Sand, fine to coarse, with silt, wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
535	555	Sand, medium to very coarse, with silt, wood, gravel; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
555	575	Sand, medium to very coarse, and silt, with wood, gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
575	595	Sand, medium to very coarse, with silt, wood, some gravel; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar.
595	615	Sand, fine to medium, with some silt, wood; moderately sorted; sub-angular; olive gray (5Y 4/2); quartz, feldspar, rock fragments.
615	635	Sand, fine to medium, and silt, with wood, some rock fragments (~5mm); moderately poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar.
635	655	Sand, fine to coarse, with some silt, wood, shells; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar.
655	675	Sand, very coarse to fine, with some gravel, silt, wood, shells; poorly sorted; sub-angular; olive-gray (5Y 4/2); quartz, feldspar.
675	695	Sand, fine to very coarse, with shells, some silt; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar.

**Table 15.** Lithologic log for multiple-well monitoring site CM3 (1N/23W-1C2, -1C3, -1C4, -1C5)—*Continued*

Depth (feet)		Description
From	To	
695	715	Sand, very coarse to fine, with wood, some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/2); quartz, feldspar.
715	735	Sand, fine to coarse, and silt, with wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); silt, quartz, feldspar.
735	755	Sand, coarse to fine, with silt, shells, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar.
755	775	Sand, fine to coarse, with wood, some silt, occasional gravel; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, biotite.
775	795	Sand, fine to coarse, with wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, biotite.
795	815	Sand, very coarse to fine, with wood, some silt; moderately sorted; sub-angular; olive-gray (5Y 4/2); quartz, feldspar, mica.
815	835	Sand, very coarse to medium, with gravel, some wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
835	860	Sand, very coarse to medium, and gravel, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar.
860	880	Silt and sand, very coarse to medium, with wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, rock fragments.
880	895	Sand, medium to very coarse, and silt, with wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
895	915	Sand, fine to very coarse, with silt, some gravel, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
915	935	Sand, fine to very coarse, with some wood, gravel; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, feldspar.
935	955	Sand, very fine to coarse, with shells, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, rock fragments, feldspar, biotite.
955	965	Sand, fine to coarse, and silt, with shells, wood, occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, rock fragments.
965	995	Sand, fine to coarse, and shells, with some silt, wood; poorly sorted; sub-angular to angular; olive-gray (5Y 4/1); shells mostly mollusks, rock fragments, quartz.
995	1,015	Sand, fine to med-coarse, with shells, wood, silt; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, shells, rock fragments, feldspar, biotite, mostly mollusks, some gastropods.
1,015	1,035	Sand, fine to coarse, with shells, wood, silt; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, shells: mollusks, rock fragments, feldspar, mica.
1,035	1,055	Sand, fine to coarse, with wood, some shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.

**Table 15.** Lithologic log for multiple-well monitoring site CM3 (1N/23W-1C2, -1C3, -1C4, -1C5)—*Continued*

Depth (feet)		Description
From	To	
1,055	1,075	Sand, medium to very coarse, with wood, shells, some silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar.
1,075	1,095	Sand, very coarse to medium, with wood, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments, biotite.
1,095	1,115	Clay and sand, fine to medium, with some wood, shells; poorly sorted; sub-rounded; olive gray (5Y 3/2); clay, quartz, rock fragments.
1,115	1,135	Sand, fine to coarse, with silt, wood, gravel rare; moderately sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
1,135	1,155	Sand, medium to very coarse, with silt, wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, mica.
1,155	1,175	Sand, medium to very coarse, with silt, wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
1,175	1,195	Sand, medium to very coarse, with less wood, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica.
1,195	1,215	Sand, medium to coarse, with fine sand, wood, shells, silt; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
1,215	1,235	Sand, medium to coarse, with fine sand, silt, wood, shells; poorly sorted; sub-angular; olive-gray (5Y 3/2); quartz, feldspar, mica.
1,235	1,255	Sand, medium to coarse, with fine sand, silt, wood, shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
1,255	1,275	Sand, fine to coarse, with shells, wood, occasional rock fragments; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica; shells: Mostly mollusks, some gastropods.
1,275	1,295	Sand, fine to coarse, with some gravel, wood, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
1,295	1,315	Silt and sand, fine to medium, with gravel, shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); clay, quartz, rock fragments.
1,315	1,335	Silt and sand, fine to medium, with wood, some shells, gravel rare; poorly sorted; sub-rounded; olive-gray (5Y 3/2); clay, rock fragments.
1,335	1,375	Silt and sand, fine to medium, with wood, some shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay, quartz, rock fragments.
1,375	1,395	Silt and sand, fine to medium, with wood, shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay.
1,395	1,415	Silt and sand, fine to medium, with wood, shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay.
1,415	1,435	Clay, with sand, fine to medium, wood, shells; moderately sorted; sub-rounded; olive-gray (5Y 3/2); clay.
1,435	1,455	Sand, medium, with wood, clay, shells; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar.



**Table 15.** Lithologic log for multiple-well monitoring site CM3 (1N/23W-1C2, -1C3, -1C4, -1C5)—*Continued*

Depth (feet)		Description
From	To	
1,455	1,475	Sand, fine to medium, with wood, some very coarse sand, shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
1,475	1,495	Sand, medium to coarse, with wood, silt, some clay; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar.

**Table 16.** Lithologic log for multiple-well monitoring site TKS (2N/20W-16A2, -16A3, -16A4)

[Altitude of land surface approximately 285 feet. Drilled by U.S. Geological Survey using mud-rotary method, September 25, 1990. Total depth drilled, 300 ft. Screened intervals, 260-280, 170-180, and 90-100 feet]

Depth (feet)		Description
From	To	
0	20	Sand, very coarse to coarse, with clay, fine sand; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
20	40	Gravel, pebbles, and sand, coarse, with silt and fine sand, wood; poorly sorted; rounded to sub-angular; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
40	60	Gravel, granules to pebbles, and sand, fine, with some wood; poorly sorted; sub-angular to rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
60	80	Gravel, pebbles, and clay, with wood, shells, some coarse sand; poorly sorted; sub-rounded to rounded; quartz, rock fragments, clay.
80	100	Sand, medium to fine, and clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica.
100	120	Sand, medium to fine, and clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2) to dark yellowish brown (10YR 4/2); quartz, rock fragments, mica, clay.
120	140	Clay; olive-gray (5Y 3/2) to (5Y 4/1) to yellowish gray (5Y 7/2).
140	160	Clay; dark yellowish brown (10YR 4/2).
160	180	Sand, medium to fine, and clay, with shells; poorly sorted; sub-rounded; light olive-gray (5Y 5/2) to moderate yellowish brown (10YR 5/4); quartz, rock fragments, clay.
180	200	Sand, fine to medium, and silt, with shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
200	220	Sand, very fine, and silt, with shells, some medium sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
220	240	Sand, medium to fine, with silt; well sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.
240	260	Sand, coarse to medium, with silt, shells; well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
260	280	Sand, medium to coarse, with some silt, shells, occasional gravel; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
280	300	Sand, medium to fine, and silt, with occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.

**Table 17.** Lithologic log for multiple-well monitoring site SAT (2N/21W-7L3, -7L4, -7L5, -7L6)

[Altitude of land surface approximately 142 feet. Drilled by U.S. Geological Survey using mud-rotary method, September 9, 1990. Total depth drilled, 705 feet. Screened intervals, 640-700, 500-540, 270-310, and 135-155 feet]

Depth (feet)		Description
From	To	
0	10	No Sample.
10	25	Sand, medium to coarse, with gravel, silt; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, rock fragments, mica.
25	45	Sand, fine to very coarse, and gravel, granules to pebbles, with some clay; poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar, mica.
45	65	Sand, medium to coarse, and gravel, granules to pebbles, with silt; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar.
65	85	Gravel, pebbles to granules, and sand, very coarse; poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar.
85	105	Gravel, pebbles to granules, with coarse sand; poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); rock fragments.
105	125	Gravel, pebbles, with medium-fine sand, some wood; poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); rock fragments.
125	145	Sand, fine to medium, with silt, clay; moderately well sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, mica, rock fragments.
145	165	Sand, medium to coarse, with some gravel, silt; moderately sorted; sub-rounded; light olive-gray (5Y 5/2) to yellow gray (5Y 7/2); quartz, mica, rock fragments.
165	185	Sand, fine to coarse, with some silt; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, mica, rock fragments.
185	205	Silt, clay, and sand, fine to medium; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
205	225	Silt, sand, fine to medium, and clay, with some wood, shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, mica, feldspar.
225	240	Silt, sand, fine to medium, and gravel, pebbles, with some clay; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, rock fragments.
240	265	Sand, medium to fine, with clay and silt, shells; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, rock fragments.
265	285	Sand, fine to medium, with silt and clay, some gravel, shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
285	305	Sand, fine to medium, with silt, occasional shells; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments, mica.
305	325	Sand, medium to fine, with silt, clay, some shells, coarse grains; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.

**Table 17.** Lithologic log for multiple-well monitoring site SAT (2N/21W-7L3, -7L4, -7L5, -7L6)—*Continued*

Depth (feet)		Description
From	To	
325	345	Sand, fine to very fine, silt, and clay, with shells, some wood, occasional coarse sand; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
345	365	Clay, silt, and sand, fine to very fine, with shells, some medium grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
365	385	Sand, fine, and silt, with clay; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica, and rock fragments.
385	400	Silt, and sand, very fine, with clay, some medium grains, occasional rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, mica, quartz.
400	425	Sand, very fine to coarse, with silt, some very coarse grains, clay, bone fragment; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.
425	445	Silt, sand, fine, and clay, with medium-coarse sand, some wood, occasional rock fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, silt, mica.
445	465	Sand, fine to medium, with silt, wood, shells, occasional coarse grains, clay; moderately poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, feldspar, mica.
465	485	Sand, very fine to medium, with some silt, clay, occasional coarse grains, shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
485	505	Sand, fine to medium, and silt, with some clay; moderately sorted; sub-rounded; light olive-gray (5Y 6/1); quartz, feldspar, rock fragments.
505	525	Silt and sand, very fine, with some shells, wood, coarse grains; moderately sorted; sub-rounded; silt, quartz, feldspar.
525	545	Silt and sand, very fine to fine, with some shells, wood; poorly sorted; rounded; olive-gray (5Y 4/1); silt, quartz, mica.
545	565	Silt, sand, very fine, and clay, with some coarse grains, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, mica.
565	585	Silt and sand, very fine, with clay, shells, occasional coarse grains; poorly sorted; rounded; olive-gray (5Y 3/2); silt, quartz, mica.
585	605	Silt and sand, very fine to fine, with some wood, occasional coarse grains; poorly sorted; rounded; olive-gray (5Y 4/1); silt, mica, quartz.
605	625	Silt and sand, very fine to medium, with some wood, occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
625	645	Silt and sand, fine, with medium sand, wood, occasional shell fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz, rock fragments.
645	665	Sand, fine to medium, with silt, occasional coarse grains, wood; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.

**Table 17.** Lithologic log for multiple-well monitoring site SAT (2N/21W-7L3, -7L4, -7L5, -7L6)—*Continued*

Depth (feet)		Description
From	To	
665	685	Sand, fine to medium, with silt, occasional coarse sand, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.
685	705	Sand, fine to medium, with silt, occasional coarse sand, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, mica.

**Table 18.** Lithologic log for multiple-well monitoring site LP1 (2N/21W-11J3, -11J4, -11J5, -11J6)

[Altitude of land surface approximately 378 feet. Drilled by U.S. Geological Survey using mud-rotary method, December 3, 1990. Total depth drilled, 1,093 feet. Screened intervals, 1,018-1,078, 615-655, 340-380, and 190-230 feet]

Depth (feet)		Description
From	To	
0	20	No sample (probably sandy clay).
20	40	Sand, fine to medium, with some shells, wood, silt; moderately sorted; sub-rounded; light olive brown (5Y 5/6) to moderate yellowish brown (10YR 5/4); quartz, feldspar.
40	60	Clay, silt, and sand, very fine, with some shells, very coarse grains; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); clay, quartz.
60	90	Clay, silt, and sand, very fine, with some coarse grains; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); clay, quartz.
90	100	Sand, fine to coarse, with some very coarse grains, shells; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica.
100	120	Sand, fine to very coarse, with gravel; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica.
120	140	Sand, fine to coarse, with some gravel, silt, white rocks (may be gypsum); poorly sorted; rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
140	160	Sand, fine to medium, with some very coarse to coarse grains, possibly gypsum; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
160	180	Clay and sand, fine to medium, with some very coarse grains, wood, white rocks may be gypsum; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); clay, quartz, feldspar.
180	200	Sand, medium to very fine, with some coarse grains; moderately poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, mica.
200	220	Sand, very fine to medium, with some coarse sand, clay; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
220	240	Sand, medium to very fine, with some coarse sand, occasional wood; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
240	260	Sand, medium to fine, with some silt, occasional coarse sand; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
260	280	Sand, medium to fine, with some silt, very coarse sand; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica.
280	300	Sand, medium to very fine, with silt, some coarse sand, wood; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, silt.
300	320	Sand, medium to very fine, with silt, some coarse grains; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, silt.
320	340	Sand, medium to fine, with clay and silt, occasional coarse sand; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, clay.

**Table 18.** Lithologic log for multiple-well monitoring site LP1 (2N/21W-11J3, -11J4, -11J5, -11J6)—*Continued*

Depth (feet)		Description
From	To	
340	360	Sand, medium to fine, with some very fine sand, occasional coarse sand; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
360	380	Sand, very fine to medium, with silt, some coarse grains, occasional wood; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica, silt.
380	390	Sand, medium to very coarse, with coarse sand; moderately poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica, silt.
390	420	Sand, fine to medium, and clay, with some coarse sand; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); clay, quartz.
420	440	Clay and sand, fine to medium, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); clay, quartz.
440	460	Sand, coarse to fine, with clay, occasional very coarse sand, wood, shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
460	465	Clay and sand, very fine, with very coarse sand, small gravel, shells; poorly sorted; rounded; dark yellowish brown (10YR 4/2); clay, quartz.
465	500	Sand, fine to medium, with clay, wood, some shells; poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); quartz, feldspar, mica.
500	510	Sand, medium to fine, with silt, some coarse sand, wood; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar.
510	540	Sand, fine, with some silt, shells, occasional coarse sand; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, mica.
540	560	Sand, fine to medium, and silt, with very fine sand, some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, feldspar, mica.
560	580	Sand, very fine to fine, with silt, some wood; moderately poorly sorted; rounded; olive-gray (5Y 4/1); silt, mica.
580	600	Clay, and sand, very fine, with some wood, occasional coarse sand; poorly sorted; rounded; olive-gray (5Y 4/1); silt, mica, quartz.
600	620	Sand, fine to medium, with clay, shells, rock fragments; poorly sorted; rounded; greenish gray (5G 6/1); quartz, clay, mica.
620	640	Sand, fine to very fine, with some medium sand, occasional coarse sand, shells; moderately sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
640	670	Sand, very fine to fine, with silt, some medium sand, shells; moderately well sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, silt.
670	680	Silt, sand, very fine to fine, and clay, with some coarse sand, shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, silt.
680	700	Clay and silt, with very fine-fine sand, some coarse grains; poorly sorted; rounded; dusky yellow green (5GY 5/2); clay, quartz, mica.

**Table 18.** Lithologic log for multiple-well monitoring site LP1 (2N/21W-11J3, -11J4, -11J5, -11J6)—*Continued*

Depth (feet)		Description
From	To	
700	720	Silt, sand, fine, and clay, with some coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica.
720	740	Sand, fine, silt, and clay, with some medium-coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica.
740	760	Sand, fine to medium, with silt, some coarse sand, occasional shells; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, silt, mica.
760	780	Silt and sand, fine, with some clay, occasional coarse sand, shells; moderately poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, silt.
780	800	Silt and sand, fine, with some clay, medium sand, occasional shells; poorly sorted; rounded; olive-gray (5Y 3/2); quartz, silt.
800	830	Sand, fine to medium, with some silt; moderately poorly sorted; rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, rock fragments.
830	840	Silt, clay, and sand, fine, with occasional coarse sand; poorly sorted; rounded; olive-gray (5Y 3/2); quartz, silt.
840	860	Clay, silt, and sand, fine, with occasional rock fragments, coarse sand; poorly sorted; rounded; olive-gray (5Y 3/2); silt, quartz, rock fragments.
860	880	Sand, fine, silt, and clay, with some wood, shell fragments, coarse sand; poorly sorted; rounded; olive-gray (5Y 3/2); silt, quartz.
880	900	Silt with clay, fine sand, some shells, occasional medium sand; poorly sorted; rounded; olive-gray (5Y 4/1); silt, quartz.
900	920	Sand, fine, silt, and clay, with occasional shell, coarse sand; moderately sorted; rounded; olive-gray (5Y 3/2); silt, quartz, rock fragments.
920	960	Sand, fine to medium, with some silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, silt.
960	980	Sand, fine to medium, with some silt, shells; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, mica, silt.
980	1,000	Sand, fine, with some medium sand, silt, occasional shells; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt.
1,000	1,020	Sand, fine, with some medium sand, silt; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, feldspar, silt.
1,020	1,040	Sand, fine to medium, with occasional silt, coarse sand; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
1,040	1,060	Sand, fine to medium, with some wood; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar.
1,060	1,080	Sand, medium to fine, with some coarse sand; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
1,080	1,093	Sand, medium to fine, with some silt, coarse sand; poorly sorted; sub-rounded; olive-gray (5Y 3/2).



**Table 19.** Lithologic log for multiple-well monitoring site PV1 (2N/21W-34G2, -34G3, -34G4, -34G5, -34G6)

[Because of proximity, two boreholes were used to compile this log. **Borehole 2N/21W-34G2, -34G3, -34G4, -34G5:** Altitude of land surface 95 feet. Drilled by U.S. Geological Survey using mud-rotary method, July 16, 1990. Total depth drilled, 1,020 feet. Screened intervals, 938-998, 800-860, 360-380, and 170-190 feet. **Borehole 2N/21W-34G6:** Altitude of land surface 95 feet. Drilled by U.S. Geological Survey using mud-rotary method, July 24, 1990. Total depth drilled, 438 feet. Screened interval, 431-436 feet]

Depth (feet)		Description
From	To	
0	30	Sand, fine to coarse, with clay and silt, some rock fragments; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.
30	50	Sand, fine, silt and clay with some sub-rounded rock fragments; moderately poorly sorted; moderate yellowish brown (10YR 5/4); silt, rock fragments.
50	70	Sand, fine, silt and clay with medium-coarse sub-rounded sand; poorly sorted; dark yellowish orange (10YR 6/6) to moderate yellowish brown (10YR 5/4); silt, quartz, rock fragments.
70	90	Sand, fine to medium, and silt with some very fine and coarse grains; moderately sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments, mica.
90	110	Sand, fine, and silt with medium-coarse grains; moderately poorly sorted; sub-angular; moderate yellow brown (10YR 5/4); quartz, feldspar, rock fragments, mica.
110	130	Sand, fine, and silt with some medium grains; moderately poorly sorted; sub-rounded; moderate yellowish brown (10 R 5/4); silt, quartz, feldspar.
130	150	Sand, fine, silt, and clay with some medium grains; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); silt, quartz, feldspar.
150	160	Sand, fine to coarse, with some silt; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments.
160	190	Sand, fine to medium, with some coarse grains; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments.
190	210	Sand, medium to very coarse, with some gravel; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments.
210	230	Sand, very fine to medium, with some dark silt blebs, occasional coarse grains; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments.
230	250	Sand, very fine to medium, with some silt and occasional coarse grains; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
250	270	Sand, fine to medium, with some coarse, less silt, poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments, mica.
270	290	Sand, very fine to medium, silt, and clay with occasional coarse grains; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
290	310	Sand, very fine to medium, and silt with occasional shell fragments; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments, mica.
310	330	No Sample.
330	350	Sand, fine, and silt with some medium-coarse grains; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, quartz.

**Table 19.** Lithologic log for multiple-well monitoring site PV1 (2N/21W-34G2, -34G3, -34G4, -34G5, -34G6)  
—Continued

Depth (feet)		Description
From	To	
350	370	Sand, very fine to fine, and silt with shells, clams, occasional coarse grains; moderately sorted; sub-rounded; moderate yellowish brown (10YR 5/4); silt, mica, quartz.
370	390	Sand, fine to very fine, and silt with shells, occasional coarse grains, appearance of possibly gypsum; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, rock fragments.
390	410	Silt and clay with large broken shells, gypsum, some fine sand; well sorted; olive-gray (5Y 4/1); silt, clay.
410	430	Clay and silt with some fine sand; well sorted; light olive-gray (5Y 5/2); silt and clay.
430	460	Clay, silt, and sand, fine, with medium sand; well sorted; olive-gray (5Y 3/2); silt and clay.
460	480	Sand, fine, and silt with clay and large rock fragments occasional medium sand; well sorted; moderate yellowish brown (10YR 5/4) to olive-gray (5Y 3/2); silt, clay, sand.
480	500	Sand, very fine, silt, and clay with some medium sand; moderately well sorted; sub-rounded; grayish olive (10YR 4/2); silt, quartz, mica.
500	520	Clay, sand, fine, and silt with some medium sand, shells, and occasional rock fragments; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); clay, silt, mica.
520	540	Sand, fine to medium, with silt, occasional coarse grains and some clay; poorly sorted; sub-rounded; grayish olive (10YR 4/2); quartz, rock fragments, silt.
540	560	Sand, fine to medium, and silt with occasional shell fragment; poorly sorted; sub-rounded; dusky yellow green (5GY 5/2) to grayish olive green (5GY 3/2); quartz, rock fragments.
560	580	Sand, fine to medium, and silt with shell and gypsum fragments, some coarse grains; poorly sorted; sub-angular; dusky yellow green (5GY 5/2); quartz, rock fragments.
580	590	Sand, fine to medium, with abundant shell fragments, pieces of gypsum, some wood and rock fragments, silt; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.
590	610	Silt, and sand, very fine to fine, with occasional medium-coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz.
610	640	Sand, fine to medium, with shell fragments, some silt, occasional coarse grains; moderately poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments.
640	660	Sand, very fine to medium, with silt, some clay, gypsum, some coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
660	680	Sand, very fine to medium, and silt with some clay, wood fragments; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments, silt, mica.
680	700	Sand, fine, with some medium grains, silt; moderately well sorted; sub-rounded; dusky yellow green (5GY 5/2); quartz, feldspar, rock fragments.
700	720	Sand, fine to medium, with occasional coarse grains/rock fragments, some wood, shells, gypsum; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
720	740	Sand, fine, with silt, medium grains, occasional clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments.

**Table 19.** Lithologic log for multiple-well monitoring site PV1 (2N/21W-34G2, -34G3, -34G4, -34G5, -34G6)  
—Continued

Depth (feet)		Description
From	To	
740	760	Sand, fine to medium, and silt with some clay, coarse grains; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments.
760	780	Sand, fine to coarse, with some silt; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, rock fragments, mica.
780	800	Sand, medium to coarse with some fines, silt, occasional rock, shell fragments, clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1) to moderate yellowish brown (10YR 5/4); quartz, rock fragments, mica.
800	820	Silt, clay, and sand, fine to medium with minor wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1) to medium light gray (N6); silt, quartz.
820	860	Sand, fine to medium, with silt, some clay, wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, rock fragments.
860	880	Sand, medium to coarse, and silt with shell, wood fragments, some angular gravel; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, silt.
880	900	Sand, fine to coarse, with rock, wood, shell fragments, silt, some gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, rock fragments.
900	920	Sand, fine to medium, with shell, rock fragments, some silt, clay; poorly sorted; sub-rounded; dark gray (N3) to olive-gray (5Y 4/1); quartz, rock fragments, silt.
920	940	Sand, medium to very coarse, with wood, rock, and shell fragments; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.
940	960	Sand, fine to medium, with coarse rock fragments, and some gravel; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, rock fragments.
960	980	Sand, fine to coarse, with rock fragments, some wood, gravel; poorly sorted; sub-angular; olive-gray (5Y 4/1); quartz, rock fragments, mica.
980	1,000	Sand, medium to fine, with occasional coarse grains; poorly sorted; sub-angular; light olive-gray (5Y 5/2); quartz, rock fragments.
1,000	1,020	Clay; well sorted; olive-gray (5Y 3/2).

**Table 20.** Lithologic log for multiple-well monitoring site SG (2N/22W-23B3, -23B4, -23B5, -23B6, -23B7)

[Altitude of land surface approximately 107 feet. Drilled by U.S. Geological Survey using mud-rotary method, October 24, 1990. Total depth drilled, 1,250 feet. Screened intervals 1,210-1,250, 1,110-1,150, 830-870, 460-500, and 260-300 feet]

Depth (feet)		Description
From	To	
0	10	No sample recovered.
10	32	Sand, coarse to very coarse, with some wood, occasional gravel; moderately sorted; sub-rounded; light olive-gray (5Y 5/2) to dark yellowish brown (10YR 4/2); rock fragments, quartz, feldspar.
32	43	Sand, very coarse to coarse, with some gravel, silt; moderately poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar, mica.
43	50	Sand, very coarse to coarse, with some fine-medium sand; moderately poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); quartz, rock fragments, mica.
50	70	Sand, very coarse to coarse, with some clay; moderately well sorted; rounded; dark yellowish brown (10YR 4/2); quartz, rock fragments, mica.
70	90	Sand, very coarse to coarse, with some fine sand and clay; moderately sorted; rounded; light olive-gray (5Y 5/2); quartz, rock fragments, feldspar, mica.
90	110	Sand, very coarse to coarse, and gravel, granules, with some fine sand; moderately sorted; rounded; light olive-gray (5Y 5/2); quartz, rock fragments.
110	130	Sand, very coarse to coarse, and gravel, granules, with some silt; moderately sorted; rounded; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar.
130	150	Gravel, granules to pebbles, and sand, very coarse, with some silt; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
150	170	Gravel, granules to pebbles, and sand, very coarse, with some silt, fine sand; moderately poorly sorted; sub-rounded to sub-angular; quartz, feldspar, rock fragments.
170	190	Clay, sand, fine to medium, and gravel, granules to pebbles; poorly sorted; sub-rounded; moderate yellow brown (10YR 5/4); clay, rock fragments, quartz.
190	210	Gravel, granules to pebbles; sand, medium to coarse, and clay; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); rock fragments, quartz, feldspar.
210	230	Sand, fine to coarse, and gravel, granules; moderately sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments, biotite.
230	250	Sand, fine to very coarse, and gravel, granules to pebbles; moderately poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar, rock fragments.
250	270	Sand, medium to coarse, with gravel, some fine sand, moderately sorted; sub-rounded; dusky yellow (5Y 6/4); quartz, feldspar, rock fragments.
270	290	Sand, medium to coarse, and gravel, granules, with some silt; moderately poorly sorted; sub-angular; dark yellowish brown (10YR 4/2); quartz, rock fragments, feldspar.
290	310	Sand, medium to very coarse, and gravel, granules to pebbles, with some clay; moderately poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar, rock fragments.

**Table 20.** Lithologic log for multiple-well monitoring site SG (2N/22W-23B3, -23B4, -23B5, -23B6, -23B7)  
—Continued

Depth (feet)		Description
From	To	
310	330	Gravel, granules to pebbles, and sand, coarse to very coarse, with some fine sand, clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, rock fragments, feldspar.
330	350	Gravel, pebbles to granules, and sand, coarse, with clay, some silt; poorly sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, rock fragments, clay.
350	370	Silt, sand, fine, and gravel, granules; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); silt, quartz, rock fragments.
370	390	Sand, coarse to very coarse, silt, and clay, with some wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, rock fragments, feldspar.
390	410	Sand, very coarse, clay, and gravel, granules, with some wood; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, rock fragments.
410	430	Clay, silt, and sand, very coarse to medium, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); clay, rock fragments.
430	450	Clay and sand, fine, with wood, occasional gravel; poorly sorted; sub-angular; olive black (5Y 2/1); clay, mica, quartz.
450	470	Clay, and sand, fine, with occasional coarse sand; poorly sorted; sub-angular; olive-gray (5Y 4/1); clay, mica, quartz.
470	490	Sand, coarse to very coarse, clay, and silt, with wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, silt.
490	510	Sand, coarse to very coarse, with some pebbles, silt, clay; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
510	530	Sand, very coarse to coarse, with medium sand, some silt; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, rock fragments.
530	550	Sand, medium to coarse, silt, and clay, with some wood; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); silt, quartz, rock fragments.
550	570	Clay, silt, and sand, medium to fine, with occasional gravel; poorly sorted; sub-rounded; olive-gray (5Y 4/1) to moderate yellowish brown (10YR 5/4); silt, quartz, rock fragments.
570	590	Silt, clay, and sand, coarse to fine, with wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz.
590	610	Sand, medium to coarse, silt, and clay, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, quartz, feldspar.
610	630	Silt, clay, and sand, coarse to very coarse, with some wood; poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, quartz, feldspar, mica.
630	650	Sand, very coarse to fine, and silt, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt.
650	670	Sand, fine to coarse, and silt, with some wood; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, feldspar, silt.

**Table 20.** Lithologic log for multiple-well monitoring site SG (2N/22W-23B3, -23B4, -23B5, -23B6, -23B7)  
—Continued

Depth (feet)		Description
From	To	
670	690	Silt, and sand, coarse to very coarse, with wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, quartz, feldspar, mica.
690	710	Sand, fine to very fine, and clay, with some wood, occasional gravel; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); silt, quartz, mica.
710	730	Sand, fine to medium, silt, and clay, with some very coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); silt, mica, quartz.
730	750	Silt, clay, and sand, fine, with some med-coarse sand, wood; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz, mica.
750	770	Sand, fine to medium, clay and silt, with some wood; moderately poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, quartz.
770	790	Clay, silt, and sand, fine to medium, with some wood; moderately poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, quartz, mica.
790	810	Clay, silt, and sand, fine to medium, with some wood; moderately poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, mica.
810	830	Silt, clay, and sand, very fine, with some wood, coarse sand; moderately poorly sorted; rounded; dark greenish gray (5GY 4/1); silt, mica.
830	850	Silt, sand, fine to medium, and clay, with some coarse grains; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, rock fragments, silt.
850	870	Sand, medium to coarse, and clay, with some wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, rock fragments, silt.
870	890	Sand, coarse to very coarse, and clay, with some wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, rock fragments, silt.
890	910	Sand, coarse to very coarse, and clay, with wood, some gravel; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, clay, rock fragments.
910	930	Sand, coarse to very coarse, and clay, with some gravel, wood; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, feldspar, clay
930	950	Clay and sand, very fine, with wood; moderately well sorted; rounded; dark greenish gray (5GY 4/1); clay, wood.
950	970	Clay, and sand, very fine, with some wood, some medium sand; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); silt, clay, quartz.
970	990	Clay, and silt, with sand, very fine and medium, some very coarse sand; moderately sorted; sub-rounded; olive-gray (5Y 4/1); clay, mica, quartz.
990	1,010	Sand, very coarse to fine, and clay, with some granules; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, clay, rock fragments.
1,010	1,030	Clay and sand, very coarse to fine, with some granules; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); quartz, clay, rock fragments.

**Table 20.** Lithologic log for multiple-well monitoring site SG (2N/22W-23B3, -23B4, -23B5, -23B6, -23B7)  
—Continued

Depth (feet)		Description
From	To	
1,030	1,050	Clay and sand, very fine to medium, with some granules; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); clay, quartz, mica.
1,050	1,070	Clay and sand, fine to medium, with some coarse sand; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); clay, quartz, mica. *sample contains white powder.
1,070	1,090	Clay, silt, and sand, very fine, with medium-coarse sand; moderately poorly sorted; sub-angular; olive-gray (5Y 4/1); clay, rock fragments.
1,090	1,110	Sand, very coarse to fine, and silt, with clay; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, clay, rock fragments.
1,110	1,130	Sand, fine to very coarse, and silt, with clay; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, clay, rock fragments.
1,130	1,150	Sand, fine to coarse, and silt, with shells; moderately poorly sorted; sub-rounded; olive-gray (5Y 3/2); silt, quartz.
1,150	1,170	Silt, clay, and sand, very fine to medium, with occasional very coarse sand, some wood, shells; poorly sorted; sub-rounded; dark greenish gray (5GY 4/1); silt, quartz, rock fragments.
1,170	1,200	Silt, clay, and sand, fine, with some shells, occasional very coarse grains; moderately poorly sorted; sub-angular; olive-gray (5Y 3/2); silt, clay, feldspar, quartz.
1,200	1,210	Sand, fine to medium, and clay, with some shells, wood; poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, clay.
1,210	1,230	Sand, fine to coarse, and clay, with some shells, poorly sorted; sub-rounded; olive-gray (5Y 3/2); quartz, rock fragments, clay.
1,230	1,250	Clay, silt, and sand, fine to medium, with some shells, wood; poorly sorted; rounded; olive-gray (5Y 4/1); clay, rock fragments.

**Table 21.** Lithologic log for multiple-well monitoring site P7 (3N/20W-35R2, -35R3, -35R4)

[Altitude of land surface approximately 590 feet. Drilled by U.S. Geological Survey using mud-rotary method, December 12, 1990. Total depth drilled, 1,120 feet. Screened intervals, 1,050-1,110, 800-900, and 490-530 feet]

Depth (feet)		Description
From	To	
0	18	Sand, fine to very coarse, with some clay; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar, mica.
18	40	Sand, medium to very coarse, with some gravel, clay; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
40	60	Sand, very coarse, and gravel, granules to pebbles, with some clay; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, feldspar.
60	80	Sand, very coarse to fine, clay, and gravel, granules to pebbles; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, clay.
80	100	Clay and sand, very coarse to fine, with gravel; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); clay, rock fragments.
100	120	Clay, silt, and sand, very fine, with some medium-coarse sand; poorly sorted; rounded; moderate yellowish brown (10YR 5/4); silt, mica.
120	140	Clay, silt, and sand, very fine; moderately well sorted; rounded; moderate yellowish brown (10YR 5/4); silt, clay, mica.
140	160	Clay, silt, and sand, very fine, with some medium sand; poorly sorted; rounded; moderate yellowish brown (10YR 5/4); clay, silt, mica.
160	180	Clay, silt, and sand, medium to coarse; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); clay, silt, mica.
180	200	Silt, clay, and sand, very fine to coarse; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); silt, clay, quartz.
200	220	Silt, clay, and sand, fine to coarse; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, silt, clay.
220	240	Clay, silt, and sand, fine to coarse; poorly sorted; sub-rounded; moderate yellowish brown (10YR 5/4); quartz, silt, clay.
240	260	Clay and sand, fine to medium, with some coarse grains; poorly sorted; sub-rounded; moderate yellow brown (10YR 5/4); quartz, silt, clay.
260	280	Clay with fine to medium sand; moderately well sorted; rounded; moderate yellow brown (10YR 5/4); clay, quartz.
280	300	Sand, fine, and silt, with clay, some medium-coarse grains; well sorted; rounded; moderate yellow brown (10YR 5/4); quartz, silt, clay.
300	320	Sand, fine to coarse, and silt, with clay; poorly sorted; rounded; moderate yellow brown (10YR 5/4); quartz, silt, clay.
320	340	Silt, sand, fine, and clay, with some medium coarse grains; well sorted; rounded; moderate yellow brown (10YR 5/4); quartz, silt, clay.



**Table 21.** Lithologic log for multiple-well monitoring site P7 (3N/20W-35R2, -35R3, -35R4)—*Continued*

Depth (feet)		Description
From	To	
340	360	Silt, clay, and sand, fine, with some medium-coarse grains; moderately well sorted; rounded; moderate yellow brown (10YR 5/4); quartz, silt, clay.
360	380	Clay and sand, coarse to very coarse, with some wood; poorly sorted; sub-rounded; moderate yellow brown (10YR 5/4); clay, quartz, mica.
380	400	Sand, very coarse to fine, and clay, with some silt; poorly sorted; sub-rounded; moderate yellow brown (10YR 5/4); quartz, clay, mica.
400	420	Clay, silt, and sand, coarse to fine; poorly sorted; sub-rounded; moderate yellow brown (10YR 5/4); quartz, clay, mica.
420	440	Clay and sand, coarse to fine, with some wood; poorly sorted; sub-angular; moderate yellow brown (10YR 5/4); quartz, clay.
440	460	Sand, very coarse to coarse, clay, and silt, with fine sand; poorly sorted; sub-angular; moderate yellow brown (10YR 5/4); quartz, silt, clay.
460	480	Sand, coarse to very coarse, and clay, with fine sand and silt; poorly sorted; sub-angular; moderate yellow brown (10YR 5/4); quartz, silt, clay.
480	500	Sand, medium to coarse, silt, and clay, with fine sand; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, silt, clay.
500	520	Sand, coarse to medium, silt, and clay, with fine sand, some wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, clay, silt.
520	540	Sand, fine to medium, and silt, with clay, some wood; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); silt, quartz, clay.
540	560	Sand, medium to fine, and silt, with clay; poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, silt, clay.
560	580	Clay, silt, and sand, medium to fine, with occasional coarse grains; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, clay, silt.
580	600	Sand, fine to medium, and silt, with clay, some wood; moderately sorted; rounded; olive-gray (5Y 4/1); quartz, silt, clay.
600	620	Sand, fine to medium, and silt, with clay; moderately well sorted; sub-rounded; olive-gray (5Y 4/1); quartz, silt, clay.
620	640	Sand, very coarse to fine, and silt; poorly sorted; sub-rounded; olive-gray (5Y 4/1); quartz, silt, clay.
640	660	Sand, fine, silt, and clay; poorly sorted; rounded; olive-gray (5Y 3/2); silt, clay, quartz.
660	680	Sand, very fine to fine, silt, and clay, with occasional coarse grains, some wood; poorly sorted; rounded; olive-gray (5Y 3/2); silt, clay, quartz.
680	700	Sand, medium to fine, with some wood, silt; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar.
700	720	Sand, medium to fine, with some wood, silt, occasional coarse sand; moderately sorted; sub-rounded; dark yellowish brown (10YR 4/2); quartz, feldspar.

**Table 21.** Lithologic log for multiple-well monitoring site P7 (3N/20W-35R2, -35R3, -35R4)—*Continued*

Depth (feet)		Description
From	To	
720	740	Sand, medium to fine, with some wood, occasional coarse sand; moderately well sorted; sub-rounded; dark yellowish brown (10YR 4/2) to light olive-gray (5Y 5/2); quartz, feldspar.
740	760	Sand, medium to coarse, with some silt, wood; poorly sorted; rounded; olive-gray (5Y 4/1); quartz, feldspar, mica.
760	780	Sand, medium to coarse, with some wood, occasional very coarse grains; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar, mica.
780	800	Sand, coarse to medium, with some wood, fine sand; moderately well sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar.
800	820	Sand, coarse to medium, with some fine sand; moderately sorted; sub-angular; light olive-gray (5Y 5/2); quartz, feldspar.
820	840	Sand, medium to coarse, with some gravel, wood; moderately poorly sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar.
840	850	Sand, coarse to fine, with gravel, some wood; moderately sorted; sub-rounded; light olive-gray (5Y 5/2); quartz, feldspar.
850	860	Gravel, granules to pebbles, with coarse sand, some clay; poorly sorted; angular; light olive-gray (5Y 6/1) to greenish gray (5GY 6/1); quartz, feldspar.
860	880	Gravel, cobbles to granules, and sand, coarse to medium, with wood; moderately poorly sorted; angular to sub-angular; light olive-gray (5Y 6/1) to greenish gray (5GY 6/1); quartz, feldspar.
880	900	Gravel, granules to pebbles, clay, and sand, fine to medium, with silt, wood; poorly sorted; angular; moderate olive brown (5Y 4/4); quartz, feldspar.
900	920	Sand, medium to fine, and gravel, granules to pebbles, with silt; moderately poorly sorted; sub-angular; moderate olive brown (5Y 4/4).
920	937	Sand, medium to fine, and silt, with gravel, some wood; moderately poorly sorted; sub-angular; dusky yellow (5Y 6/4) to light olive-gray (5Y 5/2); quartz, feldspar.
937	950	Sand, coarse to medium, with gravel, fine sand, some wood; moderately poorly sorted; sub-angular; dusky yellow (5Y 6/4); quartz, feldspar.
950	960	Sand, medium to very coarse, with gravel, some fine sand, silt; poorly sorted; angular to sub-angular; dusky yellow (5Y 6/4); quartz, feldspar.
960	980	Sand, medium to very coarse, with some fine sand, gravel; poorly sorted; sub-angular; dusky yellow (5Y 6/4); quartz, feldspar.
980	1,000	Sand, medium to very coarse, with gravel, some fine sand; poorly sorted; sub-angular to angular; dusky yellow (5Y 6/4).
1,000	1,020	Sand, fine, and gravel, with silt, medium-coarse sand; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.
1,020	1,040	Sand, coarse to very coarse, with medium-fine grains, some gravel, silt; poorly sorted; angular to sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.

**Table 21.** Lithologic log for multiple-well monitoring site P7 (3N/20W-35R2, -35R3, -35R4)—*Continued*

Depth (feet)		Description
From	To	
1,040	1,060	Sand, medium to coarse, with some fine sand, angular coarse grains (gravel); moderately poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.
1,060	1,080	Sand, medium to fine, with some coarse sand, gravel(?); moderately sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.
1,080	1,100	Sand, coarse to very coarse, with some medium sand, coarse angular grains (gravel); poorly sorted; sub-angular; moderate yellow brown, (10YR 5/4); quartz, feldspar.
1,100	1,120	Sand, medium to fine, with some coarse sand, silt; poorly sorted; sub-angular; moderate yellowish brown (10YR 5/4); quartz, feldspar.

**Table 22.** Lithologic log for multiple-well monitoring site SP1 (3N/21W-15G1, -15G2, -15G3, -15G4, -15G5)

[Altitude of land surface 236 feet. Drilled by U.S. Geological Survey, using mud-rotary method, April 27, 1994. Total depth drilled, 700 feet. Screened intervals, 660-680, 520-540, 370-390, 260-280, 60-80 feet]

Depth (feet)		Description
From	To	
0	20	No sample collected.
20	60	Sand, medium to coarse, with granules and pebbles; moderately sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
60	100	Sand, fine to coarse, with granules to pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
100	120	Clay, with some sand and occasional pebbles; olive gray (5Y 3/2).
120	180	Clay; olive gray (5Y 3/2).
180	200	Clay, with some sand; olive gray (5Y 3/2).
200	220	Clay; olive gray (5Y 3/2).
220	260	Clay, with some sand; olive gray (5Y 3/2).
260	300	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; olive gray (5Y 3/2) to dark yellowish brown (10YR 4/2).
300	320	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
320	380	Sand, fine to coarse, with some granules and pebbles, rock fragments; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
380	400	Sand, fine to coarse, with some granules and pebbles, rock fragments; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
400	440	Sand, fine to coarse, with some granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
440	500	Sand, fine to coarse, with some granules, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
500	540	Sand, fine to coarse, with some granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2), rock fragments present.
540	580	Sand, fine to coarse, with some granules, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
580	600	Sand, fine to medium, with some granules; moderately sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
600	620	Sand, fine to coarse, with some granules; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
620	700	Sand, fine to coarse, with some granules, occasional pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).

**Table 23.** Lithologic log for multiple-well monitoring site SP2 (3N/21W-16H5, -16H6, -16H7, -16H8)

[Altitude of land surface 240 feet. Drilled by U.S. Geological Survey, using mud-rotary method, May 2, 1994. Total depth drilled, 600 feet. Screened intervals, 530-550, 290-310, 150-170, 50-70 feet]

Depth (feet)		Description
From	To	
0	20	Clay, with occasional coarse sand grains; dark yellowish brown (10YR 4/2).
20	40	Clay, with occasional pebbles; dark yellowish brown (10YR 4/2).
40	60	Clay; dark yellowish brown (10YR 4/2).
60	80	Sand, fine to coarse, with granules and pebbles; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
80	100	Clay, with occasional granules; dark yellowish brown (10YR 4/2).
100	120	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
120	200	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
200	220	Sand, fine to coarse, with granules and pebbles; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
220	260	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
260	320	Sand, fine to coarse, with clay, and some granules and pebbles; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
320	350	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
350	380	Sand, medium to coarse, with some granules, and clay; moderately sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
380	460	Sand, fine to coarse, with some granules, and clay; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
460	500	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
500	520	No sample.
520	600	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).

**Table 24.** Lithologic log for multiple-well monitoring site RP1 (4N/18W-31D3, -31D4, -31D5, -31D6, -31D7)

[Altitude of land surface 592 feet. Drilled by U.S. Geological Survey, using mud-rotary method, May 11, 1994. Total depth drilled, 640 feet. Screened intervals, 590-610, 310-330, 220-240, 140-160, 50-70 feet]

Depth (feet)		Description
From	To	
0	20	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
20	80	Sand, fine to coarse, with granules and pebbles, rock fragments; poorly sorted; angular to sub-angular; some mica and mafic minerals; dark yellowish brown (10YR 4/2).
80	100	Sand, fine to coarse, with granules and pebbles, and some clay; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
100	120	Sand, fine to medium, with some coarse sand and granules; moderately sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
120	180	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
180	220	Sand, fine to coarse, with some granules and pebbles; poorly sorted; angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
220	240	Sand, fine to medium, with some coarse sand; moderately sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
240	280	Sand, fine to coarse; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
280	300	Sand, fine to coarse, with some granules and pebbles; poorly sorted; angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
300	360	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
360	400	Sand, fine to coarse, with some granules and pebbles; poorly sorted; angular to sub-rounded; dark yellowish brown (10YR 4/2).
400	420	Sand, fine to coarse; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
420	460	Sand, fine to coarse, with some granules and pebbles; poorly sorted; angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
460	540	Sand, fine to coarse, with granules and pebbles; poorly sorted; angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
540	600	Sand, fine to coarse; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).
600	620	Sand, fine to coarse, with granules and occasional pebbles; poorly sorted; sub-angular to sub-rounded; some mica; dark yellowish brown (10YR 4/2).
620	640	Sand, fine to coarse; poorly sorted; sub-angular to sub-rounded; dark yellowish brown (10YR 4/2).

**Table 25.** Grain-size classification.

[From National Research Council, 1947. >, greater than value shown. <, less than value shown]

Name of loose aggregate	Exact size limits, in millimeters	Approximate size equivalents, in inches
Gravel . . . . .	>2	>0.08
Very coarse sand . . . . .	1-2	0.04-0.08
Coarse sand . . . . .	1/2-1	0.02-0.04
Medium sand . . . . .	1/4-1/2	0.01-0.02
Fine sand . . . . .	1/8-1/4	0.005-0.01
Very fine sand . . . . .	1/16-1/8	0.002-0.005
Silt . . . . .	1/256-1/16	0.00015-0.002
Clay . . . . .	<1/256	<0.00015

**Table 26.** Grain-size distribution for samples from selected depths at multiple-well monitoring sites

[Because of rounding, values may not add up to 100 percent]

Site	Depth	Gravel	Very Coarse sand	Coarse sand	Medium sand	Fine sand	Very fine sand	Silt and clay
CM1	190-210	4.3	6.6	13.6	42.7	27.6	2.2	3.0
	230-250	0.4	7.5	14.1	23.2	15.4	4.4	35
	350-370	0.6	5.6	28.3	39.1	18.0	2.7	5.7
	510-530	0.8	5.1	12.4	44.8	31.0	1.9	4.0
	530-550	2.9	2.6	2.6	3.7	5.8	13.8	68.6
CM2	170-190	0.8	24.7	45.8	17.8	8.1	0.3	2.5
	270-290	29.0	24.0	24.5	14.0	4.0	0.6	3.9
	370-390	3.7	5.3	20.5	46.7	20.7	0.9	2.2
	510-530	7.5	13.2	25.6	37.1	10.0	0.4	6.2
	550-570	4.9	10.6	28.2	37.2	12.7	1.4	5.0
	670-690	1.8	12.1	42.2	33.4	7.4	0.4	2.7
	690-710	12.1	18.0	31.9	27.9	6.8	0.7	2.6
	730-750	3.2	8.7	27.1	43.9	12.4	0.3	4.4
	850-870	23.4	12.0	21.1	16.8	5.5	1.3	19.4
CM3	118-138	7.2	17.3	36.9	30.5	4.9	0.4	2.8
	298-318	21.9	23.6	34.0	14.5	2.1	0.4	3.5
	498-675	17.6	26.4	34.0	15.9	2.4	0.4	3.3
	655-675	11.9	15.9	25.9	35.8	5.4	0.7	4.4
	935-955	8.3	11.0	21.6	33.5	17.4	3.0	5.2
	955-975	28.8	7.9	11.9	17.9	17.4	3.6	12.5
	1,255-1,275	4.1	5.8	26.0	38.4	9.5	2.1	14.1
	1,415-1,435	1.8	2.6	7.1	17.4	6.5	6.7	57.8
CM4	175-195	9.9	24.8	35.3	20.3	4.0	0.9	4.8
	235-255	35.7	15.9	20.9	14.8	4.0	0.9	7.8
	315-335	11.8	16.7	19.5	20.8	11.3	3.9	16.0
	535-555	0.1	0.2	0.3	0.5	0.5	9.1	89.3
	735-755	1.3	3.4	1.5	0.7	0.5	6.6	86.0
	1,075-1,095	1.1	9.6	28.7	28.7	10.8	1.7	19.4
	1,375-1,395	0.2	1.3	10.3	61.9	18.9	1.7	5.7
CM5	207-227	15.0	26.1	27.9	13.6	3.4	0.8	13.2
	267-387	4.8	5.6	7.8	8.5	5.7	5.8	61.8
	307-327	6.3	15.8	36.6	29.5	6.1	0.8	4.9
	367-387	1.8	7.1	23.0	29.4	18.4	1.6	18.7
	427-447	2.0	9.4	29.8	45.2	11.0	0.5	2.1
	627-647	1.0	4.4	6.6	11.7	9.6	10.9	56.2
	887-907	1.5	4.4	18.0	59.4	12.7	0.6	3.4
	1,187-1,207	0.8	3.7	7.5	6.2	5.1	19.5	57.2
PV1	170-190	0.1	0.8	24.6	45.1	18.9	1.9	8.6
	350-570	3.7	1.9	1.7	1.8	24.4	25.1	41.4
	430-460	3.1	0.4	9.5	18.3	11.5	1.8	55.4
	820-840	0.8	0.8	5.5	25.5	43.0	3.4	21.0
	840-860	1.8	6.1	28.0	31.3	20.2	2.3	10.2
	940-960	0.9	4.2	17.1	33.3	34.4	2.7	7.4



**Table 27.** Mineralogy, in percent, for selected multiple-well monitoring sites and depths

[Because of rounding, values may not add up to 100 percent]

Site	Depth	Quartz	Potassium feldspar	Plagioclase	Calcite	Pyroxene	Mica	Others
CM1	190-210	19.8	39.6	36.6		2	1	1
	230-250	25.2	35.4	35.4	1	1	1	2
	530-550	40	20	32	3		1	4
CM2	270-290	15.2	42.4	36.4	1	2	2	1
	550-570	20	40	35	1	2	1	1
	690-710	16	50	31	1	1		1
	850-870	32	30	30	1	4	1	2
CM3	118-138	24	43	30		2	1	
	655-675	20	43	33	1	2	1	
	935-955	18	34.7	42.9	1	1		2
	1,255-1,275	20.2	50.5	25.5		2	1	1
	1,415-1,435	29	33	33	2	1	1	1
CM4	175-195	25.3	30.3	39.4		3	1	1
	235-255	16	40	40		2	1	1
	735-755	39.1	16.2	31.3	4	6.1	1	2
	1,075-1,095	28.6	30.6	30.6	3.1	5.1	1	1
	1,375-1,395	20	35	40	1	1	1	2
CM5	307-327	20.4	41.9	33		2	1	
	427-447	24	40	33	1	2		
	627-647	34.8	21.2	33.3	2	5.1	2	2
	887-907	20	38	38	1	2	1	
	1,187-1,207	37.1	28.9	25.8		4.1	2.1	2
PV1	170-190	20	52	24	1	2		1
	350-370	25.3	37.4	30.3	2	2	1	2
	390-410	34.4	22.2	34.4	2	3	2	2
	430-460	23.2	36.4	31.4	2	4	1	2
	460-480	23	34	36	2	3	1	1
	500-520	14.8	30.7	17.8	32.7	1	1	2
	600-620	25	30	40	1	1	1	2
	820-840	28.3	35.4	31.3	1	3		1
	840-860	19.2	42.4	34.4	1	2	1	
	940-960	20.4	34.7	40.8		2.1	1	1

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994**

[Site identification number is the latitude, longitude, and sequence number of the site. Measurement method (column M): C, calibrated airline; R, reported; S, steel tape; T, electric tape; and V, calibrated electric tape. Site status (column S): F, flowing; P, pumping; R, recently pumped; S, nearby pumping; T, nearby recently pumped; V, foreign substance; and Z, other]

State well number 1S21W8L3

Site identification number 340544119062901

Common name CM1A-565

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 565 feet, perforated 525-565 feet. One of two wells at this site. Altitude of land-surface datum 10 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 06, 1990	97.10 S	MAR 05, 1991	95.48 S	FEB 26, 1992	74.28 R	APR 05, 1993	43.50 R
FEB 01	87.98 S	AUG 06	84.99 SS	APR 08	61.08 R	JUL 14	60.86 R
05	91.70 S	28	93.50 S	MAY 18	63.19 R	25	64.79 V
APR 07	92.06 S	SEP 09	98.30 R	JUN 17	62.73 S	AUG 20	67.66 R
JUN 05	101.85 S	OCT 21	102.59 S	JUL 01	61.08 R	SEP 21	68.08 R
AUG 02	103.02 S	23	101.27 S	AUG 18	73.68 R	NOV 08	69.30 R
OCT 10	107.29 S	NOV 13	103.08 V	SEP 24	89.00 R	DEC 20	60.38 R
19	108.97 S	18	105.70 R	30	89.87 SZ	FEB 01, 1994	54.28 R
27	110.48 S	DEC 17	103.50 R	NOV 09	81.82 R	MAR 29	41.31 R
DEC 14	109.84 S	JAN 21, 1992	82.72 R	DEC 15	76.54 R	APR 18	41.67 R
JAN 09, 1991	104.71 S	FEB 21	77.05 C	FEB 03, 1993	53.22 R		

HIGHEST 41.31 MAR 29, 1994  
LOWEST 110.48 OCT 27, 1990

State well number 1S21W8L4

Site identification number 340544119062902

Common name CM1A-220

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 220 feet, perforated 200-220 feet. One of two wells at this site. Altitude of land-surface datum 10 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 06, 1990	23.41 S	MAR 05, 1991	22.55 S	JUN 17, 1992	17.94 S	JUL 25, 1993	15.17 V
FEB 01	21.22 S	AUG 28	21.80 S	JUL 01	17.60 R	AUG 20	17.55 R
APR 07	22.45 S	SEP 09	23.48 R	AUG 18	19.38 R	SEP 21	18.91 R
JUN 05	22.28 S	NOV 13	23.20 V	SEP 24	20.78 R	NOV 08	18.70 R
AUG 02	23.48 S	18	25.10 R	30	21.18 CZ	DEC 20	16.92 R
OCT 10	24.16 S	DEC 17	23.82 R	NOV 09	21.10 R	FEB 01, 1994	15.04 R
19	23.63 S	JAN 21, 1992	19.34 R	DEC 15	19.56 R	APR 19	13.21 R
26	24.41 S	FEB 26	20.32 R	FEB 03, 1993	16.80 R		
DEC 14	24.82 S	APR 08	18.14 R	APR 05	15.35 R		
JAN 09, 1991	24.10 S	MAY 18	17.62 R	JUL 14	15.76 R		

HIGHEST 13.21 APR 19, 1994  
LOWEST 25.10 NOV 18, 1991

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1S21W8L5

Site identification number 340544119062801

Common name CM1-220

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 220 feet, perforated 200-220 feet. Altitude of land-surface datum 10 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
APR 07, 1990	18.98 S	SEP 09, 1991	19.71 R	AUG 18, 1992	16.60 R	SEP 21, 1993	16.10 R
JUN 05	19.98 S	NOV 18	21.60 R	SEP 24	17.54 R	NOV 08	16.10 R
AUG 02	20.34 S	DEC 17	20.26 R	NOV 09	17.08 R	DEC 20	11.99 R
OCT 10	21.68 S	JAN 21, 1992	16.46 R	DEC 15	15.88 R	FEB 01, 1994	13.88 R
19	20.78 S	FEB 26	16.50 R	FEB 03, 1993	12.78 R	MAR 29	12.08 R
26	21.69 S	APR 08	12.94 R	APR 05	11.14 R	APR 19	12.08 R
DEC 14	21.26 S	MAY 18	15.00 R	JUL 14	12.02 R		
JAN 09, 1991	21.50 S	JUN 17	21.56 S	25	12.42 V		
MAR 05	19.55 S	JUL 01	14.56 R	AUG 20	14.25 R		
		HIGHEST 11.14	APR 05, 1993				
		LOWEST 21.69	OCT 26, 1990				

State well number 1S22W1H1

Site identification number 340650119080201

Common name CM6-550

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 550 feet, perforated 490-550 feet. One of four wells at this site. Altitude of land-surface datum 3 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 06, 1990	83.35 T	JAN 21, 1992	73.88 R	SEP 24, 1992	60.64 R	JUL 25, 1993	37.33 V
DEC 14	81.25 T	22	78.54 S	NOV 09	63.60 R	SEP 21	50.93 R
JAN 09, 1991	79.81 T	APR 08	57.00 R	DEC 15	61.92 R	NOV 08	51.48 R
APR 05	67.18 V	MAY 18	54.86 R	FEB 05, 1993	48.82 R	DEC 20	49.65 R
AUG 06	65.45 S	JUN 17	51.07 S	APR 05	38.90 R	FEB 01, 1994	43.15 R
28	69.56 S	JUL 01	50.42 R	MAY 13	35.06 R	MAR 29	32.44 R
SEP 09	68.50 R	20	49.82 V	JUN 10	36.03 R	APR 19	30.27 R
DEC 18	78.61 S	AUG 18	53.14 R	JUL 19	37.00 R		
		HIGHEST 30.27	APR 19, 1994				
		LOWEST 83.35	NOV 06, 1990				

State well number 1S22W1H2

Site identification number 340650119080202

Common name CM6-400

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 400 feet, perforated 380-400 feet. One of four wells at this site. Altitude of land-surface datum 3 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 06, 1990	72.42 T	DEC 18, 1991	66.09 S	SEP 24, 1992	55.34 R	SEP 21, 1993	50.30 R
DEC 14	71.65 T	JAN 21, 1992	49.24 R	NOV 09	49.90 R	NOV 08	43.22 R
JAN 09, 1991	62.60 V	22	49.27 S	DEC 15	43.80 R	DEC 20	33.09 R
APR 05	45.61 V	APR 08	34.08 R	FEB 05, 1993	24.94 R	FEB 01, 1994	24.21 R
JUN 09	62.60 V	MAY 18	37.96 R	APR 05	19.81 R	MAR 29	13.94 R
JUL 24	49.82 S	JUN 17	35.47 S	MAY 13	25.29 R	APR 19	16.83 R
AUG 07	54.47 S	JUL 01	39.98 R	JUN 10	24.06 R		
28	63.41 S	20	37.16 V	JUL 19	27.44 R		
SEP 09	62.79 R	AUG 18	53.10 R	25	28.03 V		
		HIGHEST 13.94	MAR 29, 1994				
		LOWEST 72.42	NOV 06, 1990				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1S22W1H3

Site identification number 340650119080203

Common name CM6-330

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 330 feet, perforated 310-330 feet. One of four wells at this site. Altitude of land-surface datum 3 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 06, 1990	54.60 T	DEC 18, 1991	48.95 S	AUG 18, 1992	36.22 R	JUL 19, 1993	16.60 R
DEC 14	53.86 T	JAN 21, 1992	3.00 R	SEP 24	39.62 R	25	17.43 V
JAN 09, 1991	49.32 V	22	37.70 S	NOV 09	35.72 R	SEP 21	33.38 R
APR 05	35.63 V	APR 08	24.76 R	DEC 15	31.70 R	NOV 08	29.04 R
JUL 24	37.61 S	MAY 18	27.21 R	FEB 05, 1993	16.78 R	DEC 20	22.26 R
AUG 07	38.74 S	JUN 17	25.87 S	APR 05	12.98 R	FEB 01, 1994	15.52 R
28	45.76 S	JUL 01	27.00 R	MAY 13	15.12 R	MAR 29	7.37 R
SEP 09	45.63 R	20	27.06 V	JUN 10	14.79 R	APR 19	8.76 R
HIGHEST		3.00	JAN 21, 1992				
LOWEST		54.60	NOV 06, 1990				

State well number 1S22W1H4

Site identification number 340650119080204

Common name CM6-200

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 200 feet, perforated 180-200 feet. One of four wells at this site. Altitude of land-surface datum 3 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 06, 1990	23.34 T	DEC 18, 1991	21.62 S	AUG 18, 1992	17.04 R	JUL 19, 1993	2.20 R
DEC 14	24.46 T	JAN 21, 1992	15.80 R	SEP 24	15.14 R	25	2.75 V
JAN 09, 1991	23.26 V	22	16.16 S	NOV 09	15.48 R	SEP 21	11.50 R
APR 05	18.67 V	APR 08	9.58 R	DEC 15	11.86 R	NOV 08	7.86 R
JUN 11	18.49 S	MAY 18	10.29 R	FEB 05, 1993	3.14 R	DEC 20	2.56 R
JUL 24	18.46 S	JUN 17	10.35 S	APR 05	2.31 R	FEB 01, 1994	+3.33 RF
AUG 07	28.26 S	JUL 01	10.22 R	MAY 13	2.08 R	MAR 29	+4.00 RF
SEP 09	22.16 R	20	12.58 V	JUN 10	1.79 R	APR 19	+2.81 RF
HIGHEST		1.79	JUN 10, 1993				
LOWEST		28.26	AUG 07, 1991				

State well number 1N21W19L10

Site identification number 340914119073301

Common name SCE-414

About 1.5 miles southeast of Oxnard. Drilled observation well. Diameter 2 inches, depth 414 feet, perforated 394-414 feet. One of five multiple-completion wells at this site. Altitude of land-surface datum 21 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 23, 1991	90.48 S	FEB 15, 1992	88.42 S	NOV 09, 1992	87.62 R	SEP 21, 1993	78.01 R
SEP 09	111.40 R	26	74.68 R	DEC 15	71.20 R	NOV 08	74.10 R
NOV 18	115.40 R	APR 08	69.66 R	FEB 03, 1993	51.00 R	DEC 20	53.28 R
22	118.06 V	MAY 18	77.01 R	APR 05	41.90 R	FEB 01, 1994	49.70 R
DEC 04	115.43 S	JUL 01	79.40 R	JUL 14	65.10 R	07	41.79 V
17	106.76 R	AUG 18	95.94 R	25	63.25 V	MAR 30	37.26 R
JAN 21, 1992	88.02 R	SEP 30	94.87 S	AUG 17	83.83 R	APR 18	49.15 R
HIGHEST		37.26	MAR 30, 1994				
LOWEST		118.06	NOV 22, 1991				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N21W19L11

Site identification number 340914119073302

Common name SCE-320

About 1.5 miles southeast of Oxnard. Drilled observation well. Diameter 2 inches, depth 320 feet, perforated 300-320 feet. One of five multiple-completion wells at this site. Altitude of land-surface datum 21 feet.

Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 23, 1991	55.07 S	FEB 26, 1992	45.62 R	DEC 15, 1992	40.66 R	DEC 20, 1993	27.01 R
SEP 09	66.77 R	APR 08	38.50 R	FEB 03, 1993	26.96 R	FEB 01, 1994	21.31 R
NOV 18	64.70 R	MAY 18	40.11 R	APR 05	20.59 R	09	19.87 V
22	64.85 V	JUL 01	40.48 R	JUL 14	26.42 R	MAR 30	14.26 R
DEC 04	64.99 S	AUG 18	45.92 R	25	27.90 V	APR 19	16.55 R
17	62.68 R	SEP 24	49.34 R	AUG 17	31.89 R		
JAN 15, 1992	52.78 S	30	50.43 S	SEP 21	35.51 R		
21	52.14 R	NOV 09	46.28 R	NOV 08	34.28 R		
		HIGHEST	14.26 MAR 30, 1994				
		LOWEST	66.77 SEP 09, 1991				

State well number 1N21W19L12

Site identification number 340914119073303

Common name SCE-220

About 1.5 miles southeast of Oxnard. Drilled observation well. Diameter 2 inches, depth 220 feet, perforated 200-220 feet. One of five multiple-completion wells at this site. Altitude of land-surface datum 21 feet.

Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 23, 1991	39.47 S	FEB 26, 1992	31.70 R	DEC 15, 1992	23.20 R	DEC 20, 1993	10.74 R
SEP 09	45.45 R	APR 08	26.96 R	FEB 03, 1993	14.28 R	FEB 01, 1994	5.93 R
NOV 18	43.80 R	MAY 18	30.63 R	APR 05	10.88 R	09	3.79 V
22	46.02 V	JUL 01	30.50 R	JUL 14	11.18 R	MAR 30	1.22 R
DEC 04	46.26 S	AUG 18	33.52 R	25	12.97 V	APR 18	4.03 R
17	44.40 R	SEP 24	33.64 R	AUG 17	14.45 R		
JAN 15, 1992	35.96 S	30	33.53 S	SEP 21	18.53 R		
21	37.90 R	NOV 09	28.80 R	NOV 08	17.88 R		
		HIGHEST	1.22 MAR 30, 1994				
		LOWEST	46.26 DEC 04, 1991				

State well number 1N21W19L13

Site identification number 340914119073304

Common name SCE-130

About 1.5 miles southeast of Oxnard. Drilled observation well. Diameter 2 inches, depth 130 feet, perforated 110-130 feet. One of five multiple-completion wells at this site. Altitude of land-surface datum 21 feet.

Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 23, 1991	37.85 S	FEB 26, 1992	29.64 R	DEC 15, 1992	22.68 R	DEC 20, 1993	11.20 R
SEP 09	41.81 R	APR 08	25.52 R	FEB 03, 1993	14.46 R	FEB 01, 1994	7.01 R
NOV 18	41.20 R	MAY 18	27.83 R	APR 05	9.97 R	09	5.41 V
22	43.18 V	JUL 01	28.46 R	JUL 14	11.60 R	MAR 30	2.36 R
DEC 04	42.28 S	AUG 18	30.78 R	25	12.16 V	APR 19	5.62 R
17	40.32 R	SEP 24	31.42 R	AUG 17	14.43 R		
JAN 15, 1992	34.04 S	30	31.60 S	SEP 21	18.75 R		
21	34.38 R	NOV 09	28.46 R	NOV 08	17.82 R		
		HIGHEST	2.36 MAR 30, 1994				
		LOWEST	43.18 NOV 22, 1991				

**Table 28.** Water-level data for multiple-well monitoring sites, November 1989 to August 1994—*Continued*

State well number 1N21W19L14

Site identification number 340914119073305

Common name SCE-38

About 1.5 miles southeast of Oxnard. Drilled observation well. Diameter 2 inches, depth 38 feet, perforated 18-38 feet. One of five multiple-completion wells at this site. Altitude of land-surface datum 21 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 23, 1991	8.52 S	FEB 26, 1992	6.16 R	DEC 15, 1992	6.90 R	DEC 20, 1993	6.88 R
SEP 09	7.30 R	APR 08	5.82 R	FEB 03, 1993	5.20 R	FEB 01, 1994	6.61 R
NOV 18	7.50 R	MAY 18	6.46 R	APR 05	4.83 R	09	6.51 V
22	8.18 V	JUL 01	6.96 R	JUL 14	6.67 R	MAR 30	5.63 R
DEC 04	8.31 S	AUG 18	7.08 R	25	7.03 V	APR 19	5.25 R
17	6.72 R	SEP 24	7.54 R	AUG 17	6.78 R		
JAN 15, 1992	7.20 S	30	8.44 S	SEP 21	7.00 R		
21	6.50 R	NOV 09	7.34 R	NOV 08	7.24 R		
	HIGHEST	4.83	APR 05, 1993				
	LOWEST	8.52	JUL 23, 1991				

State well number 1N21W3202

Site identification number 340712119062001

Common name 02-970

On Point Mugu Naval Air Station. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 970 feet, perforated 930-970 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS		DATE	WATER LEVEL MS		DATE	WATER LEVEL MS		DATE	WATER LEVEL MS
JUN 24, 1991	97.2 S		NOV 22, 1991	113.34 V		MAY 18, 1992	67.31 R		SEP 21, 1993	71.63 R
JUL 24	92.55 S		DEC 17	111.82 R		JUN 17	66.24 S		NOV 08	73.16 R
AUG 06	95.19 S		18	112.69 S		JUL 01	64.82 R		DEC 20	61.47 R
28	105.62 SS		JAN 16, 1992	92.33 S		AUG 18	81.74 R		FEB 01, 1994	56.14 R
SEP 09	108.43 R		21	90.08 R		SEP 24	98.32 R		MAR 29	39.80 R
NOV 13	114.53 V		FEB 21	81.32 V		JUL 14, 1993	66.48 R		APR 19	43.85 R
18	114.90 R		26	77.78 R		25	71.95 V			
21	115.43 VV		APR 08	63.60 R		AUG 20	72.58 R			
	HIGHEST	39.80	MAR 29, 1994							
	LOWEST	114.90	NOV 18, 1991							

State well number 1N21W3203

Site identification number 340712119062002

Common name 02-840

On Point Mugu Naval Air Station. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 840 feet, perforated 800-840 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE		WATER LEVEL MS	DATE		WATER LEVEL MS	DATE		WATER LEVEL MS	
JUN 24, 1991	93.65 S		NOV 22, 1991	112.37 V		MAY 18, 1992	65.32 R	SEP 21, 1993	69.81 R
JUL 24	88.61 S		DEC 17	110.95 R		JUN 12	63.89 S	NOV 08	71.78 R
AUG 06	93.95 S		18	112.17 S		JUL 01	62.82 R	DEC 20	58.33 R
28	105.52 S		JAN 16, 1992	87.69 S		AUG 18	82.10 R	FEB 01, 1994	53.90 R
SEP 09	108.60 R		21	85.82 R		SEP 24	98.98 R	MAR 29	37.40 R
NOV 13	114.81 V		FEB 21	77.24 V		JUL 14, 1993	66.84 R	APR 19	42.47 R
18	115.40 R		26	73.66 R		25	71.90 V		
21	112.44 VV		APR 08	60.88 R		AUG 20	71.87 R		
HIGHEST		37.40	MAR 29, 1994						
LOWEST		115.40	NOV 18, 1991						

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N21W32Q4

Site identification number 340712119062003

Common name Q2-640

On Point Mugu Naval Air Station. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 640 feet, perforated 600-640 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 24, 1991	95.20 S	NOV 22, 1991	116.55 V	MAY 18, 1992	66.07 R	SEP 21, 1993	70.63 R
JUL 24	90.42 S	DEC 17	111.70 R	JUN 17	64.73 S	NOV 08	72.50 R
AUG 06	94.96 S	18	112.86 S	JUL 01	63.70 R	DEC 20	59.09 R
28	106.32 S	JAN 16, 1992	88.51 S	AUG 18	82.86 R	FEB 01, 1994	54.60 R
SEP 09	108.85 R	21	86.64 R	SEP 24	99.60 R	MAR 29	38.19 R
NOV 13	115.56 V	FEB 21	78.02 V	JUL 14, 1993	67.60 R	APR 19	43.17 R
18	116.00 R	26	74.48 R	25	72.55 V		
21	112.55 V	APR 08	60.02 R	AUG 20	72.55 R		
		HIGHEST 38.19 MAR 29, 1994					
		LOWEST 116.55 NOV 22, 1991					

State well number 1N21W32Q5

Site identification number 340712119062004

Common name Q2-370

On Point Mugu Naval Air Station. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 370 feet, perforated 330-370 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 24, 1991	84.55 S	DEC 17, 1991	104.96 R	JUN 17, 1992	71.65 S	NOV 08, 1993	69.76 R
AUG 06	88.90 S	18	106.01 S	JUL 01	61.36 R	DEC 20	56.81 R
28	100.47 S	JAN 16, 1992	83.39 S	AUG 18	78.56 R	FEB 01, 1994	51.89 R
SEP 09	102.67 R	21	81.48 R	SEP 24	93.90 R	MAR 29	35.50 R
NOV 13	108.71 V	FEB 21	72.49 V	JUL 14, 1993	63.00 R	APR 19	40.20 R
18	109.10 R	26	70.14 R	25	67.91 V		
21	109.24 V	APR 08	57.70 R	AUG 20	69.41 R		
22	109.34 V	MAY 18	62.94 R	SEP 21	69.03 R		
		HIGHEST 35.50 MAR 29, 1994					
		LOWEST 109.34 NOV 22, 1991					

State well number 1N21W32Q6

Site identification number 340712119062005

Common name Q2-220

On Point Mugu Naval Air Station. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 220 feet, perforated 180-220 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 24, 1991	25.07 S	DEC 17, 1991	28.70 R	JUN 17, 1992	17.07 S	NOV 08, 1993	15.00 R
AUG 06	22.02 S	18	30.66 S	JUL 01	14.00 R	DEC 20	10.97 R
28	27.51 S	JAN 16, 1992	23.90 S	AUG 18	19.80 R	FEB 01, 1994	7.23 R
SEP 09	28.79 R	21	22.40 R	SEP 24	21.82 R	MAR 29	2.40 R
NOV 13	30.70 V	FEB 21	20.12 V	JUL 14, 1993	8.76 R	APR 19	3.61 R
18	30.00 R	26	18.66 R	25	10.61 V		
21	30.73 V	APR 08	14.82 R	AUG 20	13.07 R		
22	30.75 V	MAY 18	15.64 R	SEP 21	15.40 R		
		HIGHEST 2.40 MAR 29, 1994					
		LOWEST 30.75 NOV 22, 1991					

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N21W32Q7

Site identification number 340712119062006

Common name Q2-285

On Point Mugu Naval Air Station. Drilled observation well. Diameter 2 inches, depth 285 feet, perforated 275-285 feet. Altitude of land-surface datum 10 feet. Records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 24, 1991	63.3 S	NOV 21, 1991	72.93 V	JUN 17, 1992	43.32 S	NOV 08, 1993	48.04 R
JUL 24	60.26 S	22	76.32 V	JUL 14, 1993	38.92 R	DEC 20	41.25 R
AUG 06	61.09 S	DEC 18	34.83 S	25	42.92 V	FEB 01, 1994	35.50 R
28	68.49 S	JAN 16, 1992	61.35 S	AUG 20	47.49 R	MAR 29	24.70 R
NOV 13	75.95 V	FEB 21	53.37 V	SEP 21	49.14 R	APR 19	25.69 R

HIGHEST 24.70 MAR 29, 1994

LOWEST 76.32 NOV 22, 1991

State well number 1N22W20J4

Site identification number 340916119120901

Common name A1-930

In Port Hueneme on the Navy Base. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 930 feet, perforated 870-890, 910-930 feet. Altitude of land-surface datum 10 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAY 30, 1991	45.69 V	JAN 09, 1992	47.70 S	FEB 06, 1993	19.58 V	DEC 20, 1993	13.85 V
JUL 18	43.95 V	MAR 10	39.98 V	JUL 16	14.38 R	23	11.42 R
AUG 28	45.66 V	AUG 04	32.06 S	AUG 17	15.47 V	MAR 30, 1994	4.07 R
OCT 11	48.85 S	SEP 29	33.88 S	SEP 30	15.80 R	APR 18	4.99 R
NOV 13	49.01 V	NOV 26	32.45 S	NOV 08	16.44 R		

HIGHEST 4.07 MAR 30, 1994

LOWEST 49.01 NOV 13, 1991

State well number 1N22W20J5

Site identification number 340916119120902

Common name A1-680

In Port Hueneme on the Navy Base. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 680 feet, perforated 640-680 feet. Altitude of land-surface datum 10 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAY 30, 1991	36.68 V	JAN 09, 1992	36.99 S	FEB 06, 1993	10.85 V	DEC 23, 1993	1.95 R
JUL 18	34.64 S	MAR 10	30.89 V	JUL 16	5.91 R	MAR 30, 1994	+1.76 R
OCT 11	47.92 S	AUG 04	24.58 S	26	15.07 V	APR 18	+1.45 R
21	37.99 S	SEP 05	34.09 S	AUG 17	6.64 R		
22	38.45 S	29	24.73 S	SEP 30	6.95 R		
NOV 13	38.34 V	NOV 26	22.48 S	NOV 08	7.74 R		

HIGHEST +1.76 MAR 30, 1994

LOWEST 47.92 OCT 11, 1991



**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W20J6

Site identification number 340916119120903

Common name A1-425

In Port Hueneme on the Navy Base. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 425 feet, perforated 385-425 feet. Altitude of land-surface datum 10 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 28, 1991	28.52 V	SEP 05, 1992	20.70 S	JUL 26, 1993	1.99 VF	DEC 20, 1993	2.64 V
NOV 13	30.41 V	29	20.81 S	AUG 17	1.89 V	23	1.55 R
JAN 09, 1992	28.80 S	NOV 26	19.45 S	18	2.12 V	MAR 30, 1994	+1.76 RF
MAR 10	25.86 V	FEB 06, 1993	9.69 V	SEP 30	4.04 R	APR 18	+1.76 R
AUG 04	18.92 S	JUL 16	2.18 R	NOV 08	3.90 R		
	HIGHEST	+1.76	APR 18, 1994				
	LOWEST	30.41	NOV 13, 1991				

State well number 1N22W20J7

Site identification number 340916119120904

Common name A1-320

In Port Hueneme on the Navy Base. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 320 feet, perforated 280-320 feet. Altitude of land-surface datum 10 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAY 30, 1991	24.56 V	MAR 10, 1992	19.20 V	FEB 06, 1993	2.97 V	NOV 08, 1993	+ .04 RF
JUL 18	22.77 S	AUG 04	15.87 S	JUL 16	+2.18 RF	DEC 23	+4.09 RF
AUG 28	24.34 V	SEP 05	18.93 S	AUG 18	+2.02 S	MAR 30, 1994	+2.68 RF
NOV 13	25.74 VV	29	15.71 S	20	+2.56 RF	APR 18	+2.67 RF
JAN 09, 1992	22.41 S	NOV 26	12.28 S	SEP 30	.54 R		
	HIGHEST	+2.02	AUG 18, 1993				
	LOWEST	24.56	MAY 30, 1991				

State well number 1N22W20J8

Site identification number 340916119120905

Common name A1-195

In Port Hueneme on the Navy Base. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 195 feet, perforated 155-195 feet. Altitude of land-surface datum 10 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAY 30, 1991	23.75 V	AUG 28, 1991	23.07 V	JAN 09, 1992	21.57 S	AUG 03, 1992	13.39 V
JUL 18	21.11 V	NOV 13	23.87 V	MAR 10	18.87 V	SEP 05	16.72 S
SEP 29, 1992	14.05 S	JUL 16, 1993	+3.80 RF	SEP 30, 1993	+ .86 RF	MAR 30, 1994	+2.63 RF
NOV 26	10.28 S	AUG 18	+1.17 S	NOV 08	+1.66 RF	APR 18	+2.63 RF
FEB 06, 1993	1.35 V	20	+2.32 RF	DEC 23	+4.86 RF		
	HIGHEST	+1.17	AUG 18, 1993				
	LOWEST	23.87	NOV 13, 1991				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W20M1

Site identification number 340907119125201

Common name A2-940

In Port Hueneme on the Navy Base. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 940 feet, perforated 900-940 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1991	54.05 R	AUG 05, 1992	39.18 S	FEB 07, 1993	25.48 V	SEP 30, 1993	20.62 R
DEC 17	54.78 R	18	35.99 R	13	25.25 V	NOV 08	20.95 R
JAN 09, 1992	51.30 S	SEP 22	38.11 R	APR 06	18.73 R	DEC 21	16.64 V
21	51.21 R	29	38.15 S	MAY 06	18.77 S	23	16.73 R
FEB 26	48.65 R	NOV 10	36.79 R	JUL 16	19.72 R	MAR 30, 1994	10.02 R
APR 06	43.33 R	27	35.43 S	26	20.60 V	APR 18	10.84 R
MAY 19	40.56 R	DEC 15	33.55 R	AUG 17	20.18 R		
JUL 02	38.99 R	FEB 05, 1993	25.51 R	18	20.37 V		
		HIGHEST	10.02 MAR 30, 1994				
		LOWEST	54.78 DEC 17, 1991				

State well number 1N22W20M2

Site identification number 340907119125202

Common name A2-740

In Port Hueneme on the Navy Base. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 740 feet, perforated 700-740 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1991	42.15 R	MAY 19, 1992	29.18 R	NOV 10, 1992	26.15 R	APR 06, 1993	10.91 R
DEC 17	42.43 R	JUL 02	27.93 R	27	24.75 S	MAY 06	11.12 S
JAN 09, 1992	39.06 S	AUG 05	28.24 S	DEC 15	22.99 R	JUL 16	11.47 R
21	39.19 R	18	27.49 R	FEB 05, 1993	16.35 R	26	112.01 V
FEB 26	36.81 R	SEP 22	28.75 R	07	16.76 V	AUG 17	11.88 R
APR 06	31.45 R	29	28.12 S	13	16.41 V	18	12.64 V
AUG 19, 1993	12.05 V	NOV 08, 1993	12.95 R	DEC 23, 1993	8.48 R	APR 18, 1994	5.14 R
SEP 30	11.88 R	DEC 21	8.46 V	MAR 30, 1994	3.85 R		
		HIGHEST	3.85 MAR 30, 1994				
		LOWEST	112.01 JUL 26, 1993				

State well number 1N22W20M3

Site identification number 340907119125203

Common name A2-560

In Port Hueneme on the Navy Base. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 560 feet, perforated 520-560 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1991	38.25 R	AUG 05, 1992	25.91 S	FEB 07, 1993	13.46 V	AUG 19, 1993	9.23 V
DEC 17	38.67 R	18	25.01 R	13	13.21 V	SEP 30	8.66 R
JAN 09, 1992	35.41 S	SEP 22	26.05 R	APR 06	7.88 R	NOV 08	10.09 R
21	35.45 R	29	25.48 S	MAY 06	8.67 S	DEC 21	4.77 V
FEB 26	33.59 R	NOV 10	22.65 R	JUL 16	8.51 R	23	4.88 R
APR 06	28.53 R	27	21.50 S	26	9.07 V	MAR 30, 1994	1.43 R
MAY 19	26.38 R	DEC 15	19.43 R	AUG 17	8.72 R	APR 18	3.12 R
JUL 02	25.65 R	FEB 05, 1993	12.99 R	18	9.45 V		
		HIGHEST	1.43 MAR 30, 1994				
		LOWEST	38.67 DEC 17, 1991				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W20M4

Site identification number 340907119125204

Common name A2-320

In Port Hueneme on the Navy Base. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 320 feet, perforated 300-320 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1991	28.40 R	JUL 02, 1992	20.10 R	DEC 15, 1992	13.30 R	JUL 26, 1993	5.69 V
DEC 17	27.90 R	AUG 05	20.20 S	FEB 05, 1993	8.42 R	AUG 17	4.64 R
JAN 09, 1992	24.88 S	18	19.80 R	07	9.39 V	18	6.30 V
21	25.24 R	SEP 22	20.20 R	13	9.18 V	19	6.27 V
FEB 26	24.50 R	29	19.89 S	APR 05	5.04 R	SEP 30	7.10 R
APR 06	21.80 R	NOV 10	17.06 R	MAY 06	6.70 S	NOV 08	5.83 R
MAY 19	20.60 R	27	15.68 S	JUL 16	4.05 R	DEC 21	1.84 V
DEC 23, 1993	1.98 R	MAR 30, 1994	+0.04 RF	APR 18, 1994	1.94 R		

HIGHEST 1.84 DEC 21, 1993

LOWEST 28.40 NOV 19, 1991

State well number 1N22W20M5

Site identification number 340907119125301

Common name A2-170

In Port Hueneme on the Navy Base. Drilled observation well. One of two wells at this site. Diameter 2 inches, depth 170 feet, perforated 150-170 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1991	29.50 R	APR 06, 1992	20.84 R	SEP 22, 1992	19.60 R	FEB 05, 1993	9.12 R
DEC 17	28.62 R	MAY 19	20.24 R	29	18.04 SZ	07	9.44 V
JAN 09, 1992	25.16 S	JUL 02	20.30 R	NOV 10	16.84 R	13	8.92 V
21	25.90 R	AUG 05	19.76 S	27	15.40 S	APR 06	5.78 R
FEB 26	24.88 R	18	20.34 R	DEC 15	13.64 R	MAY 06	6.62 S

HIGHEST 5.78 APR 06, 1993

LOWEST 29.50 NOV 19, 1991

State well number 1N22W20M6

Site identification number 340907119125302

Common name A2-70

In Port Hueneme on the Navy Base. Drilled observation well. One of two wells at this site. Diameter 6 inches, depth 50 feet, perforated 50-70 feet. Altitude of land-surface datum 14 feet. Water-level records available 1991 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 09, 1992	12.84 S	SEP 22, 1992	14.18 R	FEB 07, 1993	12.26 V	NOV 08, 1993	13.24 R
MAY 06	12.52 S	29	13.40 SZ	13	12.07 V	DEC 23	15.23 R
19	14.38 R	NOV 10	13.12 R	APR 06	12.40 R	MAR 30, 1994	13.54 R
JUL 02	14.12 R	27	13.22 S	JUL 16	12.96 R	APR 18	13.92 R
AUG 05	13.46 S	DEC 15	13.90 R	AUG 17	12.98 R		
18	14.04 R	FEB 05, 1993	12.34 R	SEP 30	13.22 R		

HIGHEST 12.07 FEB 13, 1993

LOWEST 15.23 DEC 23, 1993

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W26J3

Site identification number 340821119085701

Common name SWIFT-350

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 4 inches, depth 350 feet, perforated 310-350 feet. Altitude of land-surface datum 13 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 26, 1990	64.69 T	NOV 18, 1991	57.40 R	SEP 24, 1992	43.50 R	SEP 22, 1993	RP
DEC 13	60.83 T	DEC 17	55.10 R	30	44.02 S	NOV 08	29.30 R
JAN 09, 1991	56.60 T	JAN 21, 1992	45.00 R	NOV 09	10.18 R	FEB 01, 1994	14.75 R
FEB 07	53.15 V	FEB 26	39.80 R	DEC 15	9.10 R	MAR 30	9.00 R
MAR 24	P	APR 08	32.90 R	FEB 05, 1993	7.64 R	APR 18	12.30 R
JUN 13	48.99 SR	MAY 20	45.80 R	APR 06	5.87 R		
SEP 10	55.60 R	JUL 01	35.60 R	JUL 16	19.35 R		
NOV 12	58.66 VP	AUG 18	42.80 R	AUG 17	19.35 S		

HIGHEST 5.87 APR 06, 1993

LOWEST 64.69 OCT 26, 1990

State well number 1N22W26J4

Site identification number 340821119085702

Common name SWIFT-205

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 205 feet, perforated 185-205 feet. Altitude of land-surface datum 13 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 26, 1990	40.37 T	DEC 05, 1991	36.39 S	SEP 20, 1992	25.61 S	AUG 17, 1993	10.25 R
DEC 13	38.85 T	17	34.82 R	24	25.32 R	SEP 22	13.50 R
JAN 09, 1991	35.77 T	JAN 09, 1992	30.41 V	30	25.61 S	NOV 08	11.78 R
FEB 07	34.32	21	29.18 R	NOV 09	22.92 R	DEC 23	5.71 R
MAR 24	30.54 S	FEB 26	25.90 R	DEC 15	18.10 R	FEB 01, 1994	2.17 R
JUN 13	32.62 S	APR 08	21.34 R	FEB 05, 1993	9.74 R	MAR 29	+4.03 RF
SEP 10	36.50 R	MAY 20	22.67 R	APR 06	7.35 R	APR 18	.14 V
NOV 12	36.60 VP	JUL 01	22.06 R	JUL 16	6.64 R		
18	36.50 R	AUG 18	25.96 R	25	7.22 V		

HIGHEST .14 APR 18, 1994

LOWEST 40.37 OCT 26, 1990

State well number 1N22W26J5

Site identification number 340821119085703

Common name SWIFT-65

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 65 feet, perforated 55-65 feet. Altitude of land-surface datum 13 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 26, 1990	11.53 T	NOV 18, 1991	11.10 R	JUL 01, 1992	10.02 R	JUL 16, 1993	8.80 R
DEC 13	11.61 T	DEC 05	10.89 S	AUG 18	10.56 R	AUG 17	8.89 R
JAN 09, 1991	11.57 T	17	10.68 R	SEP 24	10.50 R	SEP 22	8.93 R
FEB 07	9.79 V	JAN 09, 1992	8.96 V	30	10.36	NOV 08	8.78 R
MAR 24	9.60 S	21	9.56 R	NOV 09	39.60 R	DEC 23	8.28 R
JUN 13	10.90 S	FEB 26	8.42 R	DEC 15	33.40 R	FEB 01, 1994	7.98 R
SEP 10	11.30 R	APR 08	8.80 R	FEB 05, 1993	20.70 R	MAR 30	7.21 R
NOV 12	10.67 VP	MAY 20	9.49 R	APR 06	14.48 R	APR 19	7.37 V

HIGHEST 7.21 MAR 30, 1994

LOWEST 39.60 NOV 09, 1992

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W27C2

Site identification number 340848119102601

Common name SW-295

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 295 feet, perforated 275-295 feet. Altitude of land-surface datum 11 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 13, 1990	37.24 T	JAN 21, 1992	27.96 R	SEP 29, 1992	23.88 S	DEC 23, 1993	2.80 R
JAN 09, 1991	35.67 S	FEB 26	25.20 R	NOV 09	20.64 R	JAN 31, 1994	+3.47 RF
MAR 24	31.00 S	APR 08	19.10 R	DEC 15	16.30 R	FEB 09	1.0 V
AUG 26	32.62 S	MAY 18	21.30 R	FEB 05, 1993	7.60 R	MAR 30	+6.47 RF
SEP 13	34.14 R	JUL 01	22.60 R	APR 06	3.11 R	APR 18	+6.11 RF
NOV 12	35.91 V	AUG 07	21.74 S	JUL 16	4.92 R		
18	35.20 R	18	23.40 R	SEP 22	10.05 R		
DEC 17	33.31 R	SEP 24	23.40 R	NOV 08	8.60 R		

HIGHEST 1.0 FEB 09, 1994

LOWEST 37.24 DEC 13, 1990

State well number 1N22W27C3

Site identification number 340848119102602

Common name SW-195

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 195 feet, perforated 175-195 feet. Altitude of land-surface datum 11 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 13, 1990	28.63 T	JAN 21, 1992	21.26 R	SEP 29, 1992	16.46 S	DEC 23, 1993	+4.00 RF
JAN 10, 1991	27.12 S	FEB 26	20.14 R	NOV 09	15.02 R	JAN 31, 1994	+3.11 RF
MAR 24	25.28 S	APR 08	16.68 R	DEC 15	10.24 R	FEB 09	F
AUG 26	27.08 S	MAY 18	16.44 R	FEB 05, 1993	3.48 R	MAR 30	+3.89 RF
SEP 13	27.00 R	JUL 01	15.86 R	APR 06	.31 R	APR 18	+3.47 RF
NOV 12	27.70 V	AUG 07	16.92 S	JUL 16	+0.04 RF		
18	27.10 R	18	17.58 R	SEP 22	3.97 R		
DEC 17	25.48 R	SEP 24	16.22 R	NOV 08	3.08 R		

HIGHEST .31 APR 06, 1993

LOWEST 28.63 DEC 13, 1990

State well number 1N22W27C4

Site identification number 340848119102603

Common name SW-65

Near Oxnard. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 65 feet, perforated 55-65 feet. Altitude of land-surface datum 11 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 13, 1990	7.91 T	JAN 21, 1992	5.58 R	SEP 29, 1992	7.07 S	DEC 23, 1993	2.60 R
JAN 09, 1991	7.87 S	FEB 26	4.20 R	NOV 09	6.14 R	JAN 31, 1994	4.93 R
MAR 24	5.96 S	APR 08	4.34 R	DEC 15	5.30 R	FEB 09	5.1 V
AUG 26	6.90 S	MAY 18	5.01 R	FEB 05, 1993	3.62 R	MAR 30	3.95 R
SEP 13	6.54 R	JUL 01	5.72 R	APR 06	2.86 R	APR 18	4.13 R
NOV 12	7.15 V	AUG 07	6.52 S	JUL 16	4.84 R		
18	6.60 R	18	6.34 R	SEP 22	5.21 R		
DEC 17	6.42 R	SEP 24	6.34 R	NOV 08	5.28 R		

HIGHEST 2.60 DEC 23, 1993

LOWEST 7.91 DEC 13, 1990

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W27R3

Site identification number 340800119095901

Common name CM7-350

Southeast of Port Hueneme. Drilled observation well. Diameter 2 inches, depth 350 feet, perforated 330-350 feet.

One of three wells at this site. Altitude of land-surface datum 10 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 24, 1990	62.2 T	NOV 21, 1991	54.11 V	AUG 18, 1992	37.40 R	NOV 08, 1993	26.86
DEC 13	59.01 T	DEC 05	54.21 S	SEP 24	39.88 R	DEC 23	17.73
JAN 09, 1991	54.70 T	17	51.12 R	NOV 09	36.24 R	JAN 27, 1994	14.20 V
MAR 24	43.57 S	JAN 10, 1992	44.61 V	DEC 15	30.70 R	31	11.97
JUL 19	42.57 V	21	40.48 R	FEB 05, 1993	17.38 R	FEB 09	11.03 V
SEP 10	50.00 R	FEB 26	35.64 R	APR 06	10.03 R	MAR 30	4.41
NOV 12	54.41 V	APR 08	27.80 R	JUL 16	14.68 R	APR 18	7.06 R
15	54.10 V	MAY 18	30.28 R	AUG 17	24.77		
18	54.00 R	JUL 01	29.62 R	SEP 22	29.30		
HIGHEST 4.41 MAR 30, 1994							
LOWEST 62.2 OCT 24, 1990							

State well number 1N22W27R4

Site identification number 340800119095902

Common name CM7-190

Southeast of Port Hueneme. Drilled observation well. Diameter 2 inches, depth 190 feet, perforated 170-190 feet.

One of three wells at this site. Altitude of land-surface datum 10 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 24, 1990	24.12 T	NOV 21, 1991	20.27 V	AUG 18, 1992	11.40 R	SEP 22, 1993	+3.39 RF
DEC 12	24.31 T	DEC 05	20.69 S	SEP 24	11.34 R	NOV 08	+5.10 RF
JAN 09, 1991	22.66 T	17	19.07 R	NOV 09	9.52 R	DEC 23	+4.68 RF
MAR 24	20.80 S	JAN 10, 1992	16.78 V	DEC 15	5.08 R	JAN 27, 1994	F
JUL 19	18.63 V	21	14.90 R	FEB 05, 1993	+1.54 R	31	+7.32 RF
SEP 10	20.00 R	FEB 26	13.74 R	APR 06	+3.87 R	MAR 30	+7.06 RF
NOV 12	20.48 V	APR 08	9.82 R	18	+6.77 RF		
15	20.80 V	MAY 18	10.44 R	JUL 16	+4.51 RF		
18	20.60 R	JUL 01	9.84 R	AUG 17	+2.35 RF		
HIGHEST +3.87 APR 06, 1993							
LOWEST 24.31 DEC 12, 1990							

State well number 1N22W27R5

Site identification number 340800119095903

Common name CM7-110

Southeast of Port Hueneme. Drilled observation well. Diameter 2 inches, depth 110 feet, perforated 100-110 feet.

One of three wells at this site. Altitude of land-surface datum 10 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 24, 1990	15.89 T	NOV 18, 1991	8.95 R	MAY 18, 1992	6.84 R	DEC 23, 1993	.40 R
DEC 13	17.10 T	21	10.05 V	JUL 01	6.74 R	JAN 27, 1994	.60 V
JAN 09, 1991	16.38 T	DEC 05	10.07 S	AUG 18	7.32 R	31	+1.73 RF
MAR 24	14.52 S	17	8.73 R	SEP 24	7.76 R	FEB 09	.30
JUL 19	10.00 V	JAN 10, 1992	8.09 S	JUL 16, 1993	.20 R	MAR 30	+3.09 RF
SEP 10	8.90 R	21	7.52 R	AUG 17	.80 R	APR 18	+2.53 RF
NOV 12	10.16 V	FEB 26	7.24 R	SEP 22	1.57 R		
15	10.13 V	APR 08	6.30 R	NOV 08	1.52 R		
HIGHEST .20 JUL 16, 1993							
LOWEST 17.10 DEC 13, 1990							

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W28G1

Site identification number 340827119110901

Common name CM4-1,395

In Oxnard at sewage treatment plant. Drilled observation well, diameter 2 inches, depth 1,395 feet, perforated 1,295-1,395 feet. One of five wells at this site. Altitude of land-surface datum 5 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 15, 1989	44.51 T	DEC 13, 1990	59.55 S	APR 08, 1992	43.70 R	AUG 17, 1993	25.62 R
JAN 24, 1990	45.99 S	JAN 10, 1991	58.85 S	MAY 18	42.27 R	SEP 22	26.15 R
FEB 01	44.82 S	MAR 05	57.00 T	JUL 01	38.30 R	NOV 08	25.82 R
06	44.60 S	24	54.86 S	AUG 18	37.40 R	DEC 23	26.42 R
MAR 22	43.27 S	MAY 15	51.04 S	SEP 24	40.82 R	JAN 26, 1994	25.22 V
MAY 05	46.73 S	SEP 10	51.00 R	NOV 09	41.72 R	31	21.26 R
JUN 06	49.12 S	NOV 18	55.50 R	DEC 15	39.04 R	FEB 09	21.89 V
AUG 01	51.27 S	DEC 17	56.24 R	FEB 05, 1993	31.38 R	MAR 30	16.53 R
OCT 04	55.49 S	JAN 21, 1992	53.08 R	APR 06	24.54 R	APR 18	15.91 R
18	57.03 S	FEB 26	49.76 R	JUL 16	23.68 R		
HIGHEST		15.91	APR 18, 1994				
LOWEST		59.55	DEC 13, 1990				

State well number 1N22W28G2

Site identification number 340827119110902

Common name CM4-1,095

In Oxnard at sewage treatment plant. Drilled observation well, diameter 2 inches, depth 1,095 feet, perforated 995-1,095 feet. One of five wells at this site. Altitude of land-surface datum 5 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 15, 1989	49.15 T	DEC 13, 1990	64.57 S	APR 08, 1992	42.76 R	JUL 16, 1993	24.54 R
JAN 24, 1990	47.57 S	JAN 10, 1991	61.76 S	MAY 18	43.22 R	26	26.48 V
FEB 01	46.72 S	MAR 09	58.74 S	JUL 01	39.12 R	AUG 17	28. R
MAR 22	45.56 S	24	55.26 S	AUG 18	40.32 R	SEP 22	28.65 R
MAY 05	51.23 S	MAY 15	52.98 S	SEP 24	43.84 R	NOV 08	28.42 R
JUN 06	52.91 S	SEP 10	53.70 R	NOV 09	43.82 R	DEC 23	24.26 R
AUG 01	55.40 S	NOV 18	60.20 R	DEC 15	38.92 R	JAN 31, 1994	19.21 R
OCT 05	60.78 S	DEC 17	59.84 R	JAN 26, 1993	25.18 V	FEB 09	20.29 V
18	62.79 S	JAN 21, 1992	53.76 R	FEB 05	29.58 R	MAR 30	16.65 R
28	62.87 S	FEB 26	49.66 R	APR 06	22.28 R	APR 18	15.73 RR
HIGHEST		16.65	MAR 30, 1994				
LOWEST		64.57	DEC 13, 1990				

State well number 1N22W28G3

Site identification number 340827119110903

Common name CM4-760

In Oxnard at sewage treatment plant. Drilled observation well, diameter 2 inches, depth 760 feet, perforated 720-760 feet. One of five wells at this site. Altitude of land-surface datum 5 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 15, 1989	36.10 T	DEC 13, 1990	44.25 S	APR 08, 1992	27.08 R	JUL 16, 1993	4.94 R
JAN 24, 1990	32.03 S	JAN 10, 1991	43.63 S	MAY 18	25.39 R	26	6.27 V
FEB 01	31.51 S	MAR 06	42.13 S	JUL 01	24.37 R	AUG 17	6.39 R
06	31.55 S	24	39.59 S	AUG 18	24.84 R	SEP 22	8.25 R
MAR 22	31.22 S	MAY 14	37.25 S	SEP 24	26.44 R	NOV 08	8.08 R
MAY 05	34.68 S	SEP 10	38.60 R	NOV 09	24.90 R	DEC 23	3.53 R
JUN 06	37.02 S	NOV 18	40.40 R	DEC 15	20.90 R	JAN 31, 1994	2.01 R
AUG 01	39.14 S	DEC 17	40.00 R	JAN 26, 1993	4.37 V	FEB 09	4.40 V
OCT 05	42.61 S	JAN 21, 1992	36.12 R	FEB 05	11.98 R	MAR 30	+2.31 R
18	43.72 S	FEB 26	33.08 R	APR 06	5.67 R	APR 18	+2.87 RF
HIGHEST		+2.31	MAR 30, 1994				
LOWEST		44.25	DEC 13, 1990				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W28G4

Site identification number 340827119110904

Common name CM4-275

In Oxnard at sewage treatment plant. Drilled observation well, diameter 2 inches, depth 275 feet, perforated 255-275 feet. One of five wells at this site. Altitude of land-surface datum 5 feet.

Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 15, 1989	17.20 T	MAR 06, 1991	22.14 S	JUL 01, 1992	11.72 R	SEP 22, 1993	.36 R
JAN 24, 1990	17.23 S	24	20.39 S	AUG 18	12.01 R	NOV 08	+.46 R
MAR 22	15.97 S	MAY 14	20.48 S	SEP 24	13.48 R	DEC 23	+3.08 R
MAY 05	19.47 S	SEP 10	21.80 R	NOV 09	11.56 R	JAN 31, 1994	+5.56 R
JUN 06	19.74 S	NOV 18	21.50 R	DEC 15	5.96 R	FEB 09	+2.31 SF
AUG 01	21.20 S	DEC 17	20.19 R	FEB 05, 1993	.10 R	MAR 30	+7.86 R
OCT 05	22.22 S	JAN 21, 1992	16.62 R	APR 06	+2.20 R	APR 18	+7.47 R
18	23.57 S	FEB 26	16.72 R	JUL 16	2.69 RF		
DEC 13	23.72 S	APR 08	12.06 R	26	F		
JAN 10, 1991	21.69 S	MAY 18	13.87 R	AUG 17	+1 R		

HIGHEST +7.86 MAR 30, 1994

LOWEST 23.72 DEC 13, 1990

State well number 1N22W28G5

Site identification number 340827119110905

Common name CM4-200

In Oxnard at sewage treatment plant. Drilled observation well, diameter 2 inches, depth 200 feet, perforated 180-200 feet. One of five wells at this site. Altitude of land-surface datum 5 feet.

Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 15, 1989	16.70 T	JAN 10, 1991	21.91 S	MAY 18, 1992	13.89 R	AUG 17, 1993	+.98 R
JAN 24, 1990	17.28 S	MAR 06	22.46 S	JUL 01	11.95 R	SEP 22	.19 R
FEB 01	16.93 S	24	20.72 S	AUG 18	12.30 R	NOV 08	+.70 R
MAR 22	16.48 S	MAY 14	20.47 S	SEP 24	13.12 R	DEC 23	+3.00 R
MAY 05	19.47 S	SEP 10	21.90 R	NOV 09	11.34 R	JAN 31, 1994	+5.80 R
JUN 06	19.86 S	NOV 18	22.00 R	DEC 15	5.84 R	FEB 09	+2.31 SF
AUG 01	21.60 S	DEC 17	20.70 R	FEB 05, 1993	.30 R	MAR 30	+7.89 R
OCT 05	23.07 S	JAN 21, 1992	17.32 R	APR 06	+2.51 R	APR 18	+7.56 R
18	24.25 S	FEB 26	16.40 R	JUL 16	+3.10 R		
DEC 13	23.78 S	APR 08	11.90 R	26	F		

HIGHEST +7.89 MAR 30, 1994

LOWEST 24.25 OCT 18, 1990



**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W29D1

Site identification number 340845119125401

Common name CM2-870

In Port Hueneme on the Navy base at the jetty. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 870 feet, perforated 830-870 feet. Altitude of land-surface datum 7 feet. Water-level records available 1989 to present.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 12, 1989	27.24 S	DEC 13, 1990	37.56 S	FEB 26, 1992	30.80 R	FEB 07, 1993	9.32 V
14	25.57 S	JAN 10, 1991	37.22 S	MAR 10	29.31 V	12	11.21 V
DEC 02	26.97 S	MAR 05	37.47 S	MAY 01	24.76 V	APR 06	11.22 R
MAY 1, 199	24.76 V	MAY 08	31.92 S	12	24.76 V	MAY 06	5.77 S
JAN 06, 1990	31.75 S	13	32.34 S	18	23.19 R	13	10.18 R
25	29.64 S	AUG 28	32.61 V	JUN 02	23.67 S	JUN 09	9.91 R
FEB 01	28.48 S	SEP 10	37.00 R	16	22.51 S	JUL 16	10.50 R
APR 07	28.46 S	25	39.50 R	JUL 02	21.40 R	26	6.86 V
MAY 03	30.28 S	OCT 11	41.02 SS	AUG 06	21.97 S	AUG 17	10.46 R
JUN 06	32.30 S	NOV 13	35.25 V	18	21.40 R	20	7.56 V
13	32.74 S	18	36.10 R	SEP 22	22.88 R	NOV 08	11.70 R
AUG 04	34.32 S	DEC 17	36.24 R	28	21.73 S	DEC 23	8.60 R
OCT 05	37.78 S	JAN 08, 1992	32.89 S	NOV 10	25.76 R	FEB 23, 1994	1.52 R
17	38.35 S	19	29.42 S	DEC 15	22.32 R	MAR 30	4.20 R
NOV 27	38.04 S	21	33.86 R	FEB 05, 1993	16.64 R	APR 18	5.42 R

HIGHEST 1.52 FEB 23, 1994  
LOWEST 39.50 SEP 25, 1991

State well number 1N22W29D2

Site identification number 340845119125402

Common name CM2-760

In Port Hueneme on the Navy base at the jetty. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 760 feet, perforated 720-760 feet. Altitude of land-surface datum 7 feet. Water-level records available 1989 to present.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 12, 1989	33.09 S	OCT 17, 1990	43.39 S	JAN 08, 1992	37.58 S	SEP 22, 1992	27.60 R
14	30.63 S	NOV 27	42.57 S	21	38.90 R	28	26.17 S
DEC 02	31.90 S	DEC 13	42.07 S	FEB 19	34.18 S	NOV 10	20.88 R
JAN 06, 1990	35.04 S	JAN 16, 1991	42.38 S	26	36.00 R	DEC 15	17.58 R
25	35.30 S	MAR 05	42.41 S	MAR 10	34.29 V	FEB 05, 1993	11.16 R
FEB 01	33.91 S	MAY 08	37.40 V	MAY 12	30.27 V	12	15.88 V
APR 07	33.74 S	13	37.44 V	13	28.48 V	APR 06	6.08 R
MAY 03	35.47 S	AUG 28	37.49 V	18	27.90 R	MAY 06	10.75 S
04	36.18 S	SEP 10	32.80 R	JUN 02	28.46 S	13	5.73 R
JUN 06	37.42 S	25	34.20 R	16	27.40 S	JUN 09	5.57 R
13	37.81 S	NOV 13	40.23 V	JUL 02	26.38 R	JUL 16	6.04 R
AUG 04	39.27 S	18	41.00 R	AUG 06	27.21 S	25	11.18 V
OCT 05	43.19 S	DEC 17	41.19 R	18	26.24 R	AUG 17	6.21 R
AUG 20, 1993	12.01 V	DEC 20, 1993	7.94 V	FEB 23, 1994	+5.7 R	APR 18, 1994	.41 R
NOV 08	7.52 R	23	4.28 R	MAR 30	+4.9 R		

HIGHEST +5.7 FEB 23, 1994  
LOWEST 43.39 OCT 17, 1990

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W29D3

Site identification number 340845119125403

Common name CM2-520

In Port Hueneme on the Navy base at the jetty. Drilled observation well. One of four wells at this site.

Diameter 2 inches, depth 520 feet, perforated 500-520 feet. Altitude of land-surface datum 7 feet. Water-level records available 1989 to present.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 12, 1989	21.35 S	DEC 13, 1990	29.16 S	FEB 26, 1992	24.80 R	FEB 12, 1993	8.70 V
14	19.79 S	JAN 10, 1991	29.52 S	MAR 10	23.64 V	APR 06	4.32 R
DEC 02	21.04 S	MAR 05	30.35 S	MAY 12	20.73 V	MAY 06	4.02 S
JAN 06, 1990	24.31 S	26	30.01 V	18	19.46 R	13	4.18 R
25	24.80 S	MAY 08	26.10 S	JUN 02	19.50 S	JUN 09	3.55 R
FEB 01	23.20 S	13	27.00 S	16	19.00 SS	JUL 16	4.10 R
06	24.30 S	AUG 28	29.51 V	JUL 02	18.34 R	26	4.81 V
APR 07	23.06 S	SEP 10	29.20 R	AUG 06	19.18 S	AUG 17	3.84 R
MAY 03	24.43 S	25	31.10 R	18	18.42 R	NOV 08	5.10 R
JUN 06	26.00 S	NOV 13	31.14 V	SEP 22	19.42 R	DEC 23	1.55 R
13	26.48 S	18	31.70 R	28	17.80 S	FEB 23, 1994	+2.16 R
AUG 04	27.78 S	DEC 17	31.60 R	NOV 10	17.18 R	MAR 30	+1.88 R
OCT 05	36.44 S	JAN 08, 1992	27.57 V	DEC 15	13.42 R	APR 18	+1.57 R
17	31.54 S	21	28.48 R	FEB 05, 1993	8.50 R		
NOV 27	29.58 S	FEB 19	23.86 S	07	6.18 V		

HIGHEST +2.16 FEB 23, 1994  
LOWEST 36.44 OCT 05, 1990

State well number 1N22W29D4

Site identification number 340845119125404

Common name CM2-280

In Port Hueneme on the Navy base at the jetty. Drilled observation well. One of four wells at this site.

Diameter 2 inches, depth 280 feet, perforated 260-280 feet. Altitude of land-surface datum 7 feet. Water-level records available 1989 to present.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 14, 1989	13.62 SR	MAR 05, 1991	22.38 S	MAR 10, 1992	17.39 V	FEB 07, 1993	1.93 V
DEC 02	15.10 S	26	23.08 S	MAY 12	15.76 V	12	4.31 S
JAN 06, 1990	18.60 S	MAY 08	19.77 S	18	13.94 R	APR 06	1.12 R
FEB 01	16.69 S	13	20.19 S	JUN 02	14.64 S	MAY 06	.97 S
APR 07	16.54 S	AUG 28	20.42 V	16	13.77 S	13	1.07 R
MAY 03	17.72 S	SEP 10	20.80 R	JUL 02	13.10 R	JUN 09	.45 R
JUN 06	18.75 S	25	22.10 R	26	1.53 V	JUL 16	.64 R
13	19.33 S	NOV 13	22.46 V	AUG 06	14.00 S	AUG 17	.61 R
AUG 08	20.42 S	18	22.00 R	18	13.10 R	NOV 08	1.80 R
OCT 05	23.59 S	DEC 17	21.42 R	SEP 22	13.96 R	DEC 23	+1.89 R
17	23.42 S	JAN 08, 1992	17.49 S	28	12.20 S	FEB 23, 1994	+3.14 R
NOV 27	20.78 S	21	20.16 R	NOV 10	12.00 R	MAR 30	+4.20 R
DEC 13	20.14 S	FEB 19	15.46 S	DEC 15	7.88 R	APR 18	+1.97 R
JAN 10, 1991	20.38 S	26	18.48 R	FEB 05, 1993	4.19 R		

HIGHEST +4.20 MAR 30, 1994  
LOWEST 23.59 OCT 05, 1990

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W35E1

Site identification number 340732119093801

Common name CM5-1,200

Near Oxnard. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 1,200 feet, perforated 1,140-1,200 feet. Altitude of land-surface datum 6 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 09, 1990	53.20 T	JAN 10, 1991	65.37 S	JUL 01, 1992	40.20 R	JUN 09, 1993	25.07 R
20	47.74 S	MAR 25	56.87 S	AUG 18	42.60 R	JUL 16	26.46 R
APR 02	48.74 S	SEP 09	57.52 R	SEP 24	48.06 R	AUG 17	30.99 R
MAY 03	52.40 S	NOV 18	64.60 R	NOV 09	47.74 R	SEP 22	32.72 R
04	52.67 S	DEC 17	63.56 R	DEC 15	43.50 R	NOV 08	31.54 R
JUN 07	56.03 S	JAN 10, 1992	59.62 V	FEB 05, 1993	31.60 R	DEC 23	27.23 R
AUG 08	58.28 S	21	56.72 R	MAR 30	16.22 R	JAN 27, 1994	24.30 V
OCT 18	65.39 S	APR 08	43.84 R	APR 05	24.16 R		
27	66.10 S	29	43.03 S	18	16.49 R		
DEC 11	66.50 S	MAY 19	42.59 R	MAY 13	24.88 R		
	HIGHEST	16.22	MAR 30, 1993				
	LOWEST	66.50	DEC 11, 1990				

State well number 1N22W35E2

Site identification number 340732119093802

Common name CM5-940

Near Oxnard. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 940 feet, perforated 840-940 feet. Altitude of land-surface datum 6 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 09, 1990	50.70 T	JAN 10, 1991	68.88 S	JUL 01, 1992	42.42 R	JUL 26, 1993	30.03 V
20	51.36 S	MAR 25	56.47 S	AUG 18	50.08 R	AUG 17	39.05 R
APR 02	53.02 S	SEP 09	65.30 R	SEP 24	53.56 R	SEP 22	42.20 R
MAY 03	58.56 S	NOV 18	73.40 R	NOV 09	51.90 R	NOV 08	39.62 R
04	59.13 S	DEC 17	69.14 R	DEC 15	44.94 R	DEC 23	30.23 R
JUN 07	61.54 S	JAN 10, 1992	60.58 V	FEB 05, 1993	29.64 R	JAN 27, 1994	26.68 V
AUG 01	64.71 S	21	57.08 R	APR 05	22.53 R	MAR 30	14.97 R
OCT 18	75.19 S	APR 08	42.82 R	MAY 13	27.48 R	APR 18	18.27 R
27	76.35 S	29	44.54 S	JUN 09	26.13 R		
DEC 11	74.21 S	MAY 19	44.67 R	JUL 16	28.48 R		
	HIGHEST	14.97	MAR 30, 1994				
	LOWEST	76.35	OCT 27, 1990				

State well number 1N22W35E3

Site identification number 340732119093803

Common name CM5-470

Near Oxnard. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 470 feet, perforated 420-470 feet. Altitude of land-surface datum 6 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 09, 1990	55.05 T	MAR 25, 1991	55.41 S	JUL 01, 1992	46.98 R	JUL 16, 1993	32.06 R
20	55.14 S	SEP 09	75.44 R	AUG 18	61.80 R	26	33.77 V
APR 02	57.08 S	NOV 18	82.00 R	SEP 24	64.38 R	AUG 17	54.13
MAY 03	62.76 S	DEC 17	75.86 R	NOV 09	59.14 R	SEP 22	58.41
JUN 07	65.42 S	JAN 10, 1992	62.18 V	DEC 15	50.98 R	NOV 08	51.74
AUG 01	72.96 S	21	58.22 R	FEB 05, 1993	31.00 R	DEC 23	38.92
OCT 18	86.60 S	APR 08	41.74 R	APR 05	23.08 R	MAR 30, 1994	18.20
DEC 11	82.89 S	29	45.15 S	MAY 13	31.65 R	APR 18	22.27
JAN 10, 1991	71.56 S	MAY 19	45.93 R	JUN 09	29.17 R		
	HIGHEST	18.20	MAR 30, 1994				
	LOWEST	86.60	OCT 18, 1990				

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W35E4

Site identification number 340732119093804

Common name CM5-320

Near Oxnard. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 320 feet, perforated 300-320 feet. Altitude of land-surface datum 6 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 09, 1990	37.55 T	MAR 25, 1991	40.26 S	JUL 01, 1992	29.30 R	JUL 16, 1993	14.88 R
20	38.34 S	SEP 09	50.53 R	AUG 18	37.30 R	26	15.78 V
APR 02	39.70 S	NOV 18	55.40 R	SEP 24	40.22 R	AUG 17	25.34 R
MAY 03	43.78 S	DEC 17	51.27 R	NOV 09	36.90 R	SEP 22	30.50 R
JUN 07	46.47 S	JAN 10, 1992	43.76 V	DEC 15	31.30 R	NOV 08	27.72 R
AUG 01	48.94 S	21	40.60 R	FEB 05, 1993	16.60 R	DEC 23	18.85 R
OCT 18	58.78 S	APR 08	27.90 R	APR 05	10.71 R	MAR 30, 1994	4.73 R
DEC 11	56.09 S	29	29.13 S	MAY 13	15.37 R	APR 18	7.21 R
JAN 10, 1991	51.76 S	MAY 19	29.99 R	JUN 09	14.24 R		

HIGHEST 4.73 MAR 30, 1994

LOWEST 58.78 OCT 18, 1990

State well number 1N22W35E5

Site identification number 340732119093805

Common name CM5-220

Near Oxnard. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 200 feet, perforated 200-220 feet. Altitude of land-surface datum 6 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 09, 1990	16.60 T	NOV 18, 1991	27.60 R	AUG 18, 1992	16.34 R	JUL 16, 1993	+5.59 RF
20	18.58 S	DEC 17	24.10 R	SEP 24	15.98 R	26	+3.34 V
APR 02	18.98 S	JAN 10, 1992	20.40 V	NOV 09	14.90 R	AUG 17	3.50 R
MAY 03	20.78 S	21	19.10 R	DEC 15	10.28 R	SEP 22	6.41 R
JUN 07	22.67 S	APR 08	12.48 R	FEB 05, 1993	2.06 R	NOV 08	4.74 R
OCT 18	28.37 S	29	12.07 S	APR 05	+8.1 R	DEC 23	+2.20 RF
DEC 11	27.47 S	MAY 19	13.01 R	MAY 13	.91 R	MAR 30, 1994	+1.70 RF
SEP 09, 1991	26.45 R	JUL 01	12.14 R	JUN 09	+4.41 RF	APR 18	+1.79 RF

HIGHEST +8.1 APR 05, 1993

LOWEST 28.37 OCT 18, 1990

State well number 1N22W36K5

Site identification number 340727119075601

Common name DP-720

Near Point Mugu, on Ventura County Game Preserve. Drilled observation well. Diameter 2 inches, depth 720 feet, perforated 680-720 feet. One of five wells at this site. Altitude of land-surface datum 7 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 22, 1990	79.25 T	NOV 12, 1991	116.35 VT	JUL 01, 1992	85.04 R	JUL 25, 1993	54.18 V
JAN 09, 1991	88.43 V	18	110.90 R	AUG 18	104.54 R	AUG 17	98.71 R
MAR 24	67.76 S	DEC 17	110.92 R	SEP 24	93.60 R	SEP 22	90.29 R
MAY 22	81.02 V	JAN 09, 1992	74.57 V	NOV 09	94.14 R	NOV 08	77.32 R
JUL 23	81.54 S	21	72.14 R	DEC 15	69.20 R	DEC 20	61.45 R
AUG 28	114.77 S	FEB 26	60.12 R	FEB 05, 1993	41.10 R	FEB 01, 1994	39.05 R
SEP 09	114.72 R	APR 08	54.64 R	APR 05	30.97 R	MAR 30	27.09 R
OCT 19	117.01 SS	MAY 18	64.75 R	JUL 14	50.44 R	APR 18	38.86 R

HIGHEST 27.09 MAR 30, 1994

LOWEST 114.77 AUG 28, 1991

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W36K6

Site identification number 340727119075602

Common name DP-580

Near Point Mugu, on Ventura County Game Preserve. Drilled observation well. Diameter 2 inches, depth 580 feet, perforated 540-580 feet. One of five wells at this site. Altitude of land-surface datum 7 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 22, 1990	79.70 T	NOV 12, 1991	115.80 VS	JUL 01, 1992	84.84 R	AUG 17, 1993	98.94 R
JAN 09, 1991	86.96 T	18	110.70 R	AUG 18	104.22 R	SEP 22	89.71 R
MAR 24	66.64 S	DEC 17	110.24 R	SEP 24	92.52 R	NOV 08	76.16 R
MAY 22	79.96 V	JAN 08, 1992	74.30 V	NOV 09	94.42 R	DEC 20	62.57 R
JUL 23	80.77 S	21	71.38 R	DEC 15	68.64 R	FEB 01, 1994	38.49 R
AUG 28	114.51 S	FEB 26	59.50 R	FEB 05, 1993	40.56 R	MAR 30	26.58 R
SEP 09	114.34 R	APR 08	54.02 R	APR 05	30.45 R	APR 18	39.09 R
OCT 19	116.48 SS	MAY 18	64.05 R	JUL 14	49.82 R		
HIGHEST 26.58		MAR 30, 1994					
LOWEST 114.51		AUG 28, 1991					

State well number 1N22W36K7

Site identification number 340727119075603

Common name DP-450

Near Point Mugu, on Ventura County Game Preserve. Drilled observation well. Diameter 2 inches, depth 450 feet, perforated 410-450 feet. One of five wells at this site. Altitude of land-surface datum 7 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 22, 1990	75.78 T	NOV 12, 1991	114.15 VS	JUL 01, 1992	82.98 R	JUL 25, 1993	53.18 V
JAN 09, 1991	86.59 T	18	109.40 R	AUG 18	102.52 R	AUG 17	96.95 R
MAR 24	66.48 S	DEC 17	108.72 R	SEP 24	91.60 R	SEP 22	88.69 R
MAY 22	79.31 V	JAN 09, 1992	73.73 V	NOV 09	92.72 R	NOV 08	75.26 R
JUL 23	79.67 S	21	71.30 R	DEC 15	68.32 R	DEC 20	61.30 R
AUG 28	112.14 S	FEB 26	59.40 R	FEB 05, 1993	40.50 R	FEB 01, 1994	38.53 R
SEP 09	112.22 R	APR 08	53.80 R	APR 05	30.38 R	MAR 30	26.55 R
OCT 19	114.62 SS	MAY 18	63.78 R	JUL 14	49.56 R	APR 18	38.49 R
HIGHEST 26.55		MAR 30, 1994					
LOWEST 112.22		SEP 09, 1991					

State well number 1N22W36K8

Site identification number 340727119075604

Common name DP-330

Near Point Mugu, on Ventura County Game Preserve. Drilled observation well. Diameter 2 inches, depth 330 feet, perforated 310-330 feet. One of five wells at this site. Altitude of land-surface datum 7 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 22, 1990	63.03 T	NOV 12, 1991	56.86 VS	JUL 01, 1992	32.44 R	JUL 25, 1993	20.47 V
JAN 09, 1991	55.70 T	18	57.60 R	AUG 18	41.09 R	AUG 17	29.93
MAR 24	43.54 S	DEC 17	54.82 R	SEP 24	44.14 R	SEP 22	35.07
MAY 22	45.90 V	JAN 09, 1992	47.58 V	NOV 09	39.92 R	NOV 08	31.90
JUL 23	44.51 S	21	43.64 R	DEC 15	35.50 R	DEC 20	23.60
AUG 28	51.72 S	FEB 26	37.44 R	FEB 05, 1993	20.44 R	FEB 01, 1994	16.89
SEP 09	53.90 R	APR 08	30.34 R	APR 05	13.93 R	MAR 30	8.96
OCT 19	56.05 SS	MAY 18	32.97 R	JUL 14	19.16 R	APR 18	11.00 R
HIGHEST 8.96		MAR 30, 1994					
LOWEST 63.03		OCT 22, 1990					

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N22W36K9

Site identification number 340727119075605

Common name DP-195

Near Point Mugu, on Ventura County Game Preserve. Drilled observation well. Diameter 2 inches, depth 195 feet, perforated 175-195 feet. One of five wells at this site. Altitude of land-surface datum 7 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 22, 1990	34.85 T	NOV 12, 1991	30.91 VS	JUL 01, 1992	17.38 R	JUL 25, 1993	7.19 V
JAN 09, 1991	21.07 T	18	32.40 R	AUG 18	29.92 R	AUG 17	18.01 R
MAR 24	23.72 S	DEC 17	29.48 R	SEP 24	21.82 R	SEP 22	21.75 R
MAY 22	25.69 V	JAN 09, 1992	25.06 V	NOV 09	28.10 R	NOV 08	12.90 R
JUL 23	27.34 S	21	23.72 R	DEC 15	18.16 R	DEC 20	13.54 R
AUG 28	36.40 S	FEB 26	19.84 R	FEB 05, 1993	8.52 R	FEB 01, 1994	3.29 R
SEP 09	38.28 R	APR 08	16.14 R	APR 05	3.60 R	MAR 30	+5.57 RF
OCT 19	30.87 SS	MAY 18	17.00 R	JUL 14	6.62 R	APR 18	5.23 R

HIGHEST 3.29 FEB 01, 1994 LOWEST 38.28 SEP 09, 1991

State well number 1N23W1C2

Site identification number 341215119145501

Common name CM3-1,490

In Oxnard at power plant. Drilled observation well. One of four piezometers at this site. Diameter 2 inches, depth 1,490, perforated 1,390-1,410, 1,430-1,450, 1,470-1,490 feet. Altitude of land-surface datum 10 feet. Records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 29, 1989	41.75 T	AUG 02, 1990	51.17 S	JAN 21, 1992	56.30 R	JUN 09, 1993	20.07 R
DEC 15	43.32 T	OCT 05	54.25 S	FEB 21	53.47 V	JUL 16	19.78 R
JAN 06, 1990	45.03 S	17	55.72 S	27	53.12 R	AUG 17	19.88 R
12	43.45 T	DEC 04	58.43 S	APR 08	47.46 R	NOV 08	20.14 R
25	45.23 S	JAN 07, 1991	60.37 S	MAY 19	42.34 R	DEC 23	19.37 R
FEB 01	44.68 S	MAR 05	59.59 S	JUL 01	39.24 R	JAN 31, 1994	16.34 R
05	44.77 S	24	57.95 S	AUG 18	36.16 R	FEB 08	15.1 V
MAR 23	43.28 S	SEP 10	50.35 R	SEP 23	37.70 R	MAR 30	13.07 R
APR 04	44.58 S	OCT 11	51.81 S	NOV 09	39.40 R	APR 18	12.40 R
MAY 05	45.33 S	NOV 12	53.59 V	DEC 15	36.74 R		
23	46.96 T	18	56.35 R	FEB 05, 1993	31.44 RR		
JUN 06	48.36 S	JAN 07, 1992	55.20 S	APR 06	23.91 R		

HIGHEST 12.40 APR 18, 1994 LOWEST 60.37 JAN 07, 1991

State well number 1N23W1C3

Site identification number 341215119145502

Common name CM3-1,065

In Oxnard at power plant. Drilled observation well. One of four piezometers at this site. Diameter 2 inches, depth 1,065 feet, perforated 965-1,065 feet. Altitude of land-surface datum 10 feet. Water-level records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 29, 1989	35.10 T	AUG 02, 1990	43.38 S	NOV 18, 1991	44.35 R	APR 06, 1993	8.00 R
DEC 15	36.32 T	OCT 05	42.07 S	JAN 07, 1992	41.63 S	JUN 09	8.86 R
JAN 06, 1990	37.57 S	17	47.28 S	21	41.86 R	JUL 16	7.20 R
12	35.40 T	27	47.32 S	FEB 27	38.86 R	AUG 17	7.46 R
25	36.68 S	DEC 04	48.00 S	APR 08	31.80 R	NOV 08	7.68 R
FEB 01	36.43 S	JAN 07, 1991	49.70 S	MAY 19	27.74 R	DEC 23	3.83 R
05	36.46 S	FEB 07	48.70 S	JUL 01	26.14 R	JAN 31, 1994	1.03 R
MAR 23	35.50 S	MAR 05	48.35 S	AUG 18	24.98 R	FEB 07	.25 V
APR 04	37.28 S	24	45.14 S	SEP 23	27.32 R	MAR 29	+1.18 RF
MAY 05	37.93 S	SEP 10	39.95 R	NOV 09	26.10 R	APR 18	+1.03 RF
23	39.67 T	OCT 11	41.18 S	DEC 15	22.38 R		
JUN 06	40.73 S	NOV 12	41.94 V	FEB 05, 1993	14.96 R		

HIGHEST .25 FEB 07, 1994 LOWEST 49.70 JAN 07, 1991

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 1N23W1C4

Site identification number 341215119145503

Common name CM3-695

In Oxnard at power plant. Drilled observation well. One of four piezometers at this site. Diameter 2 inches, depth 695 feet, perforated 630-695 feet. Altitude of land-surface datum 10 feet. Water-level records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 29, 1989	42.80 T	OCT 17, 1990	44.11 S	JAN 07, 1992	35.31 S	APR 06, 1993	.80 R
DEC 15	44.00 T	DEC 04	43.61 S	21	35.40 R	JUN 09	.76 R
JAN 06, 1990	33.70 S	JAN 07, 1991	44.88 S	FEB 27	31.94 R	JUL 16	.88 R
12	32.20 T	MAR 05	43.48 S	APR 08	24.40 R	AUG 17	.33 R
FEB 01	33.80 S	24	39.31 S	MAY 19	22.03 R	NOV 08	1.92 R
MAR 23	32.72 S	SEP 10	36.55 R	JUL 01	21.70 R	DEC 23	+2.33 RF
MAY 05	35.78 S	OCT 11	37.57 S	AUG 18	20.92 R	JAN 31, 1994	+4.27 RF
31	37.54 T	12	37.76 S	SEP 23	22.96 R	FEB 08	+ .05 SF
JUN 06	38.03 S	20	38.34 S	NOV 09	19.20 R	MAR 30	+4.11 RF
AUG 02	41.15 S	NOV 12	37.55 V	DEC 15	13.60 R	APR 18	+4.07 RF
OCT 05	42.04 S	18	39.85 R	FEB 05, 1993	6.18 R		
HIGHEST .33 AUG 17, 1993							
LOWEST 44.88 JAN 07, 1991							

State well number 1N23W1C5

Site identification number 341215119145504

Common name CM3-145

In Oxnard at power plant. Drilled observation well. One of four piezometers at this site. Diameter 2 inches, depth 145 feet, perforated 120-145 feet. Altitude of land-surface datum 10 feet. Water-level records available 1989 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 29, 1989	11.50 T	OCT 05, 1990	14.75 S	JAN 21, 1992	13.52 R	JUN 09, 1993	2.15 R
DEC 15	12.52 T	17	15.68 S	FEB 27	12.00 R	JUL 16	1.76 R
JAN 06, 1990	12.92 S	DEC 04	14.38 S	APR 08	10.40 R	AUG 17	1.96 R
12	11.13 T	JAN 07, 1991	15.50 S	MAY 19	10.87 R	NOV 08	2.44 R
25	12.02 S	MAR 05	15.45 S	JUL 01	10.50 R	DEC 23	.83 R
FEB 01	12.22 S	24	13.77 S	AUG 18	10.21 R	JAN 31, 1994	+ .23 RF
MAR 23	12.03 S	SEP 10	14.35 R	SEP 23	11.08 R	FEB 08	+1.85 SF
MAY 05	13.47 S	OCT 12	14.30 S	NOV 09	10.14 R	MAR 30	+ .30 RF
23	13.83 T	NOV 12	14.98 V	DEC 15	7.02 R	APR 18	+ .28 RF
JUN 06	13.98 S	18	16.85 R	FEB 05, 1993	2.54 R		
AUG 02	15.37 S	JAN 07, 1992	12.88 S	APR 06	2.33 R		
HIGHEST .83 DEC 23, 1993							
LOWEST 16.85 NOV 18, 1991							

State well number 2N20W16A2

Site identification number 341549118583801

Common name TKS-280

Near Somis. Drilled observation well. One of five wells at this site. Diameter 2 inches, depth 280 feet, perforated 260-280 feet. Altitude of land-surface datum 285 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 30, 1991	73.96 S	JAN 10, 1992	86.36 V	JUL 21, 1992	83.92 V	JUL 22, 1993	68.56 V
JUL 16	87.14 S	APR 21	68.65 V	DEC 18	78.00 V		
HIGHEST 68.56 JUL 22, 1993							
LOWEST 87.14 JUL 16, 1991							

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N20W16A3

Site identification number 341549118583802

Common name TKS-180

Near Somis. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 180 feet, perforated 170-180 feet. Altitude of land-surface datum 285 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 30, 1991	34.17 S	JUL 22, 1991	32.85 V	APR 21, 1992	31.61 V	DEC 18, 1992	39.36 V
JUL 16	52.26 S	JAN 10, 1992	40.70 V	JUL 21	42.03 V	JUL 22, 1993	28.53 V
	HIGHEST	28.53	JUL 22, 1993				
	LOWEST	52.26	JUL 16, 1991				

State well number 2N20W16A4

Site identification number 341549118583803

Common name TKS-100

Near Somis. Drilled observation well. One of three wells at this site. Diameter 2 inches, depth 100 feet, perforated 90-100 feet. Altitude of land-surface datum 285 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 30, 1991	27.76 S	JAN 10, 1992	39.82 V	JUL 21, 1992	36.06 V	JUL 22, 1993	21.89 V
JUL 16	38.08 S	APR 21	25.86 V	DEC 18	32.92 V		
	HIGHEST	21.89	JUL 22, 1993				
	LOWEST	39.82	JAN 10, 1992				

State well number 2N21W7L3

Site identification number 341608119072901

Common name SAT-700

In Saticoy, at Saticoy spreading grounds. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 640-700 feet. One of five wells at this site. Altitude of land-surface datum 142 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 22, 1991	64.64 V	JAN 08, 1992	127.76 S	DEC 15, 1992	39.70 R	JAN 14, 1994	90.92 R
APR 04	96.19 V	MAY 12	91.35 V	FEB 03, 1993	35.02 R	FEB 04	89.37 R
JUL 17	127.84 S	JUL 22	101.38 V	APR 05	37.22 R	MAR 29	86.42 R
OCT 13	147.68 S	SEP 05	118.93 S	NOV 08	93.06 R	APR 19	95.89 R
DEC 10	139.57 S	NOV 10	47.36 R	DEC 10	97.79 R		
	HIGHEST	35.02	FEB 03, 1993				
	LOWEST	147.68	OCT 13, 1991				

State well number 2N21W7L4

Site identification number 341608119072902

Common name SAT-540

In Saticoy, at Saticoy spreading grounds. Drilled observation well. Diameter 2 inches, depth 540 feet, perforated 500-540 feet. One of five wells at this site. Altitude of land-surface datum 142 feet. Records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 22, 1991	96.48 V	JAN 08, 1992	114.89 S	DEC 15, 1992	39.44 R	JAN 14, 1994	89.49 R
APR 04	76.35 V	MAY 12	81.48 V	FEB 03, 1993	34.10 R	FEB 04	80.83 R
JUL 17	124.14 S	JUL 22	109.78 V	APR 05	43.52 R	MAR 29	75.54 R
OCT 13	156.20 S	SEP 05	132.47 S	NOV 08	81.56 R	APR 19	96.20 R
DEC 10	136.33 S	NOV 10	43.46 R	DEC 10	102.74 R		
	HIGHEST	34.10	FEB 03, 1993				
	LOWEST	156.20	OCT 13, 1991				



**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N21W7L5

Site identification number 341608119072903

Common name SAT-310

In Saticoy, at Saticoy spreading grounds. Drilled observation well. Diameter 2 inches, depth 310 feet, perforated 270-310 feet. One of five wells at this site. Altitude of land-surface datum 142 feet.

Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 22, 1991	65.02 V	JAN 08, 1992	96.14 S	DEC 15, 1992	77.18 R	JAN 14, 1994	41.33 R
APR 04	37.35 V	MAY 12	33.38 V	FEB 03, 1993	76.76 R	FEB 04	39.45 R
JUL 17	97.74 S	JUL 22	69.80 V	APR 05	79.47 R	MAR 29	35.67 R
OCT 13	119.27 S	SEP 05	88.44 S	NOV 08	32.22 R	APR 19	47.48 R
DEC 10	116.39 S	NOV 10	88.86 R	DEC 10	56.89 R		

HIGHEST 32.22 NOV 08, 1993  
 LOWEST 119.27 OCT 13, 1991

State well number 2N21W7L6

Site identification number 341608119072904

Common name SAT-155

In Saticoy, at Saticoy spreading grounds. Drilled observation well. Diameter 2 inches, depth 155 feet, perforated 135-155 feet. One of five wells at this site. Altitude of land-surface datum 142 feet.

Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 22, 1991	80.40 V	JUL 17, 1991	86.90 S	DEC 10, 1991	114.93 S	MAY 12, 1992	22.03 V
APR 03	40.04 V	OCT 13	113.14 S	JAN 08, 1992	96.48 S	JUL 22	52.85 V
SEP 05, 1992	72.46 S	FEB 03, 1993	86.86 R	DEC 10, 1993	43.83 R	MAR 29, 1994	34.38 R
NOV 10	100.20 R	APR 05	87.32 R	JAN 14, 1994	32.51 R	APR 19	35.56 R
DEC 15	88.96 R	NOV 08	27.40 R	FEB 04	35.71 R		

HIGHEST 22.03 MAY 12, 1992  
 LOWEST 114.93 DEC 10, 1991

State well number 2N21W11J3

Site identification number 341607119023301

Common name LP1-1,078

Near Somis. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 1,078 feet, perforated 1,018-1,078 feet. Altitude of land-surface datum 378 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 07, 1991	460.00 T	FEB 27, 1992	450.34 R	AUG 18, 1992	455.24 R	NOV 09, 1993	456.66 R
MAR 23	455.53 V	APR 08	446.04 R	SEP 23	459.62 R	DEC 20	454.13 R
MAY 23	456.92 S	MAY 18	455.27 R	NOV 10	453.08 R	JAN 31, 1994	454.10 R
AUG 27	457.10 V	JUL 02	457.46 R	DEC 15	452.54 R	MAR 29	450.17 R
NOV 19	458.40 R	20	452.07 V	FEB 03, 1993	448.96 R	APR 19	451.85 R
DEC 18	456.32 R	29	454.89 V	APR 05	445.96 R		
JAN 21, 1992	452.75 V	AUG 10	453.45 V	JUL 14	457.14 R		
23	452.78 R	11	454.55 V	AUG 18	453.97 R		

HIGHEST 445.96 APR 05, 1993  
 LOWEST 460.00 JAN 07, 1991

**Table 28.** Water-level data for multiple-well monitoring sites, November 1989 to August 1994—*Continued*

Site identification number 341607119023302

Near Somis. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 655 feet, perforated 615-655 feet. Altitude of land-surface datum 378 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE			WATER LEVEL MS		DATE			WATER LEVEL MS		DATE			WATER LEVEL MS	
JAN 07, 1991	388.35	T	JAN 21, 1992	387.74	V	JUL 20, 1992	389.50	V	NOV 10, 1992	390.50	R			
MAR 23	385.45	V	23	387.60	R	29	389.95	V	DEC 15	390.34	R			
MAY 23	387.93	S	FEB 27	387.06	R	AUG 10	389.35	V	FEB 03, 1993	388.90	R			
AUG 27	392.00	V	APR 08	386.42	R	11	389.71	V	APR 05	387.79	R			
NOV 19	387.60	R	MAY 18	386.96	R	18	390.02	R	JUL 14	390.48	R			
DEC 18	388.32	R	JUL 02	392.24	R	SEP 23	390.48	R	AUG 18	391.08	R			
NOV 09, 1993	392.44	R	JAN 31, 1994	392.25	R	APR 19, 1994	390.94	R						
DEC 20	392.54	R	MAR 29	390.95	R									

HIGHEST	385.45	MAR 23, 1991
LOWEST	392.54	DEC 20, 1993

Site identification number 341607119023303

Common Name: L1-350  
Near Somis. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 380 feet, perforated 340-380 feet. Altitude of land-surface datum 378 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE		WATER LEVEL MS	DATE		WATER LEVEL MS	DATE		WATER LEVEL MS
JAN 07, 1991	233.41 T		JAN 23, 1992	233.80 R	AUG 11, 1992	234.28 V	JUL 14, 1993	232.96 R
MAR 23	232.03 V		FEB 27	232.50 R	18	234.50 R	AUG 18	233.85 R
MAY 23	232.72 S		APR 08	231.08 R	SEP 23	235.52 R	NOV 09	235.80 R
AUG 27	233.06 V		MAY 18	231.88 R	NOV 10	235.78 R	DEC 20	235.70 R
NOV 19	235.00 R		JUL 02	233.30 R	DEC 15	235.46 R	JAN 31, 1994	235.61 R
DEC 18	234.84 R		20	233.27 V	FEB 03, 1993	233.66 R	MAR 29	233.50 R
JAN 21, 1992	233.75 V		AUG 10	238.91 V	APR 05	231.23 R	APR 19	232.90 R

HIGHEST	231.08	APR 08, 1992
LOWEST	238.91	AUG 10, 1992

Site identification number 341607119023304

Near Somis. Drilled observation well. One of our wells at this site. Diameter 2 inches, depth 230 feet, perforated 190-230 feet. Altitude of land-surface datum 378 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE			WATER LEVEL MS			DATE			WATER LEVEL MS			DATE			WATER LEVEL MS		
NOV 19, 1991	219.00	R	MAY 18, 1992	219.78	R	DEC 15, 1992	219.80	R	NOV 09, 1993	220.30	R	DEC 18, 1993	219.72	R	JUL 02, 1994	219.70	R
JAN 23, 1992	219.78	R	AUG 18, 1992	219.90	R	FEB 03, 1993	219.80	R	DEC 20, 1993	220.30	R	JAN 21, 1994	219.80	R	AUG 18, 1994	219.90	R
FEB 27, 1992	219.80	R	SEP 23, 1992	219.94	R	JUL 14, 1993	220.40	R	MAR 29, 1994	220.30	R	APR 08, 1994	219.70	R	NOV 10, 1994	219.80	R
APR 08, 1994	219.70	R	NOV 10, 1994	219.80	R	AUG 18, 1994	220.00	R	APR 19, 1994	220.30	R						

HIGHEST	219.00	NOV 19, 1991
LOWEST	220.40	JUL 14, 1993

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N21W34G2

Site identification number 341246119040201

Common name FV1-998

Near Camarillo. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 998 feet, perforated 938-998 feet. Altitude of land-surface datum 90 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUL 31, 1990	252.22 T	SEP 04, 1991	245.45 V	MAY 18, 1992	211.68 R	JUL 26, 1993	208.46 V
AUG 01	251.67 T	10	239.50 R	JUL 02	210.38 R	AUG 17	205.90
03	252.72 T	NOV 19	262.80 R	AUG 18	229.24 R	SEP 25	200.41 V
SEP 06	250.72 T	DEC 18	261.04 R	SEP 23	240.90 R	NOV 09	209.58 R
OCT 16	253.19 T	JAN 23, 1992	245.62 R	NOV 10	220.78 R	DEC 20	195.48 R
DEC 14	251.62 T	FEB 26	222.04 R	DEC 15	214.80 R	JAN 31, 1994	191.23 R
MAR 25, 1991	224.94 V	APR 08	208.50 R	FEB 03, 1993	199.22 R	MAR 29	184.04 R
JUL 18	237.58 S	MAY 05	210.49 V	APR 05	191.78 R	APR 19	189.63 R
AUG 14	243.05 SR	14	211.18 VR	JUL 14	222.50 R		
HIGHEST 184.04 MAR 29, 1994							
LOWEST 262.80 NOV 19, 1991							

State well number 2N21W34G3

Site identification number 341246119040202

Common name FV1-860

Near Camarillo. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 860 feet, perforated 800-860 feet. Altitude of land-surface datum 90 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 01, 1990	252.42 T	SEP 04, 1991	244.53 V	MAY 18, 1992	211.06 R	JUL 26, 1993	208.55 V
02	253.07 T	10	243.40 R	JUL 02	209.88 R	AUG 17	205.41 V
03	253.27 T	NOV 19	263.70 R	AUG 18	229.24 R	NOV 09	208.80 R
SEP 06	251.01 T	DEC 18	262.28 R	SEP 23	240.96 R	DEC 20	195.04 R
OCT 16	253.82 T	JAN 23, 1992	246.62 R	NOV 10	220.58 R	JAN 31, 1994	190.80 R
DEC 14	252.17 T	FEB 26	222.26 R	DEC 15	214.54 R	MAR 29	183.60 R
MAR 25, 1991	224.81 V	APR 08	208.38 R	FEB 03, 1993	198.88 R	APR 19	189.02 R
JUL 18	238.60 S	MAY 05	210.40 V	APR 05	191.36 R		
AUG 14	243.55 SR	14	211.02 V	JUL 14	223.10 R		
HIGHEST 183.60 MAR 29, 1994							
LOWEST 263.70 NOV 19, 1991							

State well number 2N21W34G4

Site identification number 341246119040203

Common name FV1-380

Near Camarillo. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 380 feet, perforated 360-380 feet. Altitude of land-surface datum 90 feet. Water-level records available 1990 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 01, 1990	212.82 T	SEP 04, 1991	209.80 V	MAY 15, 1992	177.12 V	JUL 14, 1993	171.28 R
02	211.22 T	10	205.30 R	18	177.34 R	26	170.14 V
03	212.67 T	NOV 19	221.40 R	JUL 02	176.62 R	AUG 17	168.59 V
SEP 06	213.03 T	DEC 18	221.50 R	AUG 18	189.70 R	SEP 25	164.28 V
OCT 16	215.52 T	JAN 23, 1992	205.58 R	SEP 23	199.34 R	NOV 09	166.04 R
DEC 14	217.02 T	FEB 26	191.78 R	NOV 10	188.08 R	DEC 20	158.70 R
MAR 25, 1991	196.87 V	APR 08	176.16 R	DEC 15	182.66 R	JAN 31, 1994	153.11 R
JUL 18	211.22 S	MAY 05	177.30 V	FEB 03, 1993	163.00 R	MAR 29	145.20 R
AUG 14	206.58 SR	14	177.30 V	APR 05	154.70 R	APR 19	143.93 R
HIGHEST 143.93 APR 19, 1994							
LOWEST 221.50 DEC 18, 1991							

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N21W34G5

Site identification number 341246119040204

Common name PV1-190

Near Camarillo. Drilled observation well. One of four wells at this site. Diameter 2 inches, depth 190 feet, perforated 179-190 feet. Altitude of land-surface datum 90 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 01, 1990	148.73 T	SEP 10, 1991	144.80 R	JUL 02, 1992	122.74 R	AUG 17, 1993	111.90 V
02	148.68 T	NOV 19	153.10 R	AUG 18	130.36 R	SEP 25	109.29 V
03	147.96 T	DEC 18	154.20 R	SEP 23	134.52 R	NOV 09	109.44 R
SEP 06	151.38 T	JAN 23, 1992	142.52 R	NOV 10	127.86 R	DEC 20	103.04 R
OCT 16	155.38 T	FEB 26	132.00 R	DEC 15	121.36 R	JAN 31, 1994	99.91 R
DEC 14	158.73 T	APR 08	119.34 R	FEB 03, 1993	107.62 R	MAR 29	92.89 R
MAR 25, 1991	137.22 V	MAY 05	120.15 V	APR 05	99.83 R	APR 19	94.27 R
JUL 18	140.43 S	14	121.14 V	JUL 14	116.54 R		
SEP 04	144.09 V	18	124.20 R	26	115.96 V		

HIGHEST 92.89 MAR 29, 1994

LOWEST 158.73 DEC 14, 1990

State well number 2N21W34G6

Site identification number 341246119040205

Common name PV2-436

West of Camarillo. Drilled observation well. Diameter 2 inches, depth 436 feet, perforated 431-436 feet. Altitude of land-surface datum approximately 90 feet. Water-level records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
SEP 06, 1990	217.25 TR	DEC 18, 1991	215.76 R	AUG 18, 1992	204.82 R	SEP 25, 1993	202.29 V
OCT 16	207.50 T	JAN 23, 1992	215.88 R	SEP 23	206.22 R	NOV 09	190.92 R
DEC 14	214.50 T	FEB 26	215.32 R	NOV 10	206.50 R	DEC 20	189.57 R
MAR 25, 1991	210.34 V	APR 08	212.74 R	DEC 15	206.10 R	JAN 31, 1994	188.09 R
AUG 13	216.53 S	MAY 05	210.91 V	FEB 03, 1993	202.60 R	MAR 29	184.64 R
14	216.20 SR	14	210.46 V	APR 05	196.03 R	APR 19	184.62 R
SEP 04	211.78 V	15	210.40 V	JUL 14	189.82 R		
10	210.20 R	18	379.46 R	26	189.74 V		
NOV 19	214.30 R	JUL 02	210.40 R	AUG 17	189.75 V		

HIGHEST 184.62 APR 19, 1994

LOWEST 379.46 MAY 18, 1992

State well number 2N22W23B3

Site identification number 341449119090101

Common name SG-1,250

In Oxnard, at El Rio spreading grounds. Drilled observation well. Diameter 2 inches, depth 1,250 feet, perforated 1,210-1,250 feet. One of five wells at this site. Altitude of land-surface datum 107 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 10, 1991	231.63 T	DEC 11, 1991	228.47 SS	NOV 08, 1993	135.70 R	MAR 29, 1994	123.33 R
MAR 23	215.84 T	JAN 08, 1992	213.47 S	DEC 10	135.03 R	APR 19	121.73 R
JUL 17	201.88 S	MAY 13	171.60 V	JAN 14, 1994	130.87 R		
OCT 12	228.53 S	JUN 03	167.51 S	FEB 04	90.23 R		

HIGHEST 90.23 FEB 04, 1994

LOWEST 231.63 JAN 10, 1991

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N22W23B4

Site identification number 341449119090102

Common name SG-1,150

In Oxnard, at El Rio spreading grounds. Drilled observation well. Diameter 2 inches, depth 1,150 feet, perforated 1,110-1,150 feet. One of five wells at this site. Altitude of land-surface datum 107 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 10, 1991	238.50 T	DEC 11, 1991	228.49 SS	JUN 02, 1992	166.40 S	FEB 04, 1994	81.69 R
MAR 23	214.32 T	12	225.91 SS	NOV 08, 1993	135.32 R	MAR 29	121.73 R
JUL 17	192.40 S	JAN 08, 1992	211.50 S	DEC 10	134.02 R	APR 19	120.52 R
OCT 12	229.22 S	MAY 12	170.61 V	JAN 14, 1994	129.59 R		

HIGHEST 81.69 FEB 04, 1994

LOWEST 238.50 JAN 10, 1991

State well number 2N22W23B5

Site identification number 341449119090103

Common name SG-870

In Oxnard at El Rio spreading grounds. Drilled observation well. Diameter 2 inches, depth 870 feet, perforated 830-870 feet. One of five wells at this site. Altitude of land-surface datum 107 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 10, 1991	211.53 T	DEC 11, 1991	207.10 SS	NOV 10, 1992	167.12 R	DEC 10, 1993	118.73 R
MAR 23	198.55 T	12	205.74 SS	DEC 15	161.54 R	JAN 14, 1994	114.62 R
JUL 17	193.71 S	JAN 08, 1992	204.94 S	FEB 03, 1993	149.10 R	FEB 04	40.31 R
OCT 12	227.76 S	MAY 12	159.55 V	APR 05	135.85 R	MAR 29	106.88 R
13	220.19 S	JUN 02	156.13 S	NOV 08	120.10 R	APR 19	105.93 R

HIGHEST 40.31 FEB 04, 1994

LOWEST 227.76 OCT 12, 1991

State well number 2N22W23B6

Site identification number 341449119090104

Common name SG-500

In Oxnard at El Rio spreading grounds. Drilled observation well. Diameter 2 inches, depth 500 feet, perforated 460-500 feet. One of five wells at this site. Altitude of land-surface datum 107 feet. Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 10, 1991	143.63 T	OCT 12, 1991	126.95 S	JUN 03, 1992	93.32 S	FEB 03, 1993	148.66 R
MAR 23	135.53 T	DEC 11	128.13 SS	NOV 10	166.08 R	APR 05	134.38 R
JUL 17	132.69 S	JAN 08, 1992	116.50 S	DEC 15	160.30 R	NOV 08	54.82 R
DEC 10, 1993	53.79 R	FEB 04, 1994	39.23 R	APR 19, 1994	50.28 R		
JAN 14, 1994	52.15 R	MAR 29	48.67 R				

HIGHEST 39.23 FEB 04, 1994

LOWEST 166.08 NOV 10, 1992

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 2N22W23B7

Site identification number 341449119090105

Common name SG-300

In Oxnard at El Rio spreading grounds. Drilled observation well. Diameter 2 inches, depth 300 feet, perforated 260-300 feet. One of five wells at this site. Altitude of land-surface datum 107 feet.

Records available 1990 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 10, 1991	130.91 T	JAN 08, 1992	123.13 S	APR 05, 1993	119.43 R	MAR 29, 1994	44.93 R
MAR 23	125.95 T	JUN 02	93.46 S	NOV 08	45.08 R	APR 19	45.91 R
JUL 17	122.35 S	NOV 10	152.90 R	DEC 10	48.63 R		
OCT 12	125.21 S	DEC 15	147.78 R	JAN 14, 1994	48.18 R		
DEC 11	126.01 SS	FEB 03, 1993	134.90 R	FEB 04	34.07 R		

HIGHEST 34.07 FEB 04, 1994

LOWEST 152.90 NOV 10, 1992

State well number 3N20W35R2

Site identification number 341745118561601

Common name P7-1.110

Near Moorpark. One of 3 drilled observation wells at this site. Diameter 2 inches, depth 1,110 feet, perforated 1,050 to 1,110 feet. Altitude of land-surface datum 590 feet. Water-level records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 06, 1991	384.96 V	JAN 23, 1992	379.32 V	JUL 22, 1992	393.86 VS	FEB 09, 1994	379.24 V
AUG 21	390.89 V	APR 21	378.59 VS	DEC 17	381.61 VS		
DEC 16	388.94 VS	JUN 02	287.15 S	JUL 20, 1993	393.21 S		

HIGHEST 287.15 JUN 02, 1992

LOWEST 393.21 JUL 20, 1993

State well number 3N20W35R3

Site identification number 341745118561602

Common name P7-900

Near Moorpark. One of 3 drilled observation wells at this site. Diameter 2 inches, depth 900 feet, perforated 800 to 900 feet. Altitude of land-surface datum 590 feet. Water-level records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 07, 1991	387.21 V	JAN 23, 1992	384.25 V	JUL 22, 1992	398.03 VS	FEB 09, 1994	379.31 V
AUG 21	393.02 V	APR 21	383.35 VS	DEC 17	383.33 VS		
DEC 16	392.71 VS	JUN 02	390.65 S	JUL 20, 1993	390.67 S		

HIGHEST 379.31 FEB 09, 1994

LOWEST 393.02 AUG 21, 1991

State well number 3N20W35R4

Site identification number 341745118561603

Common name P7-530

Near Moorpark. One of 3 drilled observation wells at this site. Diameter 2 inches, depth 530 feet, perforated 490-530 feet. Altitude of land-surface datum 590 feet. Water-level records available 1991 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 21, 1991	265.65 V	JAN 23, 1992	267.98 V	JUL 22, 1992	268.9 VS	FEB 09, 1994	272.28 V
DEC 03	267.78 SZ	APR 21	267.59 VS	DEC 17	269.61 VS		
16	268.19 VS	JUN 02	268.57 S	JUL 20, 1993	270.99 S		

HIGHEST 265.65 AUG 21, 1991

LOWEST 272.28 FEB 09, 1994

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 3N21W15G1

Site identification number 342034119040201

Common name SP1-680

In Santa Paula. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 660-680 feet. One of five wells at this site. Altitude of land-surface datum 236 feet. Records available 1994 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 14, 1994	40.85 V	AUG 04, 1994	44.73 S	AUG 22, 1994	45.38 V
	HIGHEST	40.85	JUN 14, 1994		
	LOWEST	45.38	AUG 22, 1994		

State well number 3N21W15G2

Site identification number 342034119040202

Common name SP1-540

In Santa Paula. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 520-540 feet. One of five wells at this site. Altitude of land-surface datum 236 feet. Records available 1994 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 14, 1994	41.10 V	AUG 04, 1994	44.96 S	AUG 22, 1994	45.64 V
	HIGHEST	41.10	JUN 14, 1994		
	LOWEST	45.64	AUG 22, 1994		

State well number 3N21W15G3

Site identification number 342034119040203

Common name SP1-390

In Santa Paula. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 370-390 feet. One of five wells at this site. Altitude of land-surface datum 236 feet. Records available 1994 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 14, 1994	41.33 V	AUG 04, 1994	45.08 S	AUG 22, 1994	45.72 V
	HIGHEST	41.33	JUN 14, 1994		
	LOWEST	45.72	AUG 22, 1994		

State well number 3N21W15G4

Site identification number 342034119040204

Common name SP1-280

In Santa Paula. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 260-280 feet. One of five wells at this site. Altitude of land-surface datum 236 feet. Records available 1994 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 14, 1994	41.55 V	AUG 04, 1994	45.23 S	AUG 22, 1994	45.88 V
	HIGHEST	41.55	JUN 14, 1994		
	LOWEST	45.88	AUG 22, 1994		

State well number 3N21W15G5

Site identification number 342034119040205

Common name SP1-80

In Santa Paula. Drilled observation well. Diameter 2 inches, depth 700 feet, perforated 60-80 feet. One of five wells at this site. Altitude of land-surface datum 236 feet. Records available 1994 to current year.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 14, 1994	23.22 V	AUG 04, 1994	23.66 S	AUG 22, 1994	23.78 V
	HIGHEST	23.22	JUN 14, 1994		
	LOWEST	23.78	AUG 22, 1994		

**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 3N21W16H5

Site identification number 342035119044401

Common name SP2-550

In Teague Park, Santa Paula. Drilled observation well. Diameter 2 inches, depth 600, perforated 530-550 feet. One of four wells at this site. Altitude of land-surface datum 240 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 15, 1994	46.25 V	AUG 04, 1994	50.26 S	AUG 22, 1994	50.69 V
	HIGHEST	46.25	JUN 15, 1994		
	LOWEST	50.69	AUG 22, 1994		

State well number 3N21W16H6

Site identification number 342035119044402

Common name SP2-310

In Teague Park, Santa Paula. Drilled observation well. Diameter 2 inches, depth 600 feet, perforated 290-310 feet. One of four wells at this site. Altitude of land-surface datum 240 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 15, 1994	46.52 V	AUG 04, 1994	50.49 S	AUG 22, 1994	50.81 V
	HIGHEST	46.52	JUN 15, 1994		
	LOWEST	50.81	AUG 22, 1994		

State well number 3N21W16H7

Site identification number 342035119044403

Common name SP2-170

In Teague Park, Santa Paula. Drilled observation well. Diameter 2 inches, depth 600 feet, perforated 150-170 feet. One of four wells at this site. Altitude of land-surface datum 240 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 15, 1994	46.24 V	AUG 04, 1994	50.07 S	AUG 22, 1994	50.38 V
	HIGHEST	46.24	JUN 15, 1994		
	LOWEST	50.38	AUG 22, 1994		

State well number 3N21W16H8

Site identification number 342035119044404

Common name SP2-70

In Teague Park, Santa Paula. Drilled observation well. Diameter 2 inches, depth 600 feet, perforated 60-70 feet. One of four wells at this site. Altitude of land-surface datum 240 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 15, 1994	36.01 V	AUG 04, 1994	38.46 S	AUG 22, 1994	39.16 V
	HIGHEST	36.01	JUN 15, 1994		
	LOWEST	39.16	AUG 22, 1994		



**Table 28. Water-level data for multiple-well monitoring sites, November 1989 to August 1994—Continued**

State well number 4N18W31D3

Site identification number 342335118484401

Common name RP1-610

In Piru. Drilled observation well. Diameter 2 inches, depth 638 feet, perforated 610-620 feet. One of five wells at this site. Altitude of land-surface datum 592 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 25, 1994	32.88 V	AUG 04, 1994	37.96 S	AUG 23, 1994	37.14 V
	HIGHEST	32.88	JUN 25, 1994		
	LOWEST	37.96	AUG 04, 1994		

State well number 4N18W31D4

Site identification number 342335118484402

Common name RP1-330

In Piru. Drilled observation well. Diameter 2 inches, depth 638 feet, perforated 310-330 feet. One of five wells at this site. Altitude of land-surface datum 592 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 25, 1994	31.40 V	AUG 04, 1994	33.84 S	AUG 23, 1994	35.23 V
	HIGHEST	31.40	JUN 25, 1994		
	LOWEST	35.23	AUG 23, 1994		

State well number 4N18W31D5

Site identification number 342335118484403

Common name RP1-240

In Piru. Drilled observation well. Diameter 2 inches, depth 638 feet, perforated 220-240 feet. One of five wells at this site. Altitude of land-surface datum 592 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 25, 1994	30.78 V	AUG 04, 1994	33.86 S	AUG 23, 1994	34.63 V
	HIGHEST	30.78	JUN 25, 1994		
	LOWEST	34.63	AUG 23, 1994		

State well number 4N18W31D6

Site identification number 342335118484404

Common name RP1-160

Drilled observation well. Diameter 2 inches, depth 638, perforated 140-160 feet. One of five wells at this site. Altitude of land-surface datum 592 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS
AUG 23, 1994	34.30 V

State well number 4N18W31D7

Site identification number 342335118484405

Common name RP1-70

In Piru. Drilled observation well. Diameter 2 inches, depth 638 feet, perforated 50-70 feet. One of five wells at this site. Altitude of land-surface datum 592 feet. Records available 1994 to current year.

## WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 25, 1994	30.21 V	AUG 04, 1994	33.93 S	AUG 23, 1994	34.10 V
	HIGHEST	30.21	JUN 25, 1994		
	LOWEST	34.10	AUG 23, 1994		

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95

[All data were analyzed at U.S. Geological Survey laboratories. Location of sites shown in figure 2. Analysis for each sample is shown on one line on four consecutive pages. Numbering systems for sites are explained in text.  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter;  $^{\circ}\text{C}$ , degrees Celsius;  $\text{mg}/\text{L}$ , milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter. —, no data; <, actual value is less than value shown]

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved ( $\text{mg}/\text{L}$ )	Magnesium, dissolved ( $\text{mg}/\text{L}$ )
CM1A-565	1S/21W-8L3	340544119062901	10-19-89	1845	2,390	7.7	—	20.0	72	48
			06-05-90	1330	2,320	7.8	—	21.0	77	53
			07-18-91	1630	2,920	7.6	20.5	22.0	100	70
CM1A-220	1S/21W-8L4	340544119062902	10-19-89	1930	35,500	7.4	—	18.5	510	1,000
			06-05-90	1515	42,400	7.3	—	19.5	580	1,000
			07-18-91	1300	39,600	7.3	20.5	19.0	560	1,000
CM6-550	1S/22W-1H1	340650119080201	10-31-90	1330	4,700	7.8	—	22.5	40	39
			01-22-92	1230	1,420	8.1	20.5	19.0	7.4	5.4
CM6-400	1S/22W-1H2	340650119080202	11-01-90	0930	1,870	8.1	—	20.0	46	18
			06-12-91	1115	1,770	8.1	19.0	21.0	45	20
CM6-330	1S/22W-1H3	340650119080203	11-01-90	1000	2,110	7.5	—	20.5	150	56
			06-11-91	1555	2,370	7.4	16.5	20.0	200	74
CM6-200	1S/22W-1H4	340650119080204	11-01-90	1100	6,670	7.2	—	22.0	450	150
			06-11-91	1500	6,500	7.3	20.0	20.0	460	160
SCE-414	1N/21W-19L10	340914119073301	06-12-91	1800	1,190	7.6	20.0	20.0	120	35
SCE-320	1N/21W-19L11	340914119073302	06-12-91	1000	1,490	7.6	17.5	19.5	160	43
SCE-220	1N/21W-19L12	340914119073303	06-12-91	1730	2,460	7.3	18.5	19.5	270	78
SCE-130	1N/21W-19L13	340914119073304	06-12-91	1600	1,230	8.0	19.5	20.0	110	30
SCE-38	1N/21W-19L14	340914119073305	06-13-91	0900	8,820	7.3	17.5	19.0	1,000	250
Q2-970	1N/21W-32Q2	340712119062001	06-25-91	1330	9,150	7.9	—	23.5	38	42
			12-18-91	1300	11,400	8.0	18.0	24.0	51	60
Q2-840	1N/21W-32Q3	340712119062002	06-25-91	1200	2,020	7.7	—	24.0	51	35
Q2-640	1N/21W-32Q4	340712119062003	06-25-91	1650	6,500	7.4	—	22.5	340	200
Q2-370	1N/21W-32Q5	340712119062004	06-25-91	1915	5,740	7.3	—	21.0	380	160
Q2-220	1N/21W-32Q6	340712119062005	06-26-91	1915	1,500	7.6	—	20.5	130	39
Q2-285	1N/21W-32Q7	340712119062006	06-25-91	1500	4,580	7.5	—	22.5	350	130
A1-930	1N/22W-20J4	340916119120901	05-30-91	1630	1,240	8.6	—	19.0	110	30
A1-680	1N/22W-20J5	340916119120902	05-30-91	1555	—	7.9	—	19.5	120	32
A1-425	1N/22W-20J6	340916119120903	05-30-91	1830	1,130	8.9	—	18.5	49	30
A1-320	1N/22W-20J7	340916119120904	05-30-91	1900	1,250	8.1	—	17.0	87	28
A1-195	1N/22W-20J8	340916119120905	05-31-91	0930	7,900	8.0	—	17.5	190	130
A2-940	1N/22W-20M1	340907119125201	11-13-91	1645	1,350	7.8	27.0	21.0	110	29
A2-740	1N/22W-20M2	340907119125202	11-07-91	1330	1,330	7.2	20.5	20.0	110	27
A2-560	1N/22W-20M3	340907119125203	11-06-91	1615	1,290	7.1	19.5	20.0	99	31
A2-320	1N/22W-20M4	340907119125204	11-12-91	1630	1,180	7.2	—	19.0	110	30
A2-170	1N/22W-20M5	340907119125301	11-07-91	1700	20,400	7.1	—	19.0	680	460
A2-70	1N/22W-20M6	340907119125302	11-13-91	1820	21,500	7.2	19.0	20.0	440	570
SWIFT-350	1N/22W-26J3	340821119085701	10-29-90	1630	1,160	7.1	—	19.5	120	34
			06-13-91	1635	1,140	7.7	22.5	20.5	120	34
SWIFT-205	1N/22W-26J4	340821119085702	09-28-90	0930	4,050	7.3	—	20.0	360	110

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
1S/21W-8L3	340	4.0	—	—	45	520	0.30	2.0	0.490
	320	11	330	—	110	570	.20	2.3	.710
	360	13	330	325	110	760	.40	2.2	.580
1S/21W-8L4	8,200	200	—	—	2,100	15,000	.10	53	.120
	7,500	200	170	—	2,300	16,000	<.10	52	.280
	8,200	230	170	165	2,100	16,000	2.2	51	.190
1S/22W-1H1	930	36	—	—	360	1,000	.40	4.0	.016
	320	14	670	—	13	66	.40	.52	.009
1S/22W-1H2	300	9.1	—	—	120	380	.20	1.9	.540
	280	9.1	340	336	95	340	.40	1.8	.620
1S/22W-1H3	190	9.4	—	—	290	380	.40	1.5	.100
	170	9.4	210	213	260	480	.30	2.0	.200
1S/22W-1H4	600	23	—	—	380	1,800	<.10	6.4	.120
	650	25	240	236	490	1,900	.50	6.8	.100
1N/21W-19L10	96	4.7	210	—	350	55	.40	.27	.039
1N/21W-19L11	90	3.7	210	—	360	150	.30	.57	.046
1N/21W-19L12	130	6.2	190	—	400	470	.50	1.8	.050
1N/21W-19L13	110	5.5	240	—	350	45	.60	.25	.069
1N/21W-19L14	950	14	250	—	2,500	2,300	.80	6.9	.780
1N/21W-32Q2	2,000	37	380	377	68	3000	1.0	11	1.4
	2,200	46	340	339	140	3,400	2.0	12	1.3
1N/21W-32Q3	320	9.6	390	385	240	340	.40	1.4	.440
1N/21W-32Q4	560	14	310	305	350	1,800	.40	6.6	.630
1N/21W-32Q5	370	9.0	220	—	430	1,500	.20	4.2	.010
1N/21W-32Q6	140	5.8	220	—	400	150	.40	.52	.052
1N/21W-32Q7	380	9.3	220	221	370	1,300	.30	4.6	.110
1N/22W-20J4	130	10	240	241	420	45	.20	.24	.054
1N/22W-20J5	100	6.0	—	216	390	38	.40	.20	.035
1N/22W-20J6	120	39	300	295	230	33	<.10	.16	.088
1N/22W-20J7	150	13	230	233	390	50	.30	.27	.049
1N/22W-20J8	1,300	24	200	193	1,100	1,800	.10	7.5	.060
1N/22W-20M1	140	7.9	180	182	370	63	.40	.35	.055
1N/22W-20M2	140	6.8	210	213	390	69	.50	.29	.034
1N/22W-20M3	130	6.0	210	205	300	70	.70	.30	.039
1N/22W-20M4	110	5.2	170	—	390	48	.50	.23	.033
1N/22W-20M5	3,300	58	220	221	1,200	6,500	1.6	24	.075
1N/22W-20M6	3,500	98	210	209	1,300	7,600	2.8	22	.130
1N/22W-26J3	82	4.2	—	—	360	37	.50	.21	.037
	80	4.0	220	—	340	49	.60	.23	.040
1N/22W-26J4	310	12	210	206	480	1,000	<.10	3.6	.061

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
1S/21W-8L3	44	1,290	—	<0.100	1.80	1.7	0.050	0.050	—
	45	1,370	—	<.100	2.00	1.9	.040	.060	—
	44	1,640	<0.010	.087	1.80	2.2	.060	.040	—
1S/21W-8L4	28	26,900	—	<.100	4.00	3.3	.060	.010	—
	30	28,300	—	<.100	2.90	3.5	.020	.020	—
	29	28,400	.010	<.050	3.40	3.4	.020	<.010	—
1S/22W-1H1	35	2,820	.040	<.100	6.40	9.9	10.0	1.10	180
	39	1,020	.030	.068	4.50	6.9	4.80	3.90	—
1S/22W-1H2	42	1,000	<.010	<.100	1.70	1.7	.710	.620	30
	42	990	<.010	<.050	1.40	2.0	.280	.260	—
1S/22W-1H3	38	1,270	<.010	<.100	.900	.90	1.30	.780	10
	37	1,540	<.010	<.050	.910	1.2	.670	.690	—
1S/22W-1H4	33	4,220	<.010	<.100	1.70	1.6	.660	.450	20
	33	4,120	.010	<.050	1.50	1.6	.860	.790	—
1N/21W-19L10	35	830	<.010	<.050	.260	.30	.030	.050	—
1N/21W-19L11	34	1,000	<.010	.360	.630	1.0	.260	.130	—
1N/21W-19L12	34	1,730	.020	.062	.310	.40	.200	.220	—
1N/21W-19L13	33	830	<.010	<.050	.700	.80	.320	.300	—
1N/21W-19L14	25	7,430	.070	.091	3.10	4.0	.180	.200	—
1N/21W-32Q2	13	5,040	<.010	<.050	3.00	2.9	1.00	.300	330
	15	8,920	.010	<.050	4.10	4.6	.560	.500	—
1N/21W-32Q3	51	1,180	<.010	<.050	1.60	18	.580	.370	20
1N/21W-32Q4	48	3,740	<.010	<.050	1.80	2.1	1.70	.290	40
1N/21W-32Q5	39	3,400	.020	<.050	1.20	1.1	1.20	1.20	—
1N/21W-32Q6	36	1,020	.030	.066	.520	.50	.870	.790	—
1N/21W-32Q7	35	2,930	<.010	<.050	1.00	1.1	.100	.090	20
1N/22W-20J4	33	872	<.010	<.050	.200	1.2	.680	.410	—
1N/22W-20J5	36	854	.020	<.050	.460	.70	.270	.270	—
1N/22W-20J6	31	692	—	—	—	—	—	—	—
1N/22W-20J7	34	922	<.010	<.050	1.80	2.8	2.90	1.40	—
1N/22W-20J8	26	4,950	—	—	—	—	—	—	—
1N/22W-20M1	36	974	<.010	<.050	.410	.50	.580	.330	—
1N/22W-20M2	31	882	.010	<.050	.280	.30	.290	.190	—
1N/22W-20M3	34	872	.020	<.050	.090	<.20	3.70	1.10	—
1N/22W-20M4	35	826	.010	<.050	.380	.50	.650	.580	—
1N/22W-20M5	26	13,800	<.020	<.050	4.50	1.3	.030	.030	—
1N/22W-20M6	28	13,800	.010	<.050	3.20	1.1	.260	.030	—
1N/22W-26J3	34	788	<.010	<.100	.180	.20	.030	.030	10
	37	800	<.010	<.050	.170	.20	.040	.040	—
1N/22W-26J4	37	3,140	<.010	<.100	.610	.80	2.10	1.40	10

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	Tritium (in Tritium units)
1S/21W-8L3	<100	830	80	—	30	—	-47.4	-6.95	—	—
	<100	850	<10	—	20	—	-43.5	-6.85	—	—
	200	770	50	100	10	2,000	-45.5	-6.85	-22.00	—
1S/21W-8L4	<100	3,000	5,700	—	600	—	-11.5	-2.00	—	—
	200	3,200	7,000	—	660	—	-11.0	-1.95	—	—
	<100	3,200	6,600	140	530	9,500	-11.0	-1.85	-11.90	0.6
1S/22W-1H1	100	1,600	3,000	—	220	1,100	-50.5	-7.60	—	—
	38	1,500	420	19	44	180	-53.5	-7.80	-10.30	—
1S/22W-1H2	48	820	60	—	23	600	-50.5	-7.40	—	—
	37	790	40	49	17	580	-49.5	-7.35	-28.60	.2
1S/22W-1H3	100	600	140	—	480	1,800	-50.5	-7.55	—	—
	100	580	310	50	580	2,200	-50.0	-7.55	-16.20	0
1S/22W-1H4	300	720	900	—	1,400	4,800	-48.0	-7.30	—	—
	100	740	750	80	1,300	4,600	-49.0	-7.25	-18.60	.1
1N/212-19L10	29	630	220	45	230	1,000	-52.5	-7.70	—	.1
1N/21W-19L11	46	660	390	35	460	1,300	-52.0	-7.60	—	.3
1N/21W-19L12	<100	670	140	50	760	2,200	-52.0	-7.60	—	.6
1N/21W-19L13	22	660	94	29	280	1,100	-53.0	-7.75	—	.6
1N/21W-19L14	<100	3,400	140	40	1,900	6,900	-48.5	-7.10	—	.2
1N/21W-32Q2	600	3,600	180	150	110	1,500	-45.5	-6.80	-10.70	—
	600	650	20	170	80	2,200	-43.5	-6.45	-8.90	—
1N/21W-32Q3	120	880	59	68	21	910	-44.0	-6.90	-23.90	.1
1N/21W-32Q4	<100	840	160	130	80	5,100	-41.5	-6.90	-22.60	.2
1N/21W-32Q5	200	380	<10	60	1,300	4,200	-44.5	-6.90	-12.00	.2
1N/21W-32Q6	31	600	48	45	300	1,100	-50.5	-7.70	-17.00	0
1N/21W-32Q7	310	370	290	60	240	3,500	-44.0	-6.60	-16.80	0
1N/22W-20J4	40	560	14	40	100	1,000	-50.0	-7.65	—	—
1N/22W-20J5	29	630	60	40	140	960	-51.0	-7.65	—	—
1N/22W-20J6	140	500	41	17	33	610	-51.5	-7.65	—	—
1N/22W-20J7	41	660	860	36	89	860	-52.5	-7.70	—	—
1N/22W-20J8	<100	1,100	<10	70	40	2,400	-45.0	-6.80	—	—
1N/22W-20M1	36	590	140	47	190	1,000	-51.5	-7.50	—	0
1N/22W-20M2	31	630	21	44	220	930	-52.0	-7.60	—	—
1N/22W-20M3	18	660	290	42	100	890	-54.0	-7.75	—	—
1N/22W-20M4	27	690	330	42	150	840	-51.0	-7.65	—	—
1N/22W-20M5	300	1,700	760	90	1,300	7,700	-33.0	-4.90	—	—
1N/22W-20M6	200	1,900	6,200	70	990	5,500	-30.0	-4.55	—	—
1N/22W-26J3	33	660	170	—	230	960	-50.0	-7.75	—	—
	32	630	300	37	240	960	-52.0	-7.55	—	—
1N/22W-26J4	<100	700	230	—	900	3,400	-50.0	-7.40	—	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)
SWIFT-205	1N/22W-26J4	340821119085702	06-13-91	1540	4,140	7.2	21.0	20.0	420	130
SWIFT-65	1N/22W-26J5	340821119085703	09-28-90	1030	1,430	9.7	—	20.5	88	33
			06-13-91	1445	1,400	8.5	21.5	19.5	93	30
SW-295	1N/22W-27C2	340848119102601	10-30-90	1200	855	8.0	—	20.5	40	16
			07-24-91	1600	850	8.1	23.0	19.5	46	18
SW-195	1N/22W-27C3	340848119102602	10-30-90	1400	9,750	7.0	—	21.0	490	180
			07-24-91	1700	—	7.0	22.0	19.0	480	170
SW-65	1N/22W-27C4	4340848119102603	10-31-90	0830	3,720	7.4	—	18.0	430	120
			07-24-91	1520	3,680	7.4	24.5	20.0	470	130
CM7-350	1N/22W-27R3	340800119095901	11-01-90	1415	1,360	7.8	—	20.0	98	29
			06-26-91	1150	1,120	7.7	—	20.5	120	33
CM7-190	1N/22W-27R4	340800119095902	11-01-90	1500	1,690	7.0	—	19.0	110	38
			06-25-91	1245	2,500	7.5	—	20.5	130	68
CM7-110	1N/22W-27R5	340800119095903	11-01-90	1545	62,000	6.6	—	18.5	1,100	1,600
			06-26-91	1320	54,800	6.9	—	20.0	1,000	1,800
CM4-1,395	1N/22W-28G1	340827119110901	12-13-89	2130	960	—	—	22.0	33	28
			03-22-90	1400	920	8.0	—	20.5	36	32
			12-13-90	1815	910	8.0	—	20.0	36	32
			05-15-91	1920	870	7.9	18.0	20.0	37	33
CM4-1,095	1N/22W-28G2	340827119110902	12-14-89	1930	930	—	—	21.0	54	21
			03-22-90	1730	1,070	7.9	—	19.5	65	28
			12-13-90	1900	1,050	7.9	—	19.5	69	28
			05-15-91	2100	1,030	7.8	16.0	20.0	70	29
CM4-760	1N/22W-28G3	340827119110903	12-14-89	1330	1,160	—	—	20.0	14	8.7
			04-03-90	1200	1,180	8.3	—	19.5	14	9.3
			12-13-90	2100	1,020	8.3	—	18.5	14	8.0
			05-14-91	1700	1,000	8.1	16.0	19.5	14	7.5
CM4-275	1N/22W-28G4	340827119110904	12-14-89	1015	13,700	—	—	18.0	1,300	370
			03-22-90	1915	17,100	7.2	—	18.0	1,500	400
			10-18-90	1600	17,600	7.2	—	18.5	1,000	360
			05-14-91	1825	17,000	7.1	16.0	18.5	930	350
CM4-200	1N/22W-28G5	340827119110905	12-14-89	2130	7,870	—	—	17.5	230	110
			03-22-90	1515	9,150	7.4	—	18.0	260	120
			10-18-90	1700	10,600	7.4	—	18.0	290	140
			05-14-91	1505	11,000	7.2	16.0	18.5	350	160
CM2-870	1N/22W-29D1	340845119125401	11-12-89	1730	1,220	8.0	—	18.0	88	38
			05-13-91	1420	1,180	7.8	27.5	19.0	98	41
CM2-760	1N/22W-29D2	340845119125402	11-14-89	1415	19,000	7.4	—	18.5	1,200	360
			05-04-90	1715	20,100	7.3	—	18.0	1,200	410
			05-13-91	1650	18,000	7.2	25.0	18.5	1,100	390

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
1N/22W-26J4	290	11	210	—	470	1,100	0.50	4.0	0.072
1N/22W-26J5	200	19	290	289	460	62	<.10	.32	.120
	170	18	300	—	390	58	.30	.28	.140
1N/22W-27C2	110	14	—	—	73	36	.50	.14	.037
	100	14	350	—	83	37	.40	.16	.041
1N/22W-27C3	1,400	19	—	—	770	2,700	.50	9.3	.089
	1,300	20	210	260	880	2,800	.70	7.7	.073
1N/22W-27C4	270	15	—	—	1,300	450	.70	1.5	.130
	260	12	290	289	1,600	500	.40	1.3	.130
1N/22W-27R3	130	6.5	—	—	350	76	.40	.31	.031
	91	4.7	210	211	380	40	.50	.19	.033
1N/22W-27R4	180	7.3	—	—	380	180	.50	.54	.043
	340	7.9	210	211	490	460	.70	1.8	.050
1N/22W-27R5	12,000	170	—	—	5,700	22,000	.10	75	.340
	13,000	210	420	428	7,400	23,000	1.9	75	.360
1N/22W-28G1	130	8.2	—	—	140	56	.30	—	—
	110	8.6	280	—	130	47	.20	.16	.087
	110	7.0	—	—	130	49	.30	.19	.085
	110	6.7	—	—	120	53	.20	.20	.087
1N/22W-28G2	120	9.7	—	—	110	43	.10	.22	.059
	120	11	240	—	260	39	.30	.20	.057
	110	8.0	—	—	260	40	.20	.19	.053
	110	8.2	—	—	260	38	.20	.18	.062
1N/22W-28G3	210	27	—	—	110	54	.20	—	—
	200	31	390	—	130	59	.20	.18	.091
	170	30	—	—	65	44	.20	.15	.045
	180	30	—	—	75	41	.10	.16	.045
1N/22W-28G4	1,400	22	—	—	940	4900	.20	17	.190
	1,700	29	230	—	1000	5300	<.10	21	.140
	2,400	28	—	—	1,000	6,200	.50	21	.110
	2,600	28	—	—	1,100	6,300	.80	22	.095
1N/22W-28G5	1,500	12	—	—	840	2,200	.70	7.9	.056
	1,600	16	230	—	810	2,600	.50	8.5	.082
	1,800	16	—	—	1,000	3,100	1.6	11	.090
	1,900	18	—	—	790	3,600	.70	12	.066
1N/22W-29D1	120	10	200	—	420	51	.30	.29	.055
	97	12	—	—	370	39	.20	.23	.054
1N/22W-29D2	2,700	28	200	—	1,200	6,700	.10	22	—
	2,700	20	200	—	1,100	6,900	<.10	24	—
	2,700	28	—	—	1,200	7,000	.50	24	.099

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
1N/22W-26J4	36	2,780	<.010	<.050	0.880	0.90	4.00	4.10	—
1N/22W-26J5	30	890	.020	<.100	.730	.90	.140	.150	10
	40	958	<.010	<.050	.890	1.8	.800	.810	—
1N/22W-27C2	34	494	<.010	<.100	4.70	4.9	.240	.240	20
	35	517	<.010	.075	4.30	4.2	.210	.220	—
1N/22W-27C3	30	5,680	<.010	<.100	1.40	1.7	4.70	1.10	30
	31	6,370	—	—	—	—	—	—	—
1N/22W-27C4	31	2,780	<.010	<.100	3.40	3.9	1.20	.730	20
	31	2,980	<.010	.078	3.20	3.8	.100	.050	—
1N/22W-27R3	35	920	<.010	<.100	.510	.50	.080	.090	<10
	36	788	<.010	<.050	.450	.50	.060	.040	—
1N/22W-27R4	32	1,070	<.010	<.100	.350	.50	.820	.740	<10
	33	1,590	<.010	<.050	.400	.80	.430	.390	—
1N/22W-27R5	19	47,300	<.010	<.100	8.60	7.7	.080	.050	20
	20	51,000	<.010	<.050	8.20	8.6	.070	<.010	—
1N/22W-28G1	40	572	—	<.100	.710	.90	.030	.040	—
	41	570	—	<.100	.920	1.0	.040	.040	—
	44	527	<.010	<.100	.800	1.1	.040	.030	<10
	41	557	<.010	<.050	1.10	1.4	.020	.030	—
1N/22W-28G2	61	623	—	<.100	5.50	6.5	.480	.400	—
	42	726	—	<.100	1.90	1.7	.450	.440	—
	45	668	<.010	<.100	.800	2.2	.170	.160	20
	42	694	<.010	<.050	2.30	2.9	.270	.270	—
1N/22W-28G3	39	680	—	<.100	11.0	15	1.90	1.30	—
	35	699	—	<.100	11.0	10	3.40	.680	—
	38	587	.020	<.100	12.0	12	2.40	2.40	20
	38	616	—	—	—	—	—	—	—
1N/22W-28G4	32	10,700	—	<.100	4.10	4.4	.030	.010	—
	34	13,500	—	<.100	4.00	3.7	.020	.020	—
	31	12,000	<.010	<.100	4.10	2.4	.030	.500	—
	31	12,000	<.010	<.050	3.60	4.0	.030	.020	—
1N/22W-28G5	29	5,180	—	<.100	.240	.40	.180	.110	—
	31	5,970	—	<.100	.190	.40	.190	.180	—
	29	6,410	<.010	.100	.170	.30	.160	<.200	—
	28	7,190	<.010	<.050	.160	.20	.120	.130	—
1N/22W-29D1	33	880	—	<.100	2.50	2.4	.130	.110	—
	35	818	<.010	<.050	2.80	2.7	.040	.040	—
1N/22W-29D2	32	12,700	—	<.100	2.60	2.4	.310	.040	—
	31	15,100	—	<.100	2.30	2.4	<.010	.020	—
	32	13,800	<.010	<.050	2.30	2.7	.060	.060	—



**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	Tritium (in Tritium units)
1N/22W-26J4	100	720	770	70	980	3,900	-50.5	-7.45	—	0
1N/22W-26J5	32	780	8	—	29	1,200	-51.0	-7.65	—	—
	35	880	20	17	43	1,200	-51.5	-7.65	—	—
1N/22W-27C2	170	730	40	—	47	460	-49.5	-7.75	—	—
	170	730	45	15	49	510	-53.5	-7.70	—	—
1N/22W-27C3	100	1,000	320	—	1,300	5,200	-42.0	-6.35	—	—
	<100	1,100	970	100	1,300	4,500	-43.5	-6.40	—	—
1N/22W-27C4	100	990	1,600	—	1,300	4,000	-51.0	-7.65	—	—
	<100	990	4,100	20	1,400	4,000	-52.0	-7.45	—	—
1N/22W-27R3	41	690	34	—	270	830	-53.0	-7.85	—	—
	40	660	280	40	330	940	-51.5	-7.70	—	0
1N/22W-27R4	29	700	330	—	250	1,100	-51.5	-7.65	—	—
	<100	760	630	40	360	1,500	-51.0	-7.60	—	—
1N/22W-27R5	700	7,700	28,000	—	7,700	19,000	-35.5	-4.95	—	—
	<100	8,500	31,000	120	5,900	17,000	-33.0	-4.70	—	0
1N/22W-28G1	65	350	27	—	19	—	—	—	—	—
	60	330	97	—	25	—	-49.5	-7.40	—	—
	61	320	110	—	22	—	-48.0	-7.30	—	—
	64	320	120	69	18	920	-46.0	-7.30	-19.40	—
1N/22W-28G2	150	500	61	—	18	—	—	—	—	—
	79	380	58	—	35	—	-53.0	-7.85	—	—
	70	390	150	—	34	—	-52.5	-7.80	—	—
	77	390	160	58	39	980	-52.5	-7.85	-15.30	—
1N/22W-28G3	53	740	240	—	8	—	—	—	—	—
	45	680	53	—	23	—	-53.5	-7.75	—	—
	45	660	65	—	38	—	-54.0	-7.70	—	—
	51	710	88	10	36	180	—	—	—	—
1N/22W-28G4	<100	840	90	—	2,100	—	—	—	—	—
	<100	990	7,400	—	2,700	—	-40.9	-6.10	—	—
	<100	1300	6,000	—	1,800	—	-36.5	-5.45	—	—
	200	1,500	5,700	130	1,800	8,300	—	—	—	0
1N/22W-28G5	<100	1,400	30	—	610	—	—	—	—	—
	<100	1,400	60	—	780	—	-44.5	-6.45	—	—
	<100	1,400	30	—	940	—	-41.0	-6.20	—	—
	<100	1,500	60	110	960	3,900	—	—	—	0
1N/22W-29D1	32	410	68	—	69	—	-50.5	-7.40	—	—
	37	390	190	57	78	1,000	-48.0	-7.50	-14.00	—
1N/22W-29D2	500	980	4,200	—	2,500	—	-34.4	-5.15	—	—
	100	1,000	4,400	—	2,500	—	-33.0	-5.10	—	—
	300	1,000	4,300	110	2,200	11,000	-34.5	-5.15	—	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)
CM2-760	1N/22W-29D2	340845119125402	06-26-91	1150	19,800	7.3	—	18.5	1,100	410
CM2-520	1N/22W-29D3	340845119125403	11-12-89	1430	1,170	8.1	—	18.0	100	33
			05-13-91	2015	2,700	7.3	15.0	17.5	300	92
CM2-280	1N/22W-29D4	340845119125404	11-14-89	1130	1,360	8.0	—	17.5	130	36
			05-13-91	2105	1,700	7.6	15.0	17.5	180	49
CM5-1,200	1N/22W-35E1	340732119093801	03-20-90	1330	1,060	8.1	—	20.5	31	21
			12-11-90	1430	1,040	8.1	—	20.5	32	22
			04-29-92	1300	990	8.1	21.5	23.0	35	23
CM5-940	1N/22W-35E2	340732119093802	03-20-90	1700	1,100	8.4	—	20.0	42	28
			12-11-90	1800	1,010	8.1	—	20.0	50	33
			04-29-92	1600	975	8.2	21.0	20.0	54	34
CM5-470	1N/22W-35E3	340732119093803	03-21-90	1100	710	8.6	—	19.5	31	12
			12-11-90	1300	635	8.2	—	19.5	38	13
			04-29-92	1410	636	8.1	21.0	20.5	42	14
CM5-320	1N/22W-35E4	340732119093804	03-21-90	1400	970	9.1	—	18.5	58	16
			12-11-90	1515	850	8.1	—	19.5	78	21
			04-29-92	1500	907	8.1	21.0	20.5	90	24
CM5-220	1N/22W-35E5	340732119093805	03-21-90	1545	1,130	9.1	—	18.5	78	21
			12-11-90	1645	1,140	8.8	—	19.0	82	19
			04-29-92	1610	1,110	8.1	21.5	20.0	110	30
DP-720	1N/22W-36K5	340727119075601	09-25-90	1100	5,760	7.2	—	22.0	520	190
			12-12-90	1400	7,980	7.3	—	20.5	760	300
			05-22-91	1630	4,090	7.5	20.0	—	390	140
DP-580	1N/22W-36K6	340727119075602	09-25-90	1130	2,150	8.0	—	21.5	170	61
			12-12-90	1730	2,070	7.7	—	20.0	170	60
			05-23-91	1400	2,370	7.5	16.0	20.0	190	66
DP-450	1N/22W-36K7	340727119075603	09-25-90	1300	4,440	7.4	—	21.5	250	82
			12-12-90	1900	4,920	7.5	—	19.5	270	81
			05-22-91	2040	4,260	7.3	15.0	20.0	260	94
DP-330	1N/22W-36K8	340727119075604	09-25-90	1400	1,420	7.5	—	21.0	100	32
			12-12-90	1500	1,140	7.6	—	19.5	100	33
			05-23-91	1200	1,120	7.5	19.0	20.5	110	33
DP-195	1N/22W-36K9	340727119075605	09-25-90	1415	3,620	7.3	—	20.0	280	80
			12-12-90	1700	3,490	7.3	—	18.5	260	76
			05-23-91	1530	3,390	7.3	19.0	19.5	250	73
CM3-1,490	1N/23W-1C2	341215119145501	12-12-89	1900	840	8.1	—	19.0	45	9.8
			12-04-90	1315	830	8.1	—	19.0	48	9.9
			01-09-92	1215	814	7.9	18.5	20.0	50	9.7
CM3-1,065	1N/23W-1C3	341215119145502	12-15-89	1900	1,230	8.2	—	20.0	130	32
			03-23-90	1230	1,290	7.8	—	18.5	130	36

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
1N/22W-29D2	3,100	31	200	197	1,100	7,100	1.0	24	0.100
1N/22W-29D3	120	5.3	—	—	380	49	.70	.25	.035
	120	6.7	—	—	360	610	.40	2.4	.043
1N/22W-29D4	120	5.8	230	—	380	120	.50	.48	.034
	110	6.2	—	—	370	240	.40	.95	.034
1N/22W-35E1	150	15	220	—	170	90	.20	.44	.100
	130	13	—	—	170	93	.20	.41	.110
	130	14	210	208	160	93	.20	.40	.110
1N/22W-35E2	150	7.7	230	—	250	48	.30	.22	.077
	110	7.0	—	—	230	42	.20	.20	.067
	100	7.1	230	232	220	45	.30	.21	.071
1N/22W-35E3	110	5.7	280	—	34	48	.40	.22	.052
	81	4.8	—	—	4.1	43	.20	.21	.051
	79	5.0	280	—	32	25	.20	.22	.057
1N/22W-35E4	140	7.0	300	—	200	44	.40	.18	.027
	83	4.7	—	—	130	38	.80	.16	.030
	75	5.0	320	316	170	39	.50	.17	.034
1N/22W-35E5	140	6.2	230	—	280	66	.40	.27	.051
	130	6.3	—	—	280	64	.40	.25	.049
	92	8.5	230	230	260	67	.50	.28	.053
1N/22W-36K5	300	20	220	216	47	1,900	<.10	12	4.1
	300	22	—	—	6.1	2,500	.20	16	5.6
	190	16	240	235	39	1,200	.20	7.3	2.5
1N/22W-36K6	170	10	250	251	170	460	<.10	2.7	.940
	150	9.0	—	—	140	470	.30	2.6	.980
	190	9.4	240	—	180	570	.30	3.1	1.1
1N/22W-36K7	450	15	280	277	25	1,200	<.10	8.0	2.9
	540	15	—	—	1.9	1,500	.50	8.6	3.1
	500	15	290	288	1.4	1,400	.20	7.8	2.6
1N/22W-36K8	130	7.0	230	225	360	68	<.10	.33	.076
	90	6.0	—	—	340	41	.40	.19	.040
	84	6.4	230	—	350	40	.40	.18	.039
1N/22W-36K9	350	11	270	268	230	900	<.10	3.1	.110
	330	9.1	—	—	220	830	.30	3.2	.086
	340	1.8	280	278	210	880	.40	3.0	.073
1N/23W-1C2	120	4.0	240	—	160	42	.30	.30	.063
	120	3.6	—	—	110	38	.30	.26	.063
	120	4.0	220	220	160	40	.40	.26	.079
1N/23W-1C3	110	5.0	230	—	420	49	.40	.31	.058
	100	6.1	220	—	400	44	.30	.29	.061

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite, dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
1N/22W-29D2	31	14,400	<0.010	<0.050	2.20	2.7	0.040	0.020	—
1N/22W-29D3	34	843	—	<.100	.170	.50	.950	.420	—
	34	1,810	<.010	<.050	.210	.40	.040	.030	—
1N/22W-29D4	35	971	—	<.100	.690	.80	.070	.080	—
	35	1,150	<.010	<.050	.760	1.0	.110	.090	—
1N/22W-35E1	41	641	—	<.100	2.40	2.6	.050	.060	—
	44	593	<.010	<.100	2.60	3.0	.070	.070	<10
	39	600	<.010	<.050	2.90	3.0	.070	.060	—
1N/22W-35E2	37	733	—	<.100	.660	.80	.660	.430	—
	41	642	<.010	<.100	.630	.60	.640	.640	20
	36	626	<.010	<.050	1.00	1.1	.240	.230	—
1N/22W-35E3	40	442	—	<.100	.140	.20	.720	.430	—
	44	363	<.010	<.100	.110	.30	.200	.200	<10
	37	370	<.010	<.050	.570	.60	.090	.090	—
1N/22W-35E4	50	668	—	<.100	.620	.90	.640	.330	—
	43	542	<.010	<.100	.560	.50	.470	.430	<10
	37	590	<.010	<.050	.530	.60	.130	.130	—
1N/22W-35E5	50	802	—	<.100	.370	.60	.410	.200	—
	48	744	<.010	<.100	.180	.50	.890	.860	30
	35	760	<.010	<.050	.710	.80	.360	.350	—
1N/22W-36K5	40	4,330	<.010	<.100	2.90	3.7	<.030	.010	30
	38	4,860	.010	<.100	4.10	3.9	<.010	.040	20
	40	2,510	.010	<.050	2.70	2.5	.020	.010	10
1N/22W-36K6	42	1,380	<.010	<.100	1.20	1.2	.410	.410	20
	44	1,220	<.010	<.100	1.40	1.3	.160	.140	<10
	40	1,440	<.010	<.050	1.40	1.6	.190	.190	20
1N/22W-36K7	44	2,540	<.010	<.100	2.10	2.5	.230	.190	20
	45	2,730	<.010	<.100	2.50	2.5	.020	.020	20
	42	2,880	<.010	.055	2.30	2.0	.030	.020	10
1N/22W-36K8	39	862	<.010	<.100	.530	.70	1.90	1.50	<10
	39	770	<.010	<.100	.690	.70	.900	.880	20
	37	778	<.010	<.050	.650	.80	.620	.620	<10
1N/22W-36K9	35	2,650	<.010	<.100	1.40	1.9	.820	.570	<10
	38	2,140	<.010	<.100	1.50	1.5	.590	.510	20
	36	2,140	<.010	<.050	1.50	1.7	.270	.270	10
1N/23W-1C2	25	536	—	<.100	.420	1.1	.060	.050	—
	25	519	<.010	<.100	.580	.60	.040	.020	20
	27	446	<.010	<.050	.540	.60	.030	.030	—
1N/23W-1C3	36	925	—	<.100	.220	.50	.170	.150	—
	36	972	—	<.100	.330	.50	.250	.270	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	C <sup>14</sup> , modern (percent)	Tritium (In Tritium units)
1N/22W-29D2	400	1,100	4,300	120	2,400	11,000	-34.0	-5.00	—	—	—
1N/22W-29D3	28	640	6	—	47	—	-52.5	-7.60	—	—	—
	200	680	1,700	50	300	2,500	-49.5	-7.60	—	—	0.3
1N/22W-29D4	38	640	280	—	180	—	-52.0	-7.55	—	—	—
	49	660	810	43	250	1,400	-51.0	-7.65	—	—	—
1N/22W-35E1	86	410	10	—	37	—	-46.0	-6.95	—	—	—
	92	410	18	—	62	—	-44.0	-6.95	—	—	—
	93	390	34	—	63	550	-47.0	-6.95	-17.10	—	—
1N/22W-35E2	61	350	8	—	14	—	-50.5	-7.45	—	—	—
	57	330	37	—	49	—	-49.0	-7.35	—	—	—
	58	330	45	—	59	860	-51.5	-7.35	-16.90	—	—
1N/22W-35E3	23	460	22	—	20	—	-51.0	-7.55	—	—	—
	37	470	58	—	65	—	-49.0	-7.65	—	—	—
	39	440	130	—	93	430	-50.0	-7.45	-26.30	—	—
1N/22W-35E4	99	600	12	—	28	—	-51.5	-7.60	—	—	—
	130	670	26	—	76	—	-51.5	-7.70	—	—	—
	170	660	15	—	90	920	-51.0	-7.65	-29.10	—	—
1N/22W-35E5	49	580	6	—	32	—	-53.0	-7.75	—	—	—
	39	580	8	—	27	—	-53.0	-7.70	—	—	—
	54	620	210	—	270	970	-52.5	-7.70	-19.50	—	—
1N/22W-36K5	400	660	520	—	720	5,000	-44.5	-6.95	—	—	—
	1,100	660	1,600	—	1,200	—	-43.5	-6.75	—	—	—
	300	640	850	110	540	4,600	-45.5	-7.00	-23.70	—	.2
1N/22W-36K6	<100	620	130	—	280	1,700	-50.5	-7.45	—	—	—
	100	610	170	—	270	—	-50.0	-7.45	—	—	—
	<100	660	440	80	310	1,900	-49.5	-7.30	-21.10	—	.1
1N/22W-36K7	200	1,000	690	—	20	2,700	-44.5	-7.00	—	—	—
	400	1,100	780	—	300	—	-45.5	-6.95	—	—	—
	200	980	780	100	260	3,100	-45.0	-6.95	-28.10	—	.1
1N/22W-36K8	42	640	200	—	300	990	-52.0	-7.70	—	—	—
	44	630	170	—	290	—	-51.5	-7.70	—	—	—
	46	640	200	31	310	940	-51.0	-7.65	-13.60	—	—
1N/22W-36K9	<100	650	120	—	990	2,400	-50.0	-7.60	—	—	—
	<100	700	120	—	930	—	-52.0	-7.55	—	—	—
	<100	710	120	50	830	2,300	—	—	-20.80	—	0
1N/23W-1C2	40	430	17	—	66	—	-61.9	-8.80	—	—	—
	47	430	85	—	71	480	-62.5	-8.85	-15.90	1.8	.1
	45	440	68	—	67	—	-61.0	-8.80	—	—	—
1N/23W-1C3	38	530	4	—	150	—	—	—	—	—	—
	31	540	190	—	160	—	-50.5	-7.55	—	—	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)
CM3-1,065	1N/23W-1C3	341215119145502	12-04-90	1830	1,280	7.7	—	18.5	130	36
			01-07-92	1820	1,260	7.7	19.0	—	140	35
CM3-695	1N/23W-1C4	341215119145503	12-15-89	1700	1,270	—	—	17.5	—	—
			03-23-90	1600	1,240	8.0	—	18.5	93	28
			12-04-90	1515	1,210	7.9	—	18.5	93	29
			01-07-92	1535	1,140	7.6	11.5	19.5	110	31
CM3-145	1N/23W-1C5	341215119145504	12-15-89	1830	1,250	—	—	18.0	130	32
			03-23-90	1730	1,200	8.6	—	18.0	82	23
			12-04-90	1000	1,200	8.4	—	18.0	92	24
			01-07-92	1330	1,150	7.8	14.5	18.0	110	29
TKS-280	2N/20W-16A2	341549118583801	12-06-90	1415	1,920	7.5	—	20.5	140	47
			09-04-91	1530	2,150	7.6	19.5	19.5	190	68
TKS-180	2N/20W-16A3	341549118583802	12-06-90	1500	1,420	7.3	—	18.5	130	42
			09-05-91	1200	1,600	7.5	25.0	18.5	160	52
TKS-100	2N/20W-16A4	341549118583803	11-02-90	1115	1,590	7.9	—	19.5	89	23
			09-04-91	1245	1,600	7.5	25.5	18.0	170	48
SAT-700	2N/21W-7L3	341608119072901	09-27-90	1100	1,620	7.6	—	17.5	150	56
			11-27-90	1030	1,750	7.6	16.5	17.5	150	62
			04-04-91	1610	1,500	7.3	23.0	18.0	150	61
			12-10-91	1520	1,710	7.3	—	19.5	150	58
			05-12-92	1255	1,580	—	32.0	18.5	150	53
SAT-540	2N/21W-7L4	341608119072902	09-27-90	1130	1,460	7.5	—	17.0	120	63
			11-28-90	0830	1,660	—	16.5	16.0	130	73
			04-03-91	1845	1,520	7.4	19.5	17.5	140	72
			12-10-91	1800	1,690	7.6	19.0	18.0	140	69
			05-12-92	1700	1,630	7.6	24.0	18.0	130	67
SAT-310	2N/21W-7L5	341608119072903	09-27-90	1200	1,810	7.6	—	18.0	120	42
			11-27-90	1730	1,400	7.6	16.5	16.0	150	51
			04-04-91	1900	1,240	7.3	19.5	17.5	160	52
			12-10-91	1800	1,670	7.4	17.5	17.0	180	59
			05-12-92	1515	1,590	7.4	29.0	32.0	170	57
SAT-155	2N/21W-7L6	341608119072904	04-03-91	1515	1,200	7.4	24.0	17.5	120	40
			12-10-91	1500	1,630	7.6	19.0	16.0	170	59
			05-12-92	1315	971	7.6	29.0	18.0	96	33
LP1-1,078	2N/21W-11J3	341607119023301	08-27-91	1530	829	7.4	—	23.5	58	22
			07-21-92	1800	809	7.4	25.0	21.0	79	27
LP1-380	2N/21W-11J5	341607119023303	02-08-91	1200	935	7.6	21.0	—	80	26
			08-20-91	1800	899	7.8	20.5	21.0	84	27
PV1-998	2N/21W-34G2	341246119040201	08-03-90	1130	1,630	7.7	—	23.5	110	40
			08-05-91	1530	1,580	7.4	21.0	23.0	110	41

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
1N/23W-1C3	97	5.4	—	—	420	39	0.20	0.29	0.059
	91	5.6	220	220	440	43	.40	.29	.061
1N/23W-1C4	—	—	—	—	400	50	.60	—	—
	130	5.5	230	—	360	43	.60	.22	.035
	120	4.9	—	—	340	37	.50	.21	.033
	97	5.2	200	200	280	30	.60	.22	.035
1N/23W-1C5	100	4.9	—	—	420	46	.40	.29	.052
	150	6.8	260	—	310	45	.60	.20	.045
	130	5.8	—	—	310	45	.80	.20	.047
	99	5.8	210	208	310	41	.60	.20	.054
2N/20W-16A2	210	6.4	—	—	600	93	<.10	.47	.032
	180	6.9	280	344	730	130	.40	.97	.022
2N/20W-16A3	130	3.9	—	—	450	55	.60	.23	.007
	140	4.4	270	332	620	68	.30	.31	.016
2N/20W-16A4	190	11	—	—	420	110	.20	.40	.021
	130	4.3	210	207	550	130	.50	.47	.014
2N/21W-7L3	170	11	270	270	590	70	<.10	.48	.069
	160	11	270	272	640	69	.40	.40	.067
	150	9.4	—	249	560	69	.40	.47	.073
	140	10	290	288	550	66	.40	.42	.069
	130	9.8	260	256	520	60	.50	.40	.064
2N/21W-7L4	200	12	310	307	620	72	<.10	.47	.059
	160	9.4	270	267	640	70	.20	.38	.055
	150	8.8	—	259	640	68	.20	.45	.063
	140	9.1	270	268	590	73	.20	.44	.058
	140	8.7	270	245	520	62	.10	.45	.052
2N/21W-7L5	140	7.3	220	225	500	60	.20	.32	.026
	100	4.9	210	—	500	53	.60	.29	.021
	94	4.6	—	223	510	58	.60	.32	.024
	110	5.2	260	256	470	62	<.10	.48	.045
	110	5.3	250	245	520	66	.70	.44	.041
2N/21W-7L6	110	5.0	—	190	420	55	.70	.25	.023
	100	5.0	230	227	540	84	.60	.49	.015
	73	3.3	170	166	310	24	.70	.13	.008
2N/21W-11J3	87	7.0	240	236	160	21	.30	.080	.036
	54	5.0	240	236	160	23	.20	.090	.033
2N/21W-11J5	74	3.7	—	—	130	58	.30	.27	.077
	65	2.7	230	223	150	62	.30	.31	.071
2N/21W-34G2	200	7.2	250	—	440	120	.40	.14	.020
	170	5.6	240	—	470	120	.30	.72	.058

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
1N/23W-1C3	35	954	<0.010	<0.100	0.270	0.20	0.210	0.230	10
	39	809	.010	<.050	.300	.40	.050	.050	—
1N/23W-1C4	29	—	—	—	—	—	—	—	—
	30	735	—	<.100	.120	.30	1.30	1.00	—
	30	818	.010	<.100	.140	.20	.930	.900	10
	33	746	<.010	<.050	.110	<.20	.630	.620	—
1N/23W-1C5	36	932	—	<.100	.400	.50	.120	.120	—
	35	836	—	<.100	.050	.50	.240	.240	—
	37	806	<.010	<.100	.150	.30	.180	.170	10
	38	733	<.010	.050	.650	.70	.110	.130	—
2N/20W-16A2	30	1,380	<.010	<.100	.210	.20	4.90	3.80	30
	26	1,530	<.010	<.050	.200	.40	4.20	3.80	—
2N/20W-16A3	33	1,030	.010	5.10	.200	.50	3.90	1.00	40
	27	1,200	<.010	<.050	.140	.30	2.10	.950	—
2N/20W-16A4	26	974	<.010	<.100	.190	.30	6.30	5.20	20
	22	1,140	<.010	<.050	.050	.40	2.20	1.80	—
2N/21W-7L3	33	1,290	<.010	<.100	1.90	2.6	.040	.030	<10
	32	1,290	<.010	<.100	2.40	2.5	<.010	<.010	<10
	32	1,280	.020	<.050	1.70	2.5	.020	<.010	—
	34	1,370	<.010	<.050	2.30	2.3	.020	.020	—
	33	1,180	<.010	<.050	2.10	2.2	.030	.020	—
2N/21W-7L4	37	1,320	<.010	<.100	1.70	1.8	.890	.880	<10
	35	1,270	<.010	<.100	1.40	2.0	.640	.610	<10
	36	1,260	<.010	<.050	1.10	2.2	.210	.190	—
	38	1,310	<.010	<.050	1.90	1.9	.160	.080	—
	37	1,200	<.010	<.050	1.80	1.9	.040	.060	—
2N/21W-7L5	28	1,140	<.010	<.100	.090	.70	2.30	1.30	40
	24	980	<.010	<.100	.070	.20	.530	.480	20
	25	1,040	<.010	<.050	.040	<.20	.140	.130	—
	26	1,140	<.010	<.050	<.010	<.20	.130	—	—
	26	1,210	<.010	<.050	.020	<.20	.040	.070	—
2N/21W-7L6	22	914	<.010	2.50	<.010	.30	.050	.030	—
	21	1,190	<.010	2.00	<.010	<.20	.040	.050	—
	20	688	<.010	1.10	.020	<.20	.040	.040	—
2N/21W-11J3	30	548	<.010	<.050	.480	.60	9.40	6.10	—
	35	519	<.010	<.050	.480	.50	2.20	1.30	—
2N/21W-11J5	39	599	.010	6.20	<.010	.30	2.50	.940	<10
	39	583	<.010	6.70	.010	.40	.810	.800	—
2N/21W-34G2	40	1,110	—	<.100	.400	.90	.050	.030	—
	39	1,040	<.010	<.050	.410	.50	.030	.030	20



**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	C <sup>14</sup> , modern (percent)	Tritium (In Tritium units)
1N/23W-1C3	28	560	140	—	170	990	-49.0	-7.45	-12.30	—	0.2
	28	530	210	—	180	—	-49.5	-7.45	—	—	—
1N/23W-1C4	—	600	—	—	—	—	—	—	—	—	—
	20	600	32	—	83	—	-54.5	-7.75	—	—	—
	21	600	130	—	100	740	-53.0	-7.75	-11.10	—	0
	22	630	170	—	120	—	-52.0	-7.55	—	—	—
1N/23W-1C5	39	510	4	—	170	—	—	—	—	—	—
	36	590	10	—	110	—	-53.0	-7.70	—	—	—
	38	610	8	—	130	1,000	-52.5	-7.65	—	—	0
	38	630	8	—	140	—	-51.5	-7.60	—	—	—
2N/20W-16A2	24	470	40	—	150	1,600	-44.0	-6.75	—	—	—
	<100	490	40	—	190	—	-45.5	-6.95	—	—	—
2N/20W-16A3	8	410	280	—	300	1,300	-45.0	-7.10	—	—	—
	12	510	35	—	250	—	-45.0	-6.90	—	—	—
2N/20W-16A4	28	500	12	—	59	1,600	-45.5	-6.70	—	—	—
	28	550	670	—	160	—	-53.0	-7.25	—	—	—
2N/21W-7L3	21	740	620	—	100	1,100	-49.0	-7.40	—	—	6.3
	16	730	71	—	96	1,200	-52.5	-7.30	-11.10	64.1	6.0
	15	720	860	—	97	—	-51.0	-7.35	—	—	—
	12	750	1,000	—	80	—	-48.5	-7.30	—	—	—
	11	770	890	—	82	—	-48.0	-7.30	—	—	6.0
2N/21W-7L4	21	390	490	—	88	1,400	-46.5	-7.25	—	—	3.1
	24	340	540	—	140	1,600	-48.0	-7.25	-14.40	14.2	8.1
	21	330	730	—	100	—	-50.0	-7.40	—	—	—
	21	350	700	—	100	—	-50.0	-7.40	—	—	—
	18	340	910	—	84	—	-47.5	-7.40	—	—	5.4
2N/21W-7L5	16	680	150	—	93	1,200	-51.0	-7.40	—	—	4.4
	24	690	350	—	91	1,400	-51.5	-7.45	-13.30	73.1	5.6
	23	690	390	—	73	—	-50.5	-7.35	—	—	—
	25	740	590	—	76	—	-46.0	-6.90	—	—	—
	25	770	520	—	68	—	-49.5	-7.15	—	—	—
2N/21W-7L6	20	740	8	—	<1	—	-61.5	-8.80	—	—	—
	27	670	4	—	<1	—	-50.5	-7.45	—	—	—
	14	460	11	—	1	—	-56.0	-8.65	—	—	4.3
2N/21W-11J3	16	140	170	—	150	—	-41.0	-6.70	—	—	—
	32	120	200	—	130	—	-42.0	-6.50	-15.30	11.1	0
2N/21W-11J5	4	190	21	—	38	1,000	-39.5	-6.15	—	—	—
	14	190	3	—	4	—	-39.5	-6.05	—	—	—
2N/21W-34G2	32	560	11	—	100	—	-42.5	-6.55	—	—	—
	18	550	40	41	44	1,000	-42.0	-6.55	-14.30	—	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)
PV1-998	2N/21W-34G2	341246119040201	05-14-92	1530	1,800	7.6	23.0	22.5	200	54
			08-17-93	1330	1,880	7.3	26.5	23.5	210	57
PV1-860	2N/21W-34G3	341246119040202	08-03-90	1430	1,670	7.8	—	23.5	110	35
			08-05-91	1230	1,650	7.6	29.0	25.5	120	38
			05-15-92	1230	1,570	7.5	23.0	22.0	120	38
			08-17-93	1610	1,630	7.5	—	22.5	130	40
PV1-380	2N/21W-34G4	341246119040203	08-03-90	1630	1,200	8.6	—	23.0	67	23
			08-05-91	1800	960	7.9	23.0	21.5	72	26
			05-14-92	1830	922	7.7	23.0	21.5	82	26
			08-18-93	1815	921	7.7	—	21.0	86	27
PV1-190	2N/21W-34G5	341246119040204	08-03-90	1845	1,740	7.6	—	21.0	180	48
			08-05-91	1100	1,750	7.9	25.5	24.0	180	44
			05-14-92	1700	1,720	7.4	23.0	21.5	190	49
			08-19-93	1250	1,720	7.3	23.5	21.0	200	50
PV1-436	2N/21W-34G6	341246119040205	05-15-92	0915	919	8.2	23.0	21.0	40	15
			08-19-93	1750	884	8.2	—	22.0	40	16
SG-1,250	2N/22W-23B3	341449119090101	11-28-90	1518	945	7.8	20.5	19.0	42	14
			12-11-91	1631	907	7.8	15.5	21.0	45	14
SG-1,150	2N/22W-23B4	341449119090102	11-28-90	1930	1,160	8.1	13.0	17.5	97	29
			12-12-91	1455	1,130	7.9	—	21.0	120	30
SG-870	2N/22W-23B5	341449119090103	12-05-90	1700	1,450	8.0	—	17.5	140	38
			12-12-91	1700	1,360	7.6	11.5	17.0	150	38
			05-13-92	1100	1,380	—	—	18.5	150	38
SG-500	2N/22W-23B6	341449119090104	12-05-90	1900	1,490	7.6	—	17.5	140	50
			12-11-91	1255	1,410	7.4	25.0	19.0	150	50
			05-13-92	1615	1,430	7.6	24.0	18.0	150	48
SG-300	2N/22W-23B7	341449119090105	12-05-90	1430	1,490	7.4	—	18.5	140	48
			12-11-91	1115	1,530	7.5	—	18.5	170	56
			05-13-92	1850	1,550	7.5	24.0	18.0	180	57
P7-1,100	3N/20W-35R2	341745118561601	02-06-91	1845	620	7.7	19.0	21.5	68	13
			07-22-92	1800	560	7.7	21.0	22.0	66	15
P7-900	3N/20W-35R3	341745118561602	02-07-91	1800	680	7.7	18.5	22.0	62	12
			04-02-91	1910	695	7.4	12.5	21.5	88	16
P7-530	3N/20W-35R4	341745118561603	08-21-91	1625	485	7.8	26.0	24.5	45	12
			07-23-92	1130	457	7.6	—	22.0	51	12

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
2N/21W-34G2	150	5.9	230	227	560	120	0.30	0.62	0.038
	140	5.1	200	192	690	130	.20	.54	.039
2N/21W-34G3	210	6.3	240	—	460	120	.40	2.3	.074
	180	6.0	230	—	490	110	.30	.50	.060
	180	5.3	240	234	400	110	.30	.48	.059
	180	4.9	220	219	490	120	.40	.26	.038
2N/21W-34G4	160	5.5	230	—	260	73	.70	.34	.079
	95	4.6	210	—	230	50	.30	.22	.051
	75	3.6	200	197	220	51	.40	.020	.052
	76	3.7	190	191	220	50	.40	.21	.052
2N/21W-34G5	130	5.3	200	—	450	120	.30	.77	.022
	120	5.7	190	—	500	120	.20	.68	.011
	120	4.4	190	188	470	120	.20	.69	.010
	120	4.4	180	179	530	130	.30	.62	.005
2N/21W-34G6	140	8.7	400	401	34	50	.20	.080	.120
	140	8.7	340	342	29	44	.10	.090	.110
2N/22W-23B3	150	4.4	280	275	68	100	.40	.68	.230
	130	3.6	290	285	48	110	.40	1.0	.310
2N/22W-23B4	130	5.6	220	222	350	64	.40	.10	.150
	94	3.7	200	200	310	54	.30	.44	.160
2N/22W-23B5	120	4.7	—	—	480	49	.30	.38	.064
	120	4.5	230	226	430	56	.40	.38	.065
	120	4.6	250	243	420	51	.40	.37	.062
2N/22W-23B6	130	4.9	—	—	500	45	.10	.60	.016
	110	5.3	250	252	500	49	.70	.63	.007
	110	5.0	240	242	430	48	.60	.53	.008
2N/22W-23B7	110	4.9	—	—	480	55	.40	.40	.013
	100	5.4	220	212	530	69	.50	.73	.010
	100	5.0	240	237	480	65	.50	.83	.009
3N/20W-35R2	40	3.7	—	—	140	14	.30	.11	.019
	33	2.8	160	162	100	18	.20	.10	.025
3N/20W-35R3	66	4.0	—	—	150	22	.30	.12	.026
	43	3.4	—	—	160	52	.30	.11	.020
3N/20W-35R4	34	2.2	170	167	29	14	.30	.070	.017
	30	1.9	150	152	38	19	.20	.070	.012

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
2N/21W-34G2	32	1,350	0.050	0.780	0.020	<0.20	0.240	0.110	—
	29	1,440	.130	.910	.030	<.20	.060	.090	—
2N/21W-34G3	37	1,130	—	<100	.280	1.1	.310	.150	—
	37	1,090	<.010	<.050	.270	.40	.250	.230	<10
	38	1,110	<.010	<.050	.270	.30	.190	.210	—
	40	1,150	<.010	<.050	.290	.30	.050	.060	—
2N/21W-34G4	32	760	—	.200	.040	.30	.640	.300	—
	32	617	<.010	<.050	.050	<.20	.820	.810	10
	34	622	.010	<.050	<.010	<.20	.430	.440	—
	36	613	.010	—	.030	.20	.160	.190	—
2N/21W-34G5	38	1,280	—	13.0	.030	.70	.210	.110	—
	37	1,230	.020	14.0	.010	.60	.230	.230	10
	39	1,280	<.010	14.0	.020	<.20	.050	.050	—
	41	1,180	<.010	15.0	.020	<.20	.010	.030	—
2N/21W-34G6	23	554	<.010	<.050	1.20	1.4	1.60	1.50	—
	25	526	<.010	<.050	.590	.60	.960	1.00	—
2N/22W-23B3	33	563	<.010	<.100	—	.90	.110	.080	<10
	36	583	<.010	<.050	.440	.50	.040	.040	—
2N/22W-23B4	30	786	<.010	<.100	.370	.50	.400	.330	<10
	33	1,000	<.010	<.050	.280	.30	.070	.070	—
2N/22W-23B5	28	1,090	<.010	<.100	.200	<.20	.290	.140	10
	29	1,020	<.010	<.050	.160	<.20	.260	.190	—
	29	1,010	<.010	<.050	.170	<.20	.140	.150	—
2N/22W-23B6	31	1,110	.020	4.30	.020	.30	.690	.370	20
	33	1,270	<.010	4.00	<.010	<.20	.180	.160	—
	31	1,050	<.010	3.20	<.010	<.20	.190	.180	—
2N/22W-23B7	29	1,070	<.010	3.10	.030	<.20	.320	.190	30
	31	1,230	<.010	6.80	<.010	<.20	.240	.240	—
	29	1,180	<.010	7.10	.010	<.20	.150	.170	—
3N/20W-35R2	33	397	<.010	<.100	.300	.60	.100	.060	10
	34	368	.040	.770	.080	<.20	.280	.270	—
3N/20W-35R3	35	438	<.010	<.100	.090	.40	.320	.270	<10
	36	487	<.010	<.050	.080	.20	.080	.060	—
3N/20W-35R4	38	296	<.010	3.40	<.010	<.20	.990	.920	—
	39	288	<.010	3.50	.010	<.20	.290	.280	—

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	C <sup>14</sup> , modern (percent)	Tritium (in Tritium units)
2N/21W-34G2	42	530	8	—	81	—	-40.0	-6.35	—	—	—
	40	540	<3	—	64	1,600	-40.3	-6.33	-14.60	32.9	—
2N/21W-34G3	23	590	99	—	53	—	-42.5	-6.55	—	—	—
	23	660	140	41	78	970	-42.0	-6.55	-14.90	—	—
	23	660	190	—	79	—	-40.5	-6.60	—	—	—
	24	700	180	—	82	1,000	-41.5	-6.60	-14.10	52.3	—
2N/21W-34G4	26	260	6	—	30	—	-42.4	-6.60	—	—	—
	23	250	17	32	43	790	-43.0	-6.65	-13.10	—	—
	27	240	18	—	31	—	-41.0	-6.65	—	—	—
	29	250	<3	—	35	880	-42.4	-6.66	-12.00	21.1	—
2N/21W-34G5	32	390	5	—	7	—	—	—	—	—	—
	75	430	<3	45	8	1,600	-40.0	-6.15	-14.00	—	—
	41	430	6	—	8	—	-39.0	-6.15	—	—	—
	35	460	<3	—	2	1,400	-40.9	-6.26	-14.30	56.9	—
2N/21W-34G6	57	900	42	—	63	—	-47.0	-7.10	—	—	—
	51	870	6	—	48	400	-46.3	-7.11	-14.50	15.9	—
2N/22W-23B3	61	690	28	—	39	490	-57.0	-8.45	-31.10	5.6	0.2
	54	690	54	—	37	—	-58.0	-8.55	—	—	—
2N/22W-23B4	36	520	9	—	110	1,000	-54.0	-7.90	-15.00	21.6	.1
	40	500	110	—	160	—	-52.5	-7.85	—	—	—
2N/22W-23B5	26	540	150	—	170	1,200	-49.0	-7.45	-13.10	53.5	0
	26	530	260	—	190	—	-47.5	-7.35	—	—	—
	26	540	240	—	190	—	-47.5	-7.40	—	—	0
2N/22W-23B6	20	730	10	—	7	1,300	-49.0	-7.25	—	—	6.2
	19	720	<3	—	<1	—	-50.5	-7.45	—	—	—
	19	720	3	—	2	—	-50.5	-7.50	—	—	4.5
2N/22W-23B7	23	680	11	—	6	1,300	-49.0	-7.20	—	—	5.7
	24	760	<3	—	1	—	-50.0	-7.20	—	—	—
	25	730	510	—	5	—	-50.0	-7.40	—	—	4.5
3N/20W-35R2	80	80	56	—	86	380	-44.0	-6.90	-14.30	38.7	.2
	79	80	4	—	21	—	-44.0	-6.75	-13.80	37.8	0
3N/20W-35R3	54	<110	240	—	47	370	-44.0	-6.95	-14.20	48.9	.2
	69	110	560	—	59	—	-61.5	-8.45	—	—	—
3N/20W-35R4	52	70	8	—	1	—	-42.5	-6.55	—	—	—
	73	70	4	—	<1	—	-42.5	-6.50	—	—	0

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

Common name	State well number	Site identification number	Date	Time	Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	pH, field (standard units)	Temperature, air ( $^{\circ}\text{C}$ )	Temperature, water ( $^{\circ}\text{C}$ )	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)
SP1-680	3N/21W-15G1	342034119040201	06-14-94	1130	1240	7.5	—	19.0	150	41
			04-03-95	1230	1330	7.4	27.0	19.0	140	41
SP1-540	3N/21W-15G2	342034119040202	06-14-94	1430	1300	7.4	—	19.0	150	43
			04-03-95	1630	1390	7.4	27.0	18.5	150	46
SP1-390	3N/21W-15G3	342034119040203	06-15-94	1030	703	7.2	—	19.5	150	39
			04-04-95	1030	1280	7.3	22.0	18.0	140	40
SP1-280	3N/21W-15G4	342034119040204	06-15-94	1330	813	7.1	—	19.5	180	45
			04-04-95	1400	1440	7.3	24.5	18.5	160	45
SP1-80	3N/21W-15G5	342034119040205	06-14-94	1700	1420	7.4	—	17.5	150	50
			04-04-95	1700	1480	7.4	22.0	17.5	150	53
SP2-550	3N/21W-16H5	342035119044401	06-16-94	1030	1230	7.5	—	20.0	150	40
			04-05-95	1045	1330	7.3	15.5	18.0	150	41
SP2-310	3N/21W-16H6	342035119044402	06-16-94	1400	1460	7.3	—	20.0	230	48
			04-05-95	1230	1580	7.2	20.5	19.5	190	47
SP2-170	3N/21W-16H7	342035119044403	06-16-94	1700	1580	7.3	—	21.0	200	60
			04-05-95	1730	1720	7.2	18.5	18.5	200	60
SP2-70	3N/21W-16H8	342035119044404	06-15-94	1745	1580	7.3	—	21.0	180	59
			04-05-95	1415	2330	7.1	21.0	19.5	190	80
RP1-610	4N/18W-31D3	342335118484401	06-25-94	1100	1220	7.7	—	16.5	110	43
			04-06-95	1330	1240	7.5	20.5	15.5	130	47
RP1-330	4N/18W-31D4	342335118484402	06-25-94	1210	1370	7.5	—	17.5	120	47
			04-06-95	1200	1430	7.6	19.5	16.0	140	54
RP1-240	4N/18W-31D5	342335118484403	06-25-94	1300	1020	7.5	—	18.5	81	30
			04-06-95	1530	1040	7.6	22.0	16.5	93	33
RP1-160	4N/18W-31D6	342335118484404	06-25-94	1330	1100	7.5	—	18.0	94	34
			04-06-95	1800	1100	7.7	17.0	15.0	110	37
RP1-70	4N/18W-31D7	342335118484405	06-25-94	1400	1130	7.5	—	18.0	93	30
			04-06-95	1645	1070	7.7	20.0	16.0	110	33

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, field (mg/L) as CaCO <sub>3</sub>	Alkalinity, water, dissolved, total isotope (mg/L)	Sulfate, dissolved (mg/L as SO <sub>4</sub> )	Chloride, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Bromide, dissolved (mg/L)	Iodide, dissolved (mg/L)
3N/21W-15G1	97	4.5	220	219	440	44	0.60	0.24	0.039
	94	4.9	—	—	420	43	.60	.25	.037
3N/21W-15G2	98	4.4	230	234	470	42	.70	.21	.020
	91	4.2	—	—	450	42	.60	.22	.017
3N/21W-15G3	83	3.0	220	223	420	43	.70	.21	.024
	79	3.2	—	—	400	44	.70	.21	.020
3N/21W-16G4	110	4.2	260	264	530	53	.70	.34	.029
	97	3.8	—	—	460	51	.70	.29	.026
3N/21W-16G5	110	4.9	290	286	490	50	.80	.22	.027
	110	3.9	—	—	480	52	.80	.25	.022
3N/21W-16H5	86	3.2	260	252	420	46	.60	.32	.028
	85	3.1	—	—	380	42	.60	.32	.028
3N/21W-16H6	110	3.4	260	262	570	56	.50	.34	.030
	100	3.1	—	—	520	54	.50	.34	.030
3N/21W-16H7	110	4.0	260	260	670	65	.70	.35	.024
	110	3.8	—	—	600	62	.70	.34	.025
3N/21W-16H8	160	3.6	260	260	680	76	<.10	.58	.150
	240	3.6	—	—	820	110	.50	1.1	.250
4N/18W-31D3	82	4.5	160	158	430	30	.80	.19	.003
	81	4.3	—	—	440	32	.90	.20	.002
4N/18W-31D4	98	5.1	200	200	430	60	.90	.30	.005
	95	4.9	—	—	440	68	.90	.37	.003
4N/18W-31D5	84	4.3	130	138	270	65	.90	.24	.004
	79	4.4	—	—	290	61	.90	.24	.002
4N/18W-31D6	83	4.6	150	144	340	50	.80	.20	.006
	80	4.6	—	—	330	52	.80	.20	.003
4N/18W-31D7	100	5.1	170	168	320	55	.60	.19	.008
	76	5.0	—	—	330	44	.60	.17	.005

**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Silica, dissolved (mg/L)	Solids, residue at 180°C, dissolved (mg/L)	Nitrogen, nitrite dissolved (mg/L as N)	Nitrogen, NO <sub>2</sub> + NO <sub>3</sub> , dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Phosphorus, dissolved (mg/L)	Phosphorus, ortho, dissolved (mg/L)	Aluminum, dissolved (mg/L)
3N/21W-15G1	35	898	0.020	0.790	0.050	<0.20	0.020	0.020	—
	34	988	.020	.800	<.015	<.20	.020	.020	—
3N/21W-15G2	33	1010	.020	1.50	.080	<.20	.340	.270	—
	32	967	.020	1.70	<.015	<.20	.060	.070	—
3N/21W-15G3	32	934	.010	2.10	.040	<.20	.180	.140	—
	32	954	.030	2.40	<.015	<.20	.050	.050	—
3N/21W-15G4	32	1150	.020	1.80	.080	<.20	.440	.220	—
	31	1070	.030	1.60	.020	<.20	.220	.230	—
3N/21W-15G5	26	1110	<.010	.300	.030	<.20	.150	.110	—
	25	1110	.030	.400	<.015	<.20	.070	.070	—
3N/21W-16H5	33	986	.040	3.80	.030	<.20	.060	.050	—
	34	968	.030	4.10	<.015	—	—	.060	—
3N/21W-16H6	31	1230	.010	2.00	.020	<.20	.730	.310	—
	32	1190	.010	2.40	<.015	<.20	.240	.230	—
3N/21W-16H7	30	1400	<.010	.920	.020	<.20	.670	.250	—
	31	1320	<.010	1.30	<.015	<.20	.130	.110	—
3N/21W-16H8	27	1460	<.010	<.050	.030	<.20	.060	.060	—
	28	1800	<.010	<.050	.040	<.20	<.010	.020	—
4N/18W-31D3	25	854	<.010	1.30	.020	<.20	.230	.170	—
	25	920	<.010	1.60	<.015	<.20	.100	.090	—
4N/18W-31D4	27	968	<.010	2.60	.020	.20	1.20	.570	—
	26	1040	<.010	3.50	<.015	<.20	.240	.220	—
4N/18W-31D5	25	642	<.010	.930	.020	<.20	.470	.360	—
	25	716	<.010	1.20	<.015	<.20	.130	.140	—
4N/18W-31D6	23	712	<.010	1.50	.020	<.20	.560	.350	—
	23	762	<.010	.840	<.015	<.20	.080	.090	—
4N/18W-31D7	24	740	.020	1.70	.020	<.20	1.80	.810	—
	23	764	<.010	.840	<.015	<.20	.270	.260	—



**Table 29.** Water-quality data for multiple-well monitoring sites, 1989-95—*Continued*

State well number	Barium, dissolved (µg/L)	Boron, dissolved (µg/L)	Iron, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Strontium, dissolved (µg/L)	H <sup>2</sup> /H <sup>1</sup> (permil)	O <sup>18</sup> /O <sup>16</sup> (permil)	C <sup>13</sup> /C <sup>12</sup> (permil)	C <sup>14</sup> , modern (percent)	Tritium (in Tritium units)
3N/21W-15G1	20	520	<3	—	470	1000	-54.1	-7.84	-13.40	54.3	0.1
	20	550	<3	—	450	1000	—	—	—	—	—
3N/21W-15G2	23	580	<3	—	510	1100	-53.8	-7.86	—	—	.6
	23	610	<3	—	560	1100	—	—	—	—	—
3N/21W-15G3	25	540	<3	—	250	970	-52.9	-7.67	—	—	.3
	25	530	<3	—	260	960	—	—	—	—	—
3N/21W-15G4	32	590	530	—	550	1100	-51.0	-7.53	—	—	2.2
	28	580	<3	—	510	1100	—	—	—	—	—
3N/21W-15G5	23	820	<3	—	9	1400	-51.2	-7.38	—	—	4.7
	23	770	<3	—	10	1400	—	—	—	—	—
3N/21W-16H5	23	550	<3	—	100	1100	-48.7	-7.39	-13.10	53.4	1.8
	26	570	3	—	100	1100	—	—	—	—	—
3N/21W-16H6	27	630	4	—	15	1500	-50.8	-7.32	—	—	4.7
	29	650	7	—	1500	—	—	—	—	—	—
3N/21W-16H7	27	760	<3	—	50	1500	-51.9	-7.43	—	—	5.6
	29	790	<3	—	47	1500	-48.7	-7.39	-13.10	53.4	—
3N/21W-16H8	26	880	89	—	130	1300	-49.6	-7.21	—	—	5.3
	<100	1200	250	—	280	1600	—	—	—	—	—
4N/18W-31D3	12	770	<3	—	4	920	-62.0	-8.84	—	—	.3
	14	700	<3	—	<1	1000	-60.7	-8.74	—	—	0
4N/18W-31D4	15	620	9	—	11	1100	-49.8	-6.91	—	—	6.3
	20	600	<3	—	1	1200	-50.5	-6.96	—	—	—
4N/18W-31D5	12	600	<3	—	2	800	-57.3	-7.86	—	—	5
	16	590	<3	—	<1	860	-57.3	-7.79	—	—	—
4N/18W-31D6	15	450	5	—	2	950	-54.8	-7.80	—	—	4.7
	23	470	<3	—	<1	1000	-54.5	-7.55	—	—	—
4N/18W-31D7	16	500	13	—	10	920	-56.1	-7.90	—	—	4.4
	28	510	<3	—	<1	990	-55.1	-7.82	—	—	—