HYDROLOGIC DATA THROUGH 1993 FOR THE HURON PROJECT OF THE HIGH PLAINS GROUND-WATER DEMONSTRATION PROGRAM

By Janet M. Carter

U.S. Geological Survey

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ILLUSTRATIONS--Continued

TABLES

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
foot	0.3048	meter
mile	1.609	kilometer
inch	25.4	millimeter
inch	2.54	centimeter

Temperature can be converted to degrees Fahrenheit (°F) or degrees Celsius (°C) by the following equations:

$$°F = 9/5\ (°C) + 32$$

$$°C = 5/9\ (°F-32)$$

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

Water year: Water year is the 12-month period, October 1 through September 30, and is designated by the calendar year in which it ends. Thus, the water year ending September 30, 1992, is called the "1992 water year."

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ABSTRACT

This report presents data on precipitation, geologic logs, water levels, and water quality that have been collected or compiled, through water year 1993, for the Huron Project of the High Plains Ground-Water Demonstration Program, under the guidance of the Bureau of Reclamation. The purpose of the Huron Project is to demonstrate the artificial recharge potential of glacial aquifers in eastern South Dakota. High flows from the James River during spring runoff are used as a source of supplemental recharge for the Warren aquifer, which is a buried, glacial aquifer. Prior to the injection of recharge water, which began in April 1994, many sites were monitored to obtain background information. This report presents data that were collected prior to the initiation of recharge.

Precipitation data are collected at two sites within the study area. A site description and daily precipitation for water years 1991-93 are presented for one precipitation site.

In 1990, 76 test holes were drilled and observation wells were installed at 70 sites. Well information and geologic logs collected during the drilling program for the Huron Project are presented.

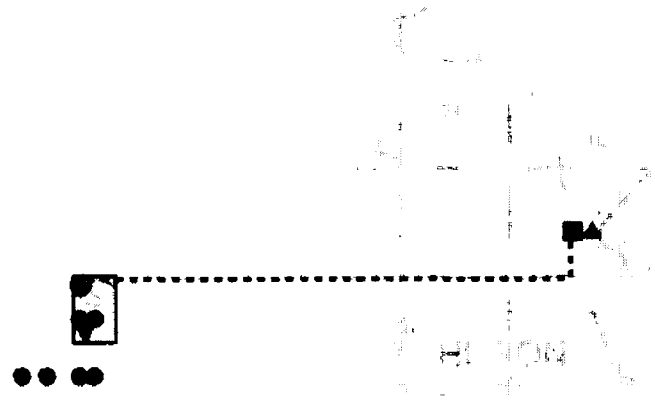
In addition to the 70 new Huron Project wells, 15 existing observation wells owned by the South Dakota Department of Environment and Natural Resources were incorporated into the study. Water-level hydrographs are presented for the 85 observation wells. The period of record shown for the hydrographs is from the earliest available record through September 30, 1993.

Water-quality data were collected from both screening and detailed sampling programs. Screening water-quality data for 32 observation wells are presented. These data include primarily field parameters and common ions. The eight detailed sampling sites represent the quality of untreated water, treated water, an intermittent stream and ground water from the Warren aquifer. Data presented for the detailed sampling program include field parameters, bacteria counts, and concentrations of common ions, solids, nutrients, trace elements, radiometrics, total organic carbon, herbicides, insecticides, and volatile organic compounds.

INTRODUCTION

The Huron Project of the High Plains Ground-Water Demonstration Project was initiated in 1990 as a cooperative effort between South Dakota State University (SDSU), the Bureau of Reclamation, the U.S. Geological Survey (USGS), the U.S. Environmental Protection Agency, the South Dakota Department of Environment and Natural Resources (DENR), and the city of Huron. The purpose of the study is to demonstrate the artificial recharge potential of glacial aquifers in eastern South Dakota.

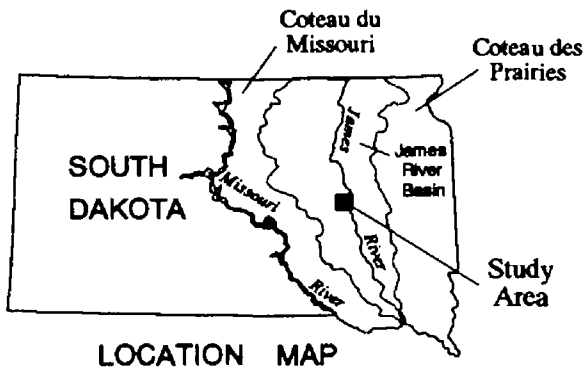
The Huron Project is designed to use high flows from the James River during spring runoff as a source of supplemental recharge for the Warren aquifer, which is a buried, glacial aquifer. During the spring runoff period, water is pumped from the James River to the city of Huron's water treatment plant. After treatment, it is piped to the Huron well field and injected into the aquifer using a recharge well (fig. 1). During periods of low flow, the city of Huron can pump water from the aquifer and return it to the water treatment plant using the same pipeline. The injection of recharge water began in April 1994.



Base from U.S. Geological Survey 1:100,000,
Huron plainimetric map, 1985
City limit from Office of the City Engineer
map, Huron, 1990

0 2 4 MILES

0 2 4 KILOMETERS



EXPLANATION

- HURON WELL FIELD
- PIPELINE
- RECHARGE WELL
- WATER TREATMENT PLANT
- JAMES RIVER INTAKE
- CITY PRODUCTION WELL
- STOCK WELL

Figure 1. Study area for the Huron Project.

Numerous observation wells existed in the study area prior to the inception of the Huron Project, and 15 DENR observation wells were incorporated into the study. In 1990, 76 test holes were drilled and observation wells were installed at 70 sites to provide a more comprehensive monitoring network. After the drilling was completed, water levels were measured biweekly in the DENR wells and new observation wells for this study.

In 1991, screening and detailed sampling programs were initiated to collect background water-quality data. The screening samples were collected monthly and were analyzed for a limited parameter set. The detailed samples were collected quarterly and were analyzed for an extensive parameter set.

The purpose of this report is to present precipitation, geologic, water-level, and water-quality data that have been collected or compiled for the Huron Project through water year 1993. Specifically, this report contains: (1) precipitation records for one site; (2) geologic logs for 76 sites; (3) hydrographs for 85 observation wells; and (4) screening water-quality data for 32 sites and detailed water-quality data for eight sites.

Description of Study Area

The study area is located in the James River Basin near Huron, South Dakota, as shown in figure 1. The James River Basin is a north-south trending lowland that separates two coteaus, the Coteau du Missouri and the Coteau des Prairies. Advancement and recession of glaciers during the Wisconsin age of the Pleistocene epoch created the James River Basin (Flint, 1955).

The Huron well field is located 3 miles west of Huron. The city of Huron operates six production wells located in and near the well field (fig. 1), normally from October 1 to April 1. This schedule enables the Huron Project to inject recharge water when the city is not producing water from the well field.

In addition to the city production wells, a stock well is located within the well field (fig. 1). This site was used in the detailed sampling program because it was the only well in the well field that could be sampled prior to the drilling of additional observation wells during 1990.

The recharge site, which is located in the Huron well field, is in a glacial drift region with interbedded till and outwash. The city production wells, stock well, and recharge well are completed in an outwash aquifer, locally known as the Warren aquifer (Schaefer and others, 1990). The Warren aquifer is of Pleistocene age and is described in Steece and Howells (1965) and Howells and Stephens (1968). The Pierre Shale and the Niobrara Formation, two bedrock units of Cretaceous age, underlie the glacial drift in the study area.

Acknowledgments

Many people have assisted with development and implementation of the Huron Project. In particular, Vernon R. Schaefer and Delvin E. DeBoer, the principal project investigators, were largely responsible for the development and execution of the project. Several graduate students from the Civil Engineering Department at South Dakota State University provided valuable assistance with the collection and analyses of data. The students included Kristen Yahnke, Todd Purtell, Larry Putnam, Darin Brickman, DelRon Peters, and Mark Hardie. Herb Scheele and the operators at the Huron Water Treatment Plant provided valuable aid in the collection of water samples from the James River and the treatment plant. The South Dakota Geological Survey drilled the test holes and installed the observation wells for the project.

PRECIPITATION DATA

Precipitation data are collected at two sites in the study area (fig. 2). Precipitation data are collected at an acid-rain station located in the Huron well field as part of the National Atmospheric Deposition Program and National Trends Network. The daily precipitation data for this site have been published annually in Water Resources Data for South Dakota (U.S. Geological Survey, 1987-94). USGS personnel have been responsible for maintenance of the acid-rain station and collection of precipitation data.

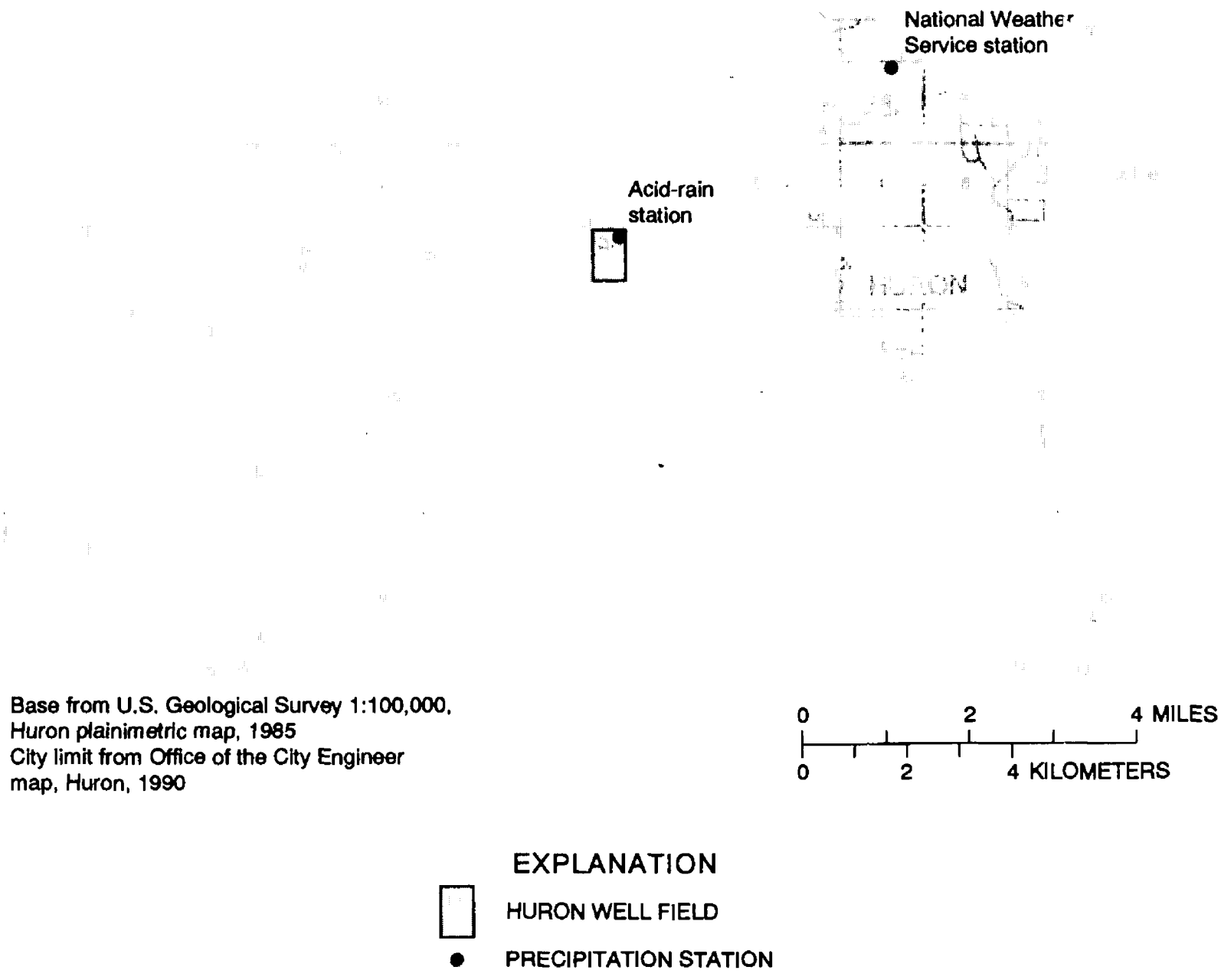


Figure 2. Location of precipitation stations within the study area.

The National Weather Service operates the other precipitation station, which is located at the Huron Regional Airport. Daily precipitation data for the Huron weather station, compiled from monthly summaries (U.S. Department of Commerce, 1990-93) for water years 1991 through 1993, are presented in table 1. The period of record presented corresponds to the collection of water-level and water-quality data for the Huron Project.

WELL DATA

As previously stated, the city of Huron operates six production wells located in and near the well field (fig. 1). In addition, a stock well is located within the well field (fig. 1). Well-construction and completion data for the city production wells are not included in this report because data were not collected from these wells for this study. Well-construction and completion data were not available for the stock well.

Prior to the inception of the Huron Project, numerous DENR observation wells existed within the study area. Fifteen of these wells were incorporated into the study. The locations of the DENR observation wells utilized for the study are shown in figure 3; selected site data for these wells are presented in table 2. The two aquifers that supply the DENR observation wells are the Warren and Pleistocene aquifers, with the exception of well BDS-54-78, where the aquifer is unknown (table 2). As previously stated, the Warren aquifer is of Pleistocene age. The Pleistocene aquifer has not been differentiated but is of the same age as the Warren aquifer.

Three methods of station identification are presented in table 2. The first method is the station identification number, which is based on the international system of latitude and longitude. The number contains 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude north of the equator. The next seven digits denote the degrees, minutes, and seconds of longitude west of the prime (Greenwich) meridian. The last two digits are sequential numbers for wells within the same latitude and longitude.

The second identification method presented in table 2 is the local number, which is based on the Federal land-survey system of eastern South Dakota (shown below). The local number consists of the township number followed by "N," range number followed by "W," and section number, followed by a maximum of four uppercase letters that indicate, respectively, the 160-, 40-,10-, and 2.5-acre tract in which the well is located. These letters are assigned in a counterclockwise direction beginning with "A" in the northeast quarter. A serial number following the last letter is used to distinguish between wells in the same 2.5-acre tract. Thus, well 111N62W32AADD is in the SE1/4 of the SE1/4 of the NE1/4 of the NE1/4 of section 32 in township 111 north and range 62 west.

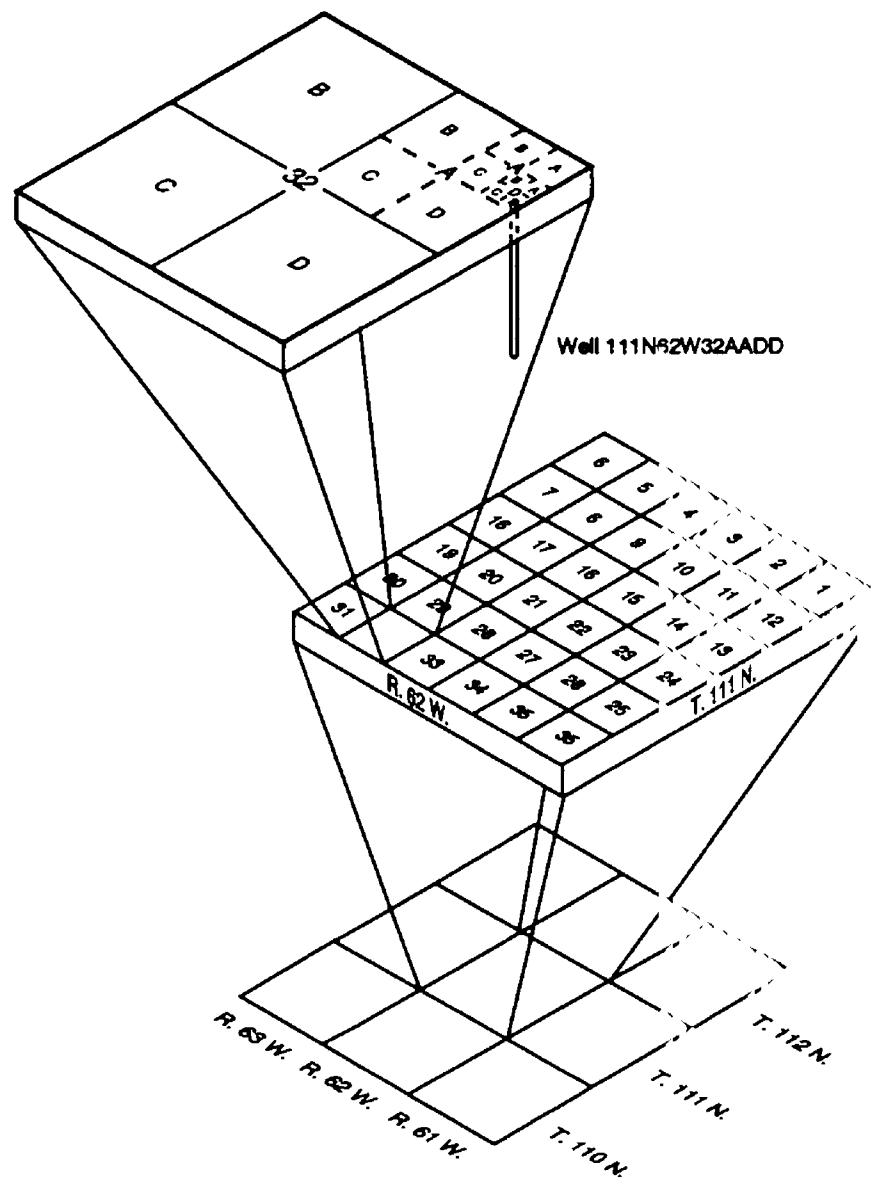


Table 1. Daily precipitation data for the Huron National Weather Service station, October 1990 through September 1993

[T, trace; ---, no data; --, not computed]

PRECIPITATION, IN INCHES, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	T	0.00	T	0.00	0.00	3.21	0.00	0.06	0.00
2	.56	T	T	.07	.00	.00	.00	T	.00	T	.21	.24
3	.13	.00	.02	.00	.00	.00	.00	1.48	.53	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.72	.00	.00	.00
5	.00	T	.00	T	.00	.09	.00	.00	T	.00	.00	.00
6	T	T	.00	.00	.00	.00	.00	.00	.00	.00	T	.00
7	.00	.00	.00	T	.00	.00	.00	.00	.00	.06	.81	.17
8	.00	.00	.00	T	.00	T	.00	.00	.00	T	T	.03
9	.00	.00	.00	T	.00	.00	.00	.00	.00	T	.00	.00
10	.00	T	.00	T	.00	.00	.00	.00	.04	.00	.00	.00
11	.01	.00	.00	T	T	.00	1.51	.00	.00	.11	.00	.13
12	.01	.00	T	.00	.00	.20	1.28	T	.00	.00	.00	.00
13	T	.00	T	T	T	.18	.56	.00	.00	.00	.00	.70
14	.00	.00	.22	.00	T	.00	.36	.00	.00	.00	.00	.00
15	T	.00	.03	T	.00	.00	.04	.01	.04	.00	T	.00
16	T	.00	.00	T	.00	.00	.00	.19	.00	.00	.00	T
17	.44	.00	T	.00	.40	T	.00	.50	.00	.00	.02	.03
18	.00	.00	T	.00	.37	.00	T	.00	T	.01	.00	.00
19	.01	.00	.09	T	T	.00	.00	T	.00	.00	.00	.00
20	.11	T	.03	T	.00	.14	.00	.00	.00	.08	.06	.00
21	.00	.00	.04	.00	.00	T	.00	.00	.00	T	.00	.00
22	T	.00	.00	T	.00	.01	T	.48	.00	.00	.00	.00
23	.00	.00	.00	.01	T	T	.00	T	.00	.00	.00	.64
24	.00	.00	T	.00	.06	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	T	.00	.01	.00	.00	.00	.00	.00	T	.00
26	.00	T	T	.00	.02	.00	.88	.08	.02	1.17	.00	.00
27	.00	T	.00	T	.02	.00	.01	.03	.00	.33	.00	.00
28	.00	.00	T	T	.04	.00	.00	.69	.00	T	.00	.00
29	.00	.00	T	.00	---	.00	.89	.15	.34	.00	.02	T
30	.00	.00	.00	T	---	T	.06	T	.82	T	.00	.00
31	.00	---	.00	.00	---	.00	---	.11	---	T	.00	---
Total	1.27	--	.43	.08	.92	.62	5.59	3.72	5.72	1.76	1.18	1.94

Table 1. Daily precipitation data for the Huron National Weather Service station, October 1990 through September 1993—Continued

PRECIPITATION, IN INCHES, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	T	0.00	0.00	0.00	0.00	0.00	0.00	T	0.29	0.05	0.78
2	.00	T	T	.00	.00	.00	.00	.00	.00	.02	.16	T
3	T	.00	T	.00	.00	.00	T	.00	.16	.00	.10	.00
4	.14	.00	.00	.00	.00	.03	.00	.00	.00	.00	.77	T
5	T	.02	.00	T	.00	.34	.00	.00	.35	T	.03	.22
6	.00	T	.00	.00	.00	.20	.10	.00	.00	.00	.01	1.02
7	.00	.00	.00	.40	T	.00	.01	.00	.37	1.26	.00	.40
8	.00	.00	.00	.01	.00	.28	.41	.00	.00	.00	.00	T
9	.00	T	.00	T	.00	T	.01	.00	.00	.62	.00	T
10	.00	T	.00	.00	T	.00	.02	T	.00	.00	.00	.00
11	.00	.16	.00	.00	.38	.01	.06	.00	.00	.32	.00	.00
12	.00	.00	.00	T	.02	.00	.01	.00	.00	.00	.00	.00
13	.00	.00	T	T	.00	.00	.00	T	.00	.13	.00	T
14	.00	.00	.00	.18	.06	.00	T	.04	.03	.00	.00	.00
15	.00	.00	T	.00	.01	.00	.23	.02	1.43	.28	.00	.01
16	.00	.00	.00	T	.00	.00	.00	.01	1.09	.00	.00	T
17	.00	.25	.00	T	.31	.00	.13	.00	.31	.00	T	T
18	.00	.00	.00	T	.25	.00	.96	.00	.00	.00	.00	.00
19	.00	.00	.08	.00	.00	.00	.04	.00	.00	.04	.00	.00
20	.00	.00	.00	.00	.00	T	.03	.00	T	.00	.00	.09
21	.00	T	.00	.00	.14	T	.06	.00	.02	.53	.91	.05
22	.00	T	.00	T	.00	.00	.00	.06	.00	.57	.00	.00
23	.00	.00	.00	T	T	.00	T	.00	.00	.00	T	.00
24	.00	.00	.00	.12	T	.00	.03	.05	.05	.00	.56	.00
25	T	.00	.00	T	.00	.00	.00	.15	.00	T	.19	T
26	.00	.05	.00	.00	.01	T	.00	.00	.00	.00	T	.00
27	.00	.00	.00	T	.00	.00	.00	.00	.00	.00	.00	.00
28	.84	.05	.00	.00	.00	.00	.00	.00	T	.00	.00	.00
29	T	.25	.00	.00	.00	.00	.00	.00	T	.04	.00	.00
30	.00	.03	.00	.00	---	.00	.00	.00	1.62	.76	.00	.00
31	.00	---	.00	.00	---	T	---	.00	---	.00	T	---
Total	.98	.81	.08	.71	1.18	.86	2.10	.33	5.43	4.86	2.78	2.57

Table 1. Daily precipitation data for the Huron National Weather Service station, October 1990 through September 1993—Continued

PRECIPITATION, IN INCHES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.46	T	T	0.00	0.00	0.00	0.60	1.34	0.06	0.00	0.00
2	.00	.25	.00	T	.00	.00	.00	.00	.09	T	.14	.00
3	.00	.08	.05	T	.00	.00	.00	.00	.00	.99	.01	.00
4	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
5	.00	T	.00	.01	.00	.00	.08	.00	.00	.00	.00	.00
6	T	T	T	.00	.00	.00	.44	.67	.00	.00	.00	.00
7	.00	T	T	.00	.00	.00	.55	.18	.11	.25	.03	.00
8	T	T	.00	.00	.00	.00	.01	1.04	.04	.05	.00	.00
9	.01	.00	.00	.00	T	.01	T	.19	.01	.00	.00	T
10	.00	.00	.00	T	.18	T	.72	.00	.00	.25	.00	.00
11	.00	.00	.00	.16	.03	.06	T	.00	.00	.00	.00	.00
12	T	.06	T	.08	.10	T	.00	.00	.58	.02	.65	T
13	.00	.00	.11	T	T	T	.48	.00	.03	.07	.00	.26
14	.00	T	.01	T	T	.00	.14	.00	.00	.00	.04	.00
15	.02	.00	.09	.00	T	.00	T	T	.50	.00	.00	.00
16	.00	.00	.00	.00	T	T	.00	.01	.61	T	1.36	.00
17	T	.00	T	.00	.00	.00	.00	.30	.72	2.09	.00	.01
18	.00	.01	.02	.00	.00	.00	.00	.00	.46	.37	.00	.00
19	.00	.07	T	.00	.00	.00	T	.00	.01	.00	.00	1.41
20	.00	T	.00	T	T	.00	.00	.00	.00	.00	.00	T
21	.00	T	.00	T	.11	.74	.00	.00	.00	.43	.00	.01
22	.00	T	T	.00	T	T	.00	T	.34	.00	.00	T
23	.00	T	.03	.07	.00	.00	T	.12	.29	.00	.00	.00
24	.00	.02	.00	.00	.06	.00	.14	.00	.28	1.20	.00	.00
25	.00	T	.00	.00	.05	.00	.00	.00	.00	.00	.00	.03
26	.00	.00	.00	.00	.02	.00	.03	.09	.00	.77	.10	T
27	.00	.00	.00	.00	T	.00	.00	T	.00	.02	.00	.00
28	.00	.00	T	T	.00	T	.01	T	.56	.00	.00	.00
29	.00	.01	T	.00	---	.60	.00	.01	1.15	.00	T	.00
30	.00	T	T	.00	---	.01	.58	.11	T	.00	.06	.00
31	.36	---	T	.00	---	.15	---	.00	---	.12	.00	---
Total	.39	.97	.31	.32	.55	1.57	3.18	3.32	7.12	6.69	2.39	1.74

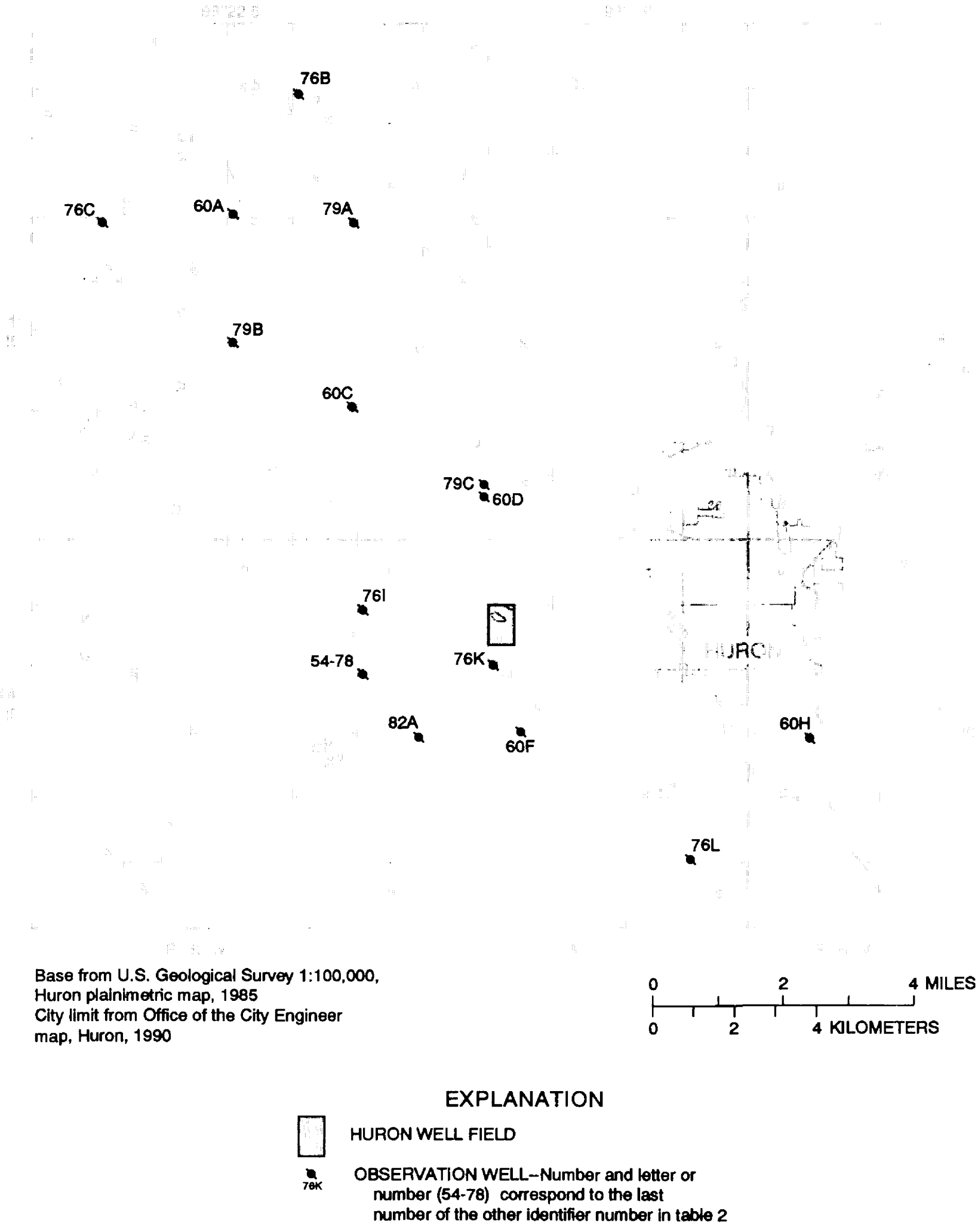


Figure 3. Location of selected South Dakota Department of Environment and Natural Resources observation wells within the study area.

Table 2. Selected site data for South Dakota Department of Environment and Natural Resources observation wells

[Other identifier: BD or BDS, Beadle County. All values in feet below or above (-) land surface. --, no data]

Station identification number	USGS local number	Other identifier	Aquifer	Depth drilled (feet)	Top of casing (feet)	Bottom of casing (feet)	Top of screen (feet)	Bottom of screen (feet)
441935098114101	110N61W19AAAA	BD-60H	Warren	--	--	--	--	--
442119098200701	110N62W 7BBBB	BD-76I	Pleistocene	90.0	-1.30	58.70	58.70	63.70
442033098174001	110N62W 9CCCC	BD-76K	Warren	110	-1.50	88.50	88.50	93.50
441941098170301	110N62W16DCCC	BD-60F	Warren	92.0	-1.50	80.00	--	--
442027098200701	110N62W18BBBB	BDS-54-78	--	40.0	-2.0	37.00	17.00	37.00
441935098185702	110N62W19AAAA2	BD-82A	Warren	--	--	--	--	--
441757098135901	110N62W25CCCC	BD-76L	Pleistocene	90.0	-1.20	68.80	68.80	73.80
442254098174501	111N62W32AADD	BD-79C	Warren	--	--	--	--	--
442250098174401	111N62W32ADAA	BD-60D	Pleistocene	130	-2.00	63.00	--	--
442638098223301	111N63W 2CCCC	BD-60A	Pleistocene	100	-1.20	58.00	--	--
442632098250001	111N63W 9BBBB	BD-76C	Pleistocene	120	-1.80	98.20	98.20	103.20
442633098201101	111N63W12AAAA	BD-79A	Warren	--	--	--	--	--
442451098151501	111N63W14CCCC	BD-79B	Warren	--	--	--	--	--
442402098201101	111N63W24DDDD	BD-60C	Pleistocene	125	-2.00	64.00	--	--
442816098212001	112N63W36BBBB	BD-76B	Pleistocene	90.0	-2.20	57.80	57.80	62.80

The third identification method is the "other identifier," which was assigned by DENR (table 2). This name denotes the county in which the well is located followed by the year and sequence in which it was drilled.

In 1990, the South Dakota Geological Survey (SDGS) drilled 76 test holes within the study area. Observation wells subsequently were installed at 70 of these sites. The recharge well was completed in 1993. The locations of the observation wells, test holes, and recharge well are shown in figure 4, and selected site data for the wells and test holes are presented in table 3.

The wells and test holes in table 3 are identified by the 15-digit station identification number based on their latitudes and longitudes, the USGS local number based on the Federal land-survey system, and the other identifier, all assigned by the same methods previously described. The other identifier (table 3) was designated by SDGS and denotes the drilling technique (CO: combination rig; A: auger rig) followed by the sequence and year in which it was drilled.

The observation wells and test holes were drilled with either a combination rotary or an auger rig. All well-drilling and completion materials were provided by SDGS. The eight wells that were constructed with an auger were drilled into the surficial till deposits and do not penetrate the Warren aquifer. The other 68 wells were constructed using hydraulic rotary techniques. Of these wells, 8 were completed in the till, 54 were completed in the Warren aquifer, and 6 were not completed because of drilling problems.

All completed wells have 2-inch PVC casing and screen. The wells were gravel packed with washed Platte River sand from Grand Island, Nebraska, and were sealed with bentonite to approximately 20 feet below land surface and with neat cement from the top of the bentonite to the land surface. The wells were developed using compressed air, after which 5-foot-tall metal protectors were installed over the top of each well.

Table 3. Selected site data for Huron Project observation wells, test holes, and recharge well

[Other identifier: CO, combination rig; A, auger rig. All values given in feet below or above (-) land surface. --, no data]

Station identification number	USGS local number	Othar identifier	Aquifer	Depth drilled (feet)	Top of casing (feet)	Bottom of casing (feet)	Top of screen (feet)	Bottom of screen (feet)
442149098151601	110N62W 2BCCC	CO-28-90	Test hole	21	--	--	--	--
442149098151602	110N62W 2BCCC2	CO-29-90	Warren	87	-2.5	86	77	82
442123098155301	110N62W 3DCCC	CO-26-90	Test hole	117	--	--	--	--
442123098155302	110N62W 3DCCC2	CO-27-90	Warren	77	-2.5	76.5	67.5	72.5
442204098163101	110N62W 4AADA	CO-24-90	Warren	77	-2.5	72	62	67
442213098174301	110N62W 4BBBB	CO-04-90	Warren	107	--	--	--	--
442123098171501	110N62W 4CDDD	CO-15-90	Warren	97	-3	87	87	92
442123098163101	110N62W 4DDDD	CO-25-90	Warren	47	-2.5	46	36	41
442150098174401	110N62W 5ADDD	CO-05-90	Warren	90	-2.5	81	81	86
442213098185601	110N62W 5BBBB	CO-02-90	Test hole	85	--	--	--	--
442213098185602	110N62W 5BBBB2	CO-03-90	Warren	100	-3	100	92	97
442128098185401	110N62W 5CCCB	CO-30-90	Test hole	47	--	--	--	--
442128098185402	110N62W 5CCCB2	CO-31-90	Warren	107	-2.65	107	95	100
442124098181601	110N62W 5DCCC	CO-14-90	Warren	86.5	-3.0	76.5	76.5	81.5
442213098200701	110N62W 6BBBB	CO-23-90	Warren	87	-2.5	86.5	76.5	81.5
442002098185301	110N62W 8CCCC	CO-01-90	Warren	105	-2.35	105	96	101
442122098172002	110N62W 9BABB	CO-06-90	Warren	77	-2.71	70	70	75
442118098173101	110N62W 9BBAC	CO-55-90	Warren	73	-2.39	70.5	70.5	73
442119098173601	110N62W 9BBBA	CO-65-90	Warren	87	-2.62	82.5	82.5	85
442119098173602	110N62W 9BBBA2	CO-66-90	Warren	67	-2.35	64.5	64.5	67.0
442119098173603	110N62W 9BBBA3	CO-67-90	Warren	47	-2.34	44.5	44.5	47
442119098173604	110N62W 9BBBA4	A-01-90	Till	20.55	-2.78	18.05	18.05	20.55
442119098173605	110N62W 9BBBA5	A-02-90	Till	12.5	-2.63	10	10	12.5
442119098173606	110N62W 9BBBA6	A-03-90	Till	38	-2.32	35.5	35.5	38
442119098173607	110N62W 9BBBA7	A-04-90	Till	28	-2.49	25.5	25.5	28
442123098174201	110N62W 9BBBB	CO-07-90	Test hole	127	--	--	--	--
442123098174002	110N62W 9BBBB2	CO-08-90	Warren	87	-2.86	79	79	84
442118098174001	110N62W 9BBBC	CO-16-90	Warren	87	-3.11	87	77	82
442118098174002	110N62W 9BBBC2	CO-33-90	Warren	67	-2.65	64.5	64.5	67
442118098174003	110N62W 9BBBC3	CO-34-90	Warren	47	-2.5	44.5	44.5	47
442118098174004	110N62W 9BBBC4	CO-35-90	Till	37	-2.90	34	34	36.5
442118098174005	110N62W 9BBBC5	CO-36-90	Till	12	-3.15	9.5	9.5	12.0
442118098174006	110N62W 9BBBC6	CO-37-90	Till	20.25	-3.26	17.75	17.75	20.25
442118098174007	110N62W 9BBBC7	CO-38-90	Till	26.5	-2.99	24	24	26.5
442117098173601	110N62W 9BBBD	CO-45-90	Warren	82	-2.39	77	77	82
442117098173602	110N62W 9BBBD2	CO-46-90	Test hole	39	--	--	--	--
442117098173603	110N62W 9BBBD3	CO-47-90	Warren	73	-2.31	70	70.5	73
442117098173604	110N62W 9BBBD4	CO-48-90	Warren	52	-2.21	49.5	49.5	52
442117098173501	110N62W 9BBBD5	CO-49-90	Warren	82	-3.53	79.5	79.5	82
442117098173502	110N62W 9BBBD6	CO-50-90	Warren	67	-3.06	64.5	64.5	67

Table 3. Selected site data for Huron Project observation wells, test holes, and recharge well—Continued

Station Identification number	USGS local number	Other identifier	Aquifer	Depth drilled (feet)	Top of casing (feet)	Bottom of casing (feet)	Top of screen (feet)	Bottom of screen (feet)
442117098173503	110N62W 9BBBD7	CO-51-90	Warren	47	-2.98	44.5	44.5	47
442115098173501	110N62W 9BBCA	CO-52-90	Warren	72	-2.90	60	60	62.5
442115098173502	110N62W 9BBCA2	CO-53-90	Warren	74	-2.34	71	71.5	74
442115098173503	110N62W 9BBCA3	CO-54-90	Warren	47	-2.55	44.5	44.5	47
442111098173801	110N62W 9BBCB	CO-18-90	Warren	81	-2.71	51	46	51
442117098174002	110N62W 9BBCB2	CO-39-90	Warren	56.5	-3.32	54	54	56.5
442117098174003	110N62W 9BBCB3	CO-40-90	Warren	67	-2.69	63.25	63.25	65.75
442117098174004	110N62W 9BBCB4	CO-41-90	Till	47	-2.67	44.5	44.5	47
442117098174005	110N62W 9BBCB5	CO-42-90	Till	27	-2.59	24.5	24.5	27
442117098174006	110N62W 9BBCB6	CO-43-90	Till	12	-3.32	9.5	9.5	12
442117098174007	110N62W 9BBCB7	CO-44-90	Till	22	-2.91	19.5	19.5	22
442117098174001	110N62W 9BBCB8	CO-17-90	Warren	84	-2.81	70	70	75
442115098174202	110N62W 9BBCB9	CO-63-90	Warren	67	-2.81	64.5	64.5	67
442115098174203	110N62W 9BBCB10	CO-64-90	Warren	47	-2.44	44.5	44.5	47
442115098174201	110N62W 9BBCB11	CO-62-90	Warren	87	-3.11	82	82	87
442115098173902	110N62W 9BBCB12	CO-57-90	Warren	60	-2.60	57.5	57.5	60
442115098173903	110N62W 9BBCB13	CO-58-90	Warren	47	-2.58	40.35	40.35	42.85
442115098173901	110N62W 9BBCB14	CO-56-90	Warren	81	-2.59	75.5	75.5	78
442117098174008	110N62W 9BBCB15	Recharge well	Warren	80	-1.56	60	60	80
442113098174201	110N62W 9BBCC	CO-59-90	Warren	81	-2.85	78	78.5	81
442113098174202	110N62W 9BBCC2	CO-60-90	Warren	67	-2.79	64.5	64.5	67
442113098174203	110N62W 9BBCC3	CO-61-90	Warren	47	-2.60	44.5	44.5	47
442113098174204	110N62W 9BBCC4	A-05-90	Till	23	-2.27	20	20.5	23
442113098174205	110N62W 9BBCC5	A-06-90	Till	13	-3.26	8.5	8.5	11
442113098174206	110N62W 9BBCC6	A-07-90	Till	43	-2.28	37.5	37.5	40
442113098174207	110N62W 9BBCC7	A-08-90	Till	33	-2.38	30.5	30.5	33
442110098174201	110N62W 9BBCC8	CO-09-90	Warren	73	-2.47	65	65	70
442110098172501	110N62W 9BBDD	CO-19-90	Warren	77	-2.57	72	72	77
442108098173101	110N62W 9BCAB	CO-32-90	Warren	87	-2.80	87	79	84
442105098174001	110N62W 9BCBC	CO-68-90	Warren	94	-2.83	94	85	90
442057098172501	110N62W 9BCDD	CO-10-90	Warren	77	-2.70	59	59	64
442002098162801	110N62W10CCCC	CO-11-90	Warren	71	-3	71	62	67
442031098151801	110N62W10DDDD	CO-12-90	Warren	77	-3	67	67	72
442032098172501	110N62W16BBAA	CO-13-90	Warren	81	-3.3	68	68	73
441937098163001	110N62W21AAAA	CO-21-90	Warren	77	-2.5	71.5	71.5	76.5
441937098174001	110N62W21BBBB	CO-20-90	Warren	92.5	-2.5	92.5	82.5	87.5
441937098151701	110N62W22AAAA	CO-22-90	Warren	57	-3.3	56	46	51

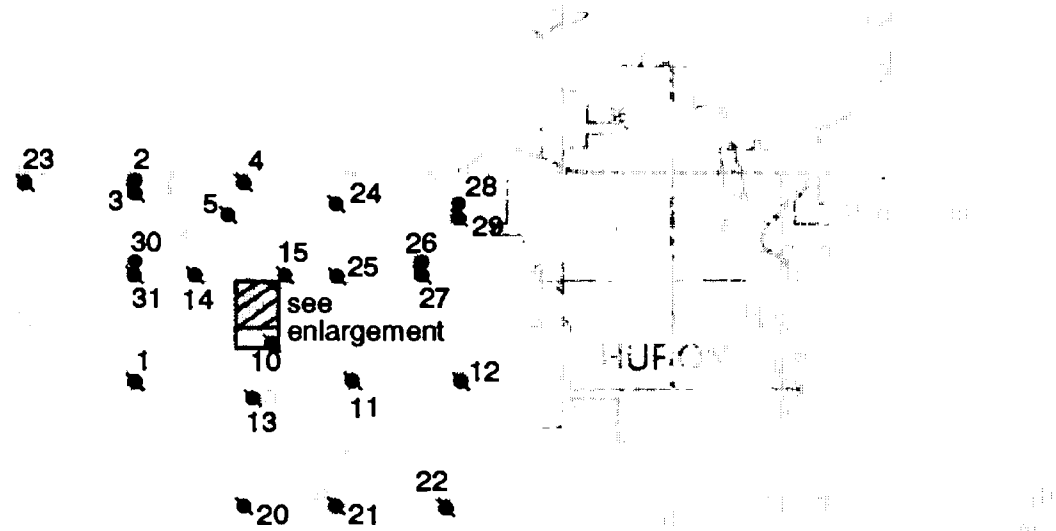
Cuttings from the wells and test holes were collected at 5-foot intervals and are available for examination at the Northern Great Plains Water Resources Research Center, SDSU, Brookings, South Dakota. The cuttings and information provided by the driller were used to prepare geologic logs of each of the wells and test holes, except for those completed in the till. Gamma logging was performed on most of the wells by USGS. The gamma logs are available for examination at the USGS office in Huron, South Dakota. The geologic logs of the observation wells and test holes are shown in figure 5. Some of the wells shown in figure 5 are grouped together as "cluster wells." The wells within each cluster were drilled as close together as possible.

WATER-LEVEL DATA

Water-level data are presented for 15 DENR observation wells and 70 Huron Project observation wells within the study area. The locations of the wells are shown in figure 3 (DENR wells) and figure 4 (Huron Project wells). USGS personnel have been responsible for the maintenance of both the DENR and Huron Project observation wells and for the collection and compilation of the water-level records.

The following section of this report presents a site description and hydrograph for each observation well. Hydrographs for DENR observation wells are presented in figures 6-20. Hydrographs for Huron Project observation wells are presented in figures 21-90. The period of record shown for both the DENR and the Huron Project observation wells is from the earliest available record through September 30, 1993. Although the frequency of water-level measurements varied for existing DENR wells before the initiation of this project in 1990, the wells were measured at least twice a year. The DENR and Huron Project observation wells were measured biweekly beginning in 1990. A dashed line is shown on the hydrographs when the interval between water-level measurements exceeds one year. The data used to generate the hydrographs are available in the USGS's "Ground Water Site Inventory" (GWSI) data base.

Water levels within wells can be affected by several factors. Pumping of nearby wells can cause short-term and long-term declines in water levels. The observation wells completed in the Warren aquifer that are located in or near the well field are affected by the annual pumping of the city production wells from October 1 to April 1. The water-level decline for these wells during the production period can be seen on their corresponding hydrographs. Other wells in the study area can be affected by pumping if they are located near irrigation wells. Short-term changes in water levels in artesian aquifers also can be caused by fluctuations in barometric pressure. Long-term increases and decreases in water levels generally correspond to changes in the recharge and discharge rates of the aquifer. Generally, increases in water levels correspond to periods of wet climatic conditions when aquifer recharge exceeds discharge. Long-term declines in water levels generally reflect periods of drought or increases in ground-water consumption when aquifer discharge exceeds recharge. The long-term declines are evident in the hydrographs for the DENR observation wells, where many of the extreme lows occurred in the early 1980's. Many of the extreme highs for the observation wells occurred in 1993, which corresponds to above-normal precipitation (table 1).



Base from U.S. Geological Survey 1:100,000,
Huron plainimetric map, 1985
City limit from Office of the City Engineer
map, Huron, 1990

0 2 4 MILES
0 2 4 KILOMETERS

EXPLANATION

HURON WELL FIELD

24 HURON PROJECT OBSERVATION WELL--Number corresponds to the middle number of the other identifier number in table 3

A1 HURON PROJECT OBSERVATION WELL--Letter and number correspond to the middle number of the other identifier number in table 3

2 HURON PROJECT TEST HOLE--Number corresponds to the middle number of the other identifier number in table 3

RECHARGE WELL

Figure 4. Location of Huron Project observation wells, test holes, and recharge well within the study area.

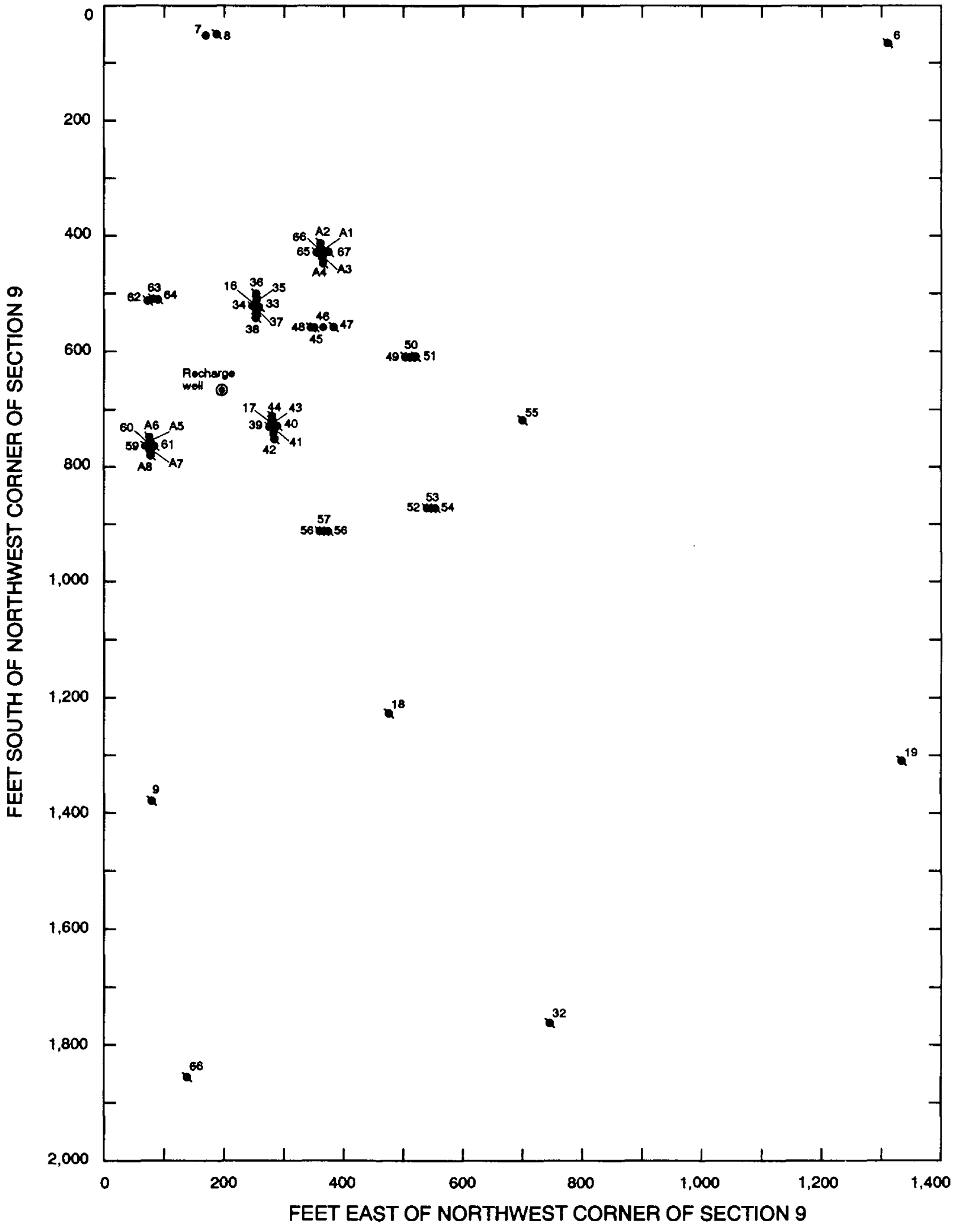


Figure 4. Location of Huron Project observation wells, test holes, and recharge well within the study area.--Continued

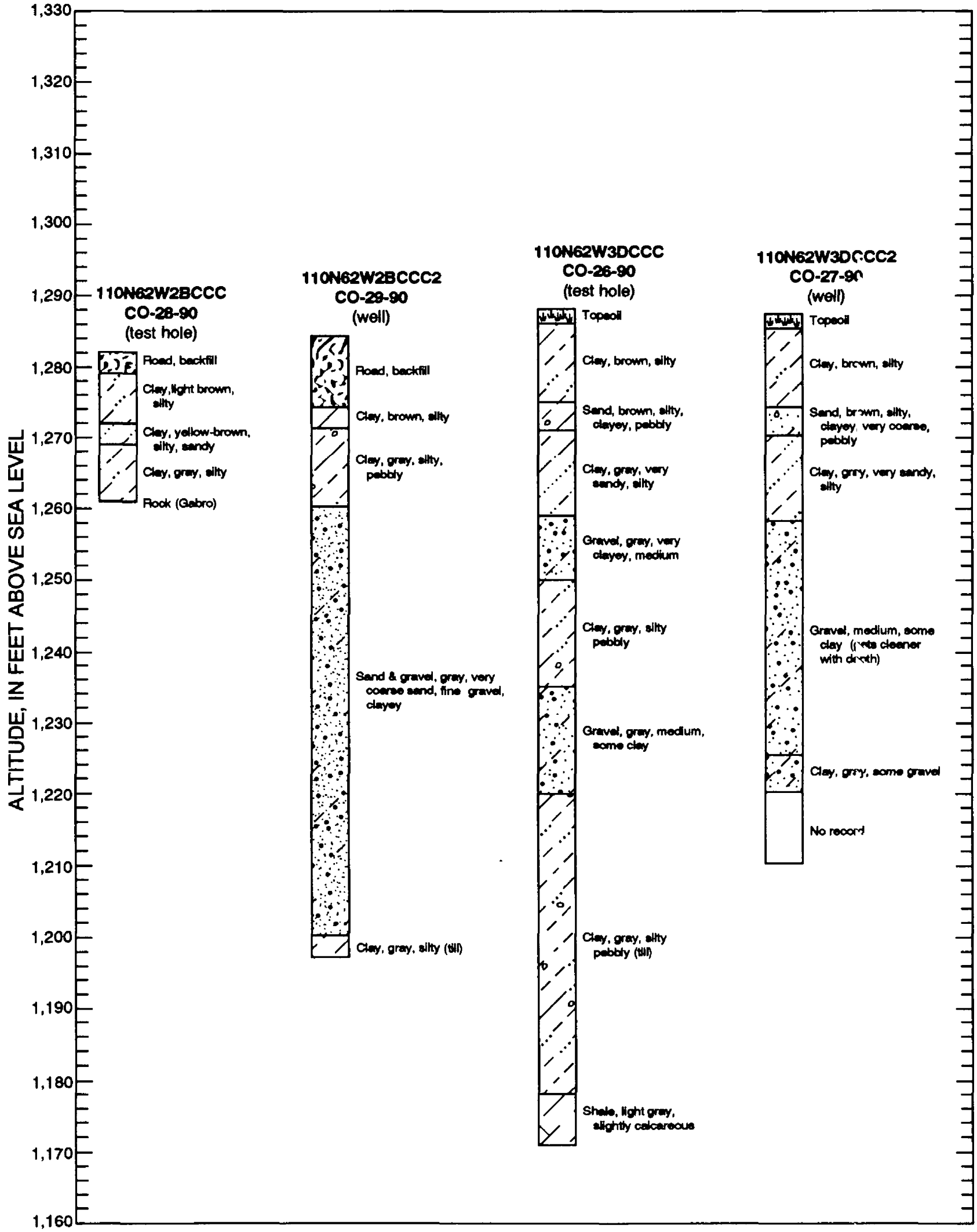


Figure 5. Geologic logs for Huron Project observation wells and test holes.

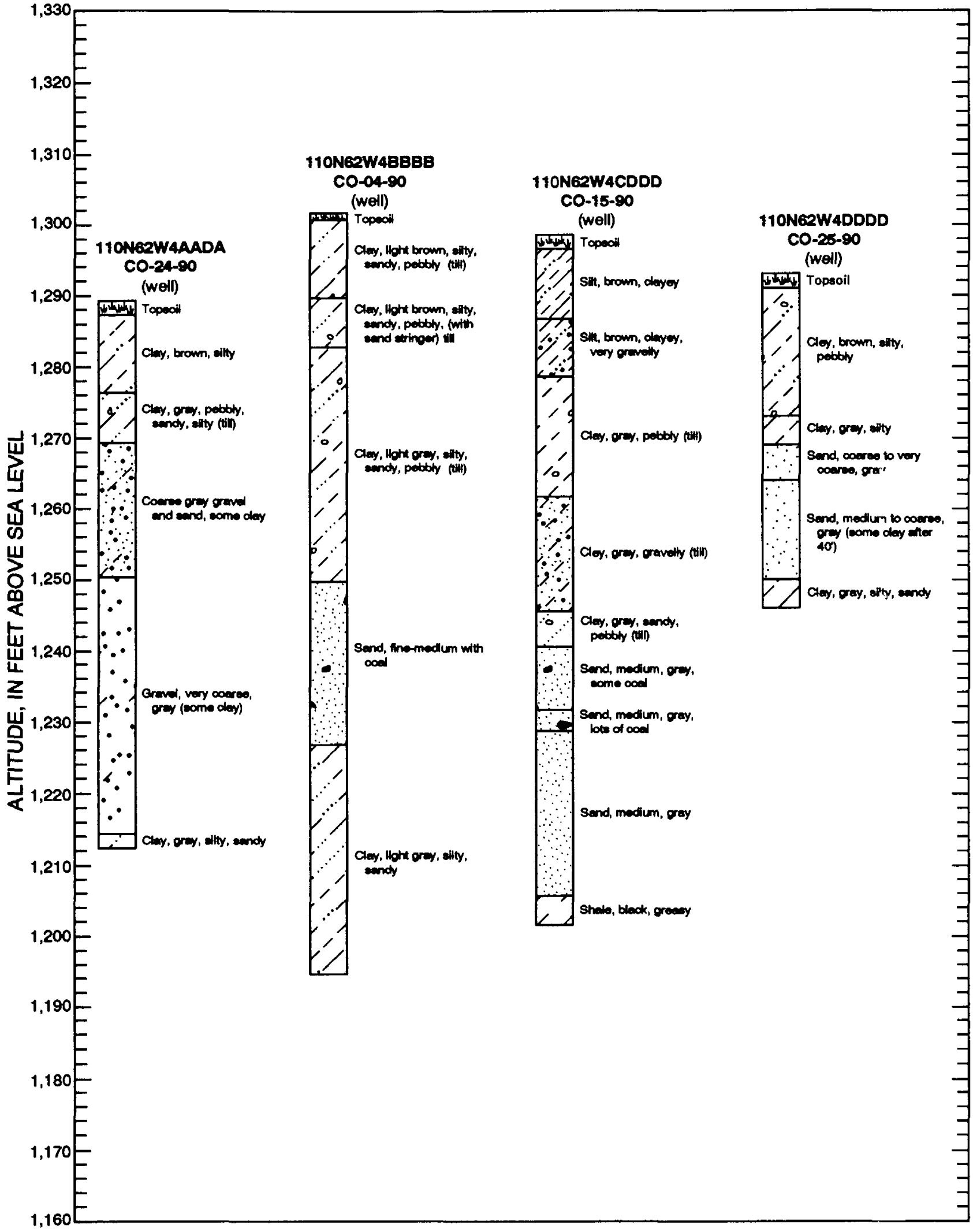


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

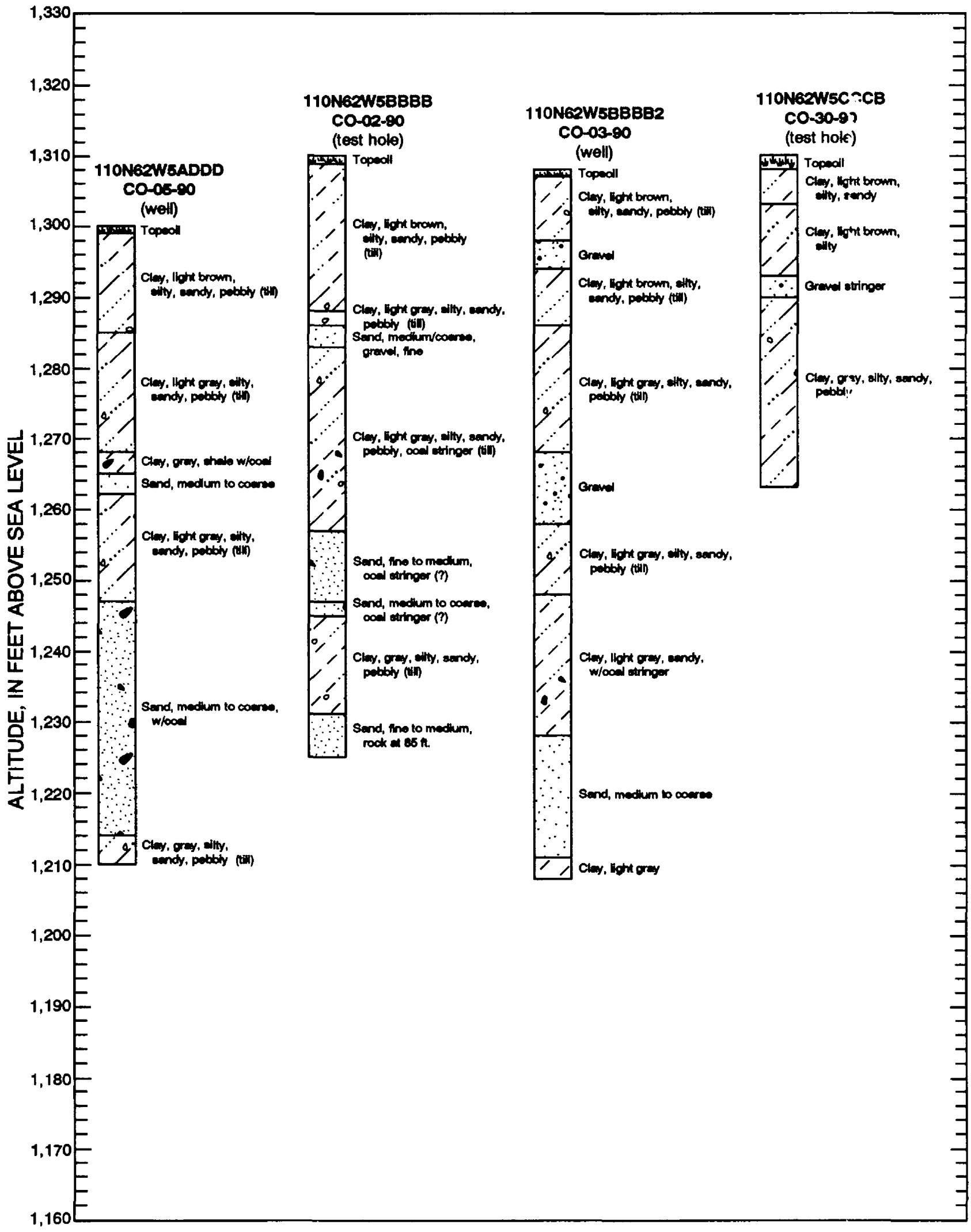


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

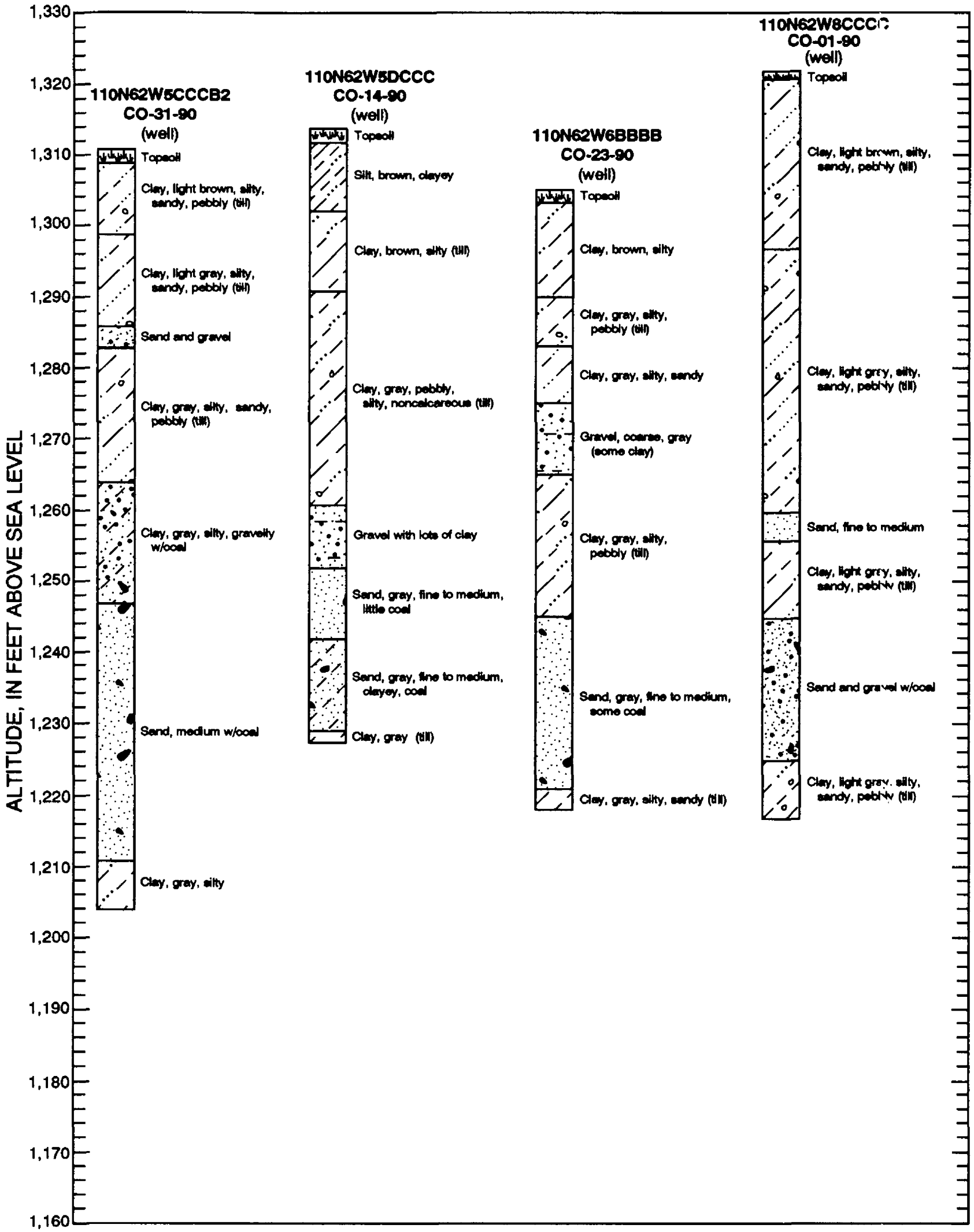


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

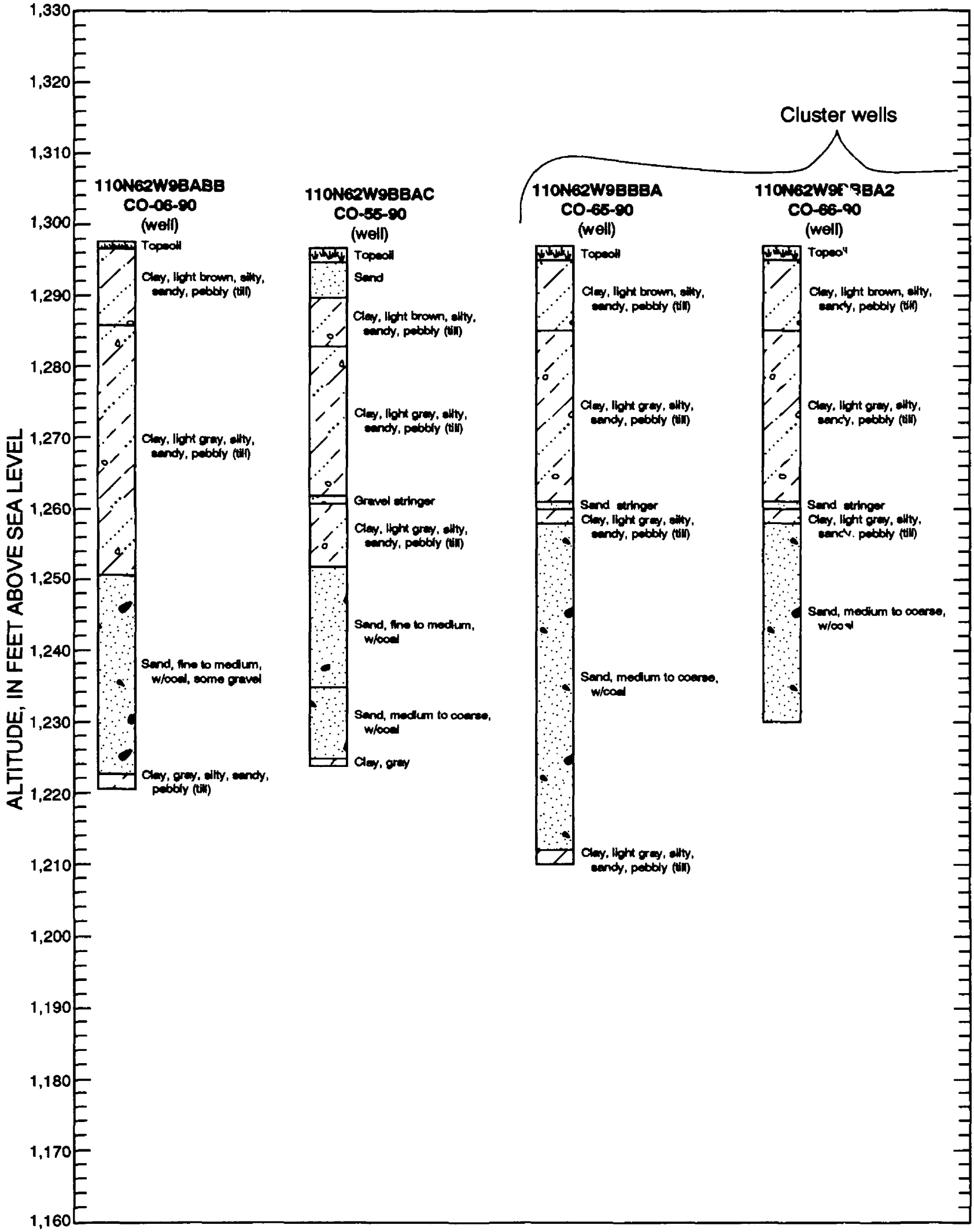


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

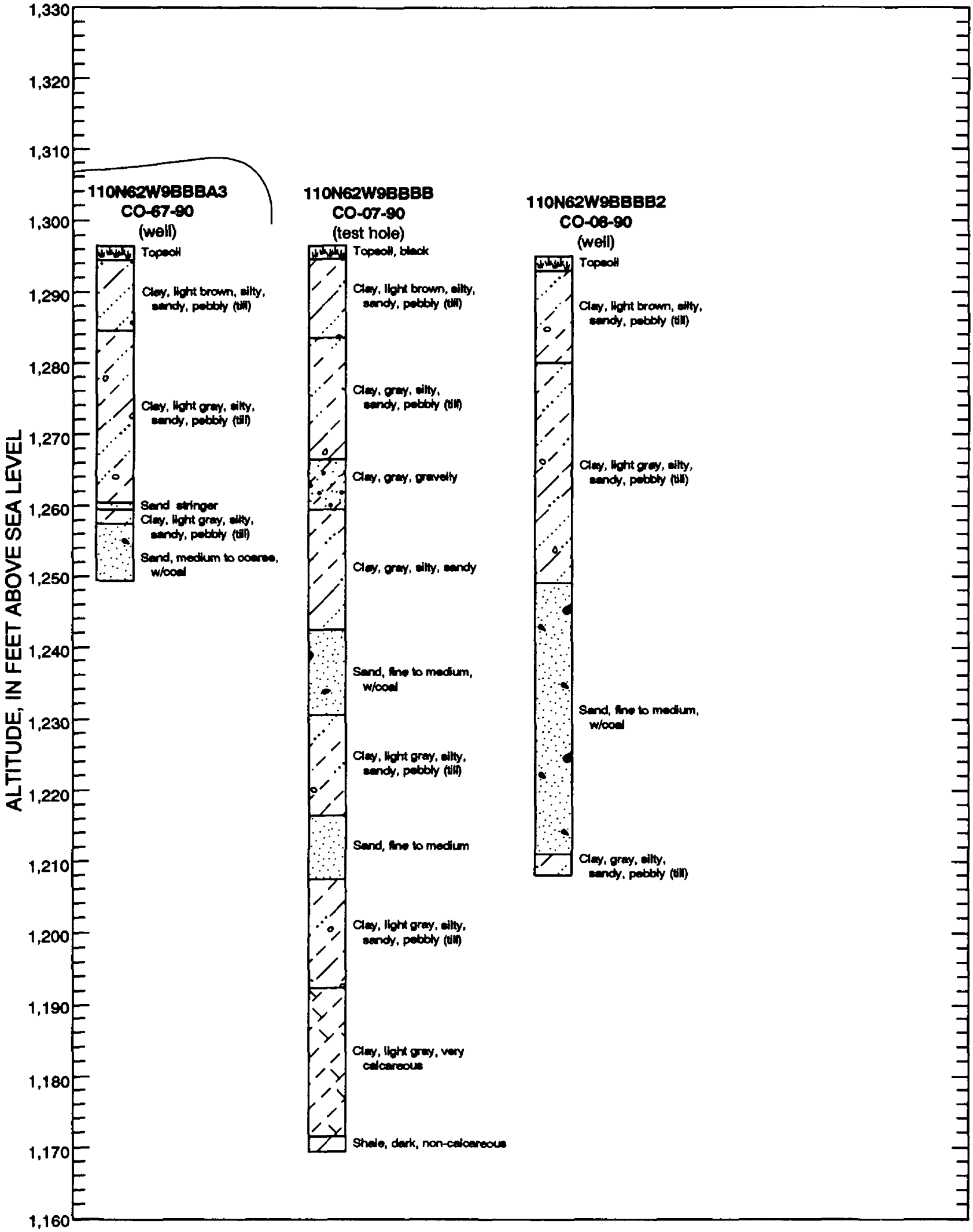


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

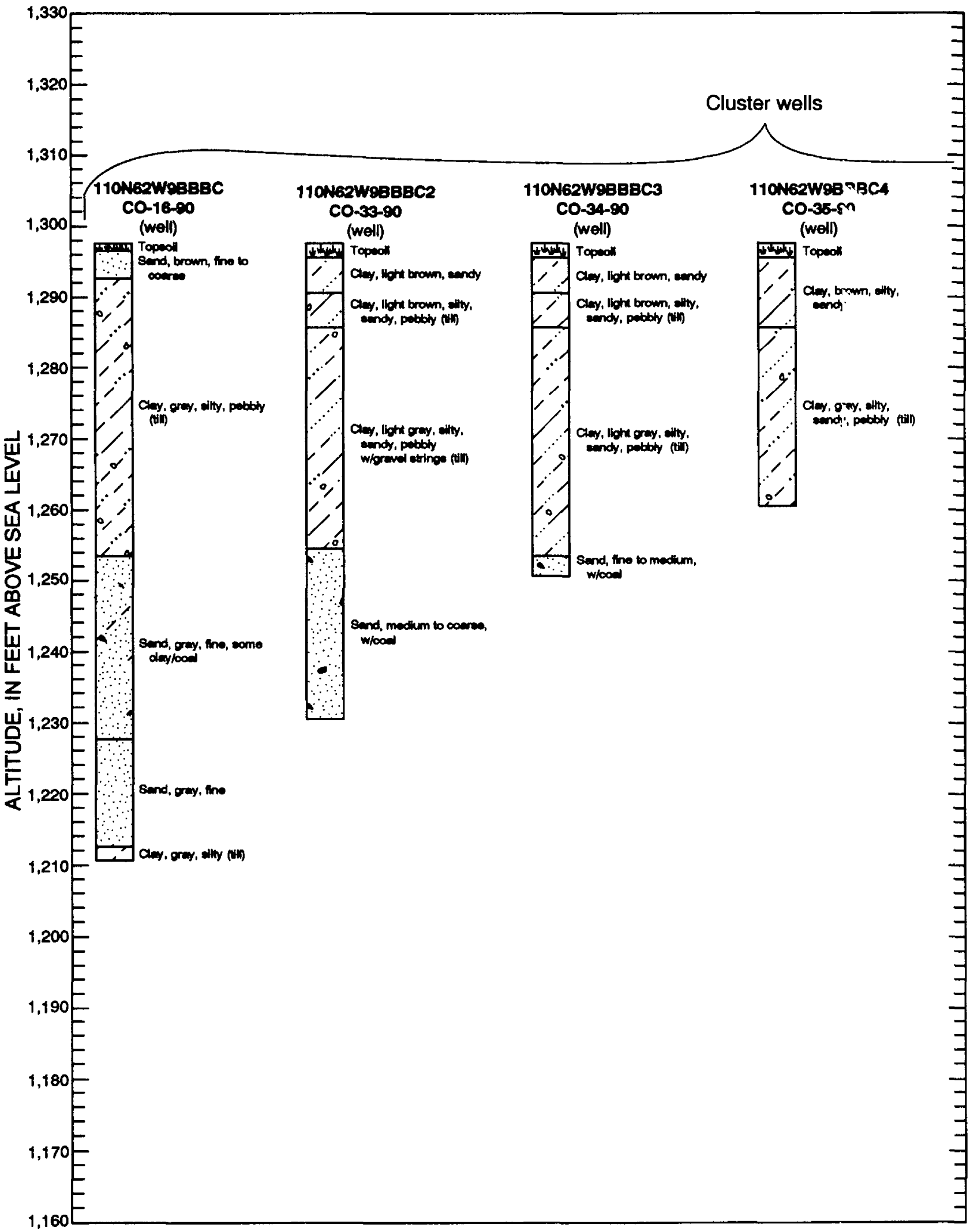


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

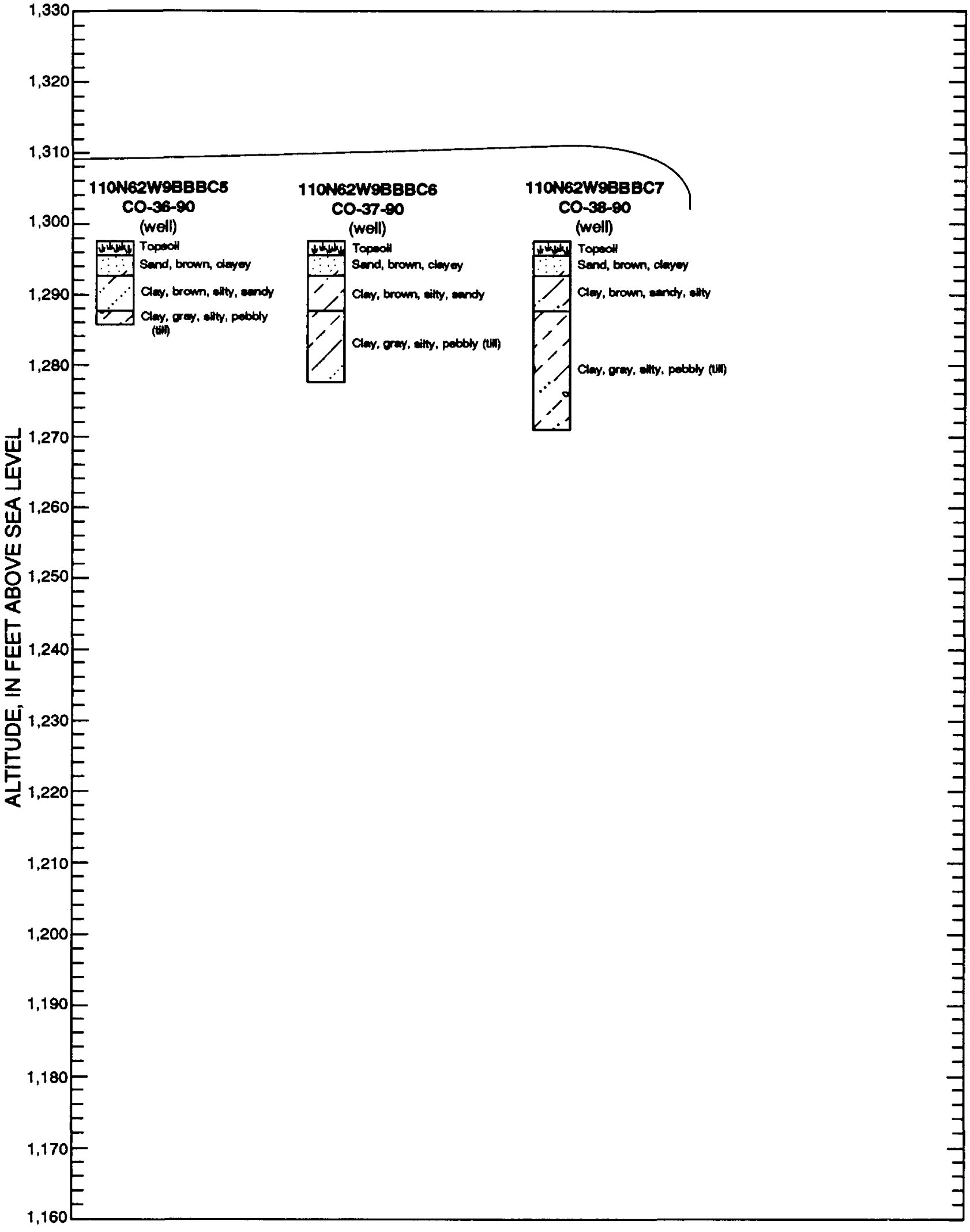


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

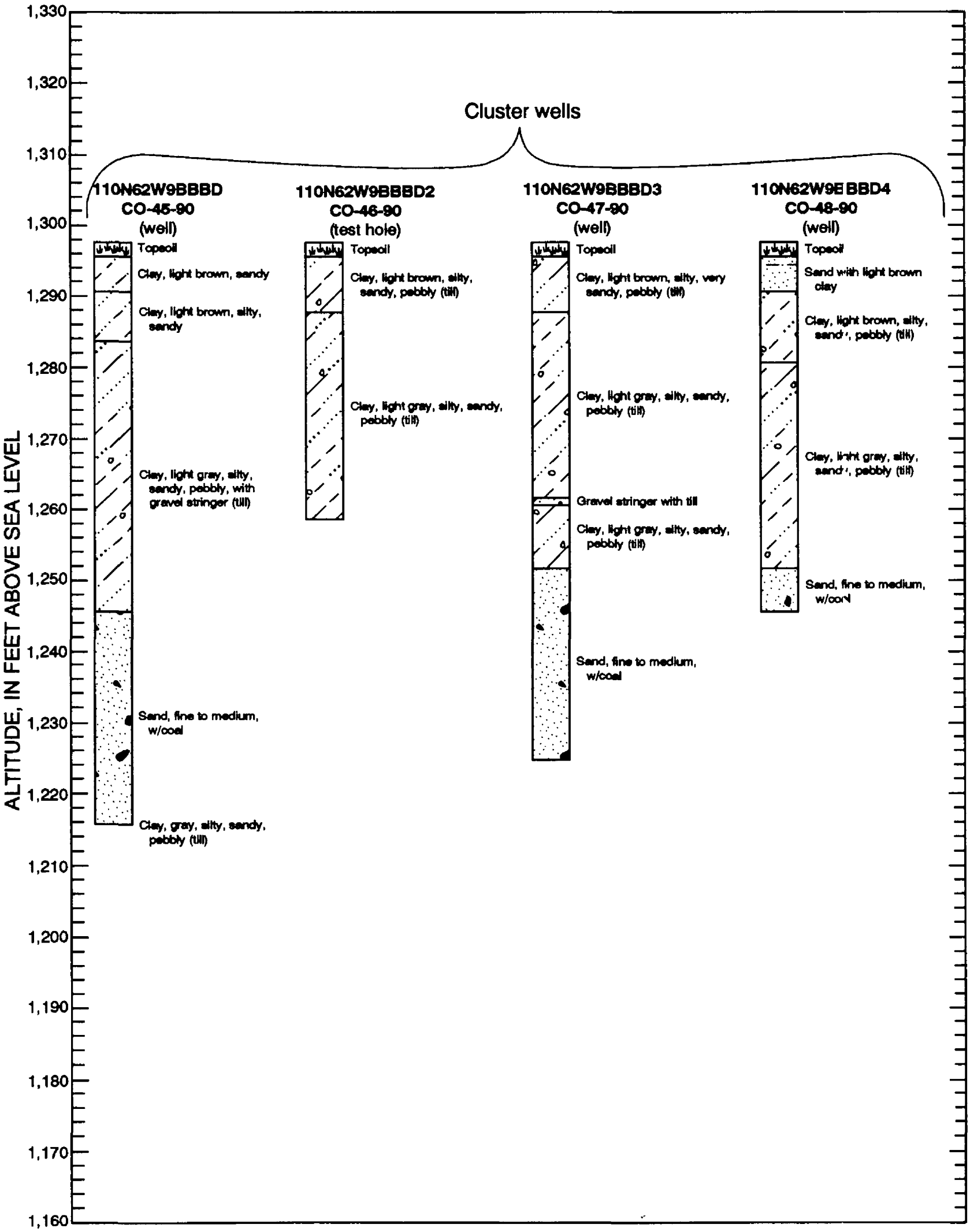


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

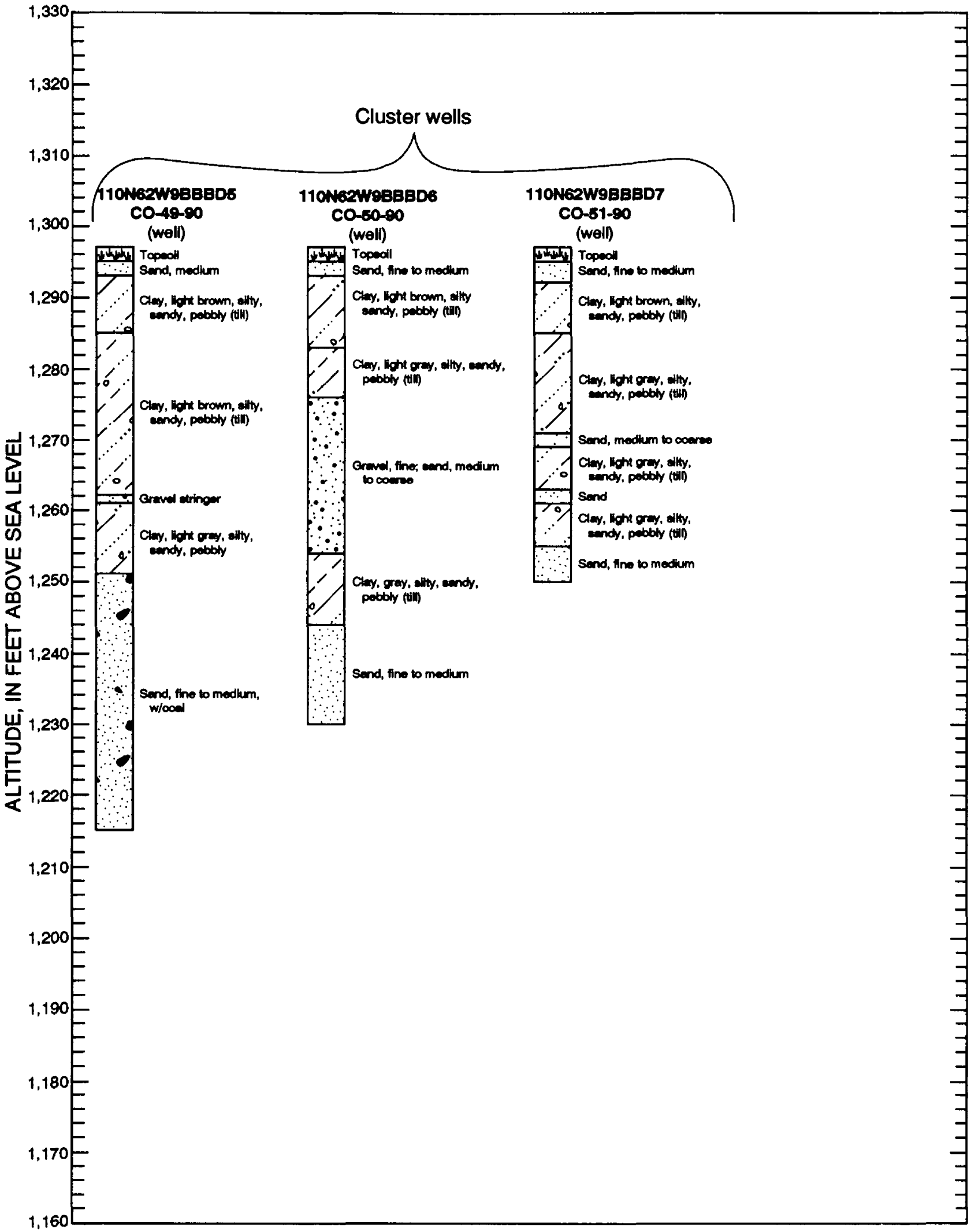


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

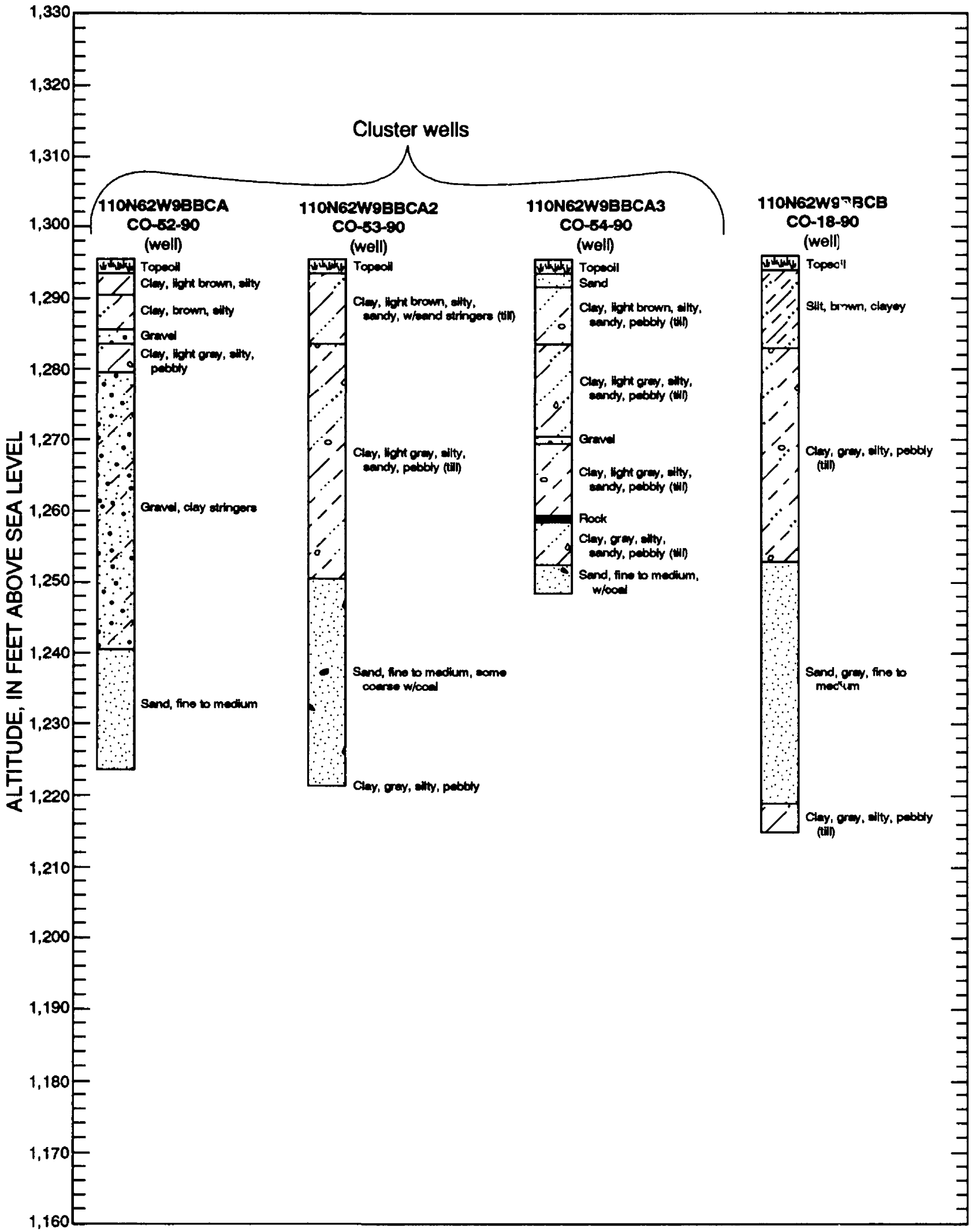


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

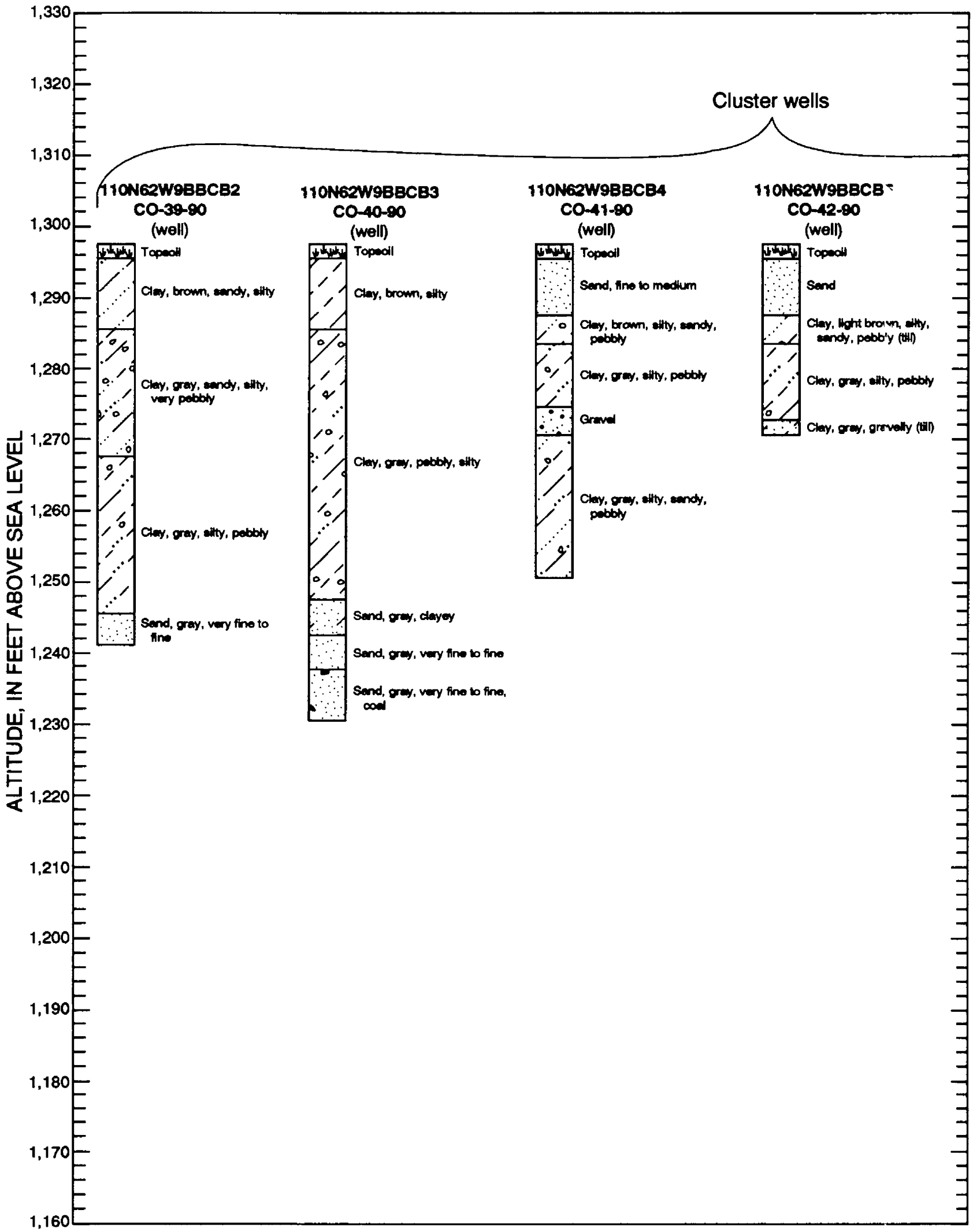


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

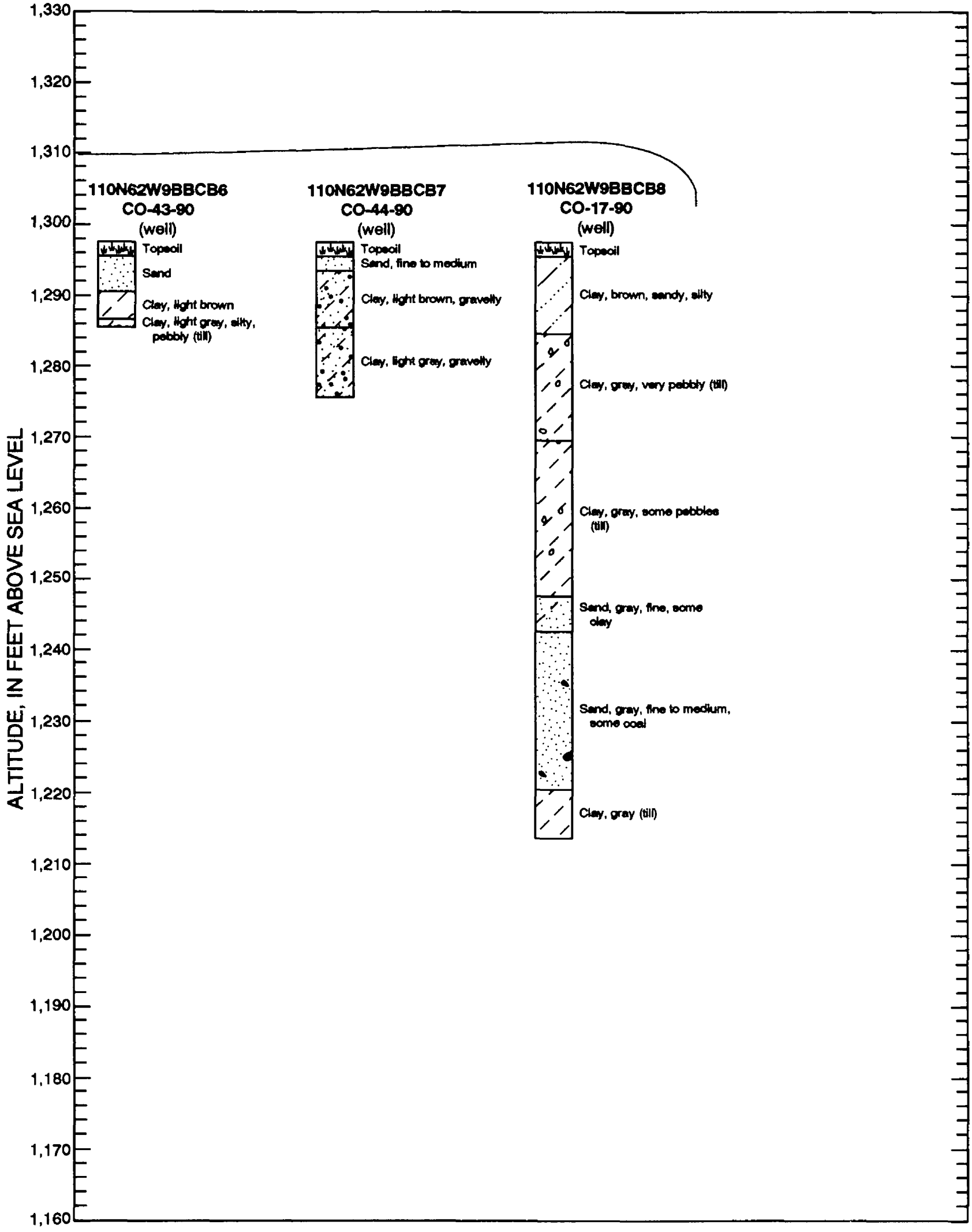


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

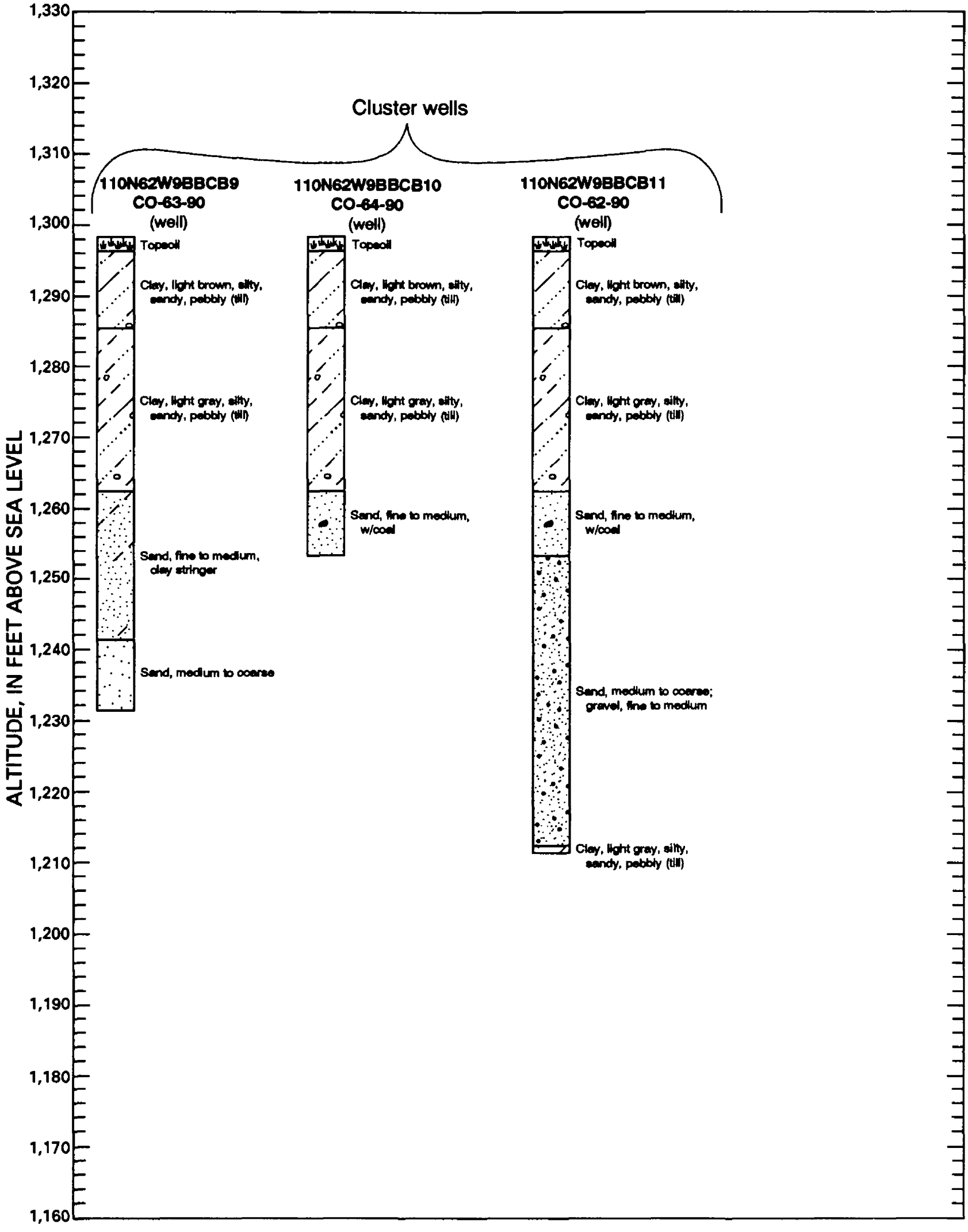


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

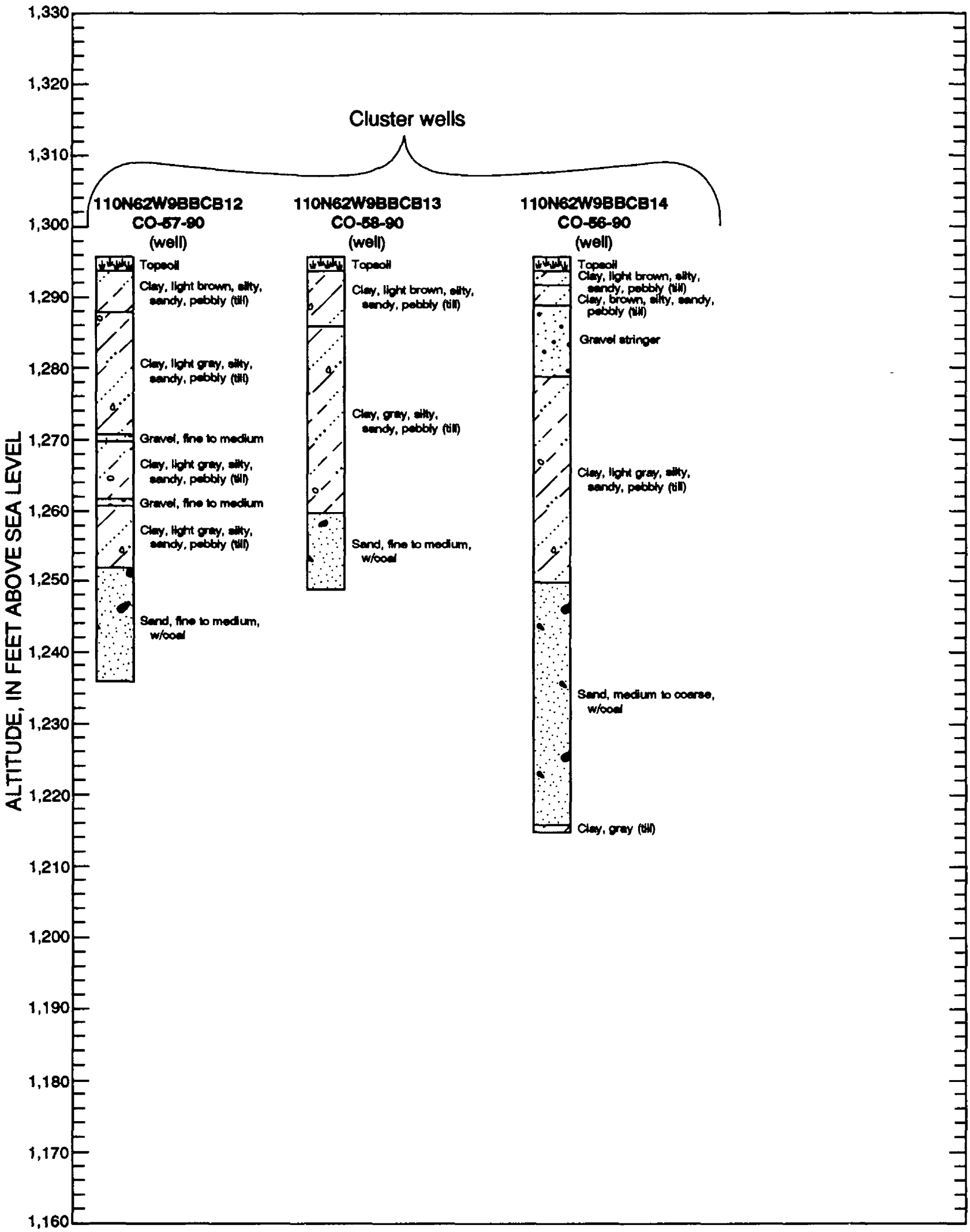


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

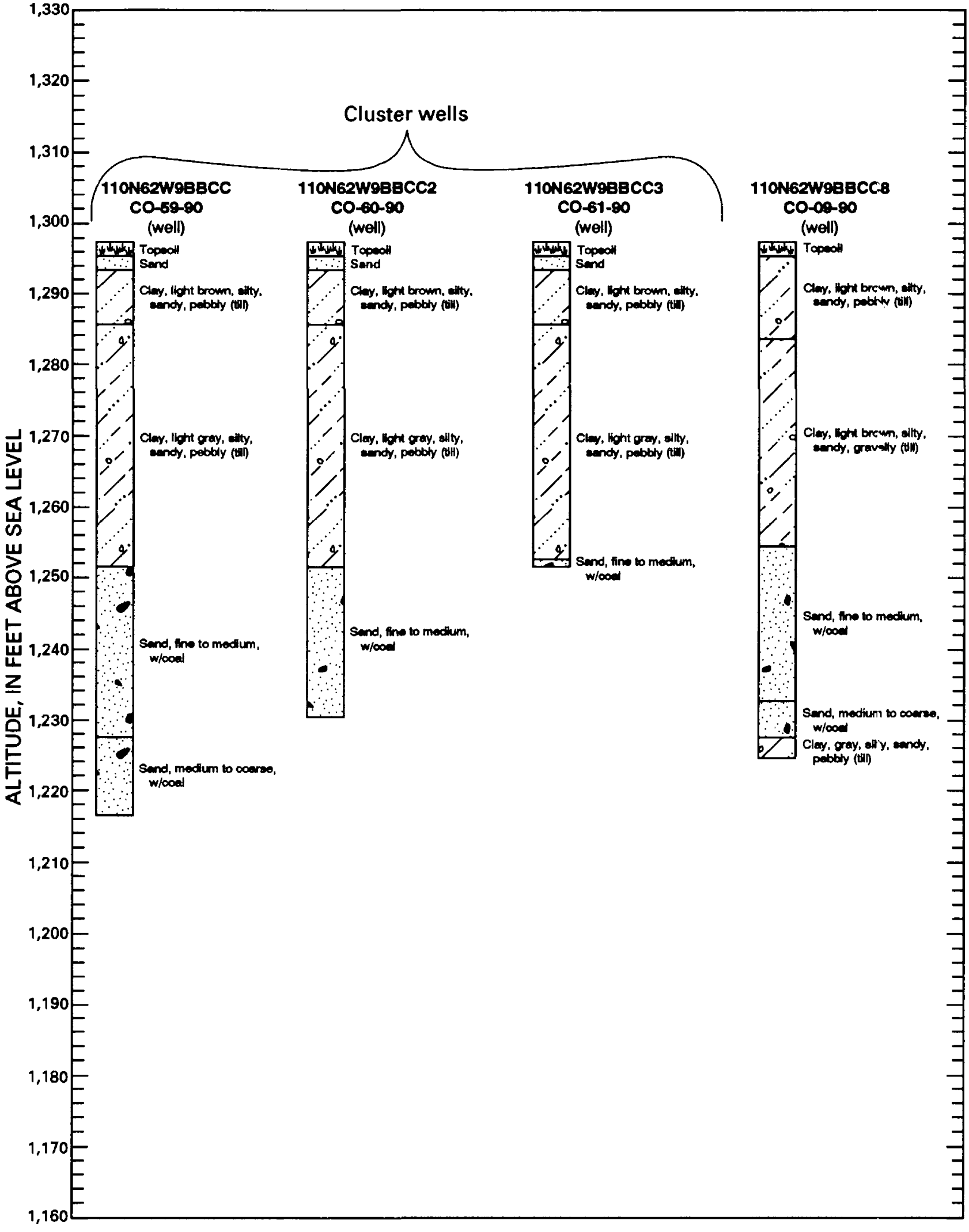


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

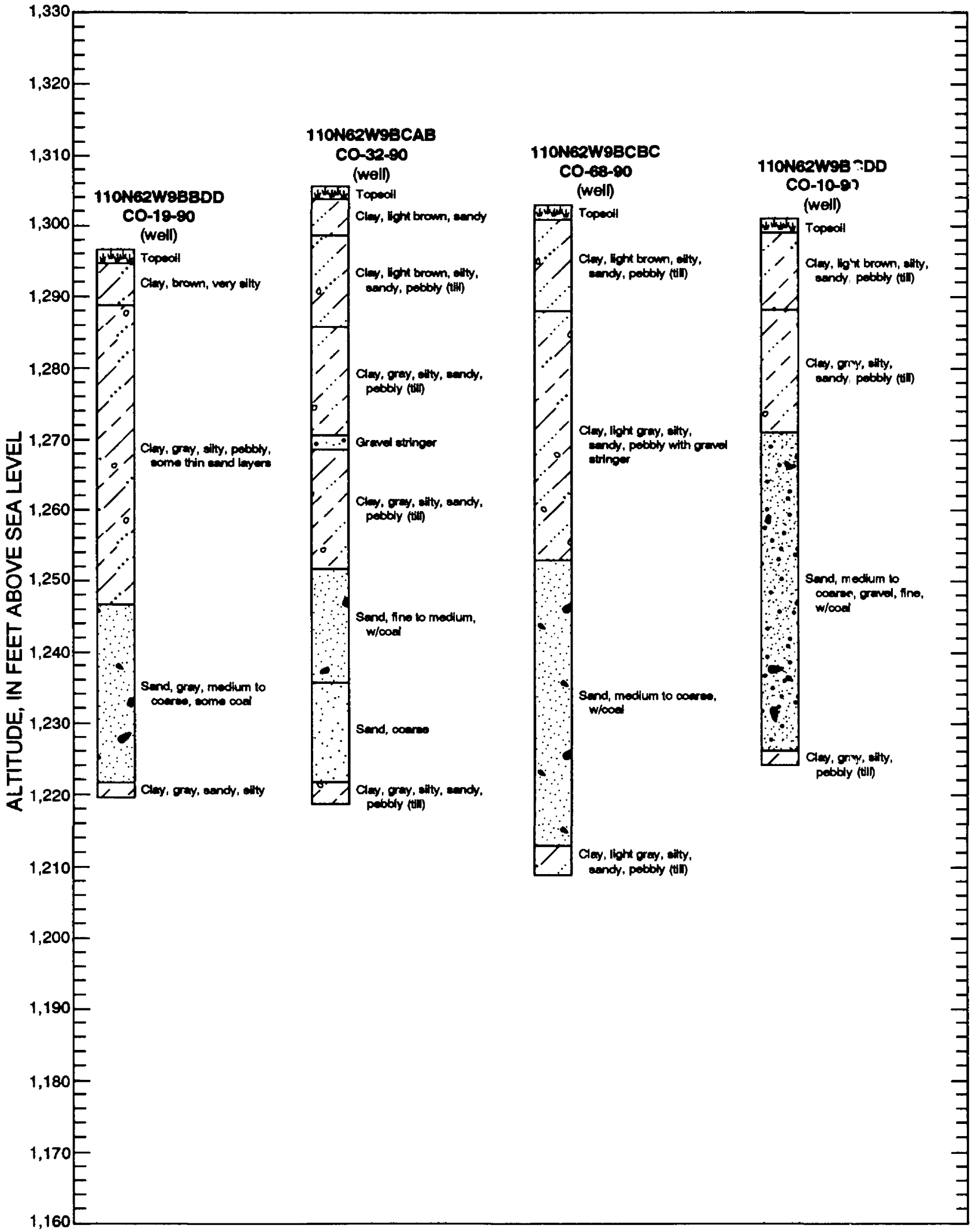


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

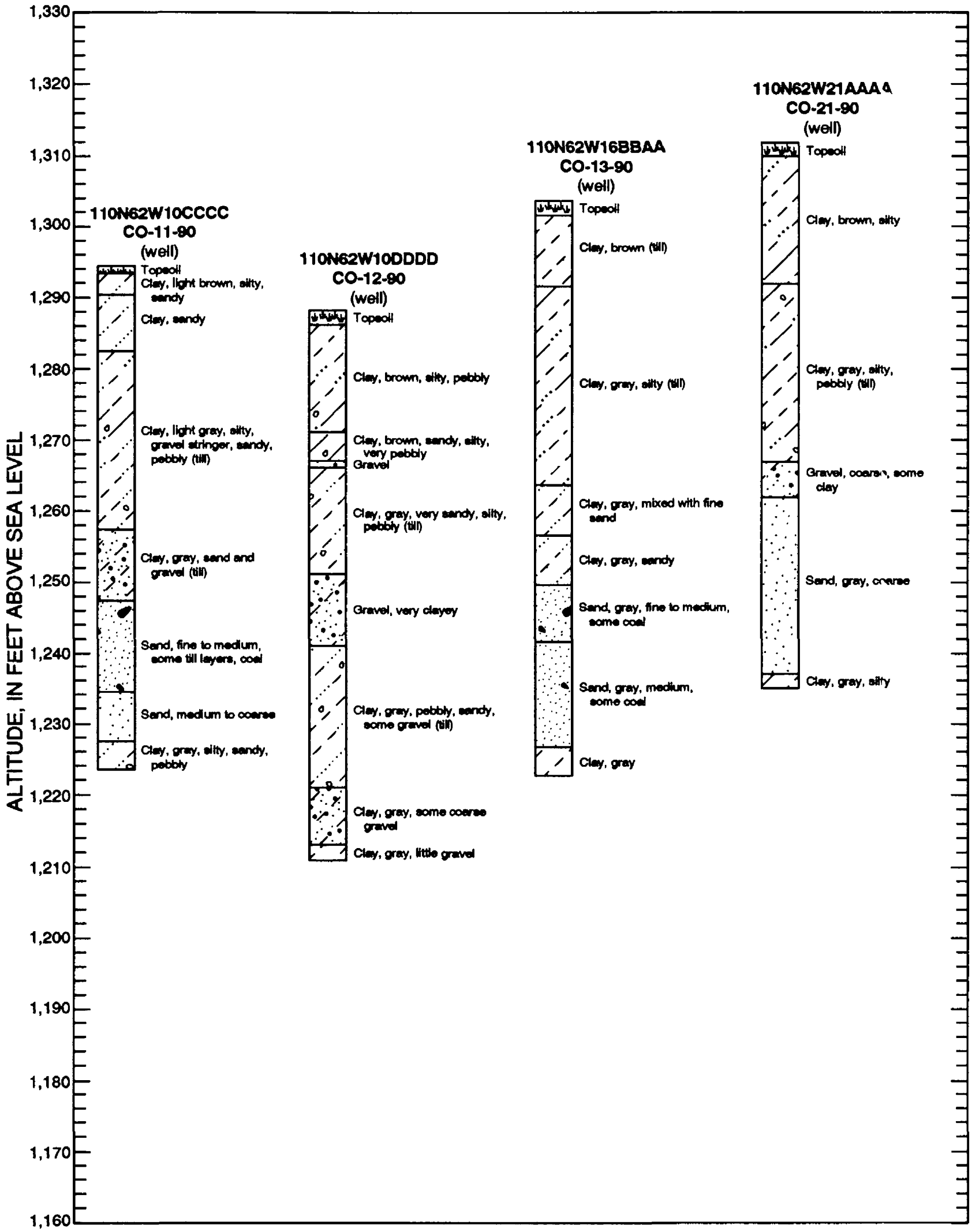


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

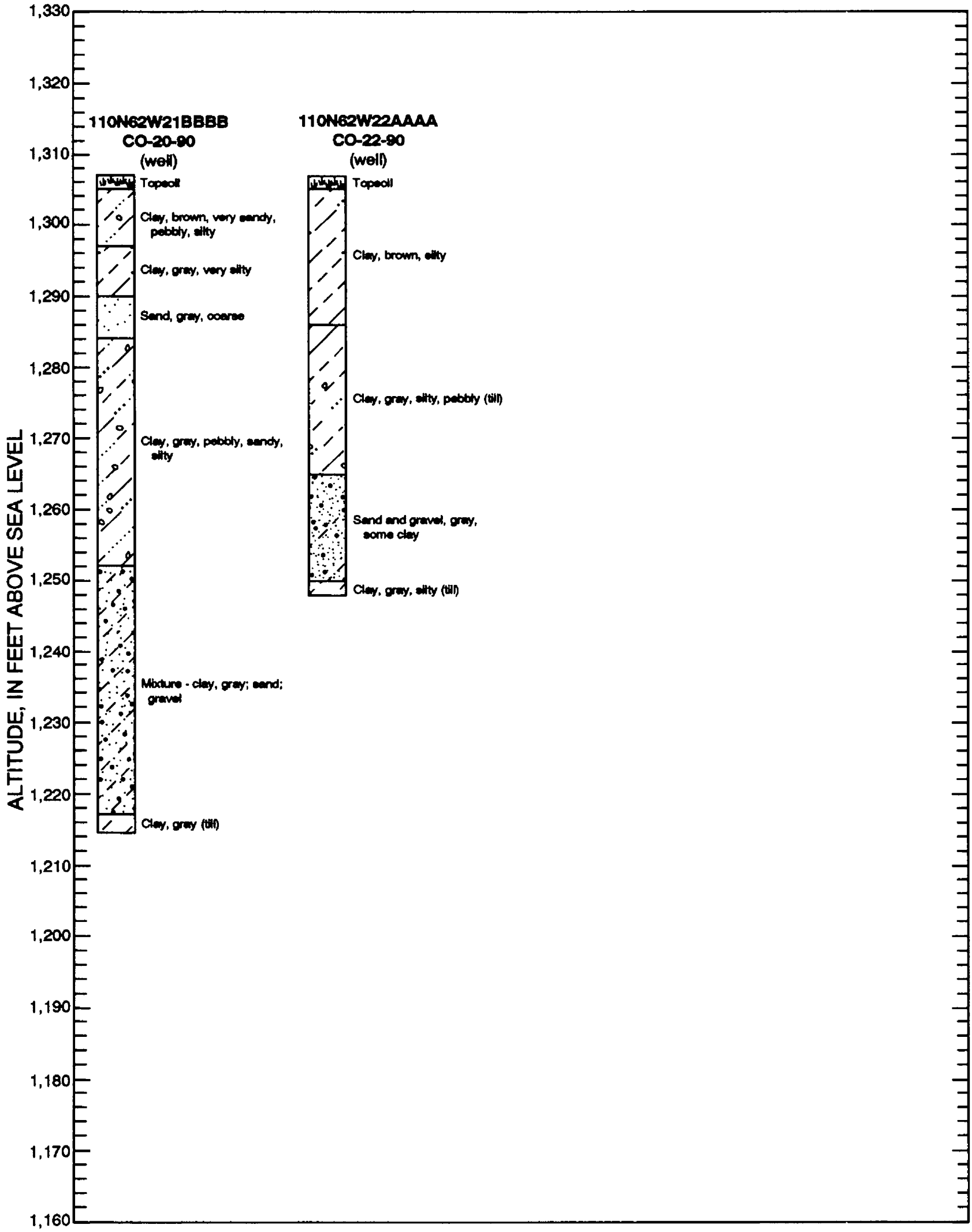


Figure 5. Geologic logs for Huron Project observation wells and test holes.--Continued

LOCAL WELL NUMBER: 110N61W19AAAA
SITE ID: 441935098114101
OTHER IDENTIFIER: BD-60H
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,239 feet
MEASURING POINT: 2.0 feet above land surface
AQUIFER: Warren
EXTREMES: May 24, 1982, to September 30, 1993: Highest, 6.53 feet, July 26, 1993; lowest, 13.59 feet, April 2, 1990.

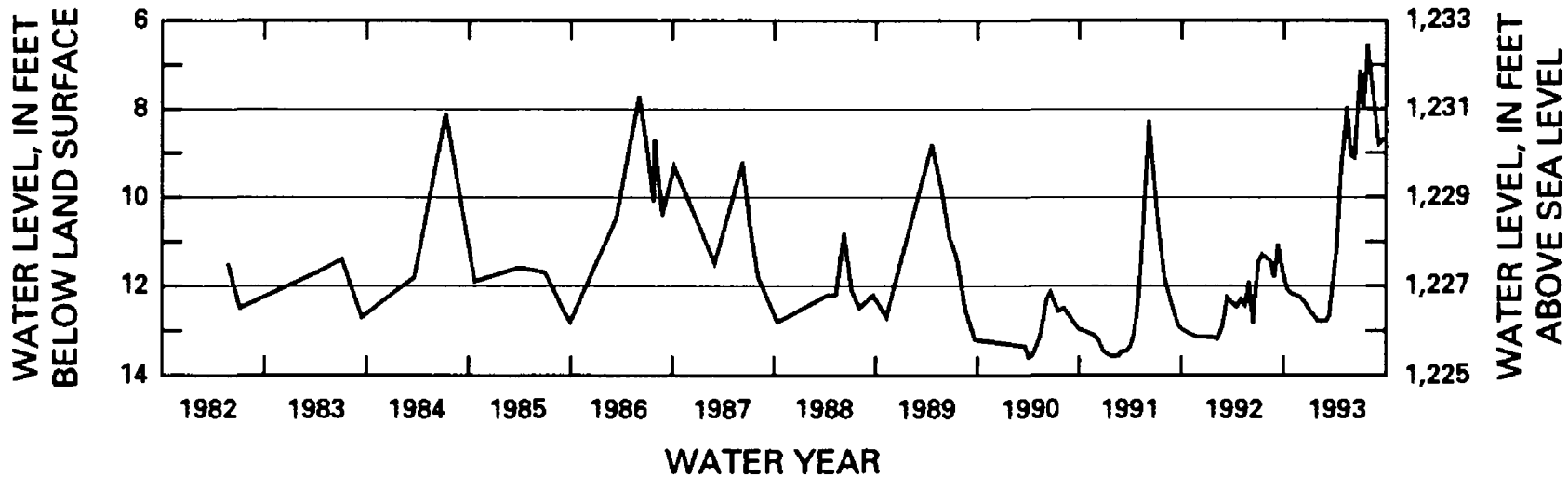


Figure 6. Hydrograph for observation well 110N61W19AAAA, BD-60H, water years 1982-93.

LOCAL WELL NUMBER: 110N62W7BBBB
SITE ID: 442119098200701
OTHER IDENTIFIER: BD-76I
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,326 feet
MEASURING POINT: 1.30 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: December 1, 1976, to September 30, 1993: Highest, 40.8 feet, April 5, 1977; lowest, 51.83 feet, April 1, 1991.

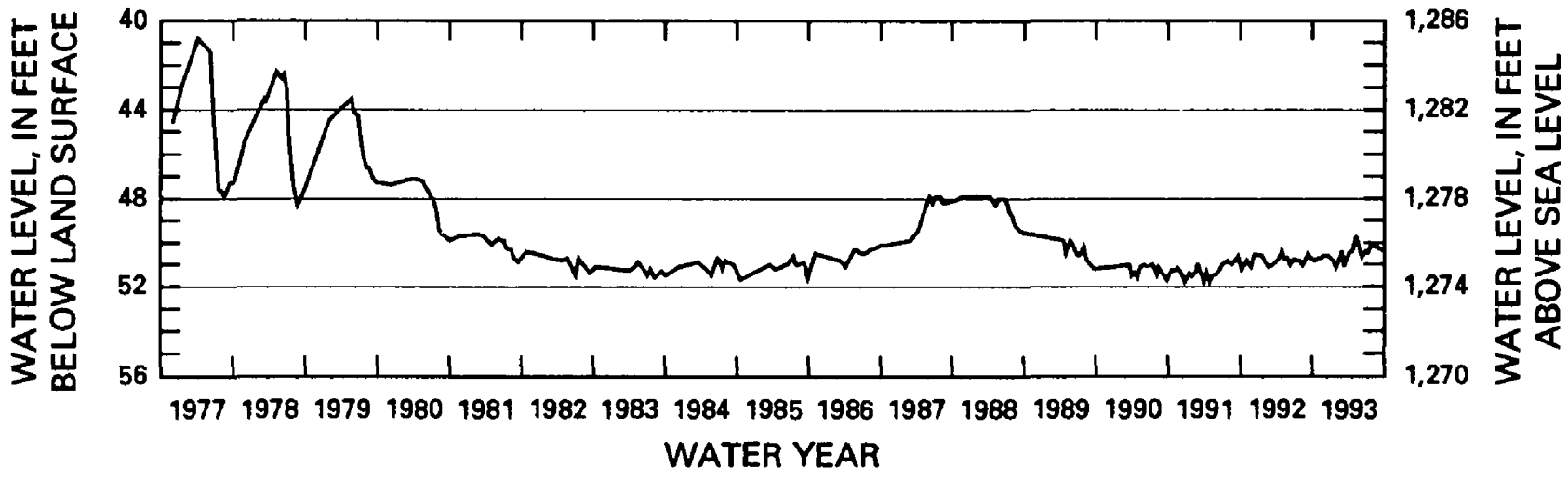


Figure 7. Hydrograph for observation well 110N62W7BBBB, BD-76I, water years 1977-93.

LOCAL WELL NUMBER: 110N62W9CCCC
SITE ID: 442033098174001
OTHER IDENTIFIER: BD-76K
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,300 feet
MEASURING POINT: 1.50 feet above land surface
AQUIFER: Warren
EXTREMES: October 8, 1976, to September 30, 1993: Highest, 27.9 feet, April 5, 1977; lowest, 59.52 feet, April 2, 1990.

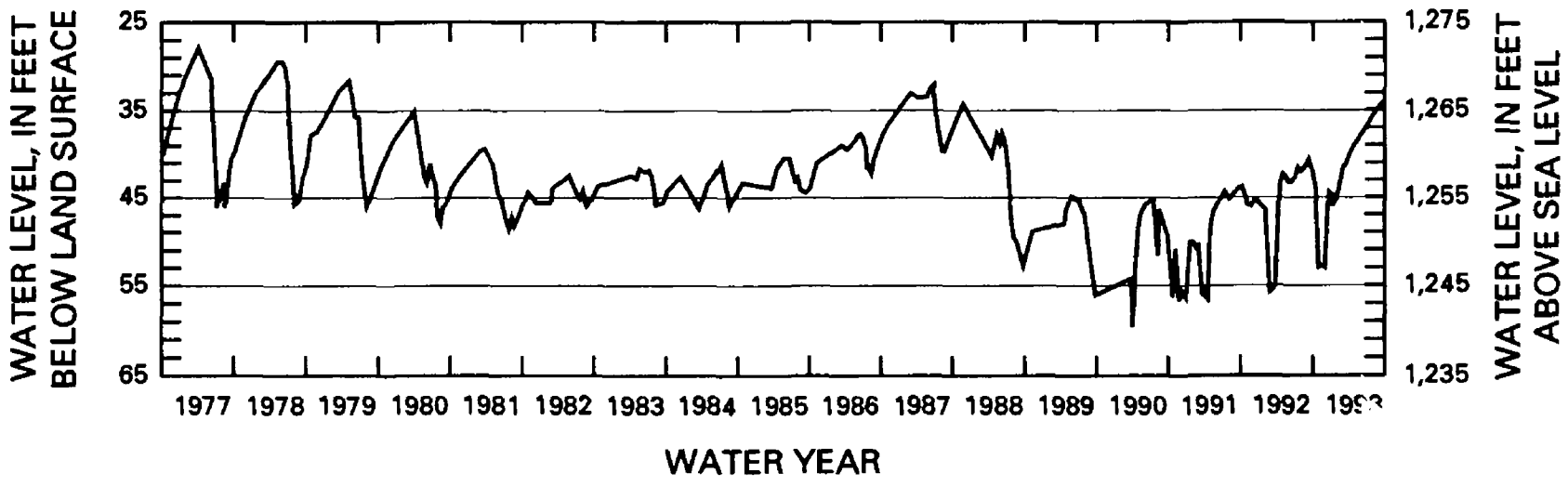


Figure 8. Hydrograph for observation well 110N62W9CCCC, BD-76K, water years 1977-93.

LOCAL WELL NUMBER: 110N62W16DCCC
SITE ID: 441941098170301
OTHER IDENTIFIERS: BD-60F
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,311.9 feet
MEASURING POINT: 0.5 feet above land surface
AQUIFER: Warren
EXTREMES: June 23, 1960, to September 30, 1993: Highest, 18.6 feet, March 4, 1993; lowest, 52.53 feet, March 21, 1990.

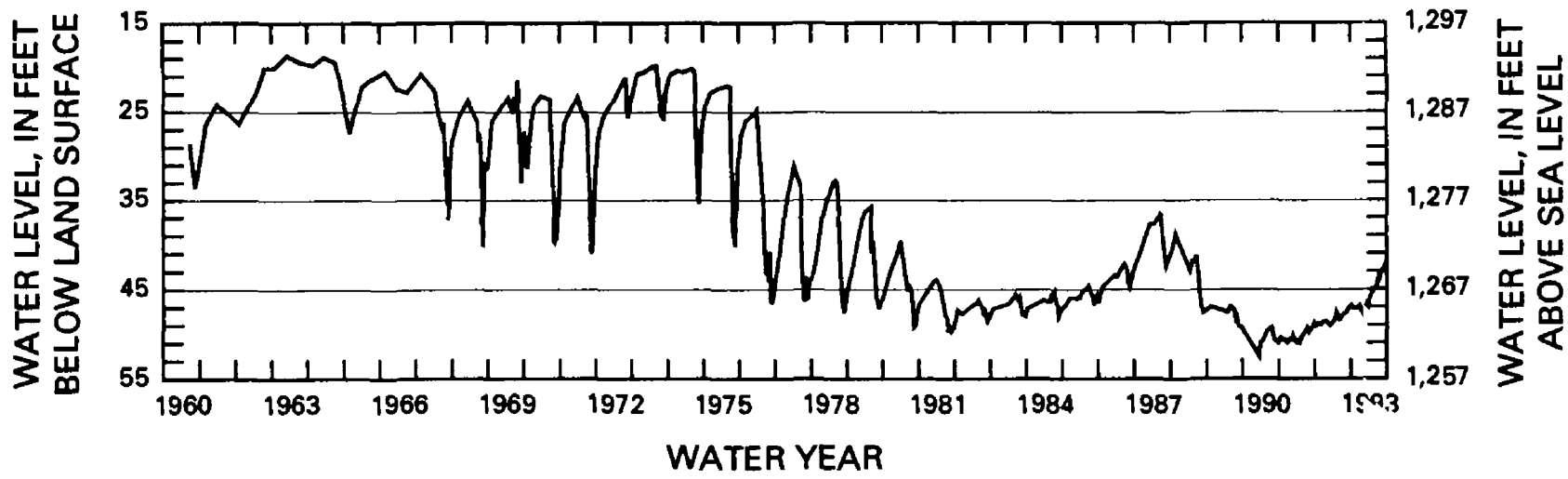


Figure 9. Hydrograph for observation well 110N62W16DCCC, BD-60F, water years 1960-93.

LOCAL WELL NUMBER: 110N62W18BBBB
SITE ID: 442027098200701
OTHER IDENTIFIER: BDS-54-78
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,305 feet
MEASURING POINT: 2.5 feet above land surface
AQUIFER: Unknown
EXTREMES: March 21, 1990, to September 30, 1993: Highest, -0.22 feet, June 6, 1991; lowest, 6.57 feet, February 20, 1991.

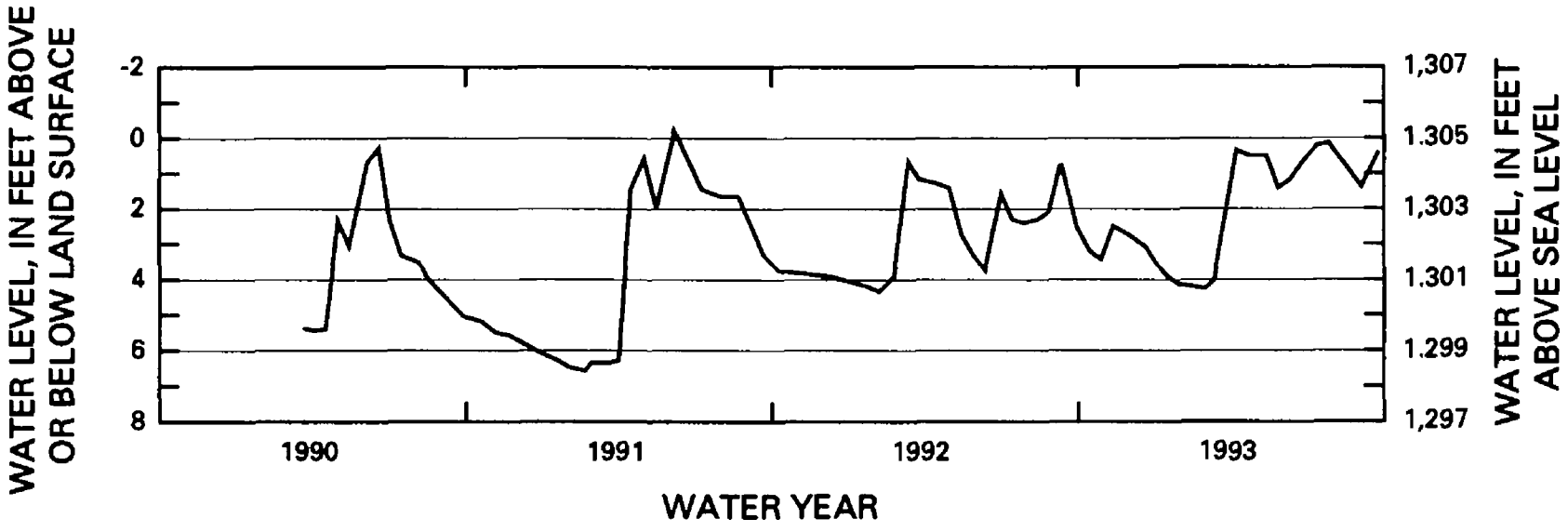


Figure 10. Hydrograph for observation well 110N62W18BBBB, BDS-54-78, water years 1990-93.

LOCAL WELL NUMBER: 110N62W19AAAA2
SITE ID: 441935098185702
OTHER IDENTIFIER: BD-82A
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,305 feet
MEASURING POINT: 2.2 feet above land surface
AQUIFER: Warren
EXTREMES: October 8, 1976, to September 30, 1993: Highest, 26.2 feet, April 5, 1977; lowest, 53.3 feet, August 15, 1980.

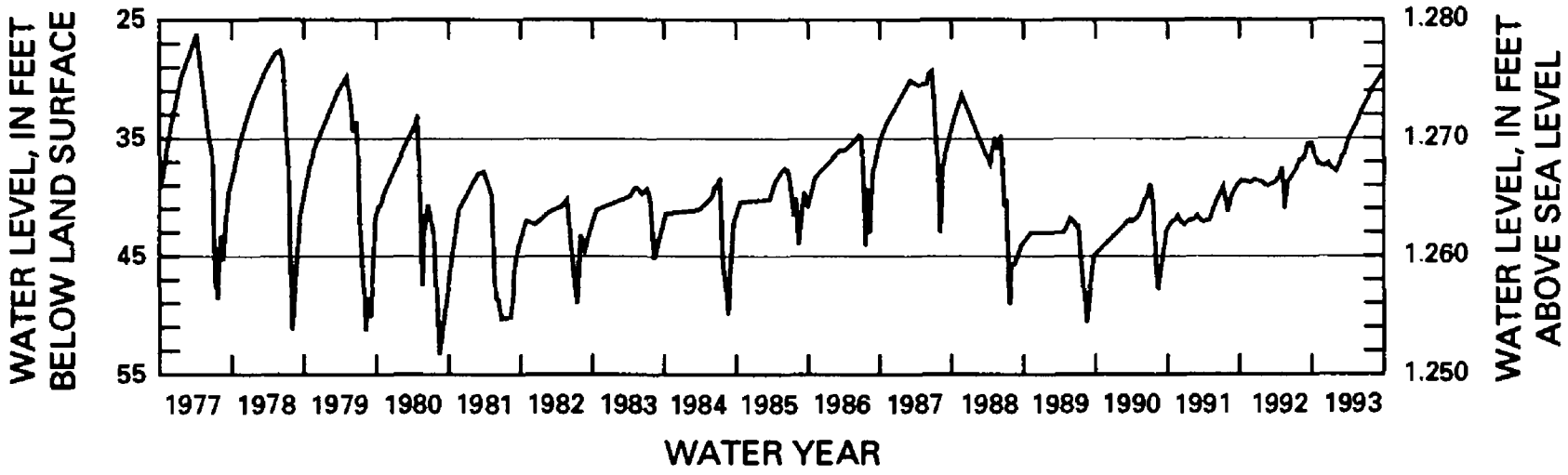


Figure 11. Hydrograph for observation well 110N62W19AAAA2, BD-82A, water years 1977-93.

LOCAL WELL NUMBER: 110N62W25CCCC
SITE ID: 441757098135901
OTHER IDENTIFIER: BD-76L
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,305 feet
MEASURING POINT: 0.2 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: December 1, 1976, to September 30, 1993: Highest, 26.8 feet, April 5, 1977; lowest, 46.3 feet, July 28, 1981.

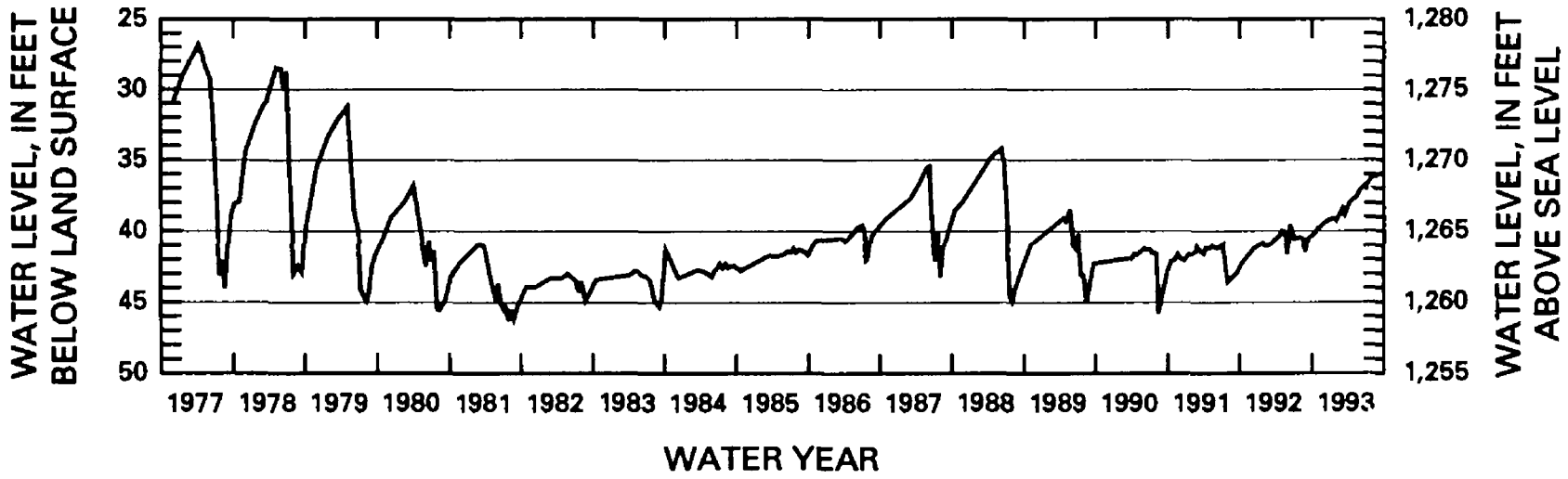


Figure 12. Hydrograph for observation well 110N62W25CCCC, BD-76L, water years 1977-93.

LOCAL WELL NUMBER: 111N62W32AADD
SITE ID: 442254098174501
OTHER IDENTIFIER: BD-79C
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,309 feet
MEASURING POINT: 2.9 feet above land surface
AQUIFER: Warren
EXTREMES: June 26, 1979, to September 30, 1993: Highest, 23.31 feet, September 23, 1993; lowest, 48.0 feet, August 18, 1988, September 22, 1989.

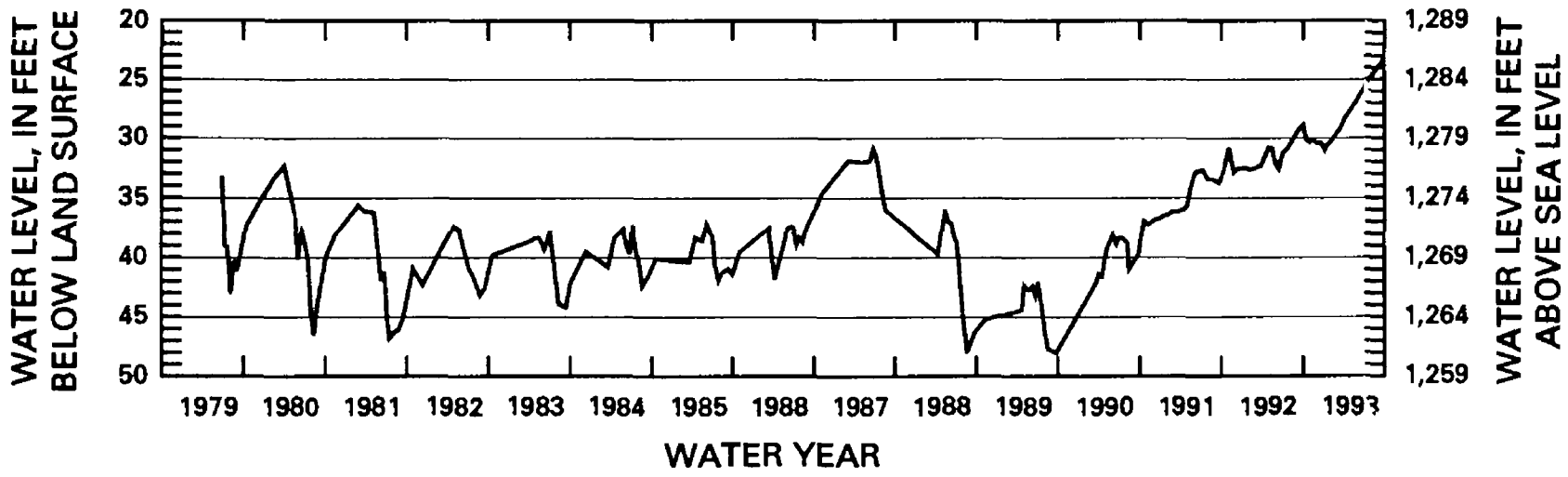


Figure 13. Hydrograph for observation well 111N62W32AADD, BD-79C, water years 1979-93.

LOCAL WELL NUMBER: 111N62W32ADAA
SITE ID: 442250098174401
OTHER IDENTIFIERS: BD-60D
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,304.51 feet
MEASURING POINT: 2.00 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: June 21, 1960, to September 30, 1993: Highest, 2.54 feet, July 26, 1993; lowest, 42.4 feet, August 23, 1976.

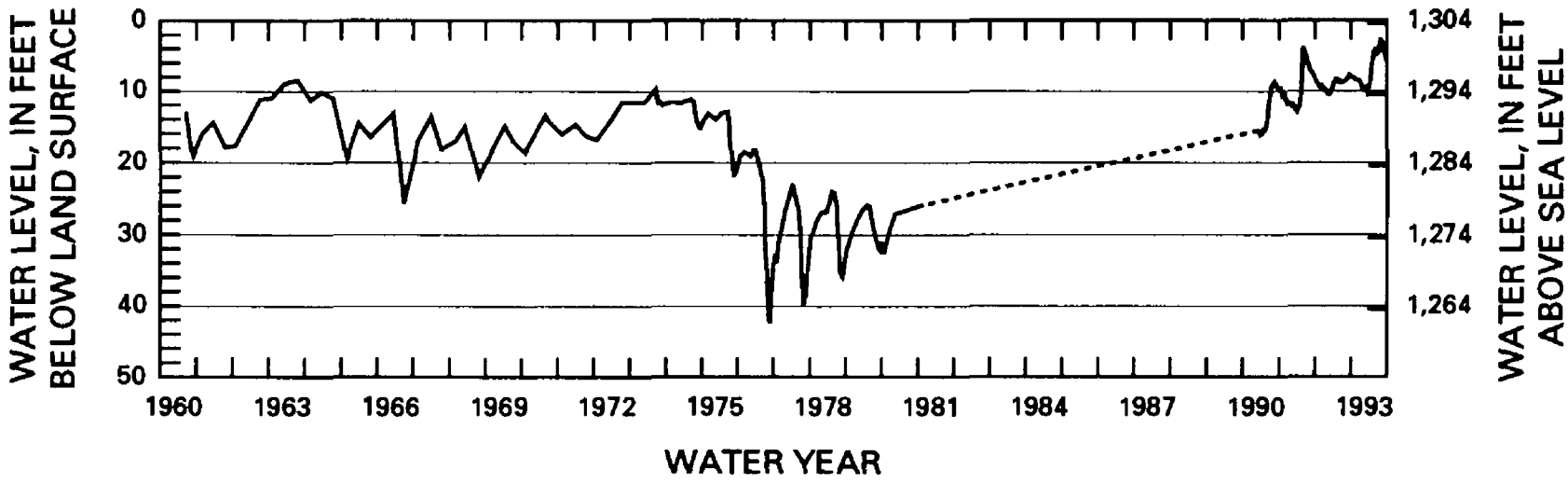


Figure 14. Hydrograph for observation well 111N62W32ADAA, BD-60D, water years 1960-93.

LOCAL WELL NUMBER: 111N63W2CCCC
SITE ID: 442638098223301
OTHER IDENTIFIER: BD-60A
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,327.86 feet
MEASURING POINT: 0.98 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: June 16, 1960, to September 30, 1993: Highest, 12.2 feet, October 29, 1962; lowest, 43.5 feet, July 22, 1981.

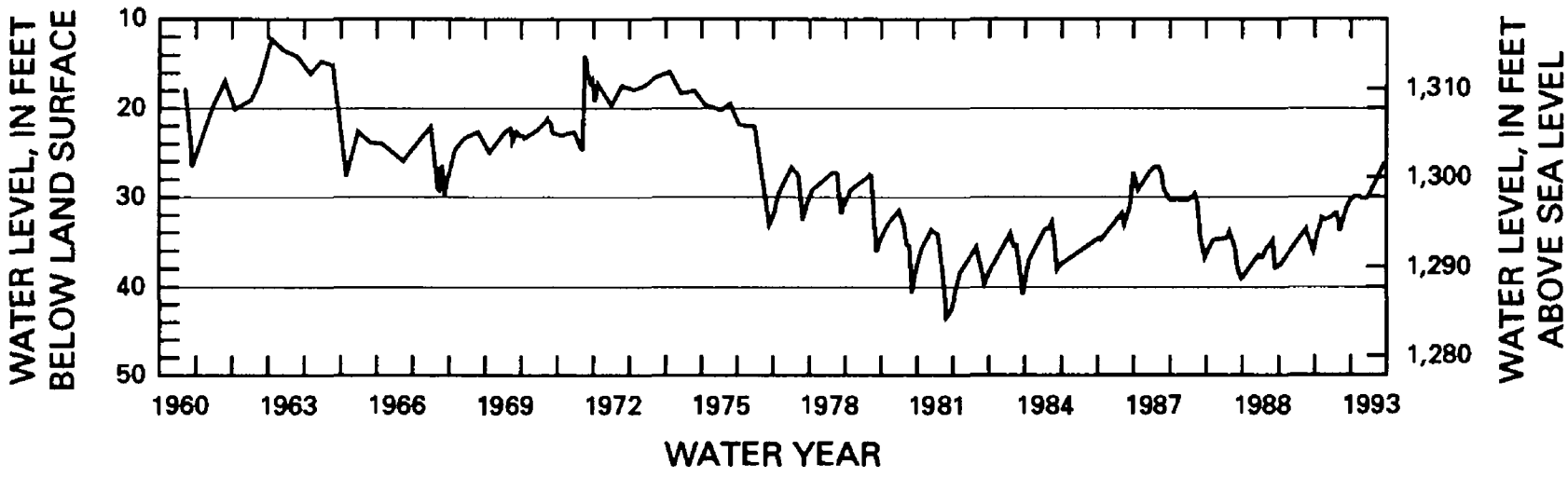


Figure 15. Hydrograph for observation well 111N63W2CCCC, BD-60A, water years 1960-93.

LOCAL WELL NUMBER: 111N63W9BBBB
SITE ID: 442632098250001
OTHER IDENTIFIER: BD-76C
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,342 feet
MEASURING POINT: 2.39 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: December 1, 1976, to September 30, 1993: Highest, 30.96 feet, September 23, 1993; lowest, 53.7 feet, August 17, 1989.

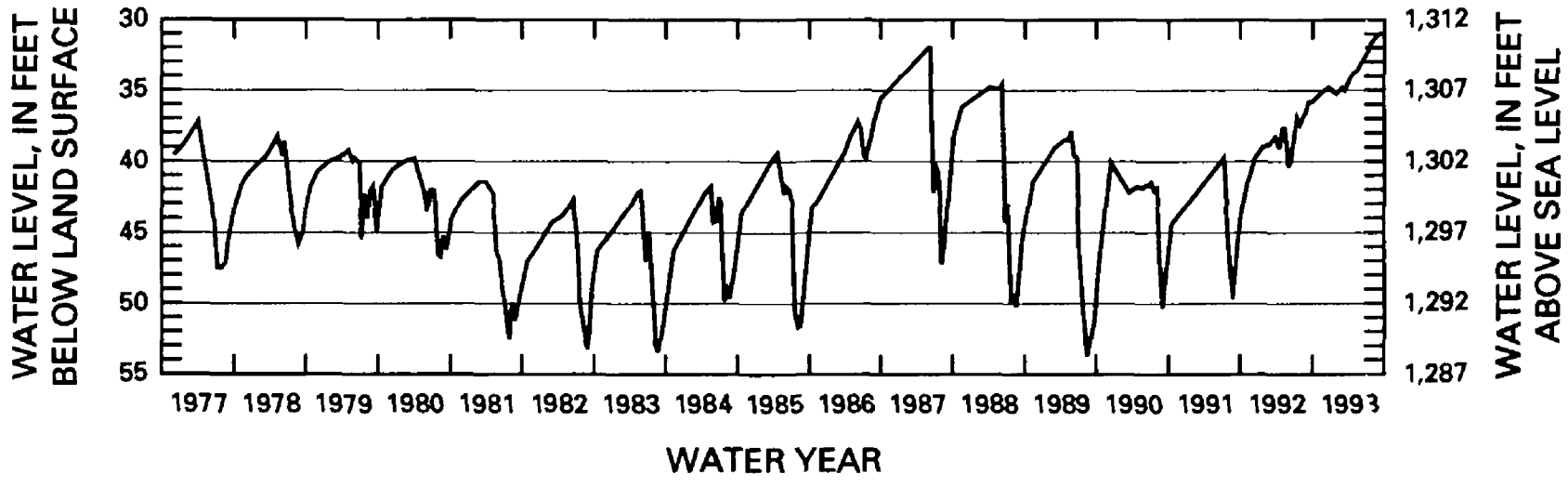


Figure 16. Hydrograph for observation well 111N63W9BBBB, BD-76C, water years 1977-93.

LOCAL WELL NUMBER: 111N63W12AAAA
SITE ID: 442633098201101
OTHER IDENTIFIER: BD-79A
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,316 feet
MEASURING POINT: 3.15 feet above land surface
AQUIFER: Warren
EXTREMES: June 4, 1979, to September 30, 1993: Highest, 19.25 feet, September 23, 1993; lowest, 41.4 feet, August 24, 1981.

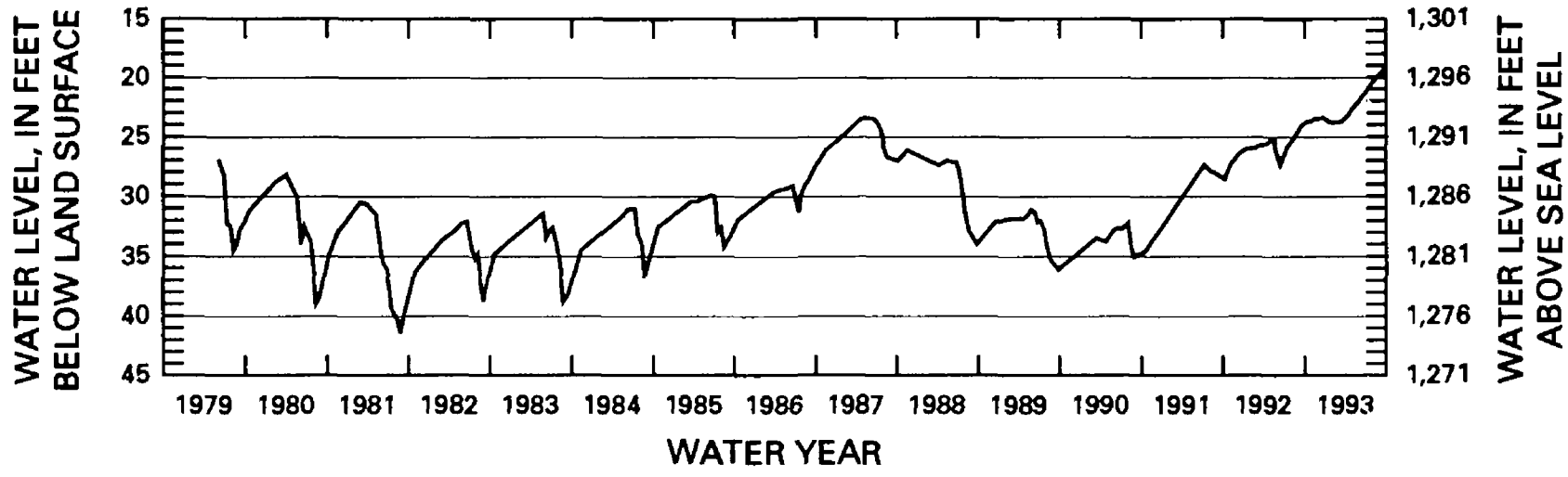


Figure 17. Hydrograph for observation well 111N63W12AAAA, BD-79A, water years 1979-93.

LOCAL WELL NUMBER: 111N63W14CCCC
SITE ID: 442451098151501
OTHER IDENTIFIER: BD-79B
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,322 feet
MEASURING POINT: 2.66 feet above land surface
AQUIFER: Warren
EXTREMES: June 5, 1979, to September 30, 1993: Highest, 22.61 feet, September 23, 1993; lowest, 46.4 feet, August 17, 1989.

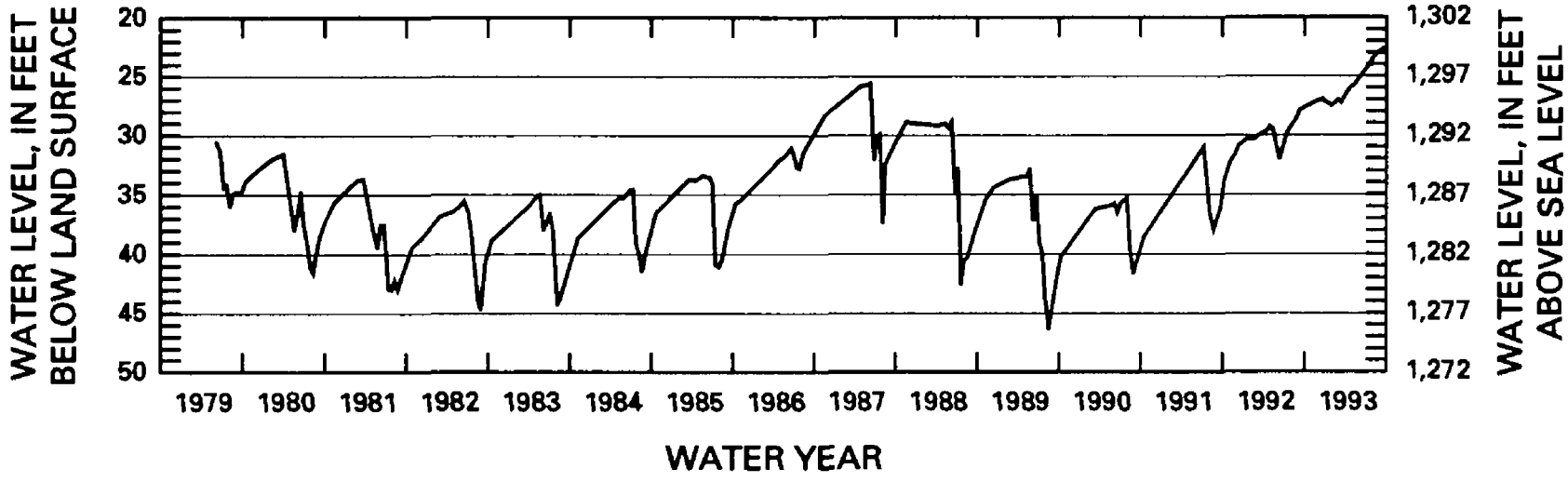


Figure 18. Hydrograph for observation well 111N63W14CCCC, BD-79B, water years 1979-93.

LOCAL WELL NUMBER: 111N63W24DDDD
SITE ID: 442402098201101
OTHER IDENTIFIER: BD-60C
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,312.24 feet
MEASURING POINT: 2.00 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: June 20, 1960, to September 30, 1993: Highest, 14.6 feet, March 4, 1963; lowest, 47.7 feet, July 27, 1981.

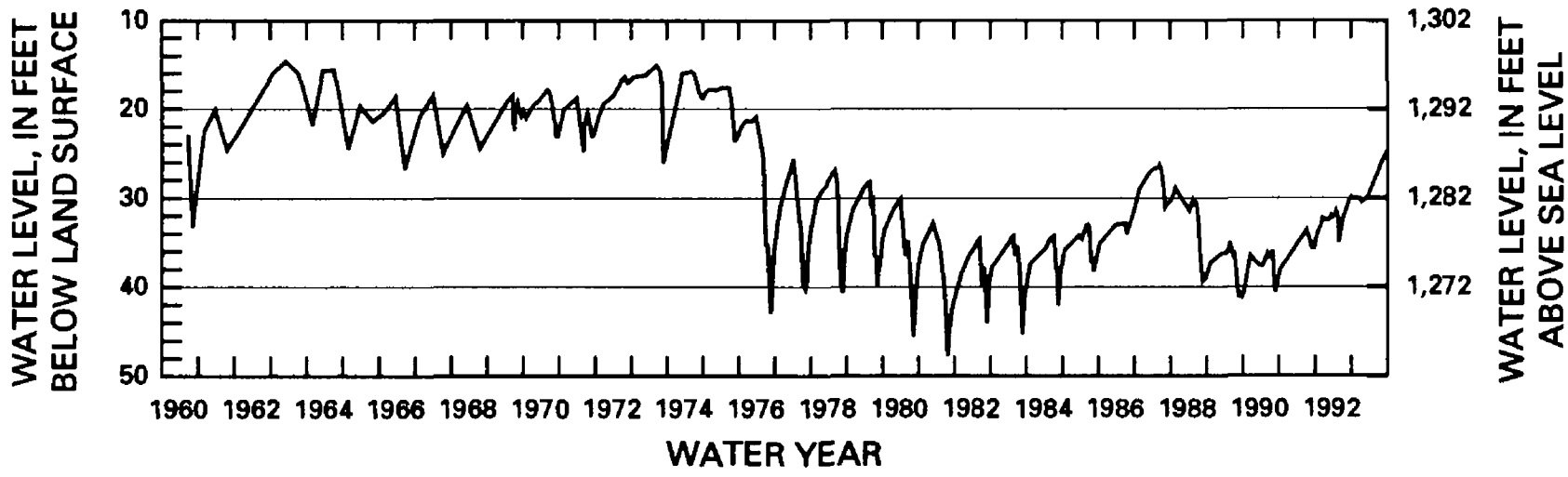


Figure 19. Hydrograph for observation well 111N63W24DDDD, BD-60C, water years 1960-93.

LOCAL WELL NUMBER: 112N63W36BBBB
SITE ID: 442816098212001
OTHER IDENTIFIER: BD-76B
OWNER: DENR
ALTITUDE OF LAND SURFACE: 1,308 feet
MEASURING POINT: 2.09 feet above land surface
AQUIFER: Pleistocene Series
EXTREMES: October 22, 1976, to September 30, 1993: Highest, 11.84 feet, September 23, 1993; lowest, 22.4 feet, September 15, 1981.

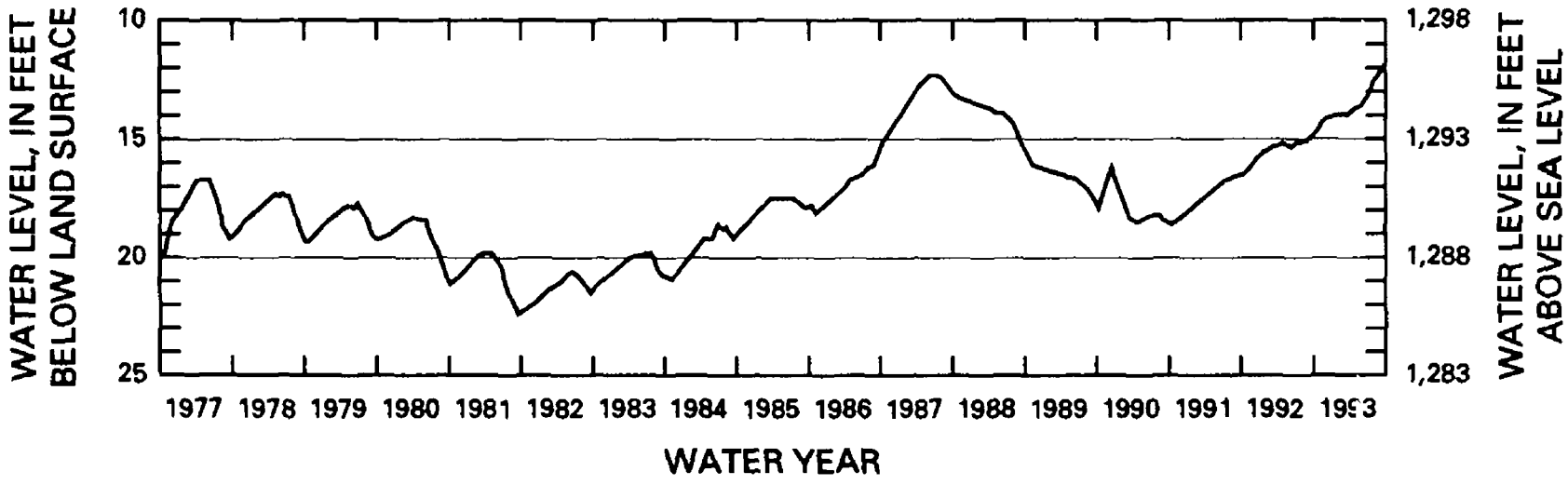


Figure 20. Hydrograph for observation well 112N63W36BBBB, BD-76B, water years 1977-93.

LOCAL WELL NUMBER: 110N62W2BCCC2
SITE ID: 442149098151602
OTHER IDENTIFIER: CO-29-90
ALTITUDE OF LAND SURFACE: 1,284.20 feet
MEASURING POINT: 2.55 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 4.89 feet, July 26, 1993; lowest, 11.81 feet, April 15, 1991.

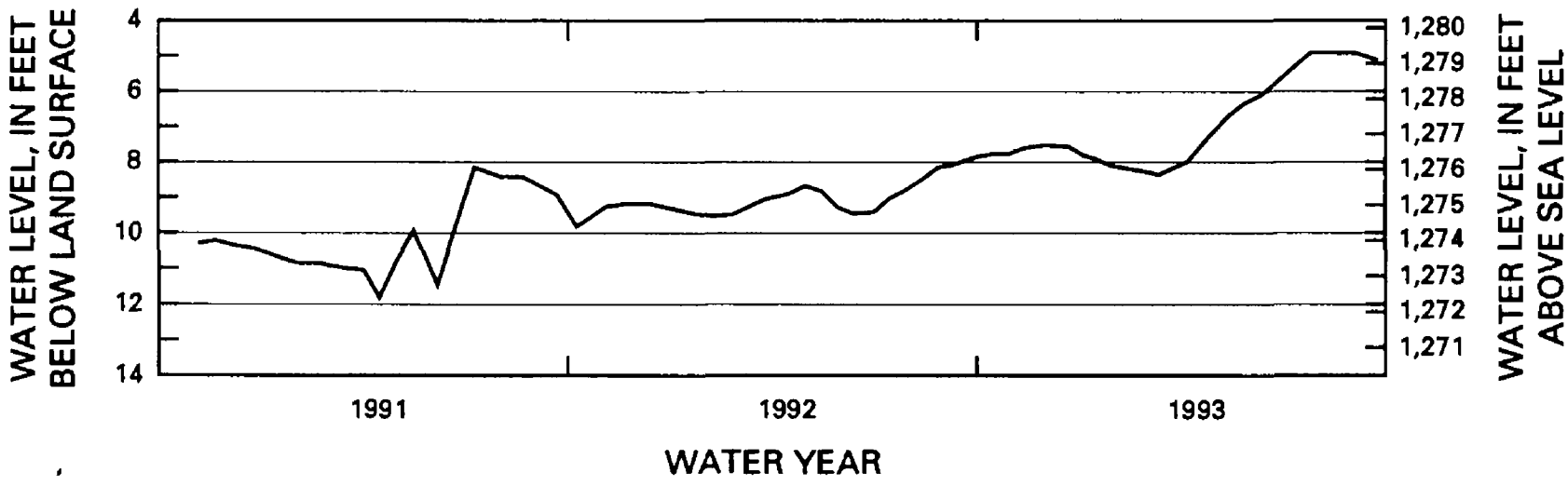


Figure 21. Hydrograph for observation well 110N62W2BCCC2, CO-29-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W3DCCC2
SITE ID: 442123098155302
OTHER IDENTIFIER: CO-27-90
ALTITUDE OF LAND SURFACE: 1,287.70 feet
MEASURING POINT: 2.66 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 4.32 feet, July 26, 1993; lowest, 13.08 feet, July 9, 1991.

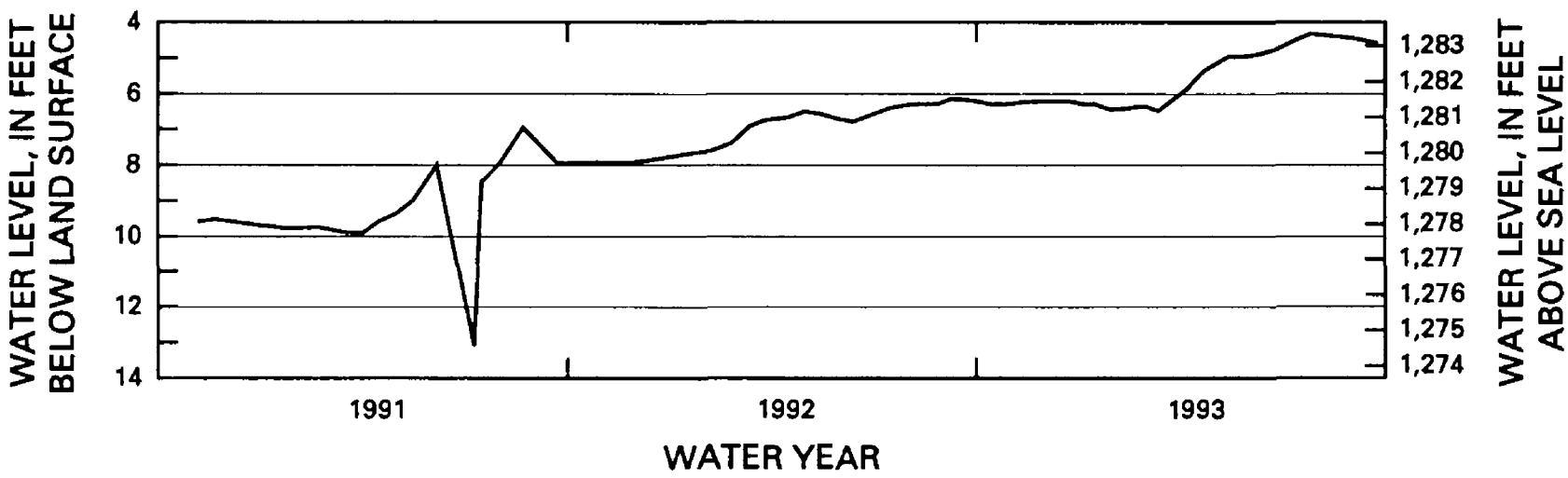


Figure 22. Hydrograph for observation well 110N62W3DCCC2, CO-27-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W4AADA
SITE ID: 442204098163101
OTHER IDENTIFIER: CO-24-90
ALTITUDE OF LAND SURFACE: 1,289.94 feet
MEASURING POINT: 2.46 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 6.39 feet, September 23, 1993; lowest, 13.18, November 6, 1990.

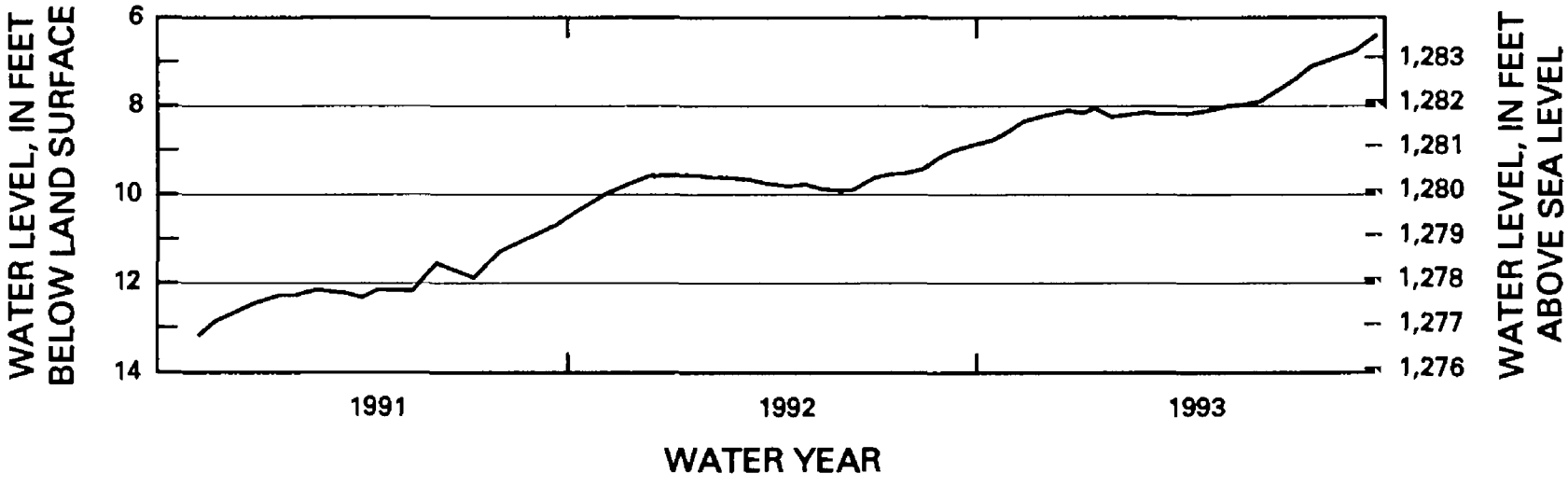


Figure 23. Hydrograph for observation well 110N62W4AADA, CO-24-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W4BBBB
SITE ID: 442213098174301
OTHER IDENTIFIER: CO-04-90
ALTITUDE OF LAND SURFACE: 1,301.84 feet
MEASURING POINT: 2.71 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 19.78 feet, September 23, 1993; lowest, 35.64 feet, August 15, 1990.

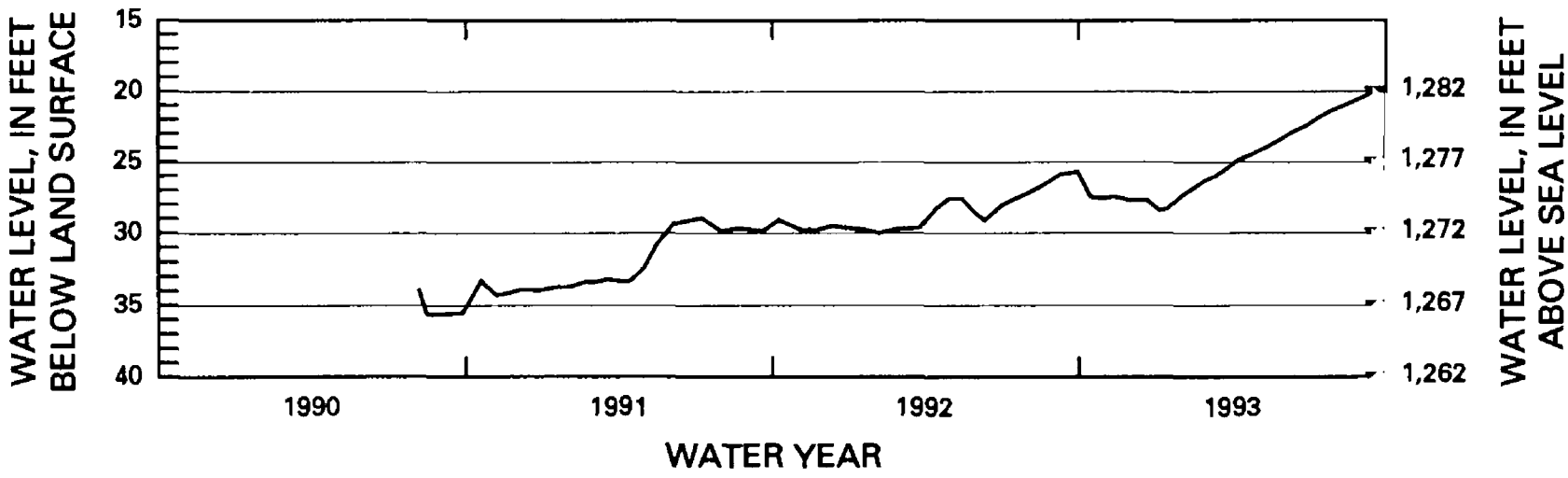


Figure 24. Hydrograph for observation well 110N62W4BBBB, CO-04-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W4CDDD
SITE ID: 442123098171501
OTHER IDENTIFIER: CO-15-90
ALTITUDE OF LAND SURFACE: 1,298.64 feet
MEASURING POINT: 2.69 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 19.76 feet, September 23, 1993; lowest, 36.35 feet, November 21, 1990.

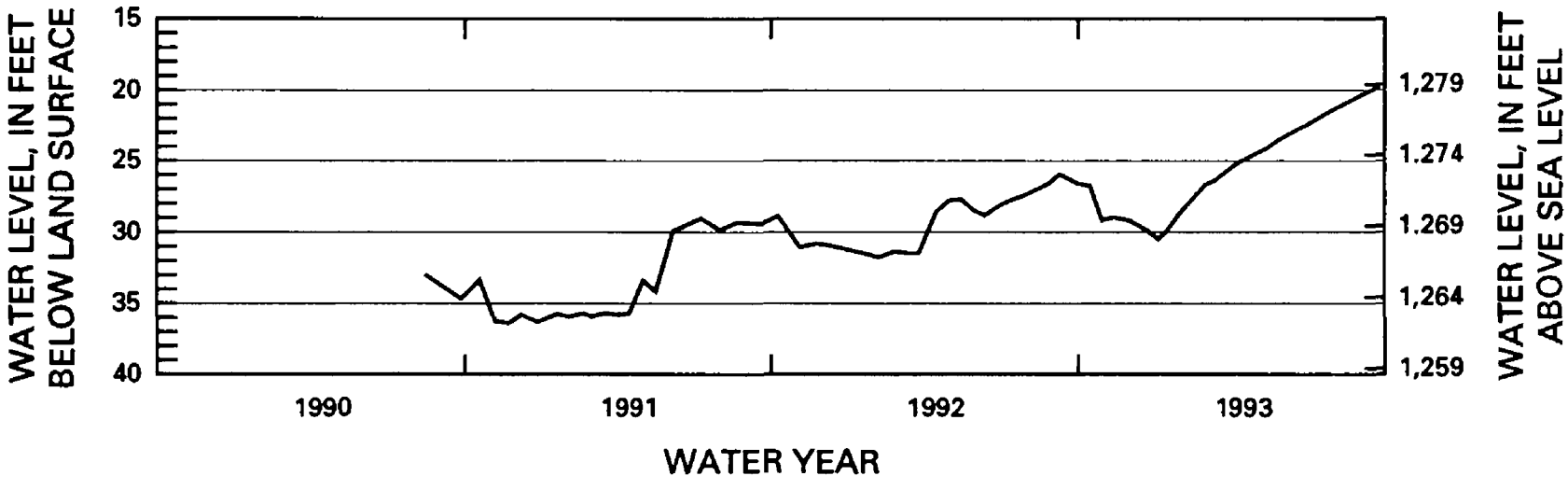


Figure 25. Hydrograph for observation well 110N62W4CDDD, CO-15-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W4DDDD
SITE ID: 442123098163101
OTHER IDENTIFIER: CO-25-90
ALTITUDE OF LAND SURFACE: 1,293.20 feet
MEASURING POINT: 2.55 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 1.84 feet, July 26, 1993; lowest, 16.29 feet, April 15, 1991.

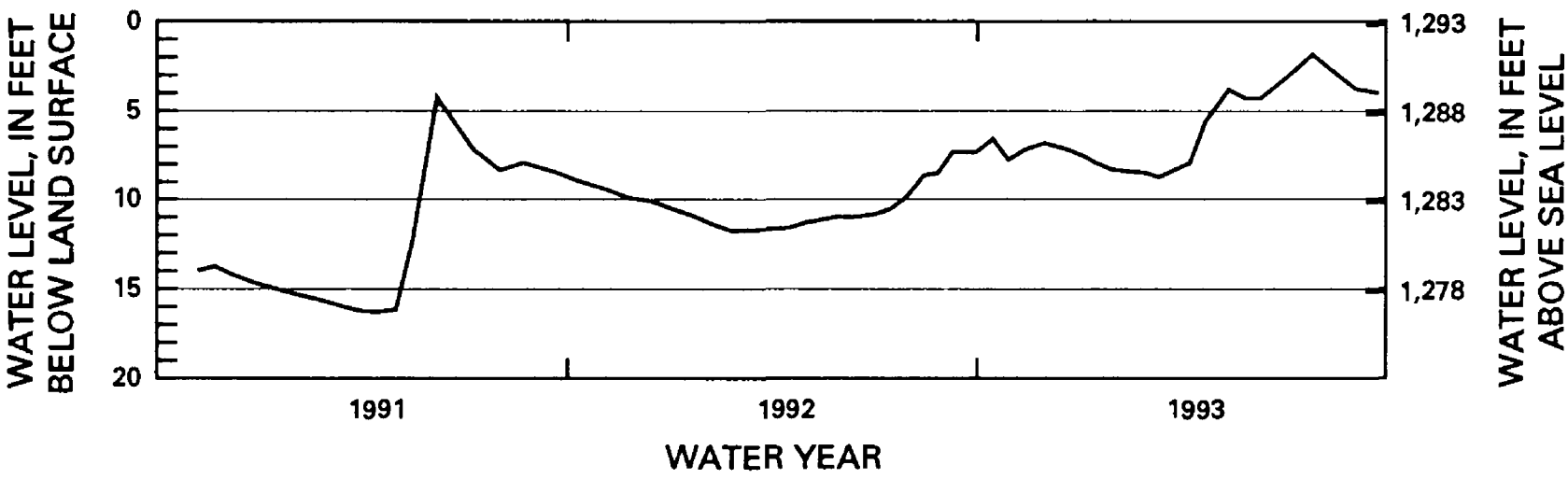


Figure 26. Hydrograph for observation well 110N62W4DDDD, CO-25-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W5ADDD
SITE ID: 442150098174401
OTHER IDENTIFIER: CO-05-90
ALTITUDE OF LAND SURFACE: 1,299.75 feet
MEASURING POINT: 2.40 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 18.87 feet, September 23, 1993; lowest, 34.51 feet, September 27, 1990.

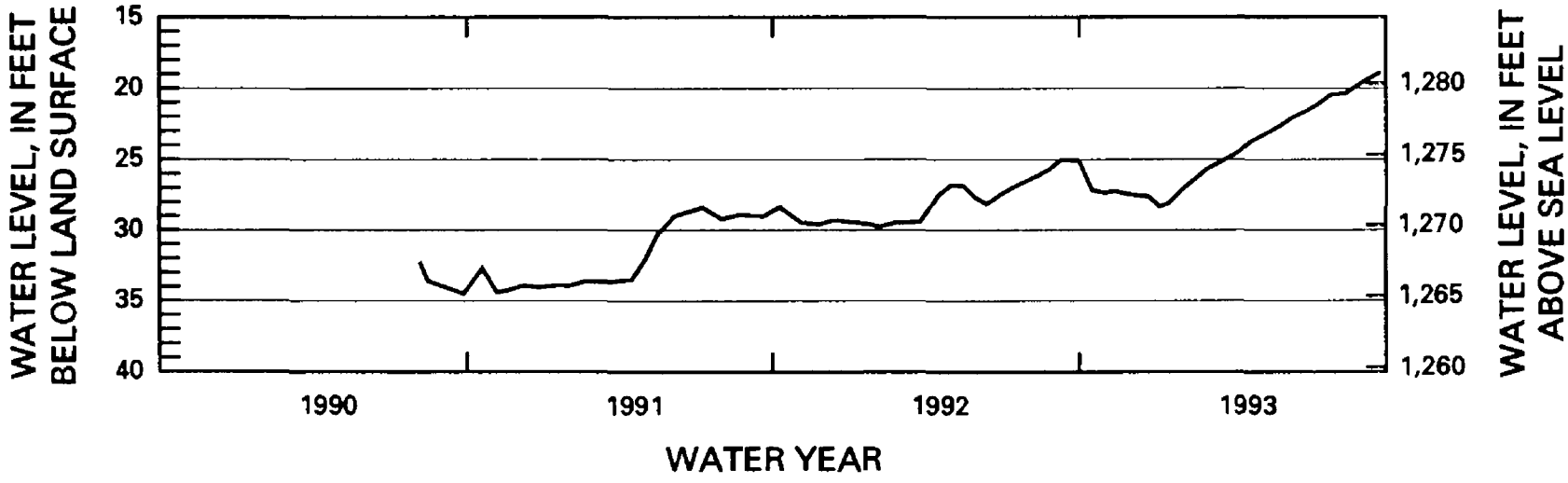


Figure 27. Hydrograph for observation well 110N62W5ADDD, CO-05-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W5BBBB2
SITE ID: 442213098185602
OTHER IDENTIFIER: CO-03-90
ALTITUDE OF LAND SURFACE: 1,308.40 feet
MEASURING POINT: 2.63 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 25.37 feet, September 23, 1993; lowest, 40.59 feet, September 27, 1990.

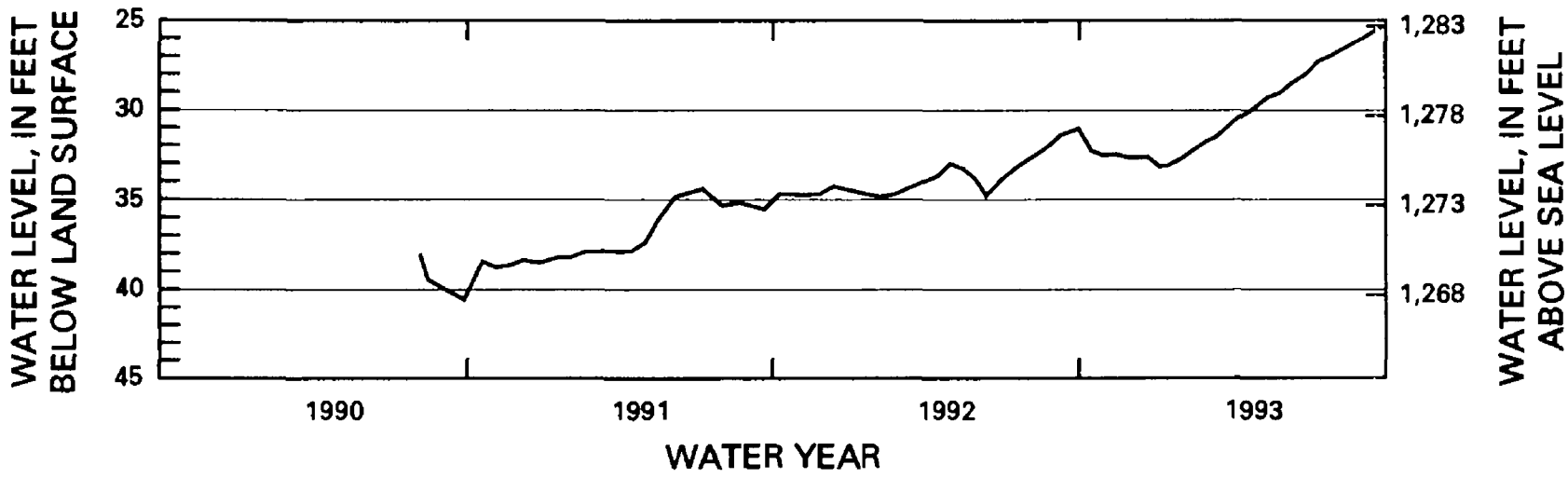


Figure 28. Hydrograph for observation well 110N62W5BBBB2, C0-03-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W5CCCB2
SITE ID: 442128098185402
OTHER IDENTIFIER: CO-31-90
ALTITUDE OF LAND SURFACE: 1,310.81 feet
MEASURING POINT: 2.63 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 31.10 feet, September 23, 1993; lowest, 45.40 feet, December 26, 1990.

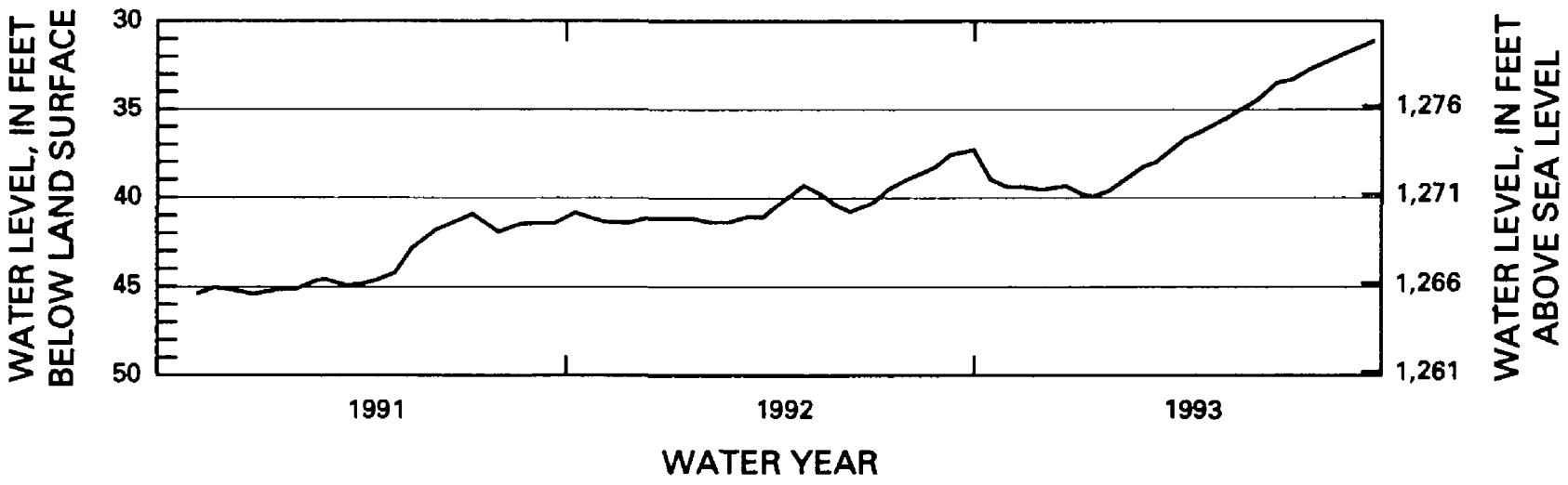


Figure 29. Hydrograph for observation well 110N62W5CCCB2, CO-31-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W5DCCC
SITE ID: 442124098181601
OTHER IDENTIFIER: CO-14-90
ALTITUDE OF LAND SURFACE: 1,313.83 feet
MEASURING POINT: 2.96 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 34.37 feet, September 23, 1993; lowest, 50.06 feet, November 5, 1990.

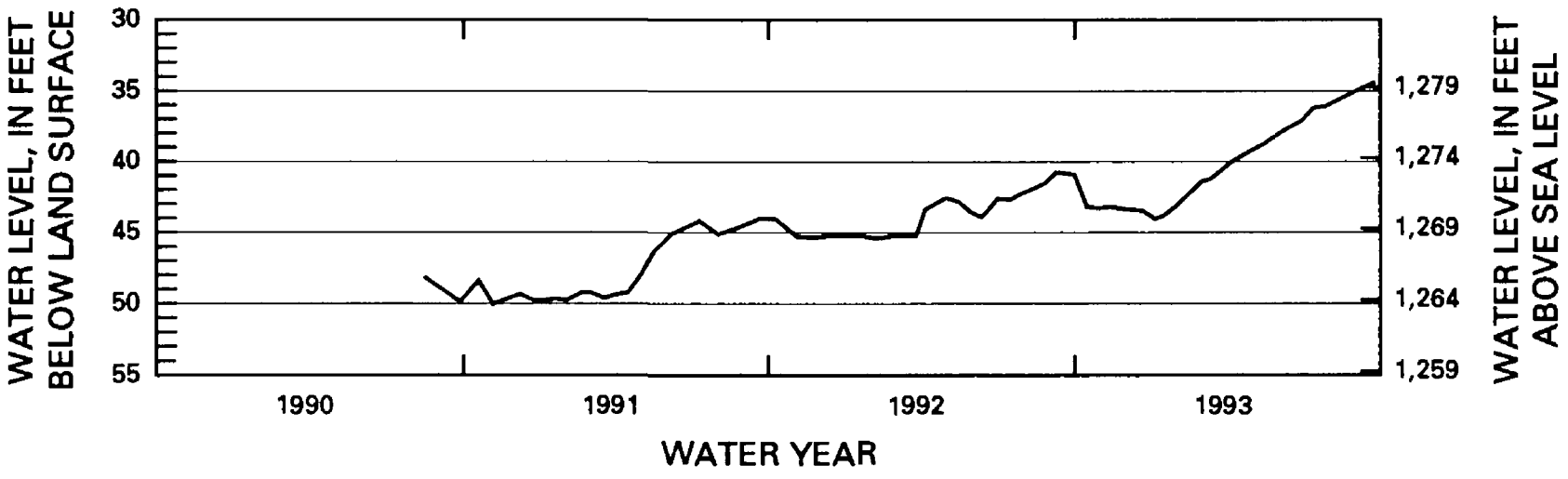


Figure 30. Hydrograph for observation well 110N62W5DCCC, CO-14-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W6BBBB
SITE ID: 442213098200701
OTHER IDENTIFIER: CO-23-90
ALTITUDE OF LAND SURFACE: 1,305.96 feet
MEASURING POINT: 2.41 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 21.46 feet, September 23, 1993; lowest, 34.43 feet, November 5, 1990.

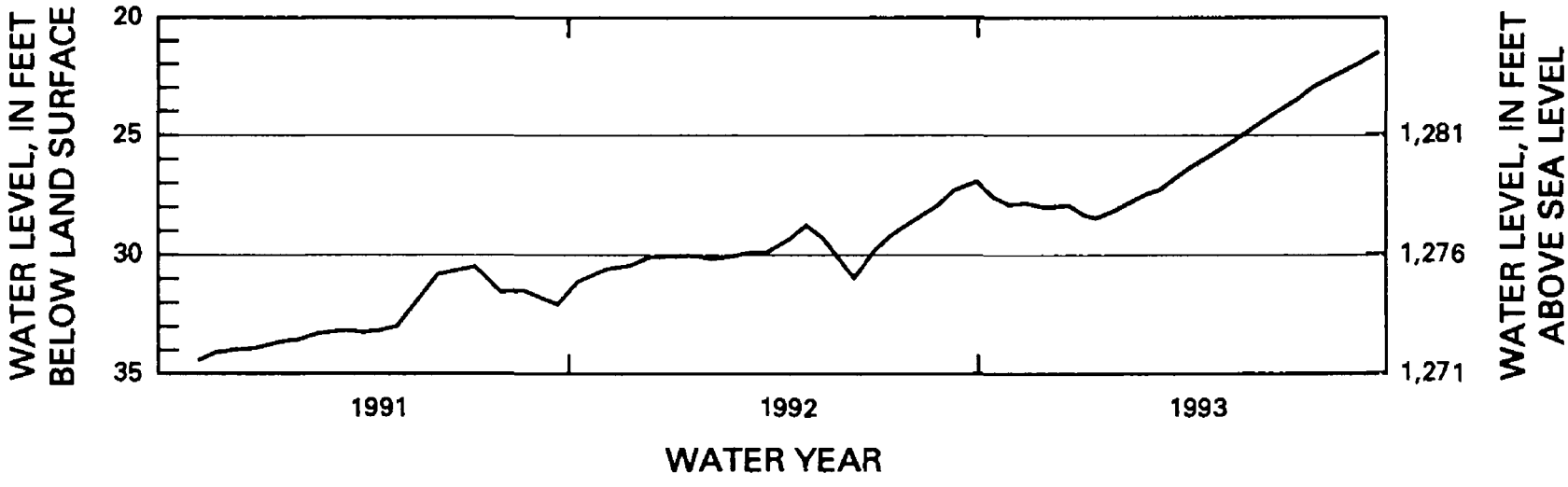


Figure 31. Hydrograph for observation well 110N62W6BBBB, CO-23-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W8CCCC
SITE ID: 442002098185301
OTHER IDENTIFIER: CO-01-90
ALTITUDE OF LAND SURFACE: 1,321.89 feet
MEASURING POINT: 2.32 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 45.03 feet, September 23, 1993; lowest, 60.90 feet, November 21, 1990.

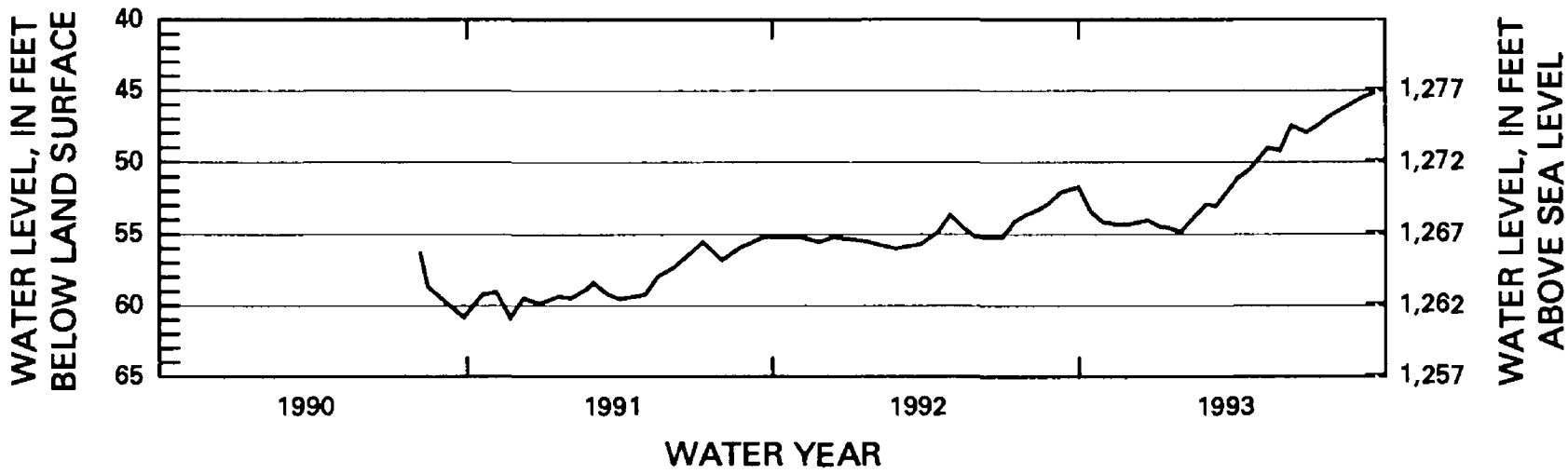


Figure 32. Hydrograph for observation well 110N62W8CCCC, CO-01-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BABB
SITE ID: 442122098172002
OTHER IDENTIFIER: CO-06-90
ALTITUDE OF LAND SURFACE: 1,297.53 feet
MEASURING POINT: 2.71 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 18.54 feet, September 23, 1993; lowest, 35.67 feet, November 21, 1990.

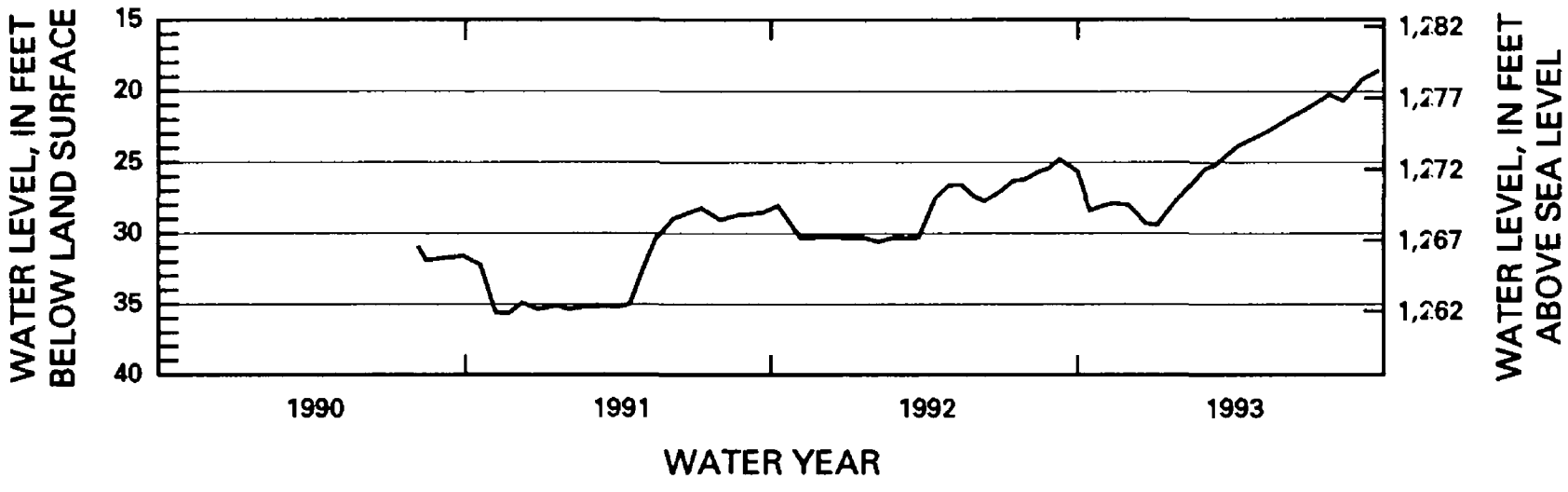


Figure 33. Hydrograph for observation well 110N62W9BABB, CO-06-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBAC
SITE ID: 442118098173101
OTHER IDENTIFIER: CO-55-90
ALTITUDE OF LAND SURFACE: 1,296.45 feet
MEASURING POINT: 2.39 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 17.70 feet, September 23, 1993; lowest, 35.69 feet, November 21, 1990.

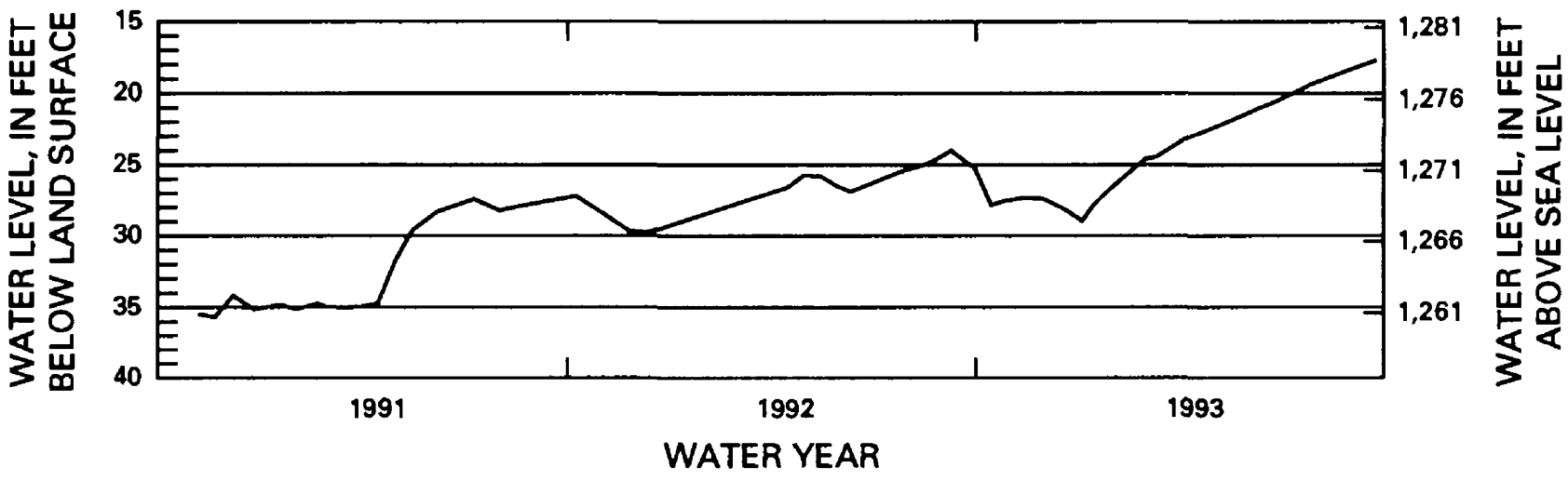


Figure 34. Hydrograph for observation well 110N62W9BBAC, CO-55-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA
SITE ID: 442119098173601
OTHER IDENTIFIER: CO-65-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.62 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.26 feet, September 23, 1993; lowest, 36.69 feet, November 21, 1990.

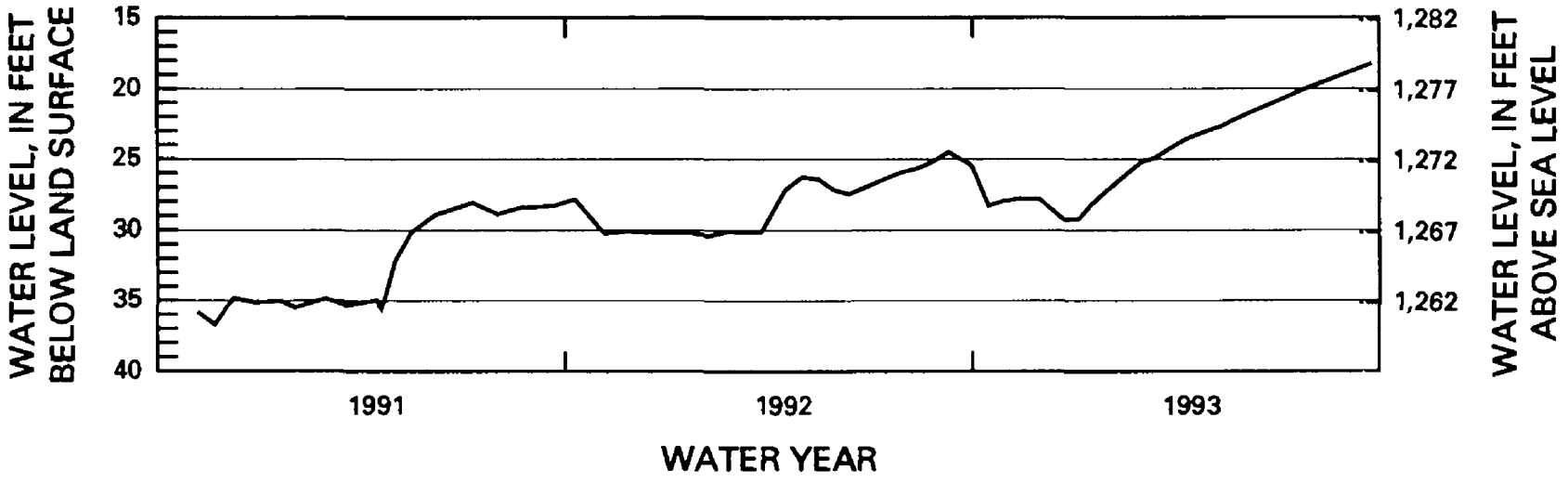


Figure 35. Hydrograph for observation well 110N62W9BBBA, CO-65-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA2
SITE ID: 442119098173602
OTHER IDENTIFIER: CO-66-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.35 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.26 feet, September 23, 1993; lowest, 35.88 feet, November 6, 1990.

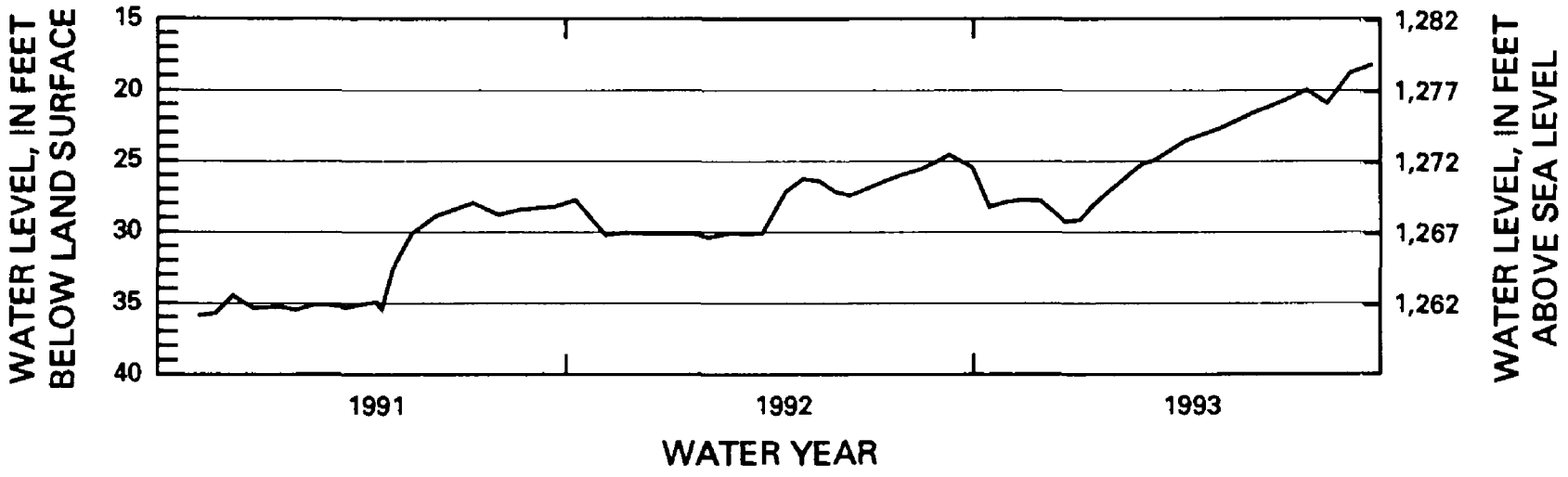


Figure 36. Hydrograph for observation well 110N62W9BBBA2, CO-66-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA3
SITE ID: 442119098173603
OTHER IDENTIFIER: CO-67-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.34 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 23, 1993: Highest, 18.30 feet, September 23, 1993; lowest, 35.87 feet, November 6, 1990.

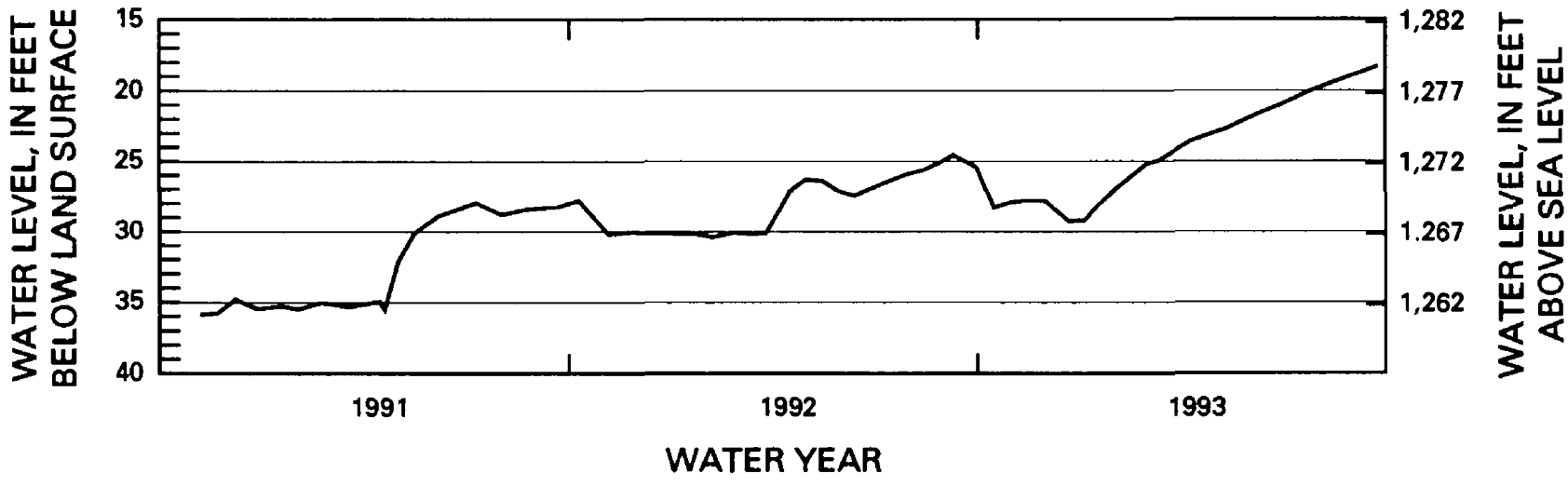


Figure 37. Hydrograph for observation well 110N62W9BBBA3, CO-67-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA4
SITE ID: 442119098173604
OTHER IDENTIFIER: A-01-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.78 feet above land surface
AQUIFER: Till
EXTREMES: November 2, 1990, to September 30, 1993: Highest, 4.20 feet, September 3, 1993; lowest, 18.67 feet, November 6, 1990.

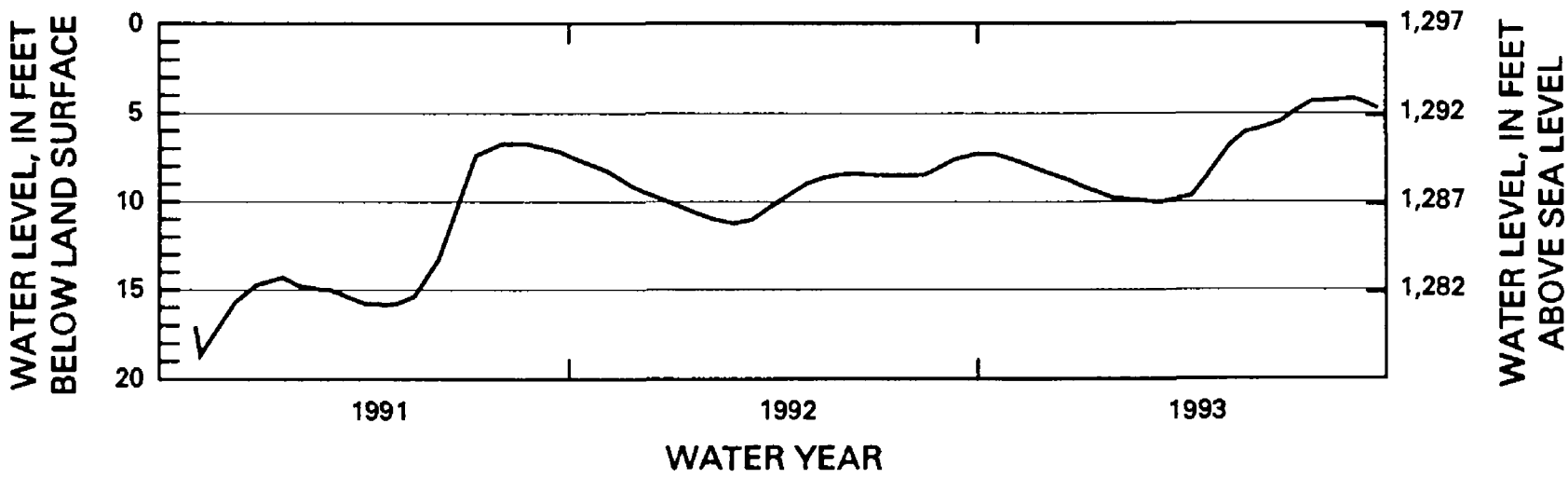


Figure 38. Hydrograph for observation well 110N62W9BBBA4, A-01-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA5
SITE ID: 442119098173605
OTHER IDENTIFIER: A-02-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.63 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 2.02 feet, July 26, 1993; lowest, 12.22 feet, February 21, 1991.

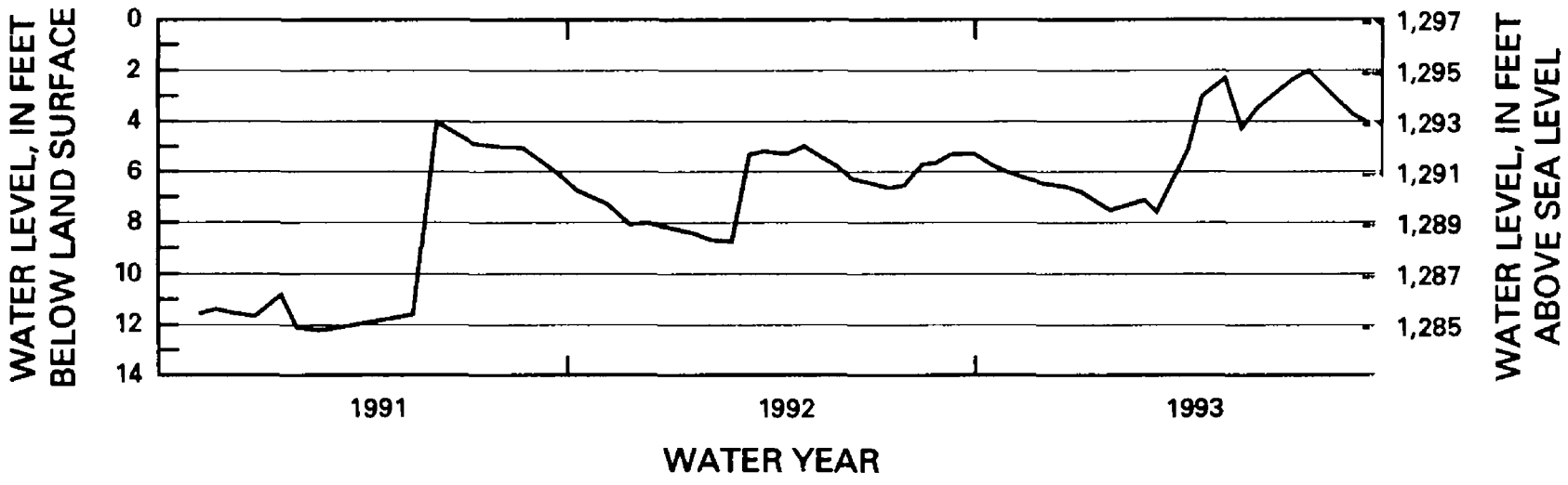


Figure 39. Hydrograph for observation well 110N62W9BBBA5, A-02-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA6
SITE ID: 442119098173606
OTHER IDENTIFIER: A-03-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.32 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 7.68 feet, September 3, 1993; lowest, 19.48 feet, April 19, 1991.

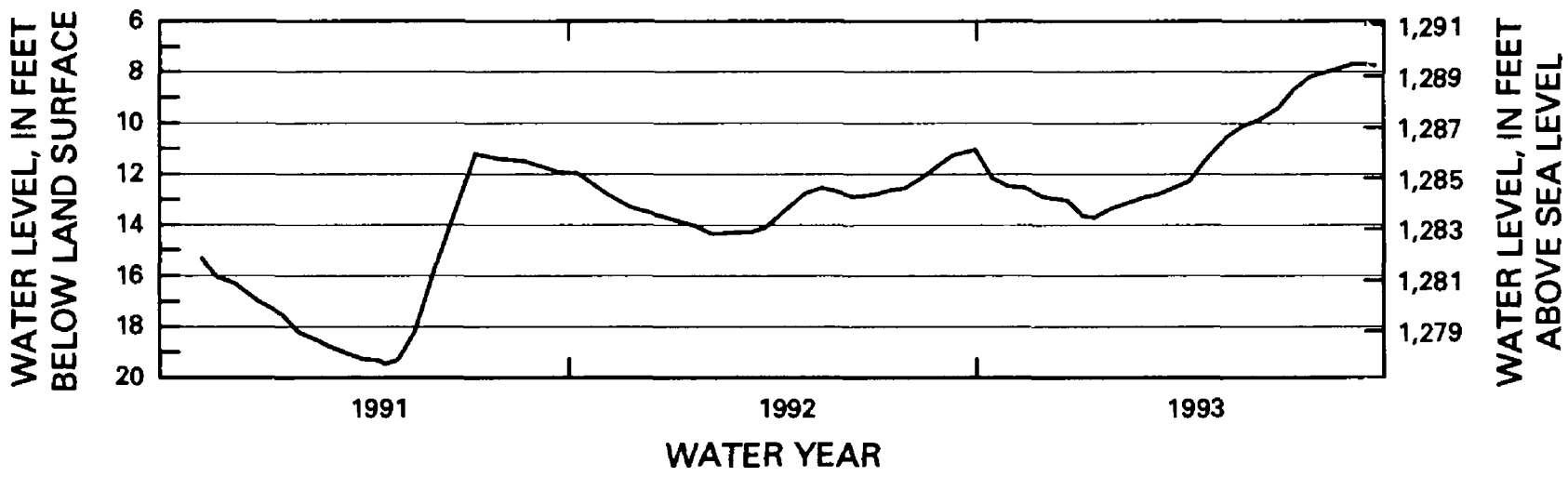


Figure 40. Hydrograph for observation well 110N62W9BBBA6, A-03-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBA7
SITE ID: 442119098173607
OTHER IDENTIFIER: A-04-90
ALTITUDE OF LAND SURFACE: 1,297.19 feet
MEASURING POINT: 2.49 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 6.29 feet, September 3, 1993; lowest, 17.87 feet, April 19, 1991.

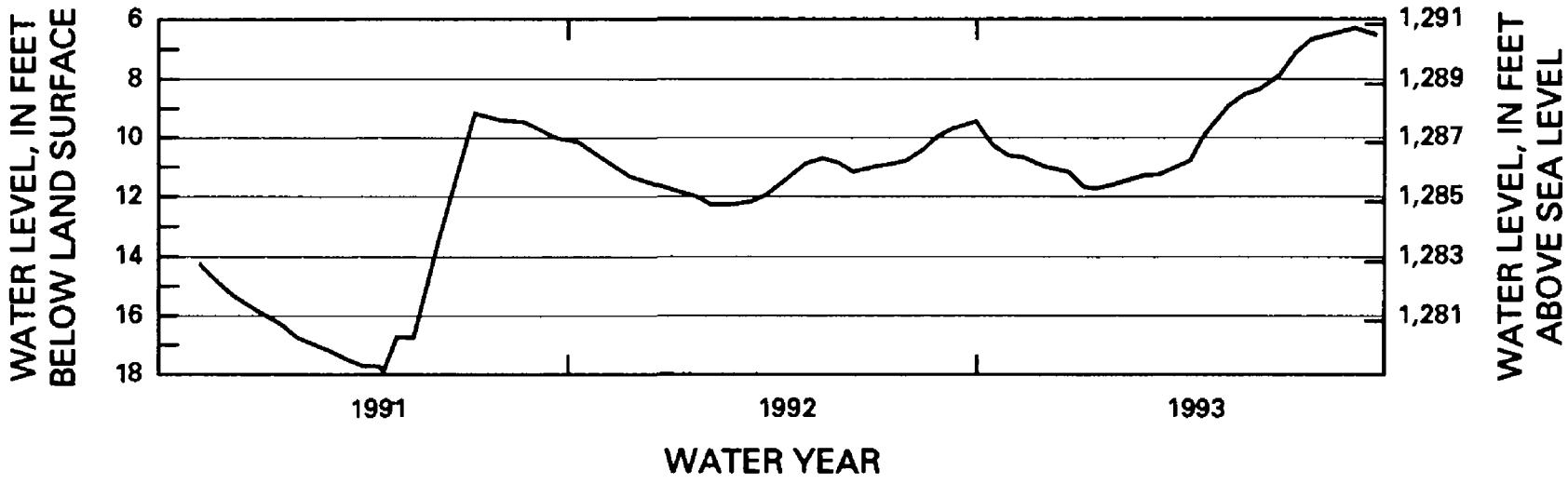


Figure 41. Hydrograph for observation well 110N62W9BBBA7, A-04-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBB2
SITE ID: 442123098174002
OTHER IDENTIFIER: CO-08-90
ALTITUDE OF LAND SURFACE: 1,295.68 feet
MEASURING POINT: 2.86 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 16.48 feet, September 23, 1993; lowest, 33.52 feet, November 21, 1990.

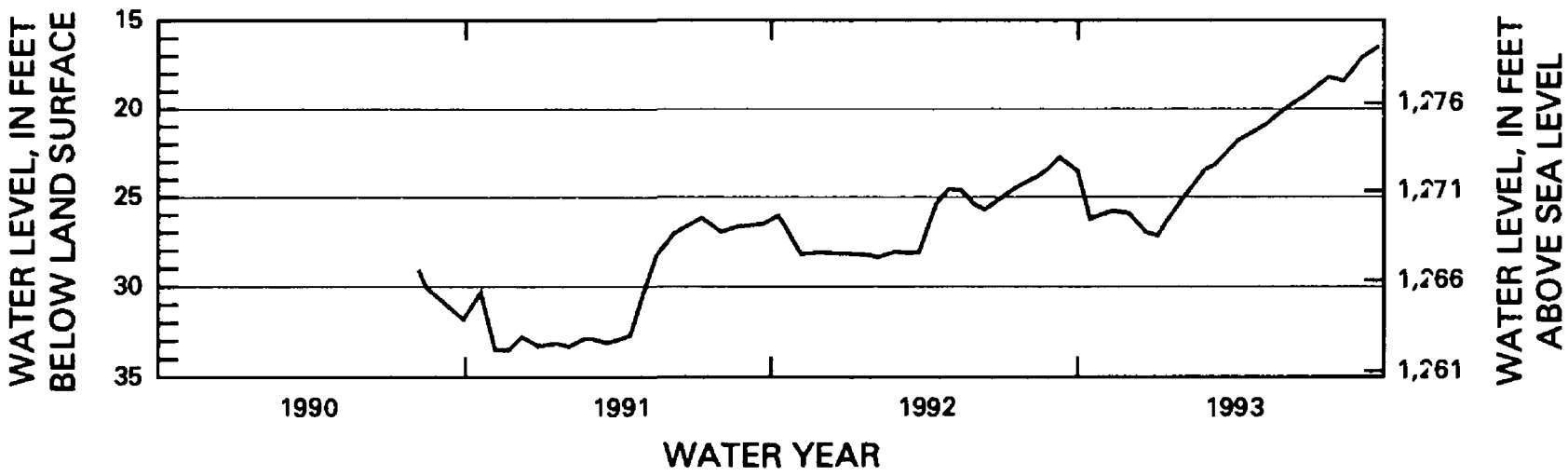


Figure 42. Hydrograph for observation well 110N62W9BBBB2, CO-08-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBBC
SITE ID: 442118098174001
OTHER IDENTIFIER: CO-16-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 3.11 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 20.43 feet, July 26, 1993; lowest, 36.80 feet, November 6, 1990.

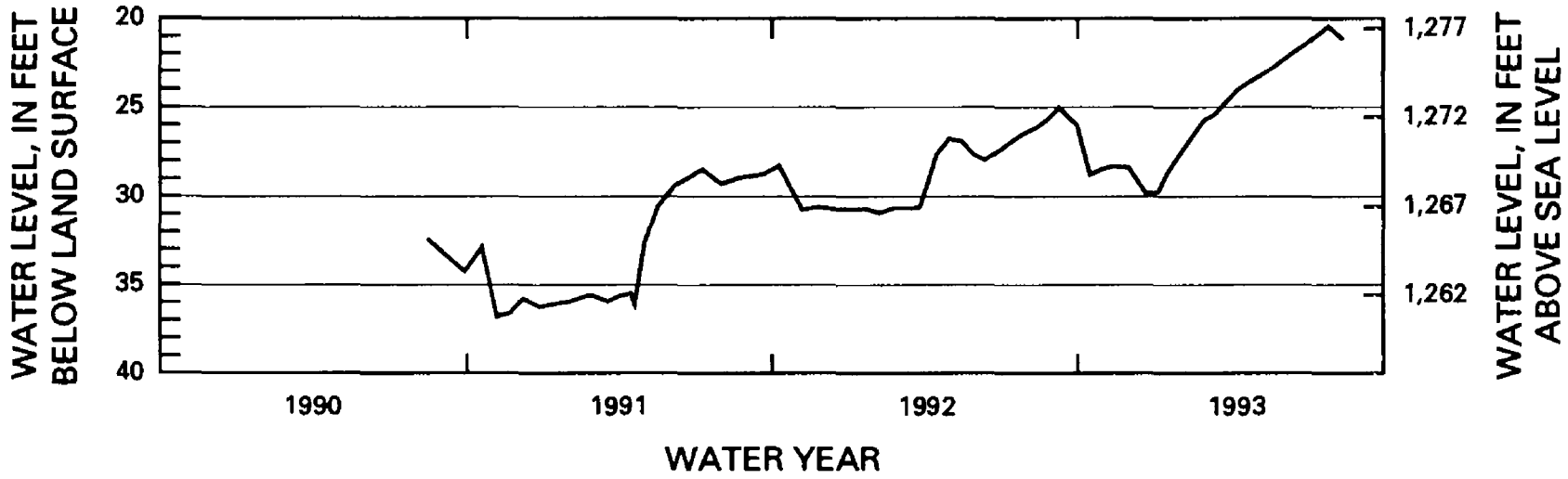


Figure 43. Hydrograph for observation well 110N62W9BBBC, CO-16-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBBC2
SITE ID: 442118098174002
OTHER IDENTIFIER: CO-33-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.60 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.71 feet, September 23, 1993; lowest, 36.63 feet, November 6, 1990.

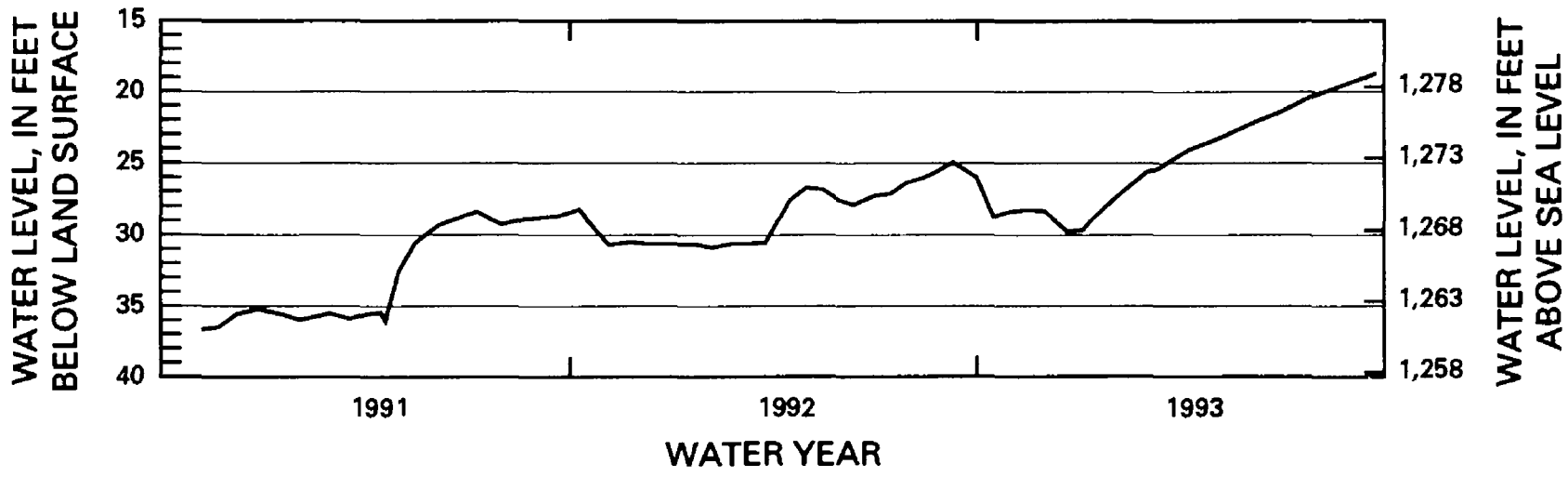


Figure 44. Hydrograph for observation well 110N62W9BBBC2, CO-33-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBC3
SITE ID: 442118098174003
OTHER IDENTIFIER: CO-34-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.91 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 19.17 feet, September 23, 1993; lowest, 37.07 feet, November 6, 1990.

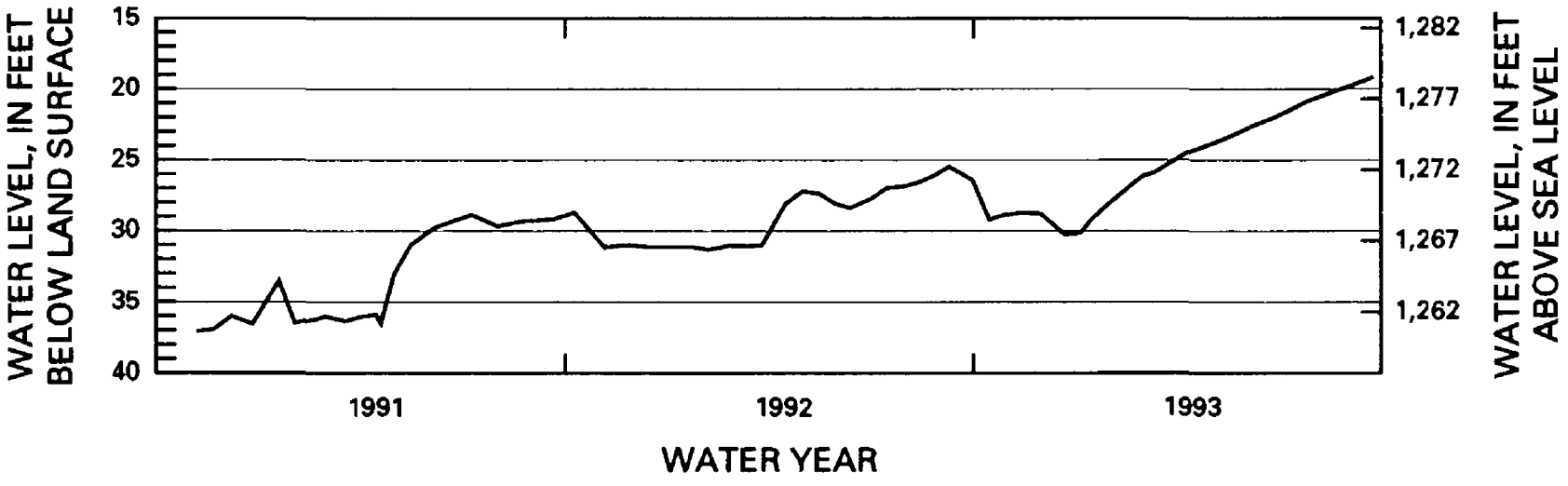


Figure 45. Hydrograph for observation well 110N62W9BBBC3, CO-34-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBC4
SITE ID: 442118098174004
OTHER IDENTIFIER: CO-35-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.90 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 12.98 feet, September 23, 1993; lowest, 25.87 feet, April 19, 1991.

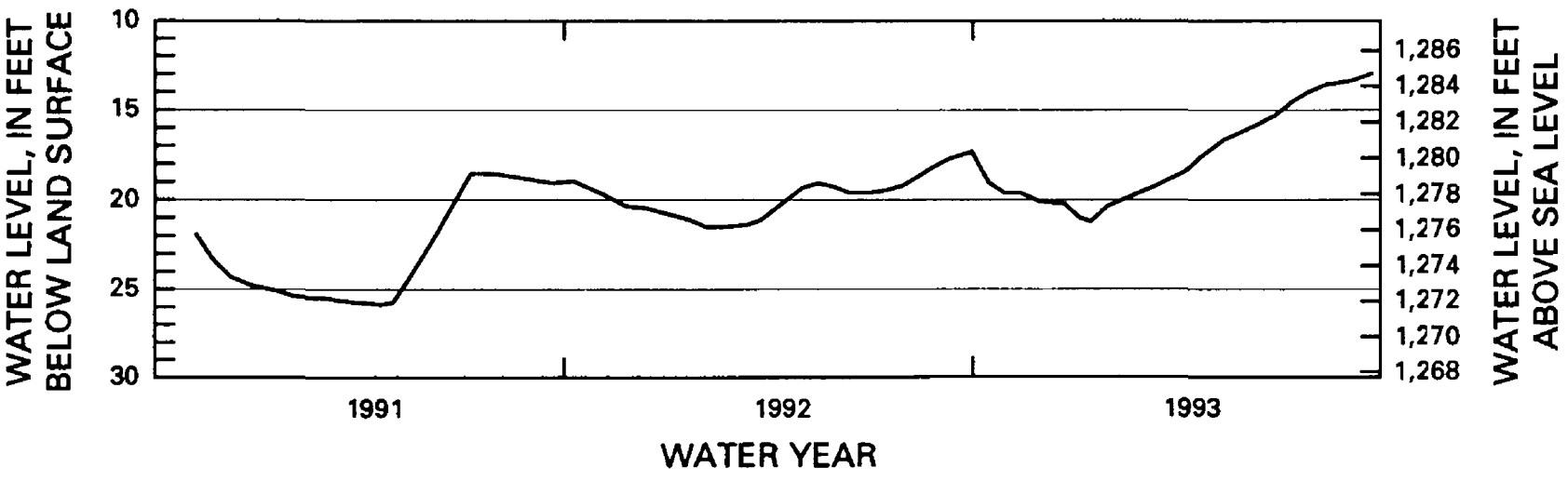


Figure 46. Hydrograph for observation well 110N62W9BBBC4, CO-35-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBC5
SITE ID: 442118098174005
OTHER IDENTIFIER: CO-36-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 3.15 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 23, 1993: Highest, 2.63 feet, June 6, 1991; lowest, 11.41 feet, May 1, 1991.

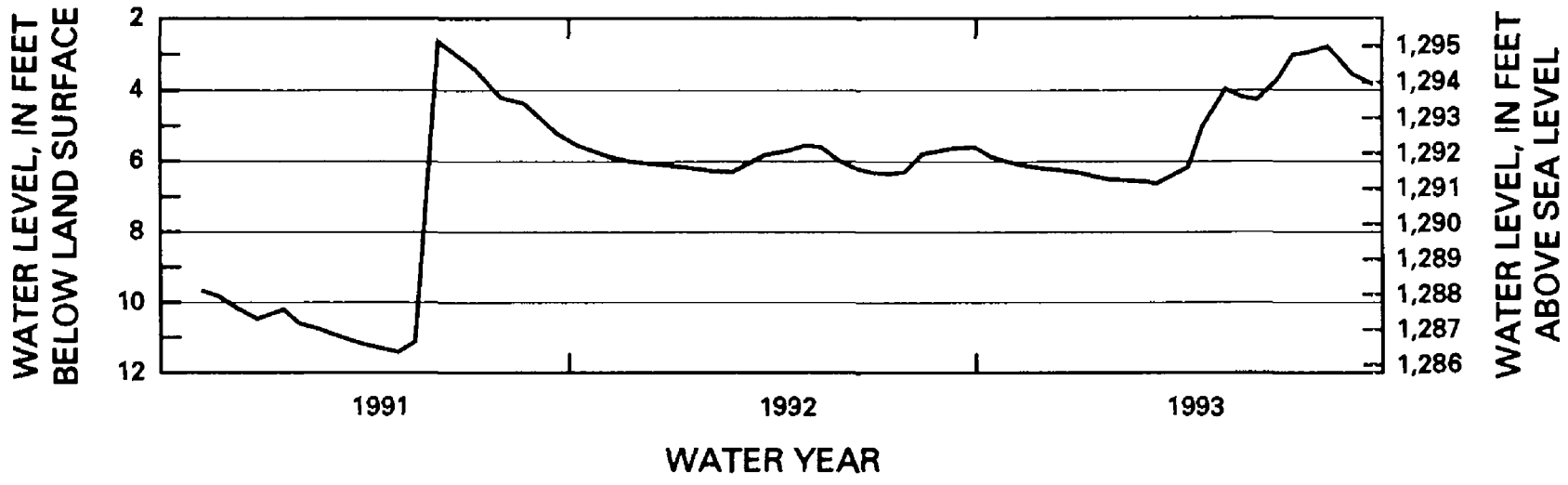


Figure 47. Hydrograph for observation well 110N62W9BBBC5, CO-36-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBC6
SITE ID: 442118098174006
OTHER IDENTIFIER: CO-37-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 3.26 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 23, 1993: Highest, 2.77 feet, June 6, 1991; lowest, 19.77 feet, May 1, 1991.

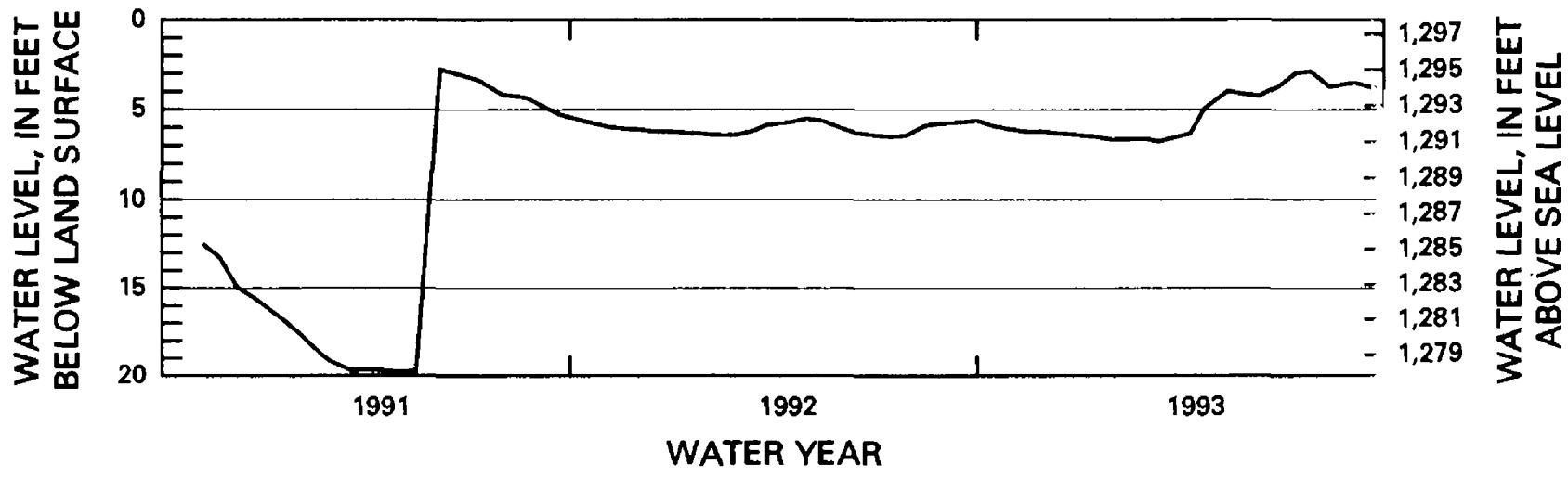


Figure 48. Hydrograph for observation well 110N62W9BBBC6, CO-37-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBC7
SITE ID: 442118098174007
OTHER IDENTIFIER: CO-38-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.99 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 6.35 feet, July 9, 1991; lowest, 21.43 feet, April 19, 1991.

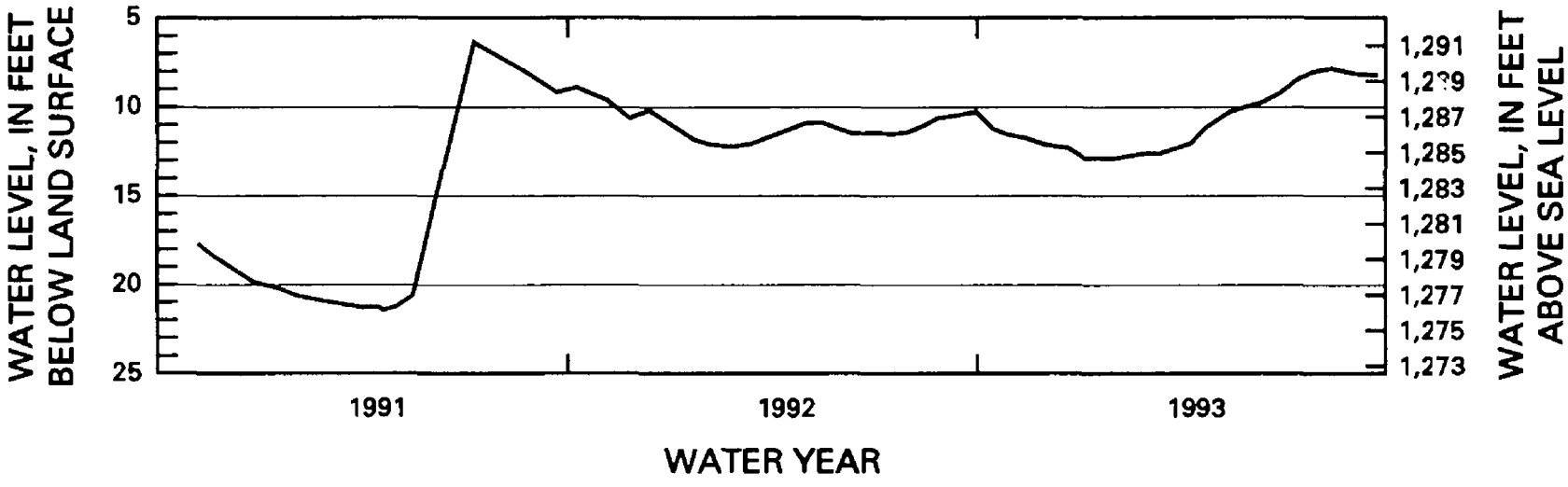


Figure 49. Hydrograph for observation well 110N62W9BBBC7, CO-38-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD
SITE ID: 442117098173601
OTHER IDENTIFIER: CO-45-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.39 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.76 feet, September 23, 1993; lowest, 36.17 feet, November 6, 1990.

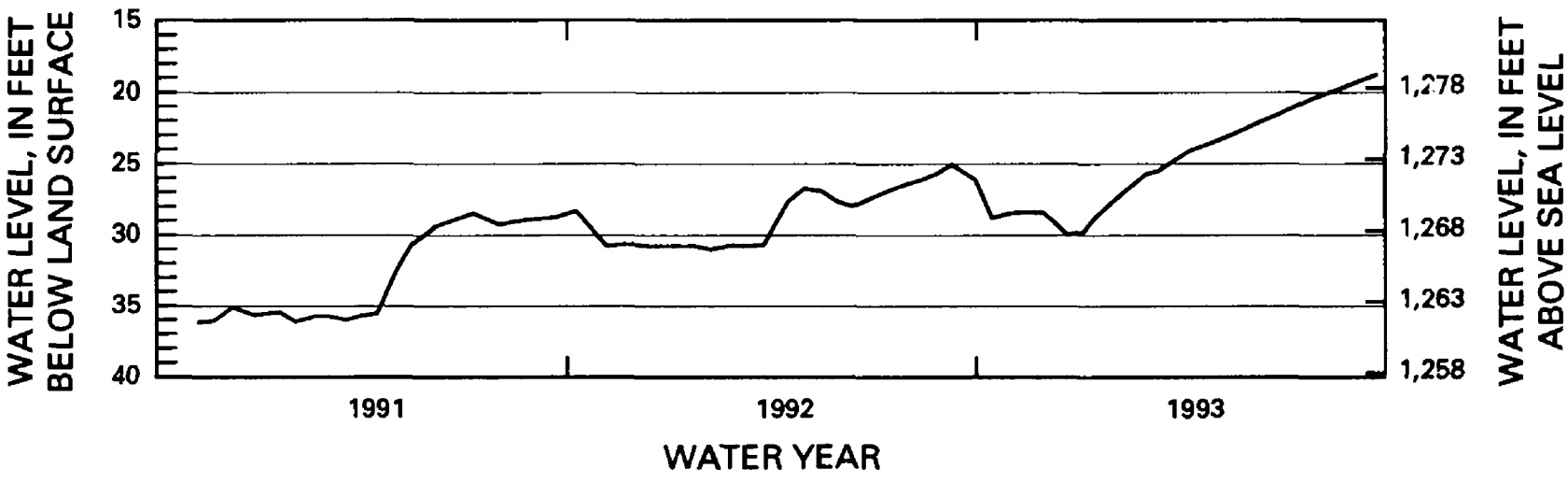


Figure 50. Hydrograph for observation well 110N62W9BBBD, CO-45-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD3
SITE ID: 442117098173603
OTHER IDENTIFIER: CO-47-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.31 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.78 feet, September 23, 1993; lowest, 36.16 feet, February 1, 1991.

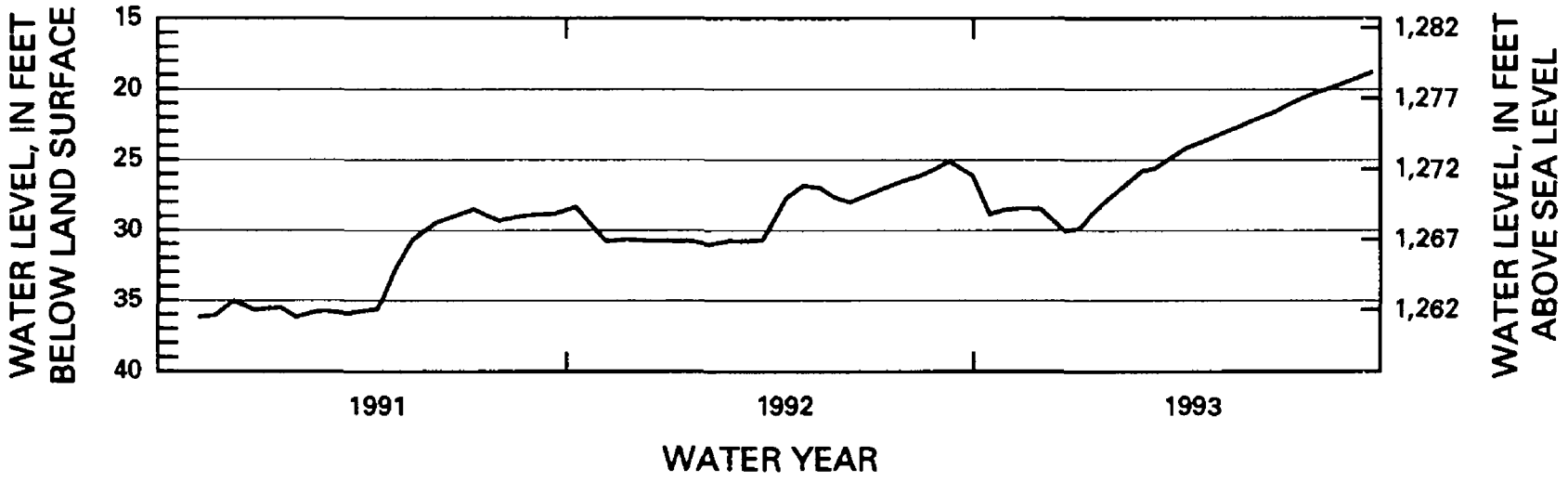


Figure 51. Hydrograph for observation well 110N62W9BBBD3, CO-47-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD4
SITE ID: 442117098173604
OTHER IDENTIFIER: CO-48-90
ALTITUDE OF LAND SURFACE: 1,297.66 feet
MEASURING POINT: 2.21 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.83 feet, September 23, 1993; lowest, 36.19 feet, November 6, 1990.

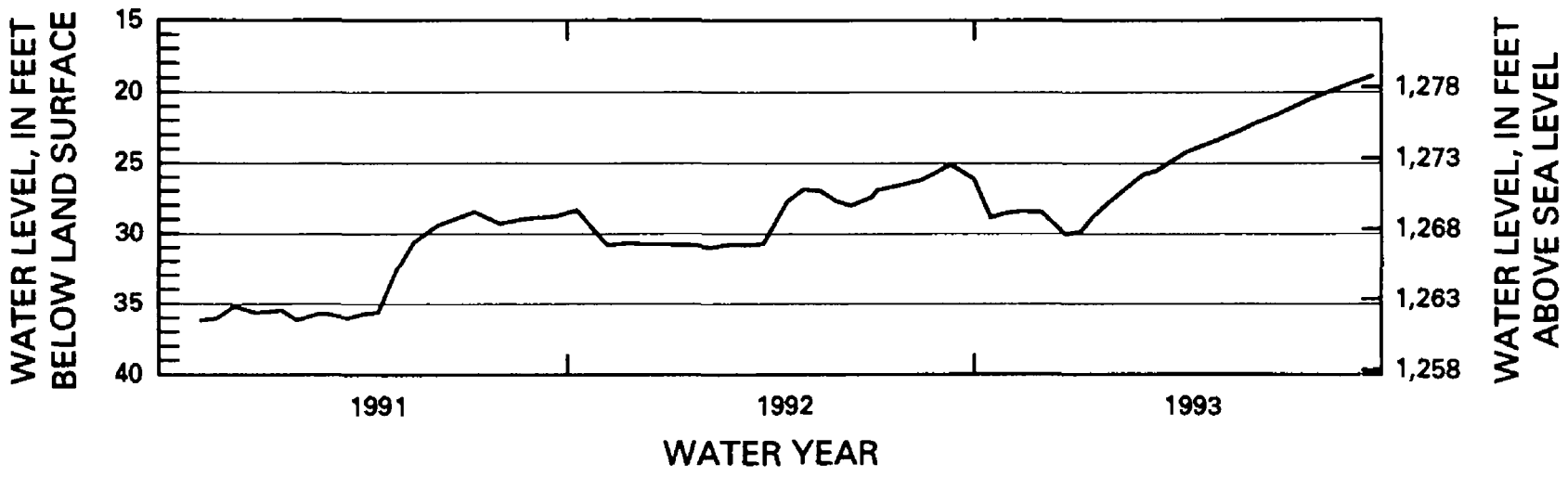


Figure 52. Hydrograph for observation well 110N62W9BBBD4, CO-48-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD5
SITE ID: 442117098173501
OTHER IDENTIFIER: CO-49-90
ALTITUDE OF LAND SURFACE: 1,297.08 feet
MEASURING POINT: 3.53 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.21 feet, September 23, 1993; lowest, 36.29 feet, November 21, 1990.

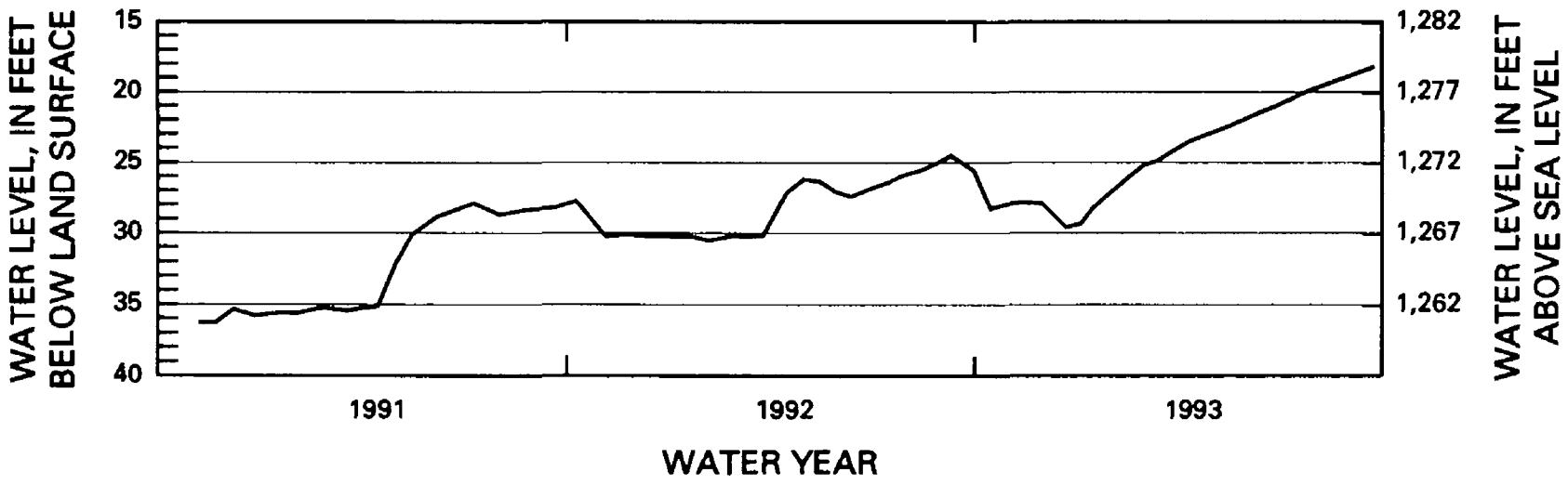


Figure 53. Hydrograph for observation well 110N62W9BBBD5, CO-49-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD6
SITE ID: 442117098173502
OTHER IDENTIFIER: CO-50-90
ALTITUDE OF LAND SURFACE: 1,297.08 feet
MEASURING POINT: 3.06 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.21 feet, September 23, 1993; lowest, 36.22 feet, November 6, 1990.

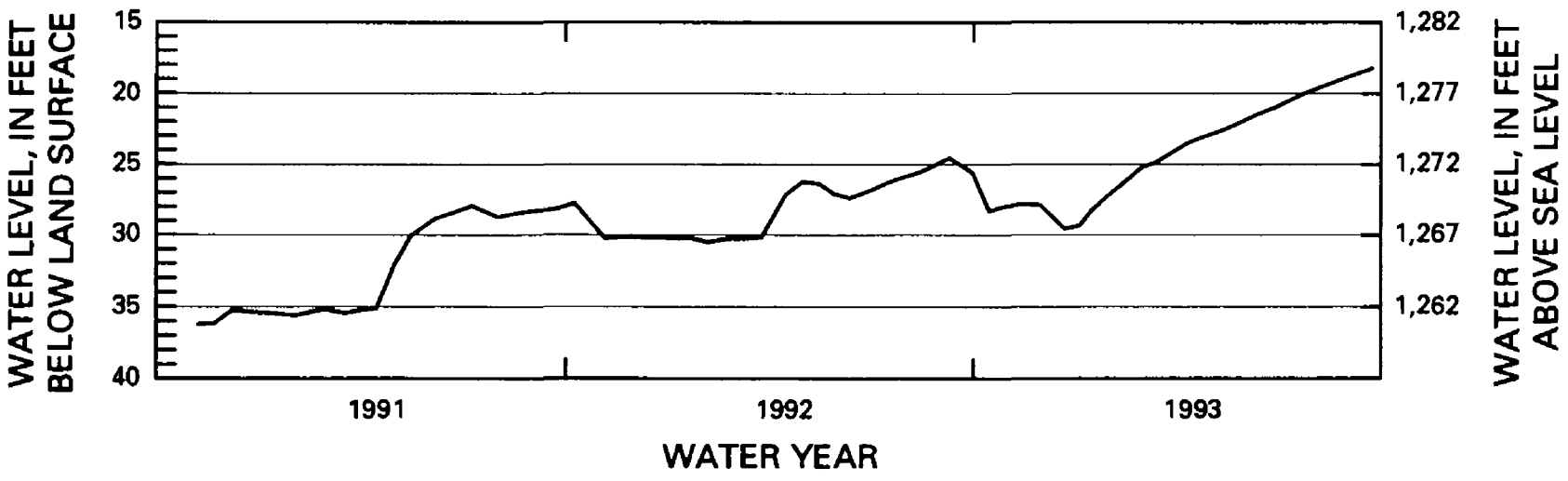


Figure 54. Hydrograph for observation well 110N62W9BBBD6, CO-50-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBBD7
SITE ID: 442117098173503
OTHER IDENTIFIER: CO-51-90
ALTITUDE OF LAND SURFACE: 1,297.08 feet
MEASURING POINT: 2.98 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.20 feet, September 23, 1993; lowest, 36.31 feet, November 21, 1990.

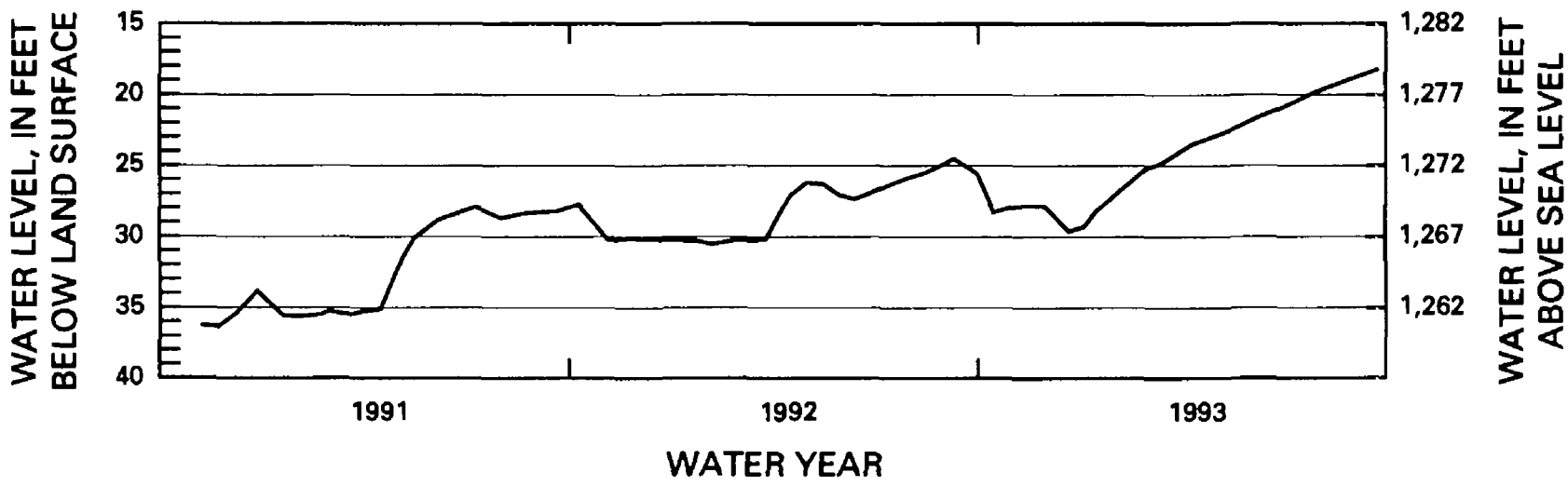


Figure 55. Hydrograph for observation well 110N62W9BBBD7, CO-51-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCA
SITE ID: 442115098173501
OTHER IDENTIFIER: CO-52-90
ALTITUDE OF LAND SURFACE: 1,295.37 feet
MEASURING POINT: 2.90 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 16.68 feet, September 23, 1993; lowest, 35.15 feet, November 21, 1990.

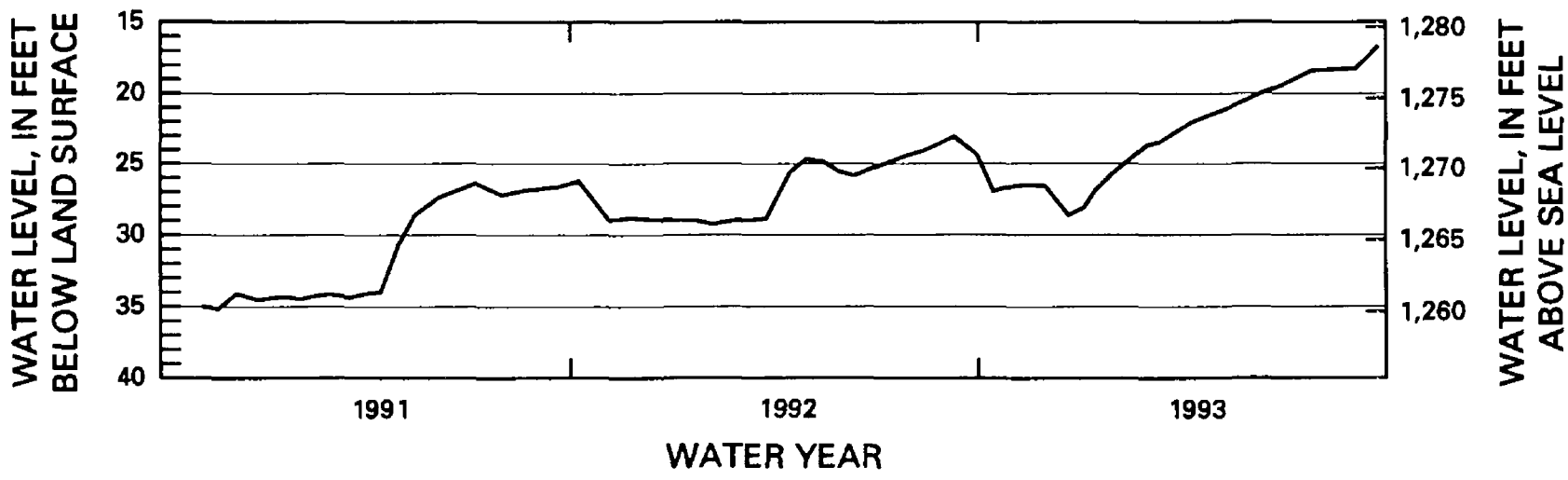


Figure 56. Hydrograph for observation well 110N62W9BBCA, CO-52-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCA2
SITE ID: 442115098173502
OTHER IDENTIFIER: CO-53-90
ALTITUDE OF LAND SURFACE: 1,295.37 feet
MEASURING POINT: 2.34 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 16.71 feet, September 23, 1993; lowest, 35.19 feet, November 21, 1990.

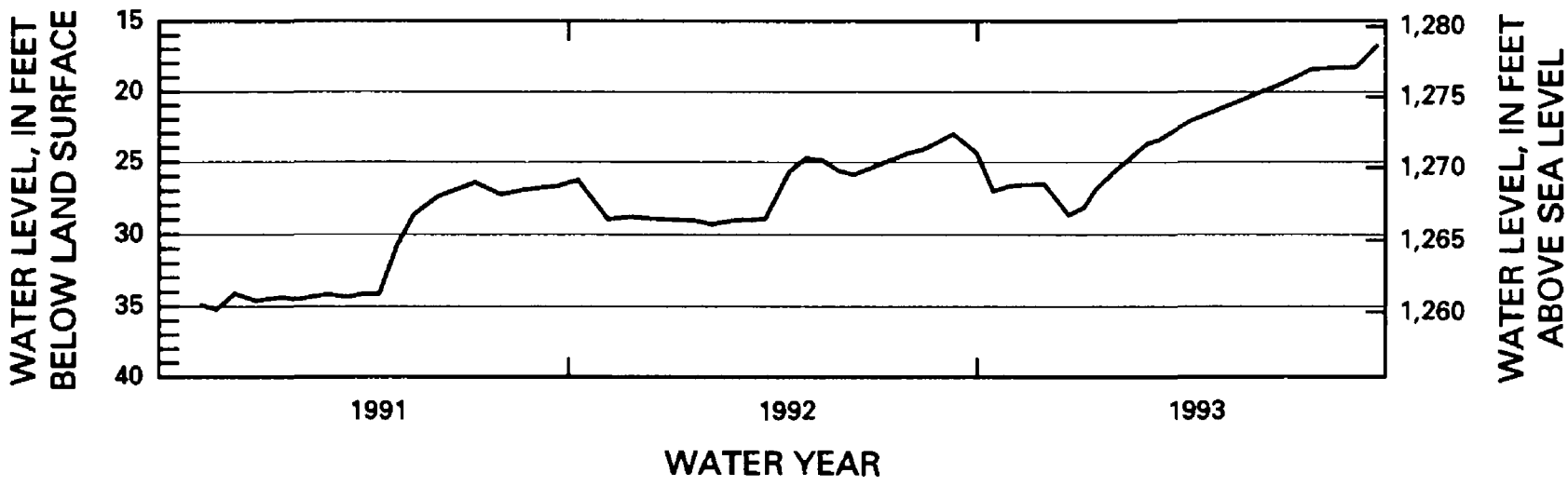


Figure 57. Hydrograph for observation well 110N62W9BBCA2, CO-53-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCA3
SITE ID: 442115098173503
OTHER IDENTIFIER: CO-54-90
ALTITUDE OF LAND SURFACE: 1,295.37 feet
MEASURING POINT: 2.55 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 16.73 feet, September 23, 1993; lowest, 35.25 feet, November 21, 1990.

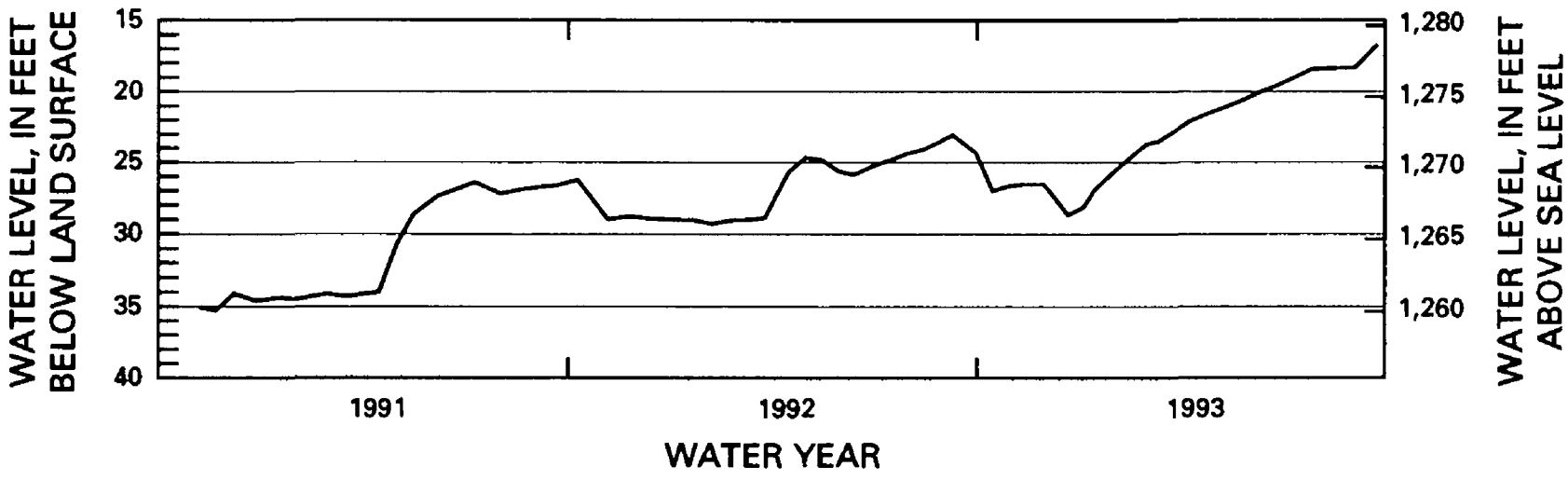


Figure 58. Hydrograph for observation well 110N62W9BBCA3, CO-54-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB
SITE ID: 442111098173801
OTHER IDENTIFIER: CO-18-90
ALTITUDE OF LAND SURFACE: 1,295.87 feet
MEASURING POINT: 2.71 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 17.47 feet, September 23, 1993; lowest, 36.50 feet, November 21, 1990.

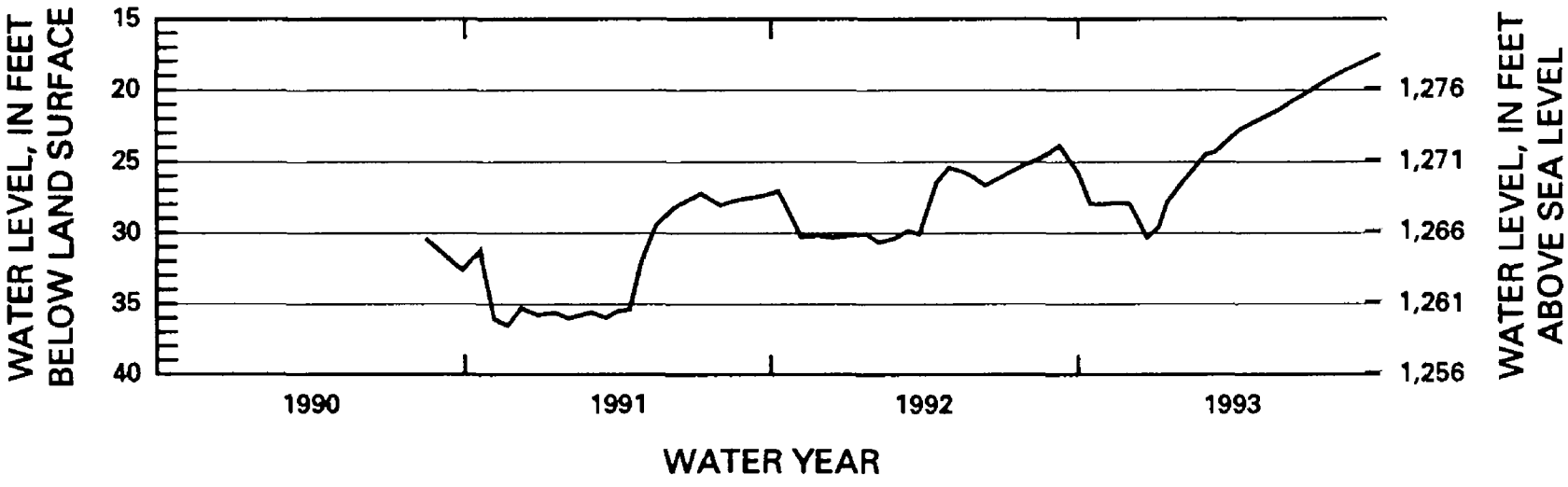


Figure 59. Hydrograph for observation well 110N62W9BBCB, CO-18-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBCB2
SITE ID: 442117098174002
OTHER IDENTIFIER: CO-39-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.88 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.87 feet, September 23, 1993; lowest, 37.27 feet, November 6, 1990.

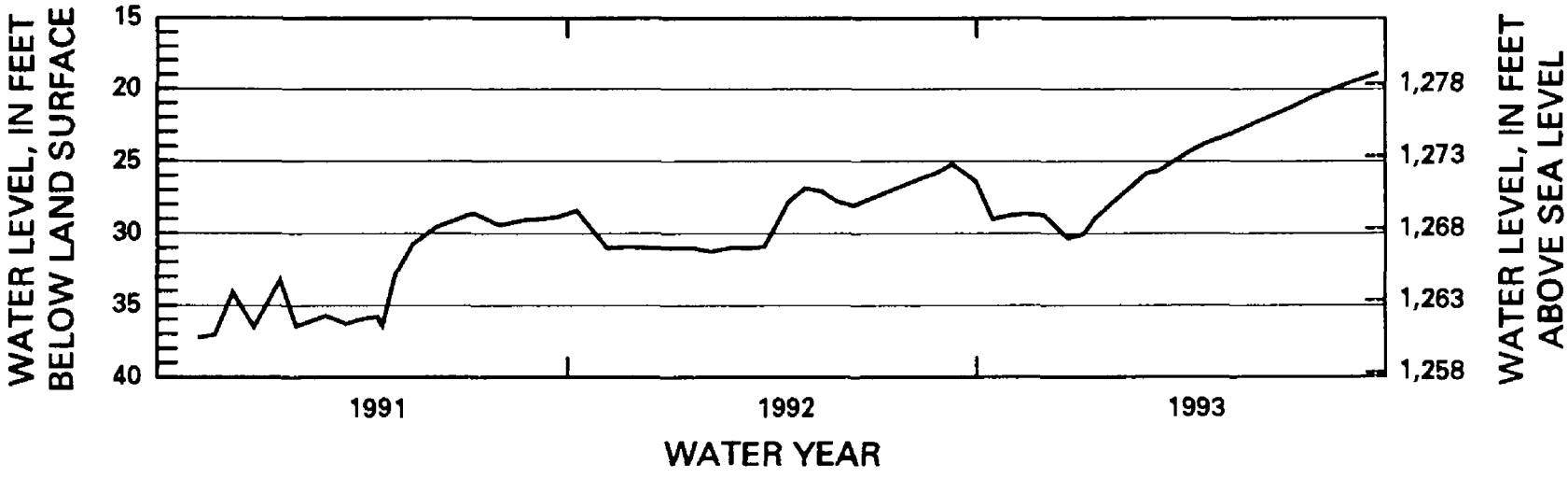


Figure 60. Hydrograph for observation well 110N62W9BBCB2, CO-39-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB3
SITE ID: 442117098174003
OTHER IDENTIFIER: CO-40-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.69 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.84 feet, September 23, 1993; lowest, 37.05 feet, November 6, 1990.

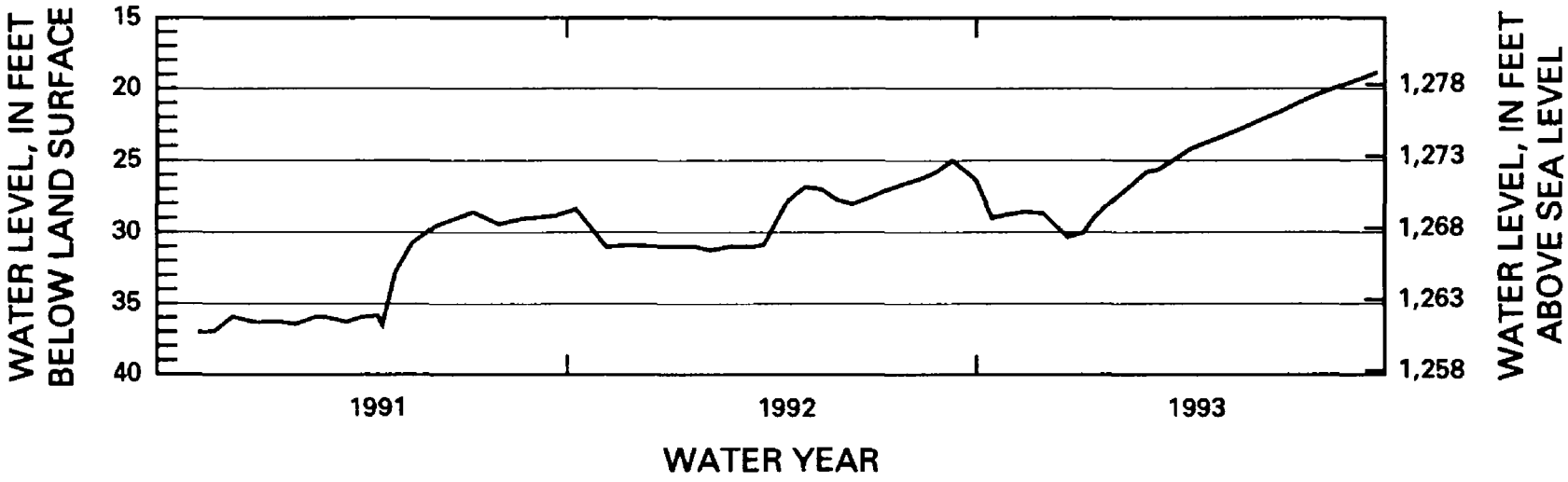


Figure 61. Hydrograph for observation well 110N62W9BBCB3, CO-40-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB4
SITE ID: 442117098174004
OTHER IDENTIFIER: CO-41-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.67 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.90 feet, September 23, 1993; lowest, 35.64 feet, February 1, 1991.

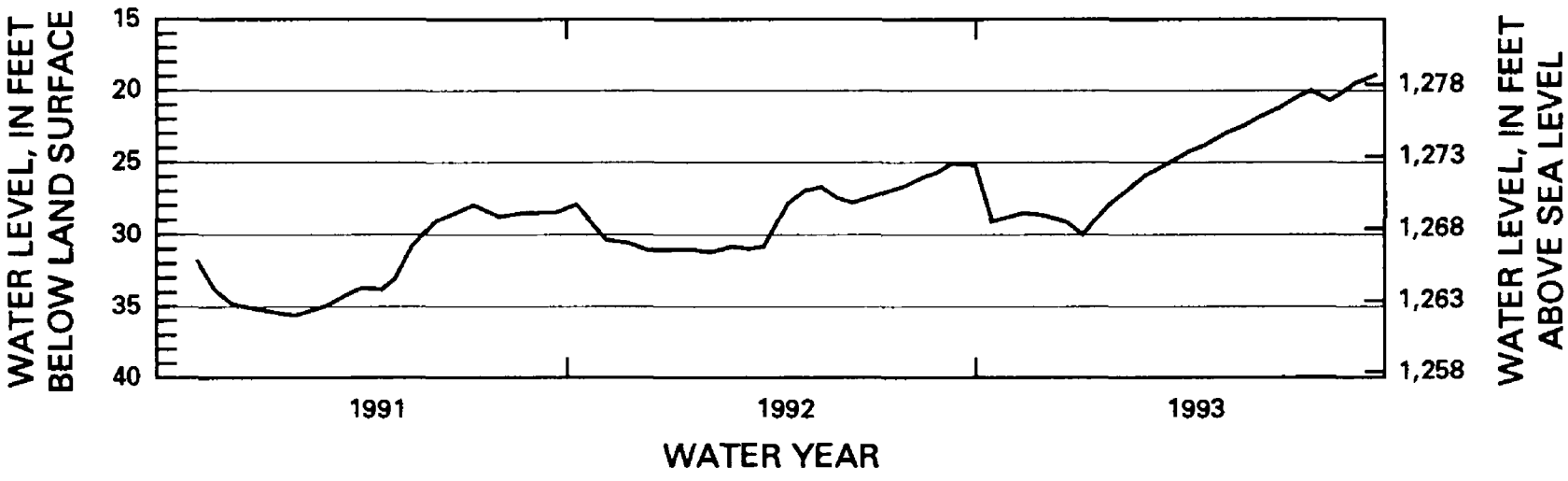


Figure 62. Hydrograph for observation well 110N62W9BBCB4, CO-41-90, water years 1991-93

LOCAL WELL NUMBER: 110N62W9BBCB5
SITE ID: 442117098174005
OTHER IDENTIFIER: CO-42-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.59 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 6.56 feet, August 12, 1993; lowest, 16.23 feet, April 15, 1991.

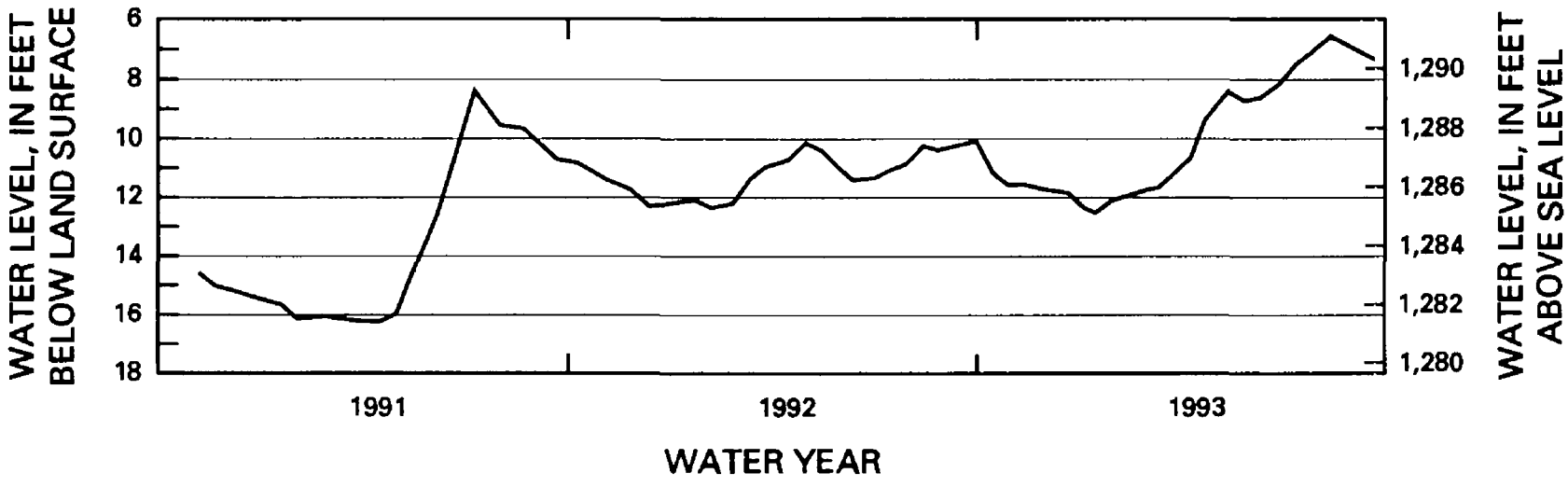


Figure 63. Hydrograph for observation well 110N62W9BBCB5, CO-42-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB6
SITE ID: 442117098174006
OTHER IDENTIFIER: CO-43-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 3.32 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 0.60 feet, June 6, 1991; lowest, 9.70 feet, April 1, 1991.

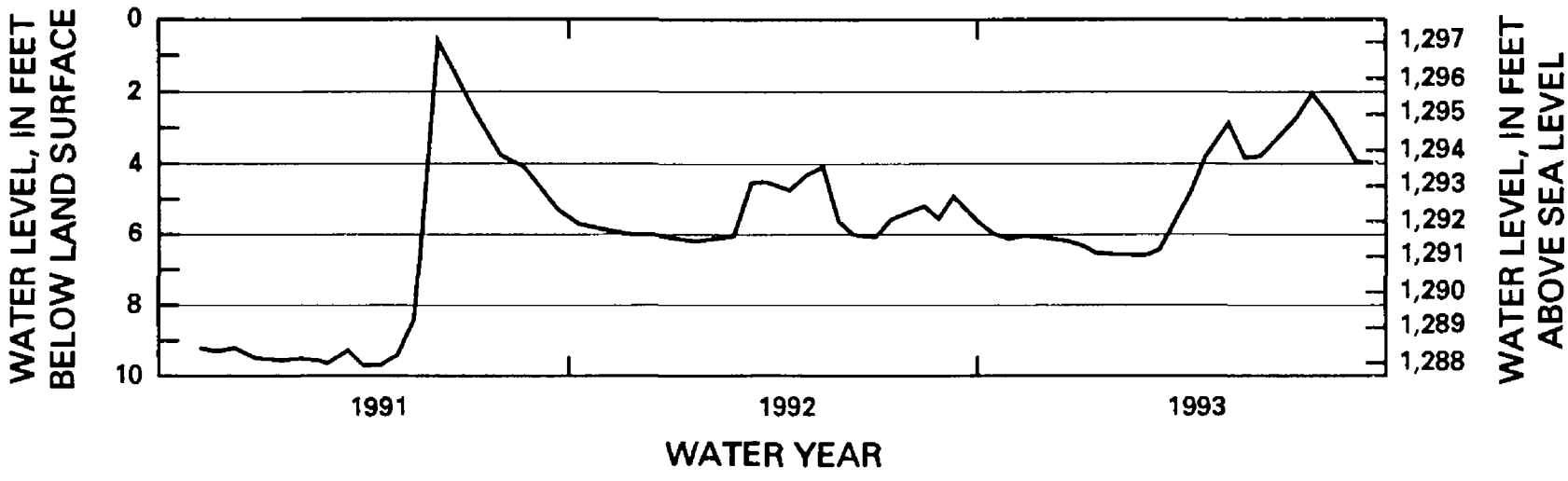


Figure 64. Hydrograph for observation well 110N62W9BBCB6, CO-43-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB7
SITE ID: 442117098174007
OTHER IDENTIFIER: CO-44-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.91 feet above land surface
AQUIFER: Till
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 0.55 feet, June 6, 1991; lowest, 9.70 feet, April 1, 1991.

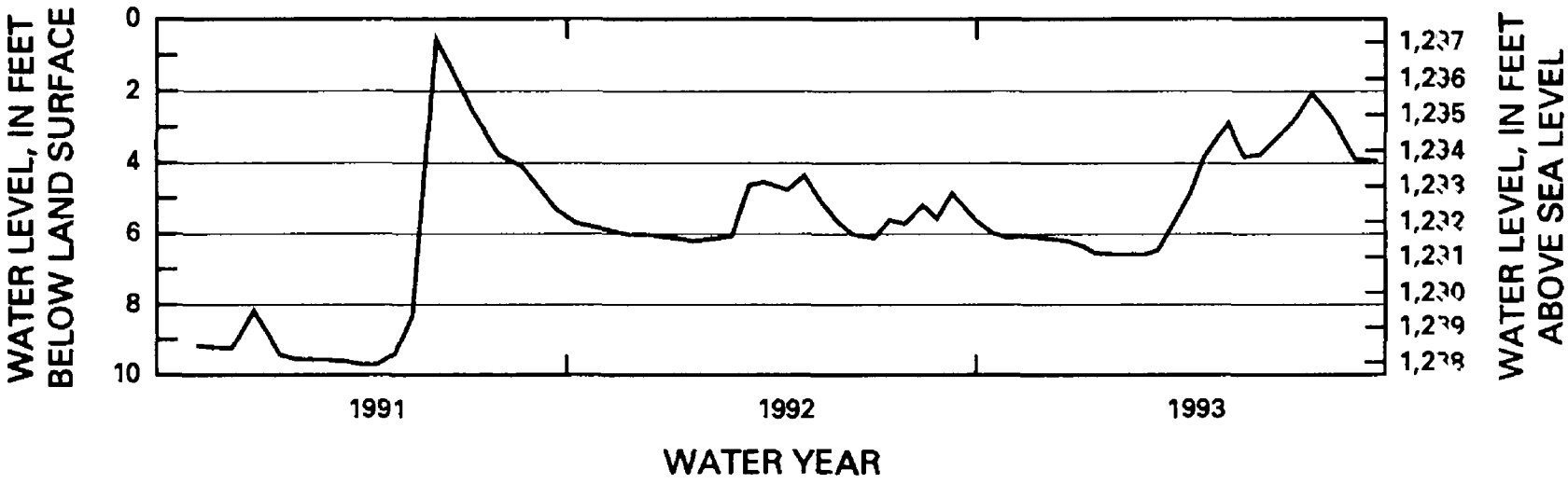


Figure 65. Hydrograph for observation well 110N62W9BBCB7, CO-44-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB8
SITE ID: 442117098174001
OTHER IDENTIFIER: CO-17-90
ALTITUDE OF LAND SURFACE: 1,297.65 feet
MEASURING POINT: 2.81 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 20.57 feet, July 26, 1993; lowest, 36.70 feet, November 21, 1990.

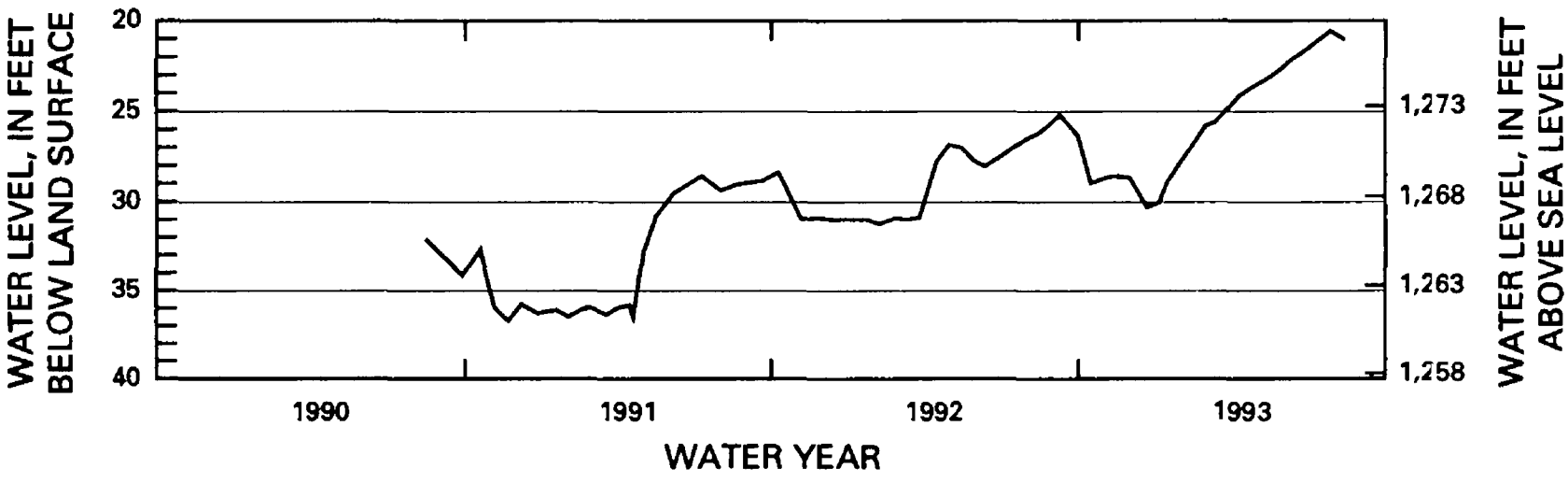


Figure 66. Hydrograph for observation well 110N62W9BBCB8, CO-17-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBCB9
SITE ID: 442115098174202
OTHER IDENTIFIER: CO-63-90
ALTITUDE OF LAND SURFACE: 1,298.24 feet
MEASURING POINT: 2.81 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 19.33 feet, September 23, 1993; lowest, 36.79 feet, November 21, 1990.

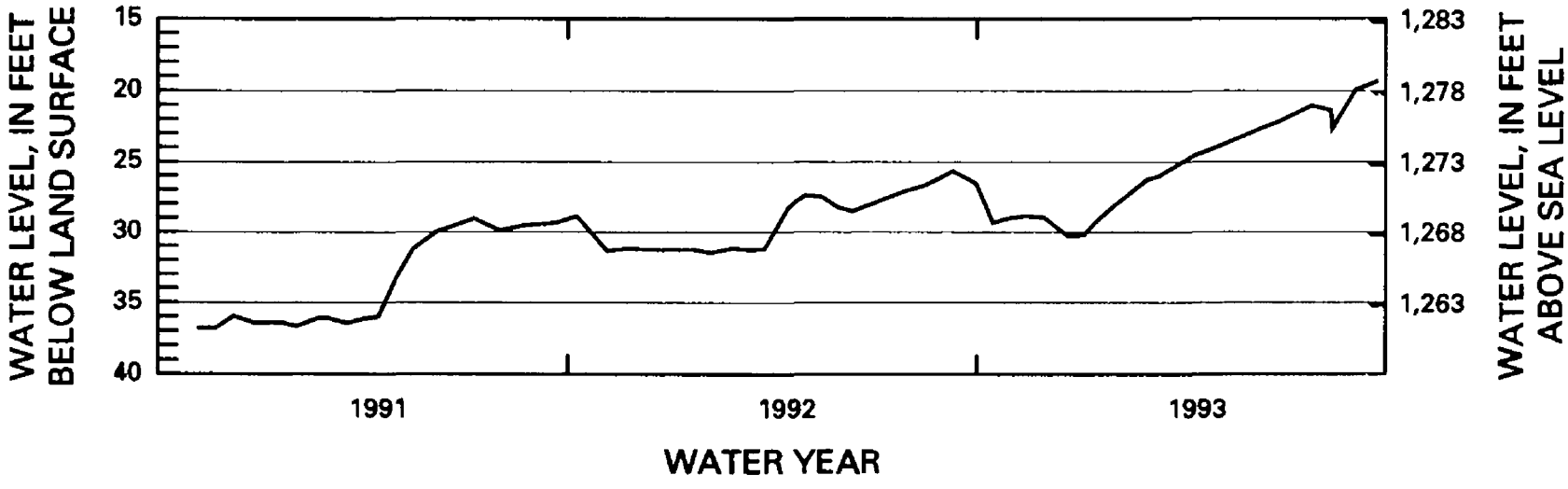


Figure 67. Hydrograph for observation well 110N62W9BBCB9, CO-63-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB10
SITE ID: 442115098174203
OTHER IDENTIFIER: CO-64-90
ALTITUDE OF LAND SURFACE: 1,298.24 feet
MEASURING POINT: 2.44 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 19.29 feet, September 23, 1993; lowest, 38.80 feet, November 21, 1990.

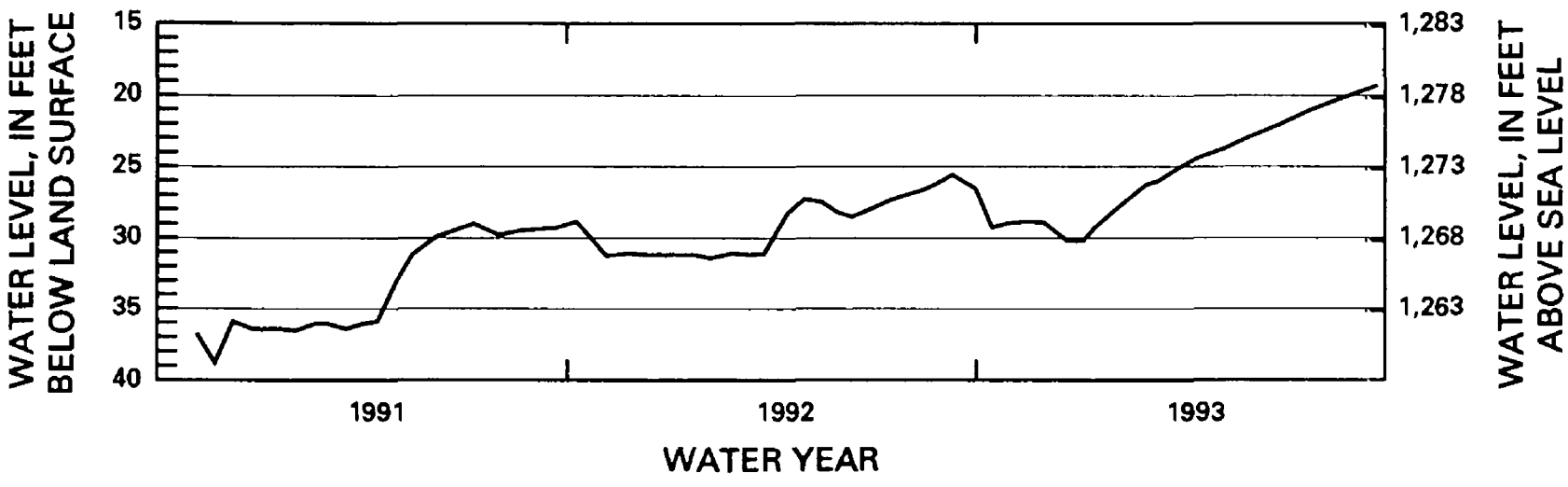


Figure 68. Hydrograph for observation well 110N62W9BBCB10, CO-64-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB11
SITE ID: 442115098174201
OTHER IDENTIFIER: CO-62-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 3.11 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 19.31 feet, September 23, 1993; lowest, 37.25 feet, November 21, 1990.

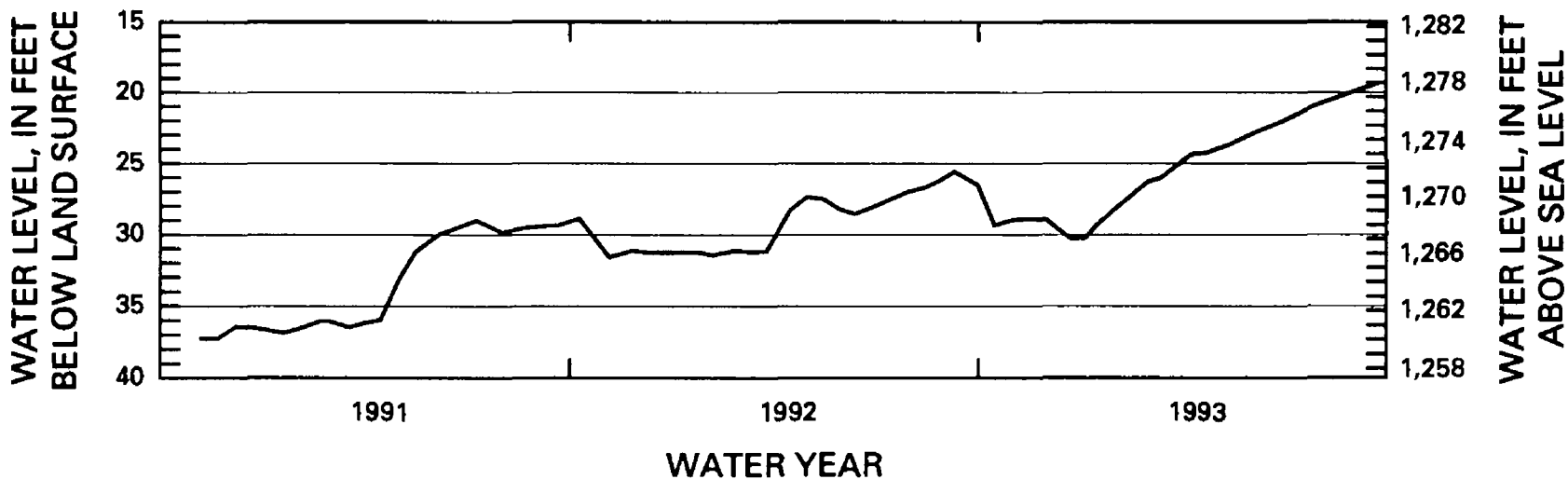


Figure 69. Hydrograph for observation well 110N62W9BBCB11, CO-62-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB12
SITE ID: 442115098173902
OTHER IDENTIFIER: CO-57-90
ALTITUDE OF LAND SURFACE: 1,295.82 feet
MEASURING POINT: 2.60 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 0.20 feet, July 26, 1993; lowest, 37.38 feet, November 21, 1990.

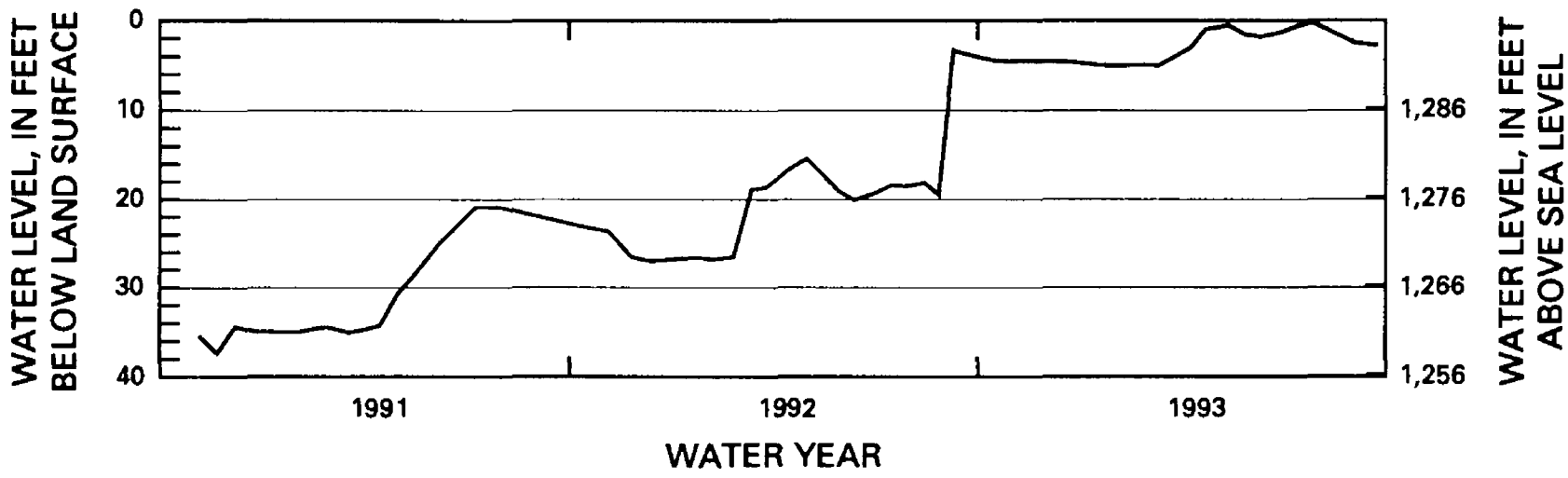


Figure 70. Hydrograph for observation well 110N62W9BBCB12, CO-57-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB13
SITE ID: 442115098173903
OTHER IDENTIFIER: CO-58-90
ALTITUDE OF LAND SURFACE: 1,295.82 feet
MEASURING POINT: 2.58 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 17.20 feet, September 23, 1993; lowest, 35.55 feet, November 21, 1990.

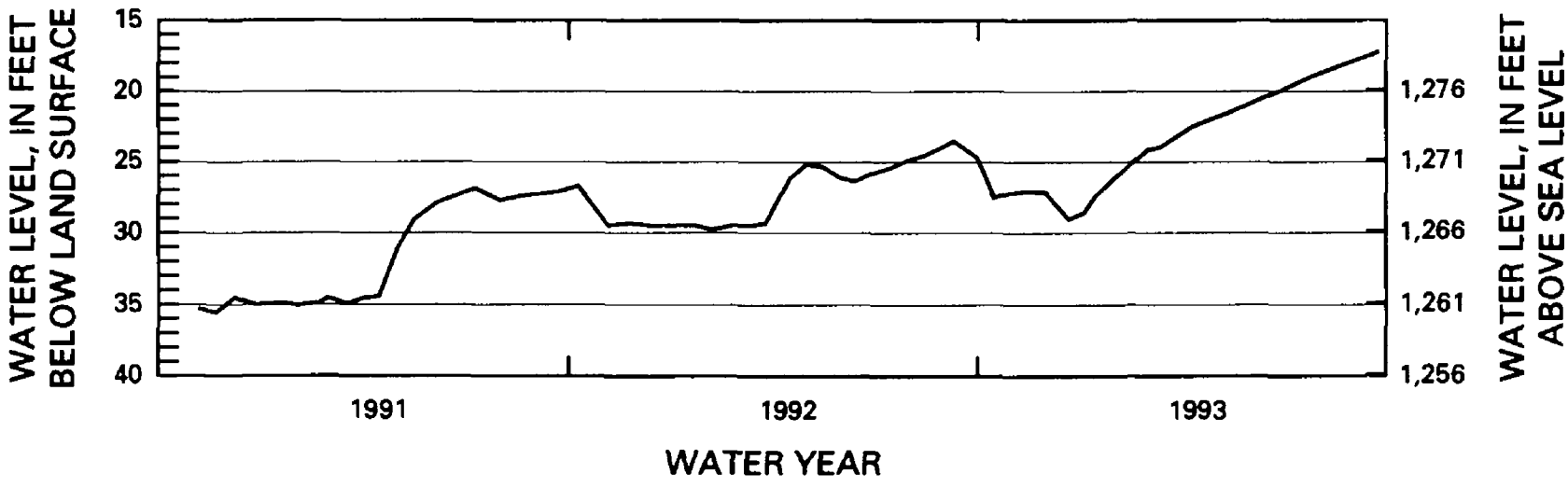


Figure 71. Hydrograph for observation well 110N62W9BBCB13, CO-58-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCB14
SITE ID: 442115098173901
OTHER IDENTIFIER: CO-56-90
ALTITUDE OF LAND SURFACE: 1,295.82 feet
MEASURING POINT: 2.59 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 17.15 feet, September 23, 1993; lowest, 35.49 feet, November 21, 1990.

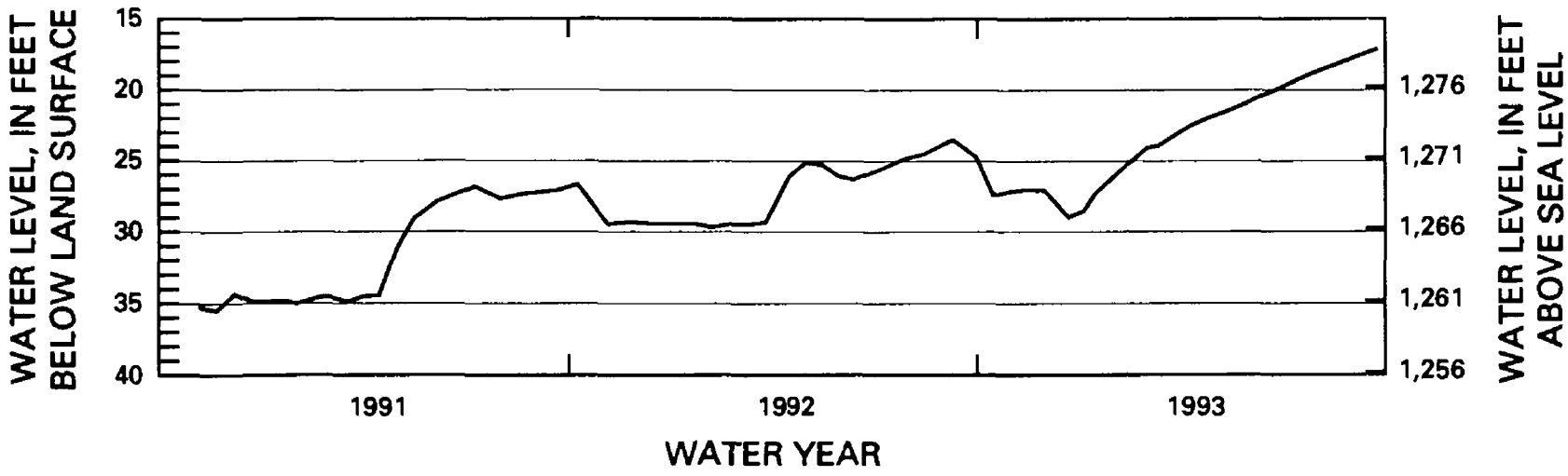


Figure 72. Hydrograph for observation well 110N62W9BBCB14, CO-56-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC
SITE ID: 442113098174201
OTHER IDENTIFIER: CO-59-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.85 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 18.49 feet, September 23, 1993; lowest, 36.51 feet, November 5, 21, 1990.

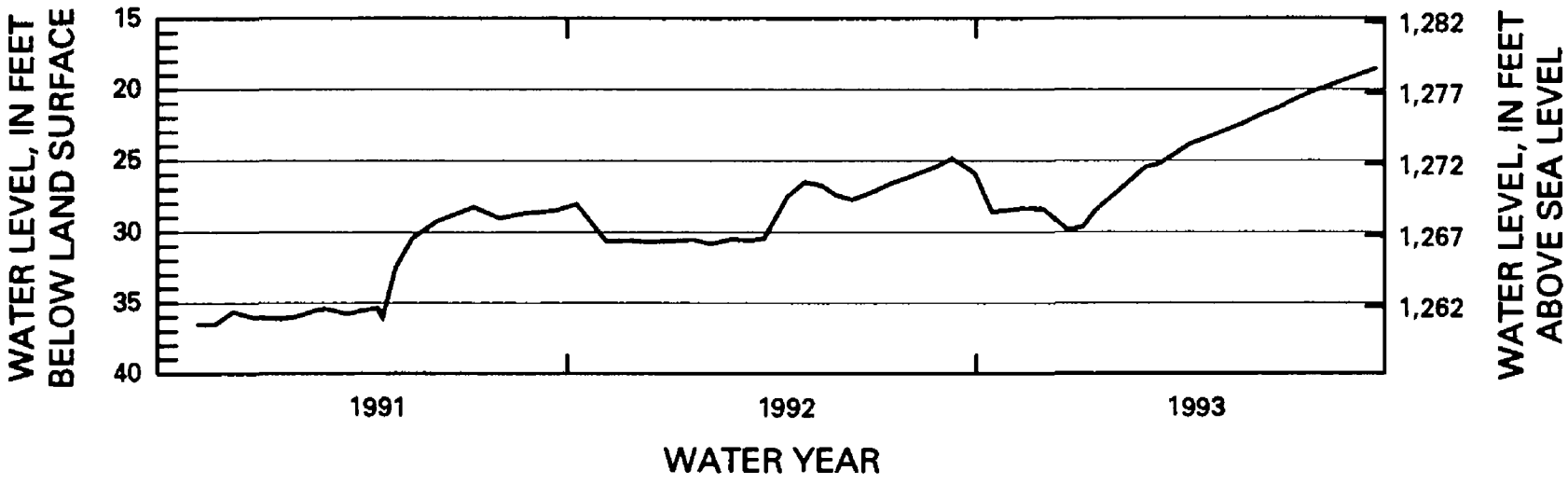


Figure 73. Hydrograph for observation well 110N62W9BBCC, CO-59-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC2
SITE ID: 442113098174202
OTHER IDENTIFIER: CO-60-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.79 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 18.51 feet, September 23, 1993; lowest, 36.49 feet, November 21, 1990.

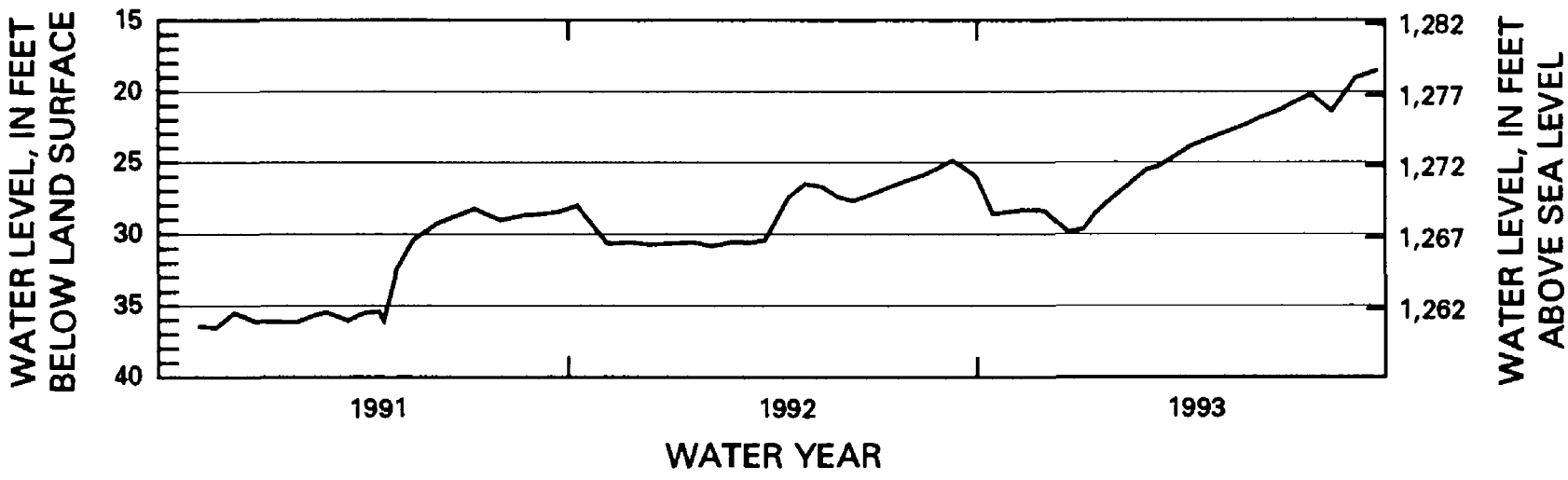


Figure 74. Hydrograph for observation well 110N62W9BBCC2, CO-60-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC3
SITE ID: 442113098174203
OTHER IDENTIFIER: CO-61-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.60 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 18.50 feet, September 23, 1993; lowest, 38.38 feet, November 21, 1990.

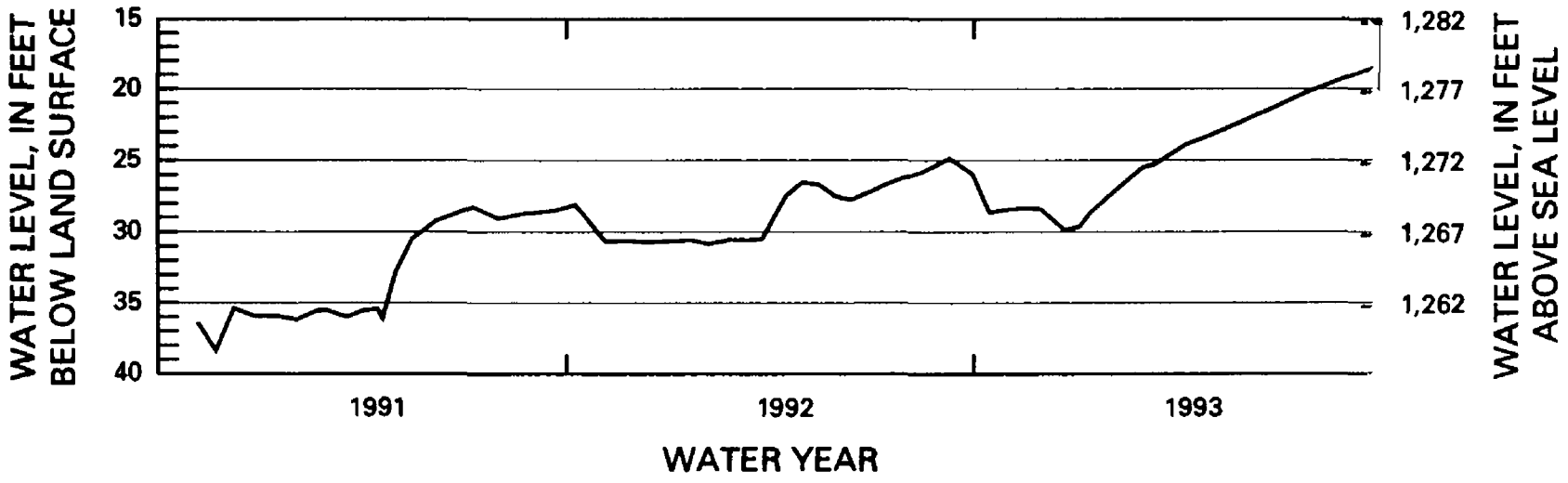


Figure 75. Hydrograph for observation well 110N62W9BBCC3, CO-61-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC4
SITE ID: 442113098174204
OTHER IDENTIFIER: A-05-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.27 feet above land surface
AQUIFER: Till
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 3.38 feet, July 26, 1993; lowest, 11.50 feet, April 1, 1991.

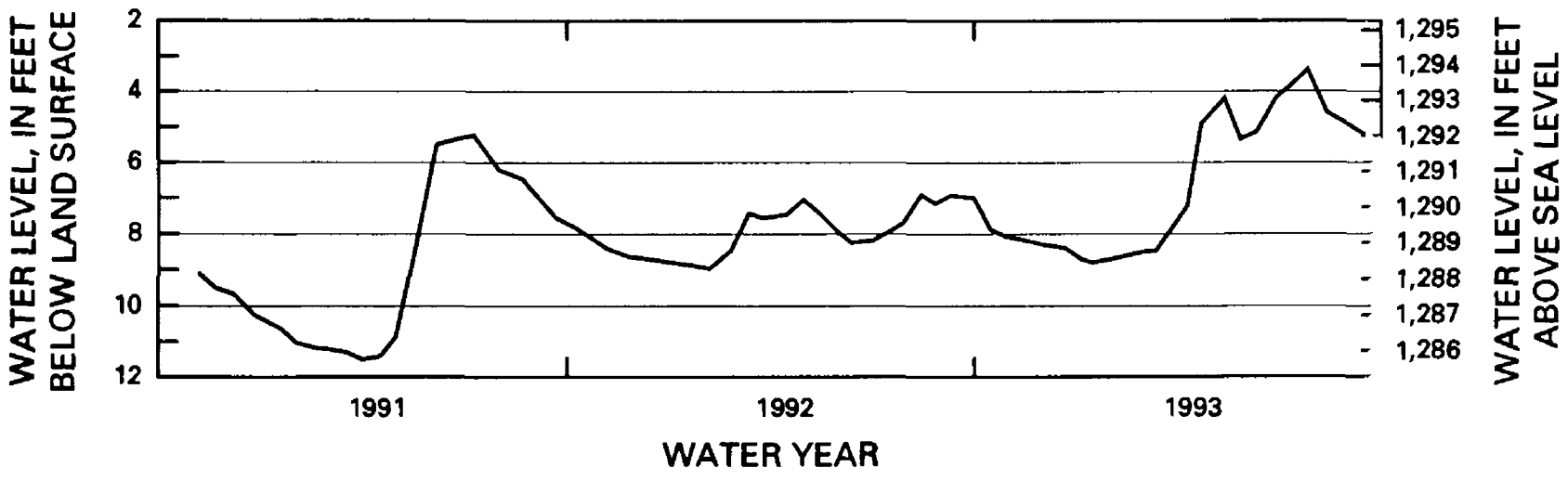


Figure 76. Hydrograph for observation well 110N62W9BBCC4, A-05-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC5
SITE ID: 442113098174205
OTHER IDENTIFIER: A-06-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 3.26 feet above land surface
AQUIFER: Till
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 0.12 feet, June 6, 1991; lowest, 6.98 feet, January 18, 1991.

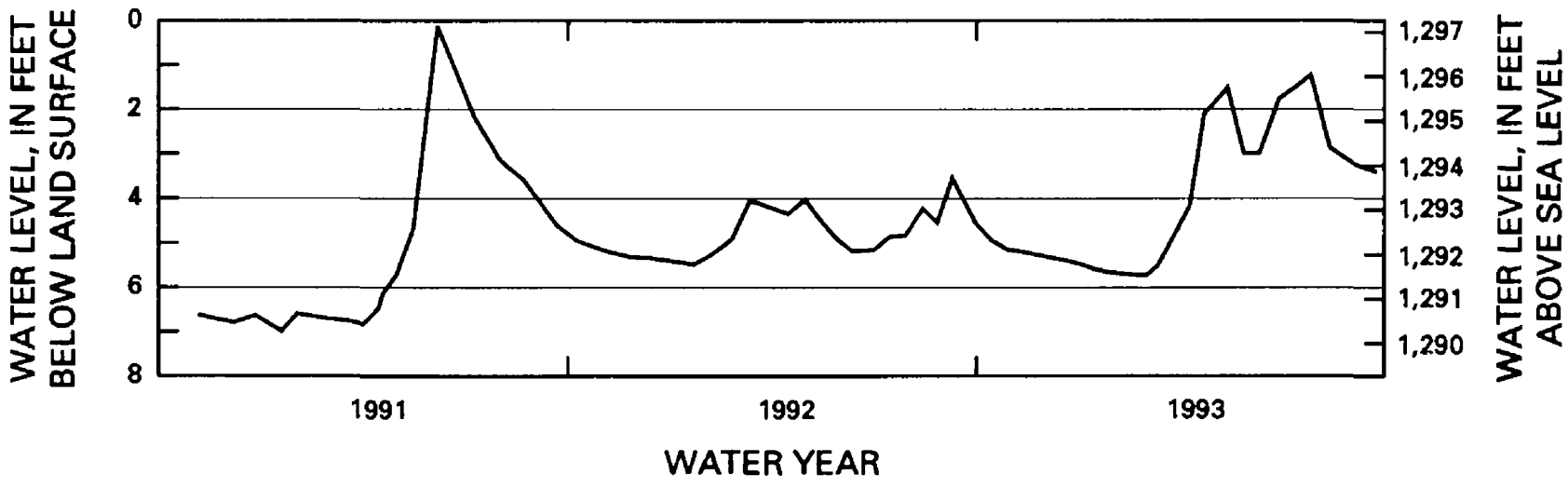


Figure 77. Hydrograph for observation well 110N62W9BBCC5, A-06-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC6
SITE ID: 442113098174206
OTHER IDENTIFIER: A-07-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.28 feet above land surface
AQUIFER: Till
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 17.62 feet, September 23, 1993; lowest, 34.57 feet, December 7, 1990.

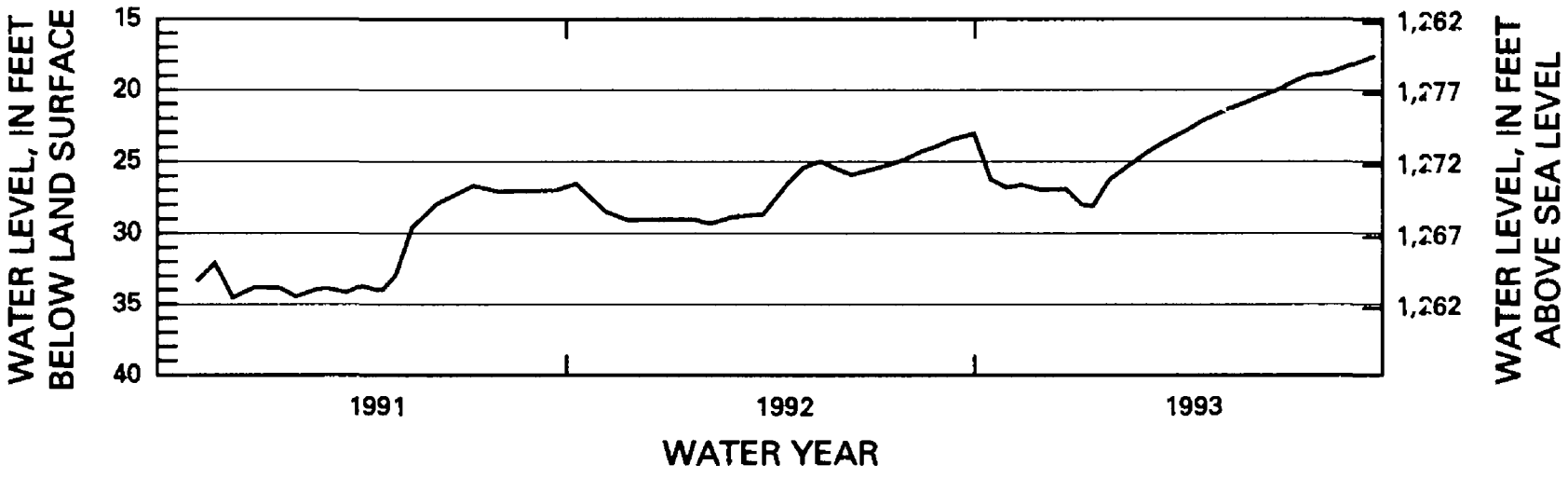


Figure 78. Hydrograph for observation well 110N62W9BBCC6, A-07-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC7
SITE ID: 442113098174207
OTHER IDENTIFIER: A-08-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.38 feet above land surface
AQUIFER: Till
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 5.52 feet, July 26, 1993; lowest, 14.48 feet, April 1, 19, 1991.

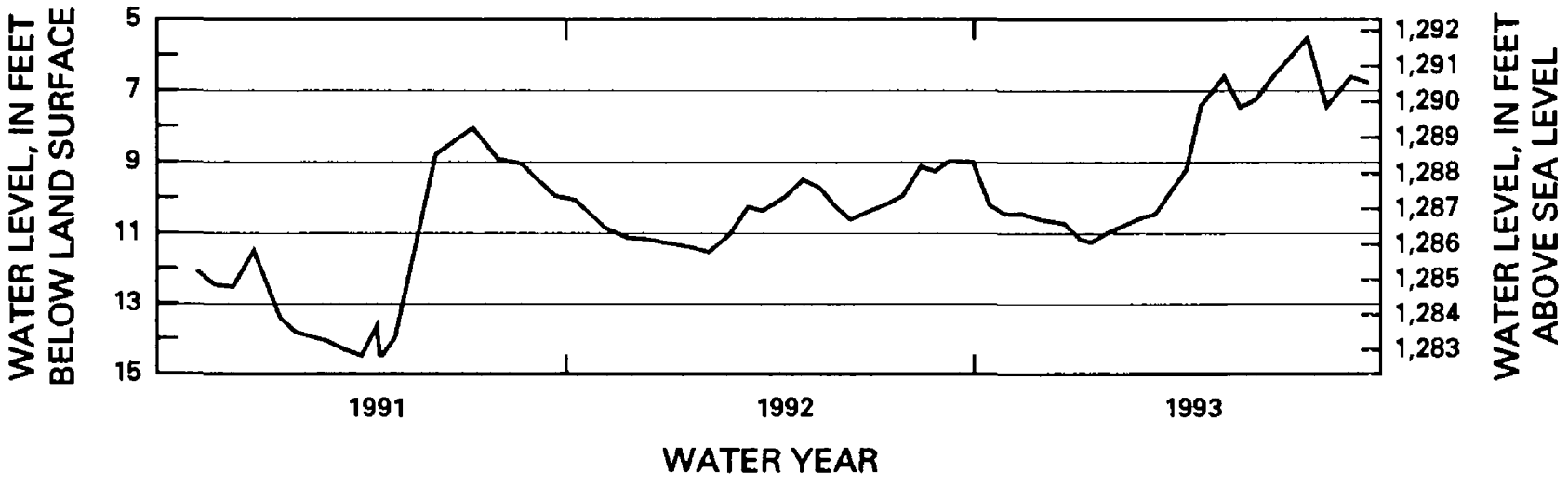


Figure 79. Hydrograph for observation well 110N62W9BBCC7, A-08-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BBCC8
SITE ID: 442110098174201
OTHER IDENTIFIER: CO-09-90
ALTITUDE OF LAND SURFACE: 1,297.30 feet
MEASURING POINT: 2.47 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 18.98 feet, September 23, 1993; lowest, 38.59 feet, November 5, 1990.

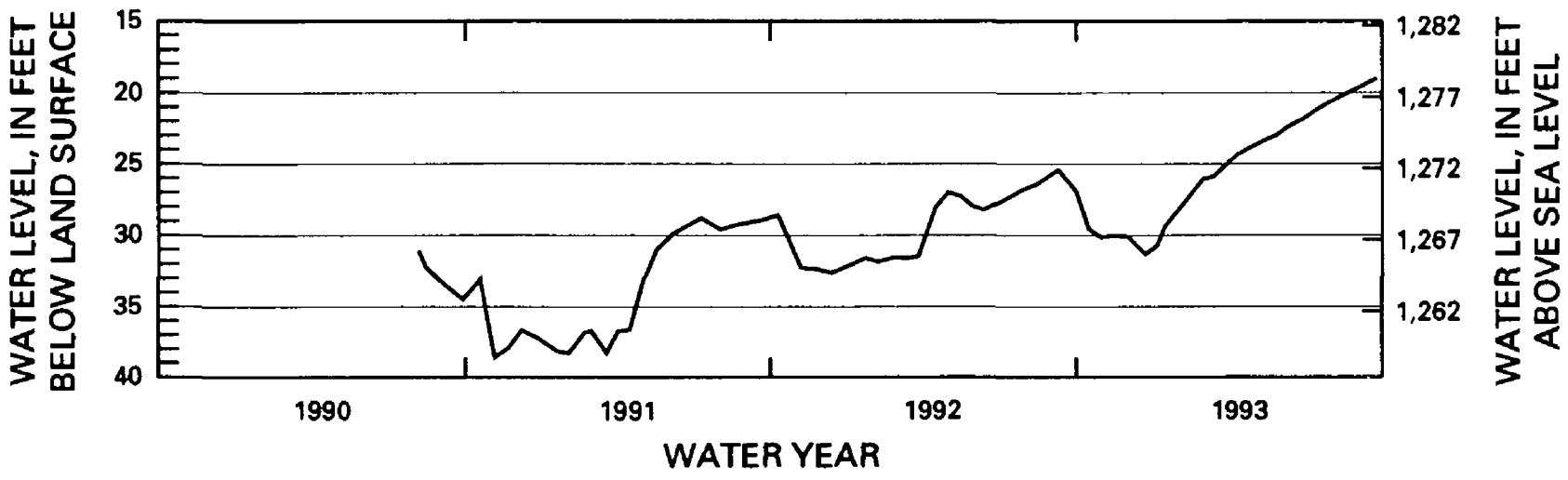


Figure 80. Hydrograph for observation well 110N62W9BBCC8, CO-09-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W9BBDD
SITE ID: 442110098172501
OTHER IDENTIFIER: CO-19-90
ALTITUDE OF LAND SURFACE: 1,296.52 feet
MEASURING POINT: 2.57 feet above land surface
AQUIFER: Warren
EXTREMES: November 6, 1990, to September 30, 1993: Highest, 18.26 feet, September 23, 1993; lowest, 37.68 feet, November 21, 1990.

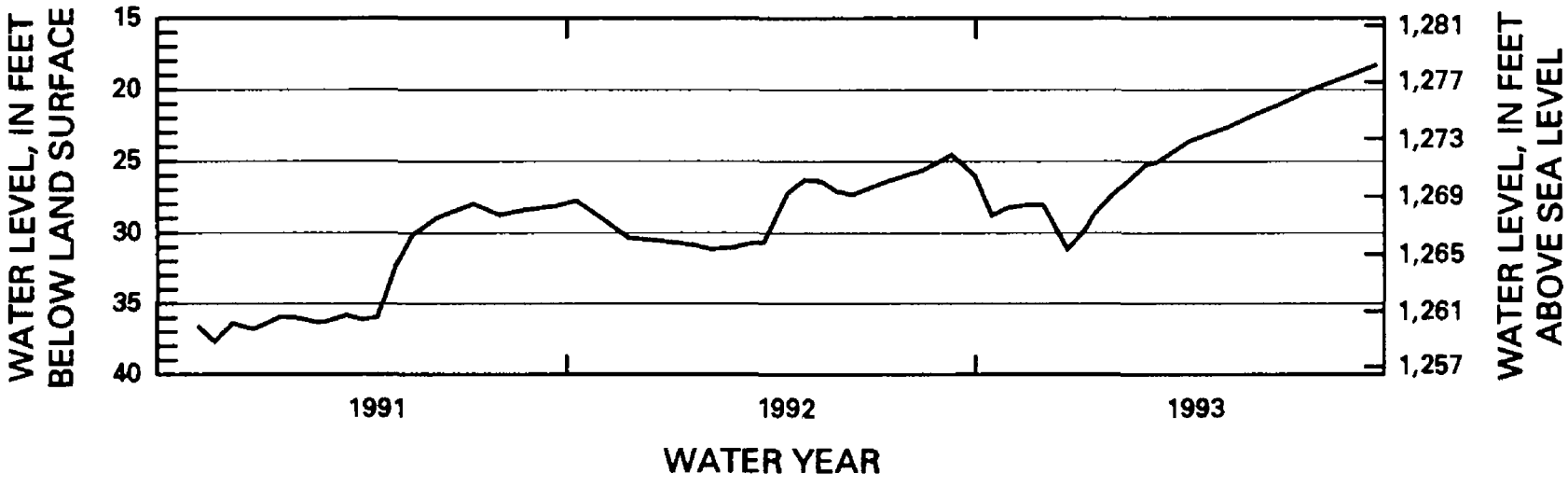


Figure 81. Hydrograph for observation well 110N62W9BBDD, CO-19-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BCAB
SITE ID: 442108098173101
OTHER IDENTIFIER: CO-32-90
ALTITUDE OF LAND SURFACE: 1,305.75 feet
MEASURING POINT: 2.80 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 27.67 feet, September 23, 1993; lowest, 51.07 feet, November 21, 1990.

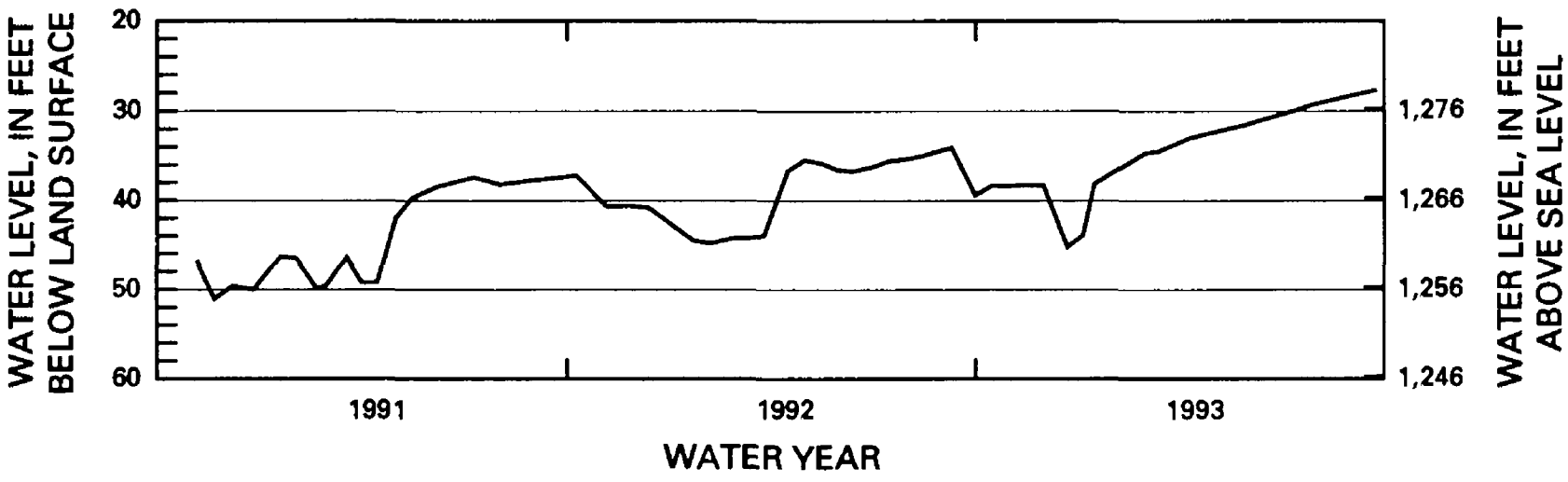


Figure 82. Hydrograph for observation well 110N62W9BCAB, CO-32-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BCBC
SITE ID: 442105098174001
OTHER IDENTIFIER: CO-68-90
ALTITUDE OF LAND SURFACE: 1,302.80 feet
MEASURING POINT: 2.83 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 24.75 feet, September 23, 1993; lowest, 48.95 feet, November 5, 1990.

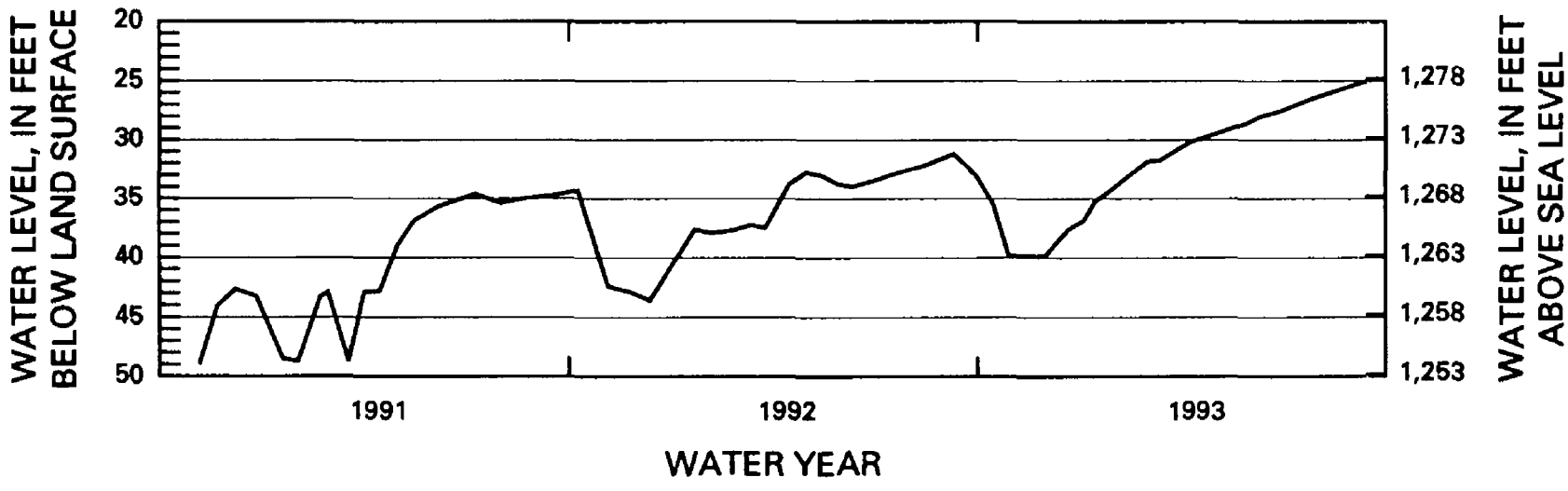


Figure 83. Hydrograph for observation well 110N62W9BCBC, CO-68-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W9BCDD
SITE ID: 442057098172501
OTHER IDENTIFIER: CO-10-90
ALTITUDE OF LAND SURFACE: 1,301.09 feet
MEASURING POINT: 2.70 feet above land surface
AQUIFER: Warren
EXTREMES: August 6, 1990, to September 30, 1993: Highest, 23.72 feet, September 23, 1993; lowest, 42.26 feet, November 21, 1990.

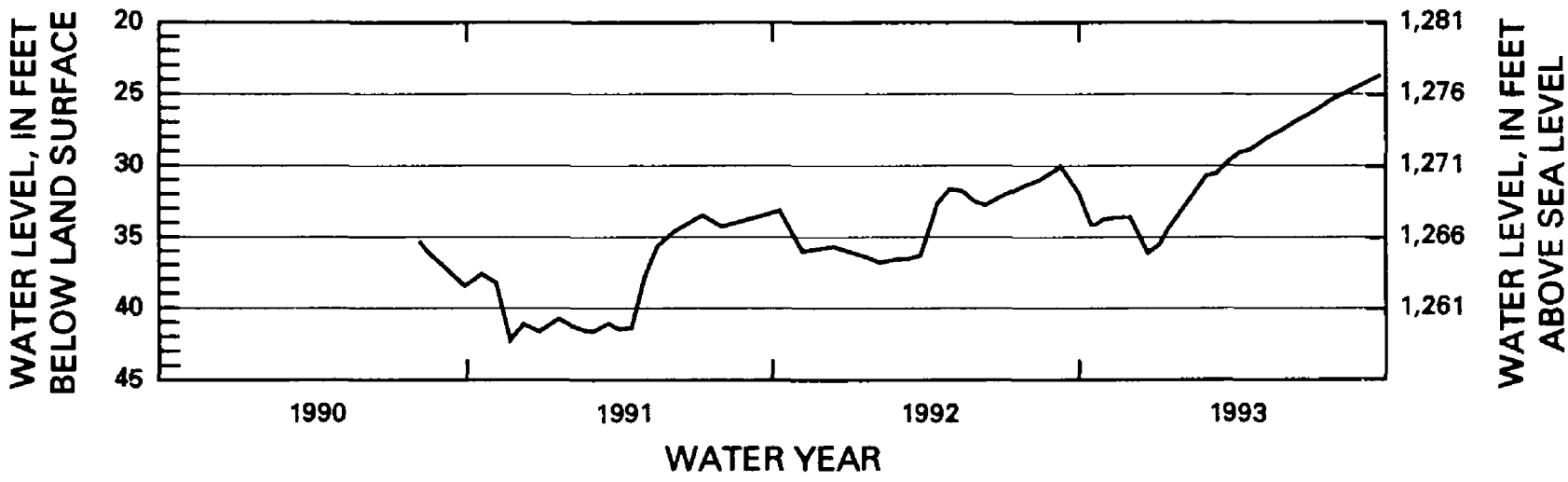


Figure 84. Hydrograph for observation well 110N62W9BCDD, CO-10-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W10CCCC
SITE ID: 442002098162801
OTHER IDENTIFIER: CO-11-90
ALTITUDE OF LAND SURFACE: 1,294.32 feet
MEASURING POINT: 2.83 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 20.13 feet, September 3, 1993; lowest, 33.25 feet, December 26, 1990.

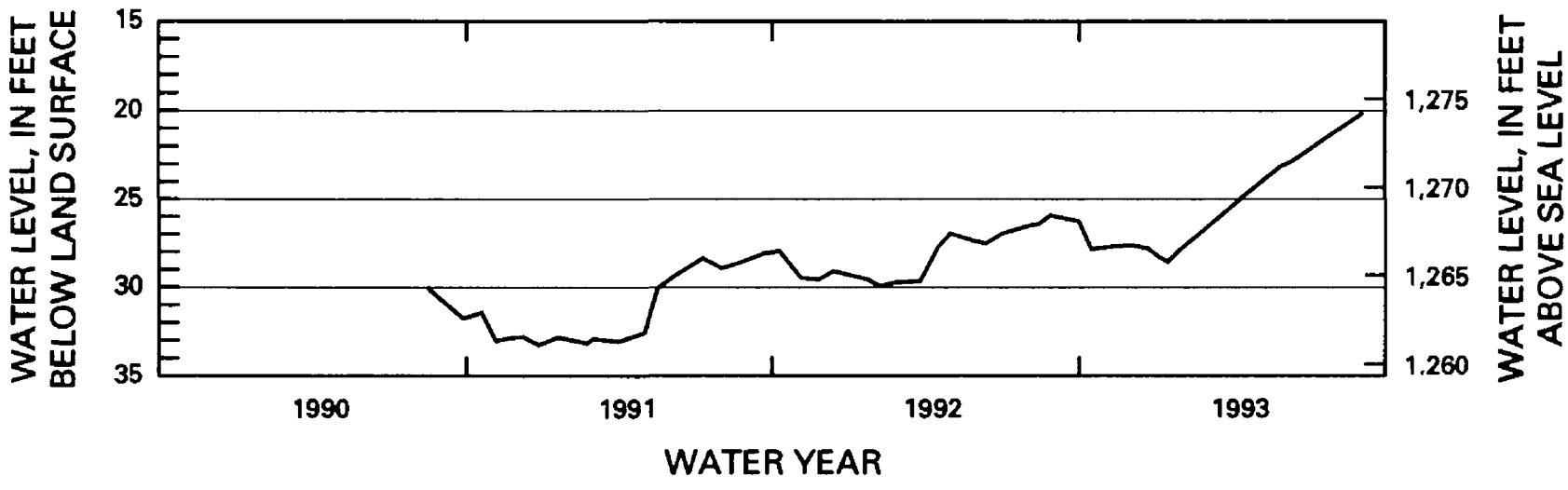


Figure 85. Hydrograph for observation well 110N62W10CCCC, CO-11-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W10DDDD
SITE ID: 442031098151801
OTHER IDENTIFIER: CO-12-90
ALTITUDE OF LAND SURFACE: 1,288.17 feet
MEASURING POINT: 2.68 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 6.82 feet, September 23, 1993; lowest, 13.86 feet, July 9, 1991.

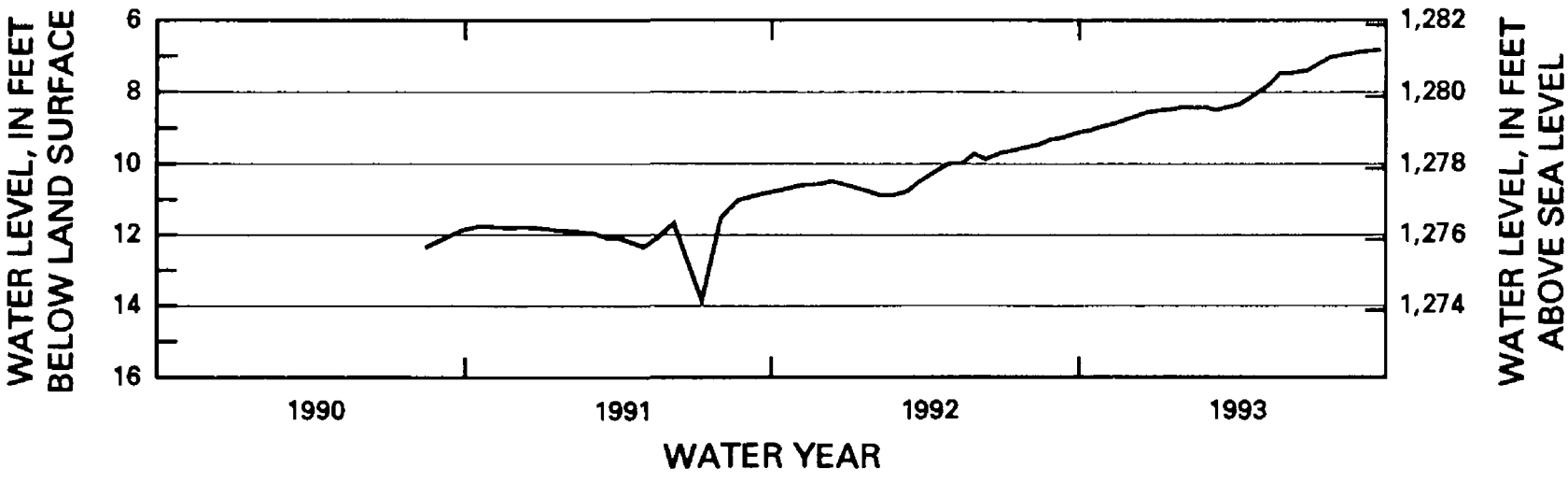


Figure 86. Hydrograph for observation well 110N62W10DDDD, CO-12-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W16BBAA
SITE ID: 442032098172501
OTHER IDENTIFIER: CO-13-90
ALTITUDE OF LAND SURFACE: 1,303.73 feet
MEASURING POINT: 2.96 feet above land surface
AQUIFER: Warren
EXTREMES: August 15, 1990, to September 30, 1993: Highest, 27.24 feet, September 23, 1993; lowest, 47.35 feet, February 20, 1991.

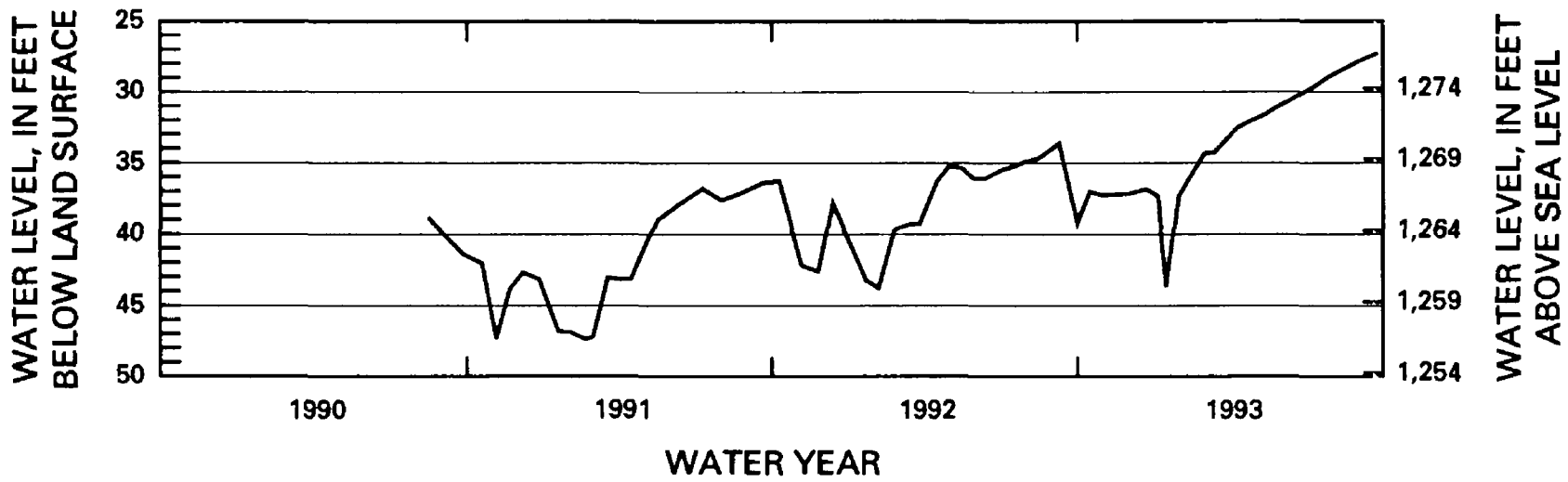


Figure 87. Hydrograph for observation well 110N62W16BBAA, CO-13-90, water years 1990-93.

LOCAL WELL NUMBER: 110N62W21AAAA
SITE ID: 441937098163001
OTHER IDENTIFIER: CO-21-90
ALTITUDE OF LAND SURFACE: 1,311.93 feet
MEASURING POINT: 2.43 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 42.14 feet, September 23, 1993; lowest, 49.40 feet, May 1, 1991.

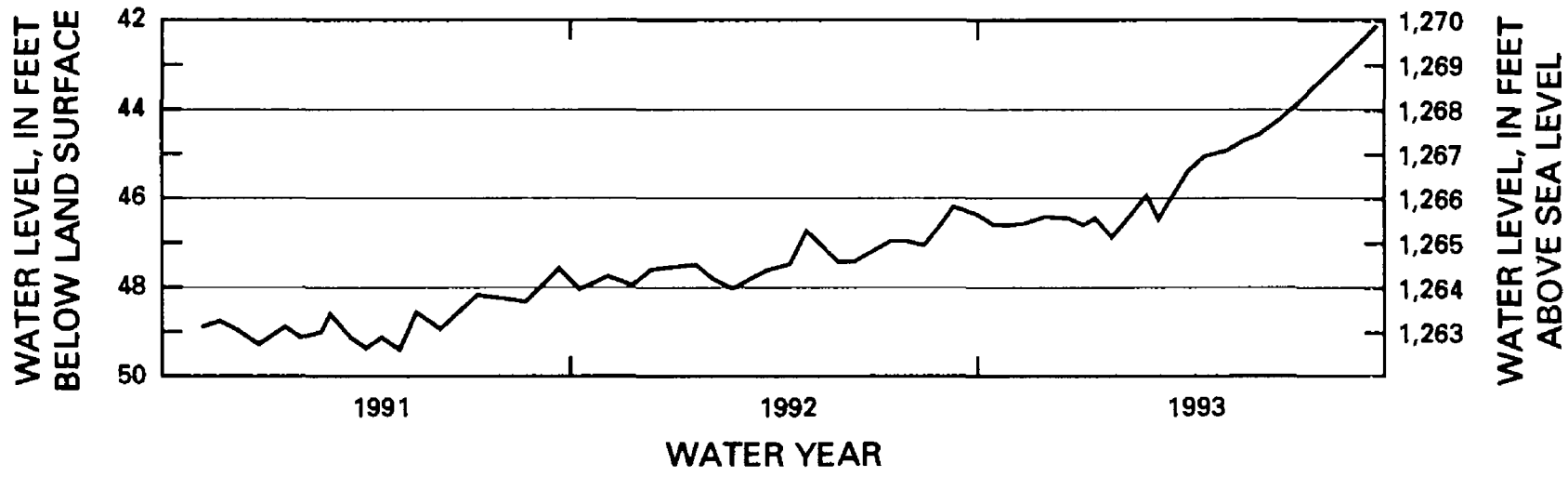


Figure 88. Hydrograph for observation well 110N62W21AAAA, CO-21-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W21BBBB
SITE ID: 441937098174001
OTHER IDENTIFIER: CO-20-90
ALTITUDE OF LAND SURFACE: 1,307.19 feet
MEASURING POINT: 2.54 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 31.46 feet, September 23, 1993; lowest, 52.69 feet, July 9, 1991.

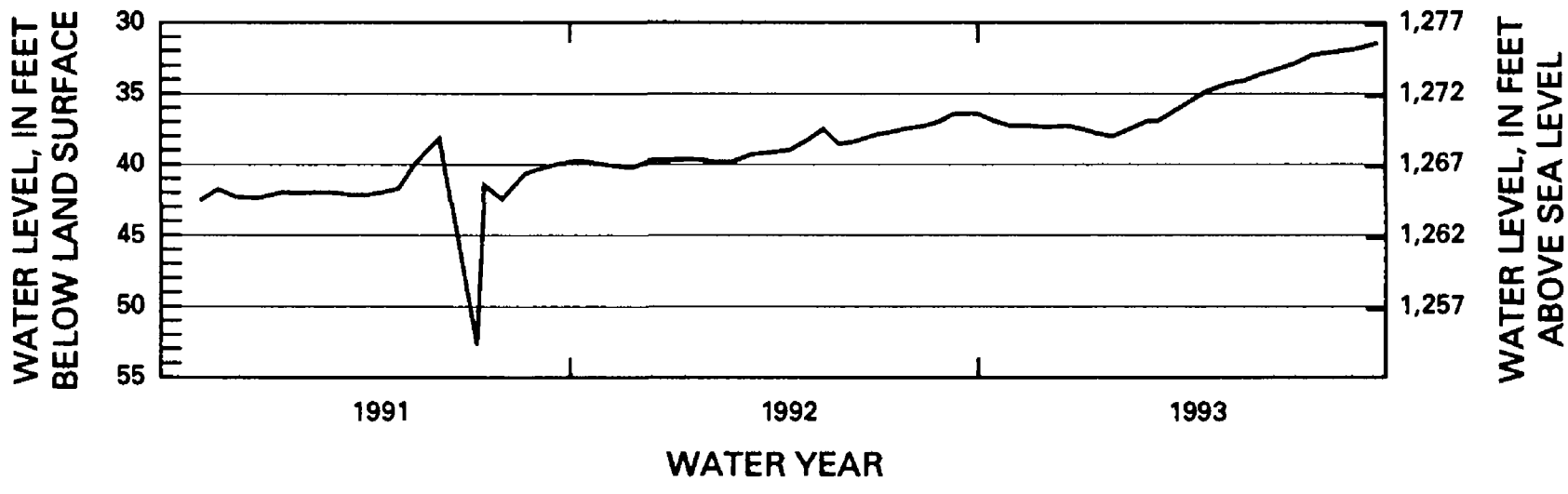


Figure 89. Hydrograph for observation well 110N62W21BBBB, CO-20-90, water years 1991-93.

LOCAL WELL NUMBER: 110N62W22AAAA
SITE ID: 441937098151701
OTHER IDENTIFIER: CO-22-90
ALTITUDE OF LAND SURFACE: 1,304.85 feet
MEASURING POINT: 3.06 feet above land surface
AQUIFER: Warren
EXTREMES: November 5, 1990, to September 30, 1993: Highest, 27.23 feet, July 26, September 23, 1993; lowest, 28.59 feet, June 12, 1992.

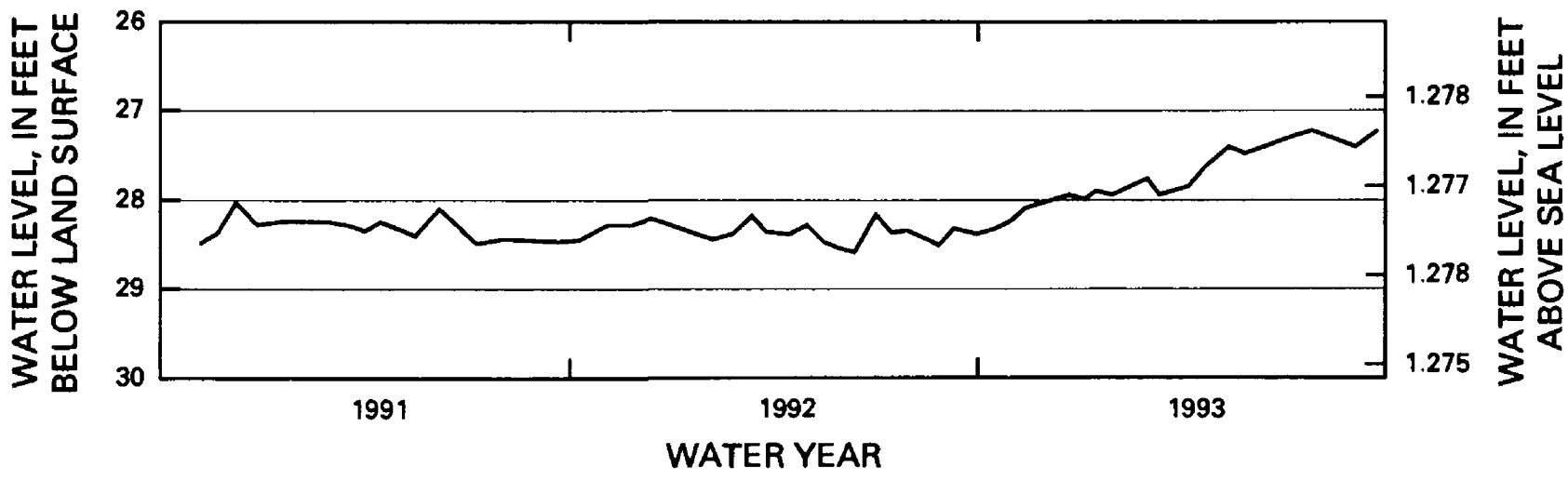


Figure 90. Hydrograph for observation well 110N62W22AAAA, CO-22-90, water years 1991-93.

WATER-QUALITY DATA

Samples were collected and analyzed to provide background information on the water quality of the Warren aquifer prior to injection of the treated James River water. Water-quality data for potential sources of artificial recharge water also were collected. This section presents data collected from both the screening and the detailed water-quality sampling programs.

The screening sampling program was designed to establish baseline water-quality data for a relatively large area using a limited parameter list. These data will be useful for assessing general water-quality changes that may occur in the aquifer due to artificial recharge. The detailed sampling program was designed to provide more detailed water-quality data and thus, includes a more extensive parameter list.

Three agencies assisted in the collection and analysis of the water-quality samples for both the screening and the detailed sampling programs. Samples and field parameters were collected by either USGS or SDSU field personnel. Laboratory analyses were performed by the USGS National Water Quality Laboratory, South Dakota Department of Health Laboratory, or SDSU Northern Great Plains Water Resources Research Center (NGPWRRC) Laboratory. Prior to 1992, SDSU personnel collected unfiltered water samples and the results of the analyses were reported as total recoverable constituents. After 1992, SDSU personnel collected filtered water samples and the results of the analyses were reported as dissolved constituents. All water samples collected by USGS personnel were filtered and the results were reported as dissolved constituents.

A duplicate sample was collected from one of the sampling sites during most screening sampling trips and analyzed by the SDSU NGPWRRC laboratory. Samples were analyzed periodically by both the USGS National Water Quality Laboratory and the SDSU NGPWRRC laboratory to compare laboratory results. Quality-control data were provided by the USGS National Water Quality Laboratory for volatile organic compounds and organic compounds.

Screening Water-Quality Data

Water-quality data for the screening sampling program were collected at 32 sites (fig. 91). Information regarding station identification and location are presented in table 4. All wells used in the screening program are completed in the Warren aquifer. The water-quality data collected from the screening sampling program are presented in table 6 in the Supplemental Information section at the end of the report.

Table 4. Wells used in screening water-quality program

[Other identifier: CO, combination rig]

Station identification number	USGS local number	Other identifier
442213098174301	110N62W 4BBBB	CO-04-90
442213098185602	110N62W 5BBBB2	CO-03-90
442002098185301	110N62W 8CCCC	CO-01-90
442122098172002	110N62W 9BABB	CO-06-90
442119098173601	110N62W 9BBBA	CO-65-90
442119098173602	110N62W 9BBBA2	CO-66-90
442119098173603	110N62W 9BBBA3	CO-67-90
442123098174002	110N62W 9BBBB2	CO-08-90
442118098174001	110N62W 9BBBC	CO-16-90
442118098174002	110N62W 9BBBC2	CO-33-90
442118098174003	110N62W 9BBBC3	CO-34-90
442117098173601	110N62W 9BBBD	CO-45-90
442117098173603	110N62W 9BBBD3	CO-47-90
442117098173604	110N62W 9BBBD4	CO-48-90
442117098173501	110N62W 9BBBD5	CO-49-90
442117098173502	110N62W 9BBBD6	CO-50-90
442117098173503	110N62W 9BBBD7	CO-51-90
442117098174002	110N62W 9BBCB2	CO-39-90
442117098174003	110N62W 9BBCB3	CO-40-90
442117098174001	110N62W 9BBCB8	CO-17-90
442115098174202	110N62W 9BBCB9	CO-63-90
442115098174203	110N62W 9BBCB10	CO-64-90
442115098174201	110N62W 9BBCB11	CO-62-90
442115098173903	110N62W 9BBCB13	CO-58-90
442115098173901	110N62W 9BBCB14	CO-56-90
442113098174202	110N62W 9BBCC2	CO-60-90
442113098174203	110N62W 9BBCC3	CO-61-90
442110098174201	110N62W 9BBCC8	CO-09-90
442110098172501	110N62W 9BBDD	CO-19-90
442108098173101	110N62W 9BCAB	CO-32-90
442032098172501	110N62W16BBAA	CO-13-90
441937098163001	110N62W21AAAA	CO-21-90

Detailed Water-Quality Data

Water-quality data for the detailed sampling program were collected at eight sites within the study area (fig. 92). These samples represent the quality of untreated water (James River), treated water (water treatment plant and church), an intermittent stream (Stony Run tributary), and ground water from the Warren aquifer (four wells). Information regarding site identification and location is presented in table 5.

Water-quality data obtained from the detailed sampling program are presented in four tables (tables 7, 8, 9, and 10) in the Supplemental Information section. The physical properties, field parameters, bacteria counts, and concentrations of common ions, solids, nutrients, trace elements, radiometrics, and total organic carbon are presented in table 7. Concentrations of herbicides are presented in table 8, and concentrations of organochlorine insecticides, gross polychlorinated biphenols (PCB's), and gross polychlorinated naphthalenes (PCN's) are presented in table 9. Concentrations of volatile organic compounds are presented in table 10.

In table 7, 2 sigma refers to the 2 sigma precision estimate (2SPE), which is a measure of the error of the reported concentration. Generally, there is about 95 percent certainty that the true concentration for a sample is within the range of the reported value plus or minus the 2SPE, with the lower part of that range bounded by zero.

Table 5. Sites used in detailed water-quality sampling program

Station identification number	USGS local number	Station name or other identifier	Sample representation
442150098120601	110N61W 6ACCD	James River at Morningside	Untreated water
442150098120602	110N61W 6ACCD2	Huron Water Treatment Plant effluent	Treated water
442150098174401	110N62W 5ADDD	CO-05-90	Warren aquifer
442124098181601	110N62W 5DCCC	CO-14-90	Warren aquifer
442122098174300	110N62W 9BBBB	Stony Run tributary near Huron	Intermittent stream
442111098173801	110N62W 9BBCD	CO-18-90	Warren aquifer
442106098174001	110N62W 9BCBC4	Stock well	Warren aquifer
442121098140001	110N62W12BBBB	First Assembly Church	Treated water

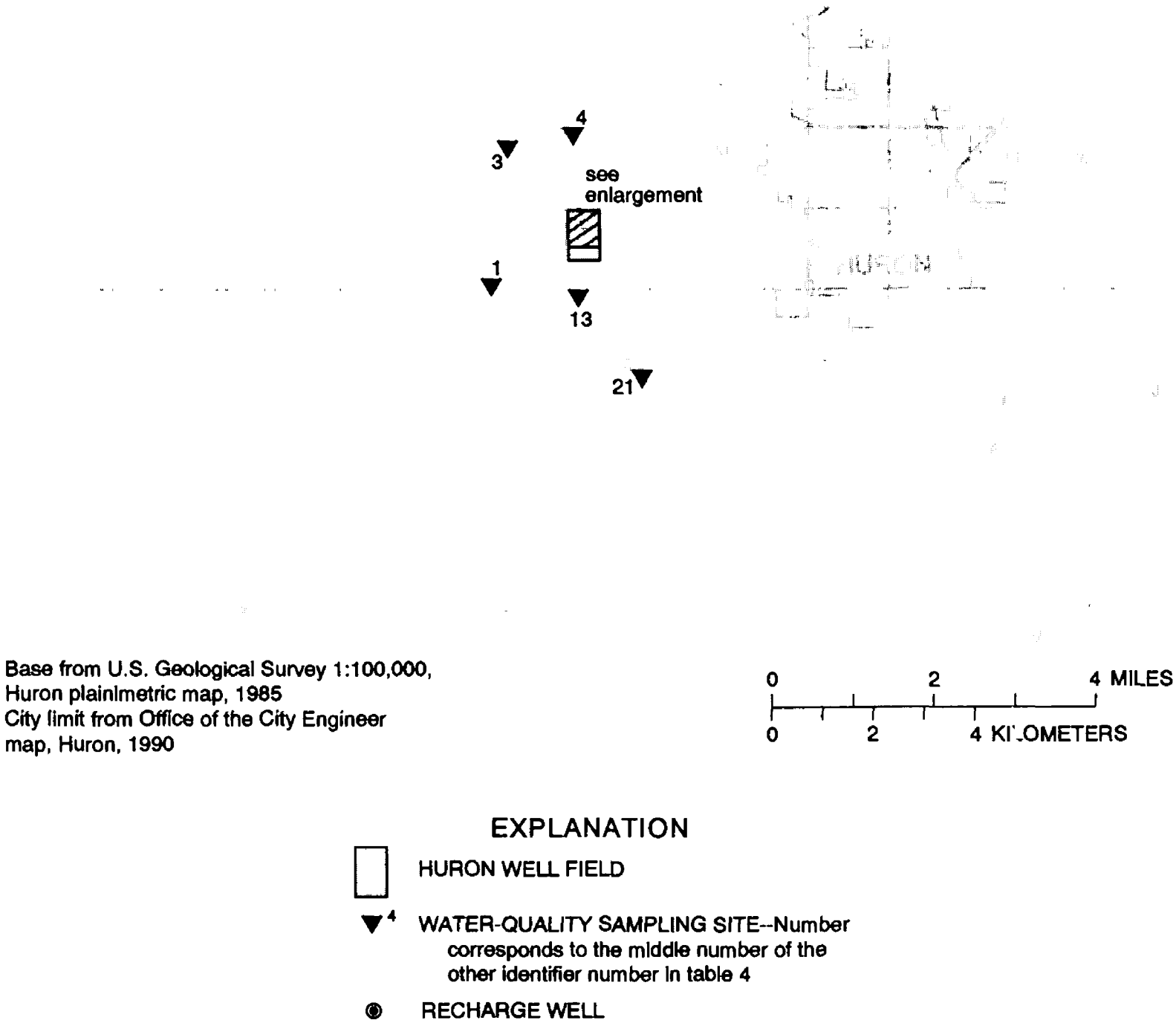


Figure 91. *Location of screening water-quality sampling sites.*

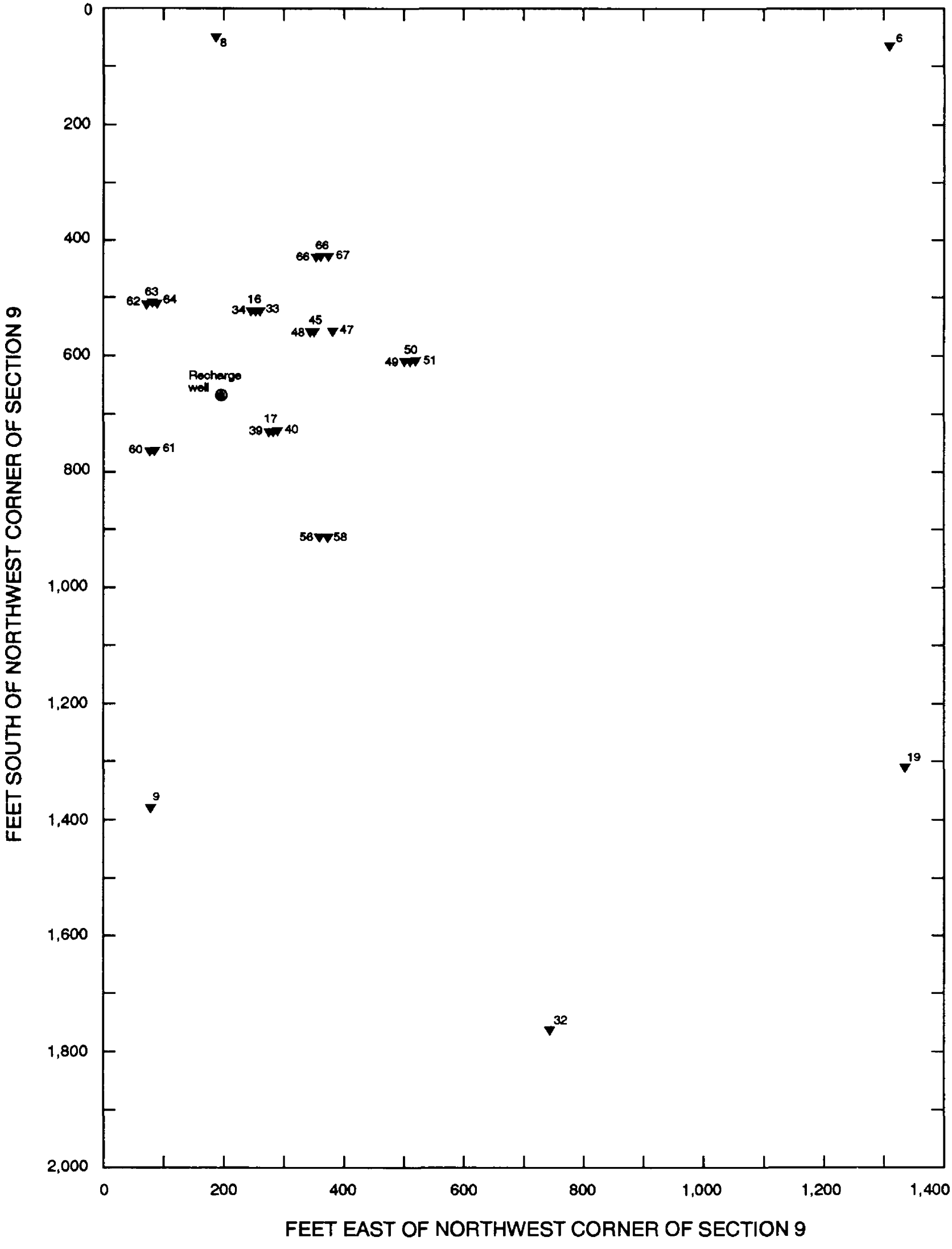
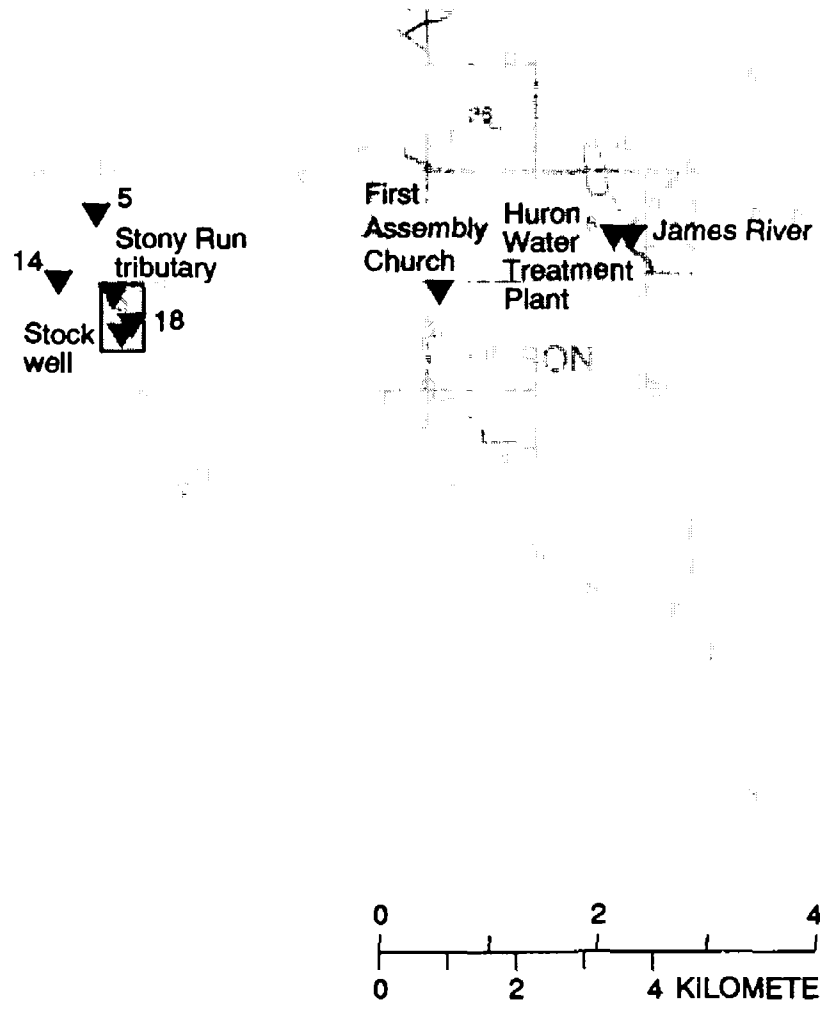


Figure 91. Location of screening water-quality sampling sites.--Continued



Base from U.S. Geological Survey 1:100,000,
Huron plainimetric map, 1985
City limit from Office of the City Engineer
map, Huron, 1990

Figure 92. Location of detailed water-quality sampling sites.

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(p. 85 follows)

SUPPLEMENTAL INFORMATION

Table 6. Water-quality data obtained from screening samples

[All analyses on unfiltered samples unless otherwise specified. Agency collecting or analyzing sample: USGS, U.S. Geological Survey; SDSU, South Dakota State University; NWQL, National Water Quality Laboratory. µS/cm, microsiemens per centimeter; mg/L, milligrams per liter; mV, millivolt; µg/L, micrograms per liter; FET, fixed end point titration]

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442213098174301	11-25-91	USGS	NWQL	1,340	7.0	10.0	0.1	--	170	--	--
(CO-04-90)	03-11-92	USGS	NWQL	1,480	7.3	11.0	.1	--	--	[1]496	[1]605
442213098185602	06-25-91	SDSU	SDSU	1,790	7.3	13.5	.1	-75	--	406	495
(CO-03-90)	07-22-91	SDSU	SDSU	1,750	7.3	12.0	.0	-86	--	394	480
	08-14-91	SDSU	SDSU	1,750	7.5	11.5	.1	-92	--	390	476
	08-26-91	SDSU	SDSU	1,640	7.5	11.5	.1	-108	--	417	508
	09-16-91	SDSU	SDSU	1,740	7.4	11.0	.1	-120	--	418	510
	10-07-91	SDSU	SDSU	1,740	7.2	10.5	.1	-98	--	405	494
	10-28-91	SDSU	SDSU	1,720	7.1	10.5	.1	-81	--	400	488
	11-25-91	SDSU	SDSU	1,530	7.2	10.5	.1	-115	--	415	506
	01-06-92	SDSU	SDSU	1,660	7.2	10.0	.1	-99	250	411	501
	01-31-92	SDSU	SDSU	1,770	7.1	10.5	.2	36	230	401	489
	04-17-92	SDSU	SDSU	1,740	7.2	10.5	.2	73	230	407	496
	05-18-92	SDSU	SDSU	1,750	7.2	11.0	.1	-49	220	407	496
	06-12-92	SDSU	SDSU	1,760	7.2	11.5	.2	-48	230	404	493
	07-01-92	SDSU	SDSU	1,770	7.1	10.5	.1	-61	230	406	495
	07-16-92	SDSU	SDSU	1,560	6.9	11.5	.1	-121	240	401	489
	08-13-92	SDSU	SDSU	1,740	7.4	11.0	.1	-100	220	400	488
	09-16-92	SDSU	SDSU	1,690	7.4	11.5	.2	-59	220	402	490
	10-02-92	SDSU	SDSU	1,690	7.4	11.5	.2	-68	230	409	499
	10-21-92	SDSU	SDSU	1,690	7.3	11.0	.1	-93	230	417	508
	11-19-92	SDSU	SDSU	1,650	7.3	10.5	.2	-71	240	422	515
	12-10-92	SDSU	SDSU	1,670	7.4	10.5	.1	-76	230	413	503
	01-05-93	SDSU	SDSU	1,620	7.4	10.0	--	-31	260	435	530
	01-18-93	SDSU	SDSU	1,560	7.5	10.0	--	-64	380	445	543
	02-06-93	SDSU	SDSU	1,590	7.3	10.0	.2	-83	240	432	527
442002098185301	06-25-91	SDSU	SDSU	1,500	7.0	13.5	.0	-34	--	446	544
(CO-01-90)	07-22-91	SDSU	SDSU	1,990	7.1	11.5	.0	-69	--	457	557
	08-14-91	SDSU	SDSU	1,990	7.7	12.0	.0	-61	--	497	606
	08-26-91	SDSU	SDSU	1,970	7.4	11.5	.1	-95	--	475	579
	09-16-91	SDSU	SDSU	1,970	7.2	11.0	.1	-60	--	462	563
	10-28-91	SDSU	SDSU	1,940	7.0	10.0	.1	-72	--	446	544
	01-06-92	SDSU	SDSU	1,870	7.0	10.0	.1	-133	480	464	566
	01-31-92	SDSU	SDSU	1,990	6.9	10.5	.2	-40	480	450	549
	03-11-92	SDSU	SDSU	1,770	7.0	10.0	.0	-123	460	462	563
	04-17-92	SDSU	SDSU	1,950	7.0	10.5	.2	61	450	449	547
	05-18-92	SDSU	SDSU	1,970	7.0	11.5	.2	-12	440	458	558
	06-12-92	SDSU	SDSU	1,970	7.0	11.5	.2	24	440	459	560
	07-01-92	SDSU	SDSU	1,970	6.9	11.0	.1	-35	470	454	553
	07-16-92	SDSU	SDSU	1,960	6.7	11.5	.1	-68	470	447	545

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Megnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtered (mg/L as Ne) (00930)	Sodium adsorption ratio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
--	50	--	12	--	270	9	--	300	33	--	1,900	--	270
[1]0	--	--	--	--	--	--	--	300	40	--	--	--	--
0	--	19	--	300	--	--	470	--	34	1,000	--	1,600	--
0	--	19	--	310	--	--	480	--	33	1,300	--	1,300	--
0	--	18	--	300	--	--	350	--	34	980	--	1,000	--
0	--	19	--	320	--	--	470	--	31	1,500	--	1,400	--
0	--	17	--	320	--	--	490	--	33	1,500	--	1,400	--
0	--	17	--	290	--	--	360	--	33	1,200	--	1,200	--
0	--	23	--	360	--	--	480	--	36	4,300	--	5,500	--
0	--	17	--	340	--	--	470	--	35	1,100	--	920	--
0	66	--	20	--	300	8	--	460	36	--	880	--	980
0	64	--	17	--	350	10	--	460	40	--	990	--	910
0	63	--	18	--	280	8	--	460	32	--	880	--	960
0	64	--	16	--	320	9	--	480	32	--	880	--	980
0	65	--	17	--	290	8	--	480	34	--	910	--	950
0	65	--	16	--	270	8	--	440	34	--	1,100	--	900
0	68	--	16	--	290	8	--	480	34	--	1,100	--	900
0	63	--	17	--	320	9	--	480	33	--	1,000	--	930
0	61	--	16	--	320	9	--	500	33	--	1,200	--	880
0	64	--	16	--	320	9	--	490	34	--	1,300	--	880
0	67	--	16	--	320	9	--	530	34	--	1,300	--	870
0	68	--	17	--	320	9	--	490	36	--	1,200	--	890
0	65	--	16	--	310	9	--	310	32	--	1,400	--	820
0	76	--	17	--	320	9	--	470	37	--	1,900	--	4,800
0	100	--	30	--	300	7	--	480	38	--	--	--	--
0	71	--	16	--	310	9	--	490	32	--	1,200	--	820
0	--	42	--	280	--	--	590	--	47	80	--	2,000	--
0	--	41	--	290	--	--	580	--	47	130	--	1,900	--
0	--	41	--	290	--	--	440	--	48	110	--	1,900	--
0	--	44	--	300	--	--	570	--	47	110	--	1,900	--
0	--	40	--	290	--	--	600	--	46	50	--	1,900	--
0	--	40	--	330	--	--	590	--	50	50	--	1,900	--
0	120	--	46	--	270	5	--	560	50	--	70	--	1,900
0	120	--	44	--	290	6	--	580	52	--	70	--	1,800
0	120	--	40	--	300	6	--	560	53	--	40	--	1,800
0	120	--	39	--	280	6	--	570	45	--	20	--	1,800
0	120	--	38	--	280	6	--	580	45	--	100	--	1,800
0	120	--	36	--	270	6	--	560	47	--	50	--	1,800
0	120	--	43	--	270	5	--	520	46	--	50	--	1,800
0	120	--	44	--	260	5	--	580	45	--	40	--	1,800

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442002098185301	08-13-92	SDSU	SDSU	1,940	7.3	11.5	0.1	-34	440	452	551
(CO-01-90)–Cont.	09-16-92	SDSU	SDSU	1,870	7.1	11.0	.1	7	450	450	549
	10-02-92	SDSU	SDSU	1,880	7.3	12.0	.2	-45	470	454	553
	10-21-92	SDSU	SDSU	1,850	7.1	11.0	.1	118	460	471	574
	11-19-92	SDSU	SDSU	1,790	7.1	10.5	.2	-3	480	474	578
	12-10-92	SDSU	SDSU	1,830	7.1	10.5	.1	-28	460	466	568
	01-05-93	SDSU	SDSU	1,740	7.3	10.0	.2	-29	460	452	551
	01-18-93	SDSU	SDSU	1,670	7.1	10.5	.2	-37	500	459	560
	02-06-93	SDSU	SDSU	1,730	7.2	10.0	.2	13	460	456	556
	02-25-93	SDSU	SDSU	1,750	7.1	10.0	.1	-85	460	461	562
	02-25-93	USGS	NWQL	1,680	7.1	10.0	.1	--	480	--	--
	03-20-93	SDSU	SDSU	1,680	7.3	10.5	.1	30	490	450	549
	07-28-93	SDSU	SDSU	2,000	7.4	11.0	.1	--	460	466	568
	09-22-93	SDSU	SDSU	1,970	7.3	10.5	.1	--	460	467	569
442122098172002	01-08-91	SDSU	SDSU	1,670	7.5	10.5	.1	-77	--	437	533
(CO-06-90)	07-22-91	SDSU	SDSU	1,530	7.5	11.0	.0	-125	--	492	600
	01-06-92	SDSU	SDSU	1,480	7.3	10.5	.1	-98	190	500	610
	03-11-92	SDSU	SDSU	1,530	7.3	10.5	.1	-71	180	514	627
	04-17-92	SDSU	SDSU	1,510	7.3	11.5	.1	-64	180	490	597
	05-18-92	SDSU	SDSU	1,520	7.3	11.5	.1	-126	170	491	599
	06-12-92	SDSU	SDSU	1,390	7.3	12.0	.1	-97	170	494	602
	07-01-92	SDSU	SDSU	1,330	7.2	11.0	.1	-101	160	502	612
	07-16-92	SDSU	SDSU	1,520	7.0	11.5	.1	-147	150	488	595
	08-13-92	SDSU	SDSU	1,490	7.4	11.0	.1	-110	180	484	590
	09-16-92	SDSU	SDSU	1,470	7.4	11.0	.1	-80	170	491	599
	10-02-92	SDSU	SDSU	1,480	7.4	11.5	.2	-84	170	496	605
	10-21-92	SDSU	SDSU	1,460	7.4	11.0	.1	-85	180	496	605
	11-19-92	SDSU	SDSU	1,420	7.5	10.0	.1	-74	180	486	593
	12-10-92	SDSU	SDSU	1,460	7.4	11.0	.1	107	170	511	623
	01-05-93	SDSU	SDSU	1,420	7.4	10.0	.2	-89	170	494	602
	01-18-93	SDSU	SDSU	1,360	7.5	10.5	.1	-97	170	491	599
	02-06-93	SDSU	SDSU	1,410	7.5	10.5	.2	-21	180	498	607
	02-25-93	SDSU	SDSU	1,380	7.4	10.0	.1	-136	170	487	594
	03-20-93	SDSU	SDSU	1,400	7.5	10.5	.2	63	180	492	600
	07-28-93	SDSU	SDSU	1,530	7.4	12.0	.1	--	180	505	616
	09-22-93	SDSU	SDSU	1,530	7.5	11.0	.1	--	180	498	607
442119098173601	01-08-91	SDSU	SDSU	1,680	7.6	10.0	.1	-77	--	460	561
(CO-65-90)	08-14-91	SDSU	SDSU	1,810	7.9	13.0	.0	-143	--	515	628
	09-02-92	SDSU	SDSU	1,670	7.1	12.0	.2	-132	150	468	571
	04-15-93	SDSU	SDSU	1,620	7.5	10.5	.1	-135	160	476	580
	05-13-93	SDSU	SDSU	1,650	7.3	11.0	.1	66	160	466	568
	06-01-93	SDSU	SDSU	1,640	7.5	10.5	.1	-127	160	466	568

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Magnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L es Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Sulfete (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L es SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L aa Fe) (01046)	Manganese (µg/L aa Mn) (01055)	Manganese, filtered (µg/L es Mn) (01056)
0	110	--	39	--	350	7	--	600	47	--	40	--	1,900
0	110	--	43	--	280	6	--	580	46	--	40	--	1,800
0	120	--	42	--	290	6	--	580	48	--	40	--	1,800
0	120	--	40	--	290	6	--	640	49	--	50	--	1,800
0	120	--	42	--	280	6	--	570	49	--	40	--	1,800
0	120	--	40	--	280	6	--	560	43	--	50	--	1,800
0	120	--	41	--	280	6	--	570	40	--	40	--	1,800
0	120	--	50	--	310	6	--	580	43	--	40	--	1,800
0	120	--	41	--	270	6	--	580	43	--	50	--	1,700
0	120	--	41	--	280	6	--	590	44	--	40	--	1,800
--	120	--	44	--	270	5	--	--	45	--	27	--	1,800
0	120	--	44	--	290	6	--	600	44	--	30	--	1,800
0	120	--	37	--	290	6	--	580	41	--	30	--	1,800
0	120	--	39	--	280	6	--	560	39	--	20	--	1,800
0	--	12	--	330	--	--	290	--	40	1,900	--	790	--
0	--	13	--	280	--	--	270	--	37	1,700	--	540	--
0	51	--	15	--	280	9	--	270	38	--	1,900	--	500
0	49	--	13	--	300	10	--	270	43	--	1,900	--	500
0	49	--	13	--	350	11	--	290	35	--	1,900	--	520
0	48	--	13	--	290	10	--	290	35	--	1,800	--	500
0	48	--	12	--	280	10	--	280	37	--	1,800	--	520
0	48	--	10	--	250	8	--	280	37	--	1,800	--	500
0	41	--	10	--	270	10	--	300	36	--	1,800	--	500
0	47	--	14	--	310	10	--	290	36	--	1,800	--	510
0	46	--	14	--	300	10	--	300	37	--	1,800	--	500
0	50	--	12	--	280	9	--	180	37	--	1,800	--	510
0	51	--	12	--	290	10	--	300	37	--	1,900	--	510
0	51	--	13	--	280	9	--	270	39	--	1,900	--	510
0	50	--	12	--	280	9	--	260	35	--	1,900	--	510
0	46	--	12	--	280	10	--	280	36	--	1,900	--	500
0	51	--	12	--	380	13	--	300	35	--	2,000	--	510
0	51	--	12	--	280	9	--	290	35	--	1,900	--	510
0	50	--	12	--	280	9	--	290	36	--	2,000	--	510
0	50	--	13	--	290	9	--	290	36	--	2,000	--	510
0	49	--	13	--	310	10	--	310	34	--	1,900	--	520
0	48	--	13	--	290	9	--	300	36	--	1,900	--	520
0	--	10	--	330	--	--	330	--	52	1,300	--	610	--
0	--	10	--	350	--	--	390	--	46	600	--	270	--
0	39	--	12	--	330	12	--	370	44	--	680	--	320
0	42	--	13	--	330	11	--	--	41	--	1,300	--	420
0	43	--	12	--	370	13	--	--	41	--	1,400	--	390
0	43	--	12	--	310	11	--	--	41	--	1,500	--	400

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442119098173602	01-08-91	SDSU	SDSU	1,610	7.6	9.5	0.0	-88	--	423	516
(CO-66-90)	08-14-91	SDSU	SDSU	1,350	7.6	13.0	.0	-119	--	486	593
	09-02-92	SDSU	SDSU	1,560	7.0	11.5	.2	--	200	456	556
	04-15-93	SDSU	SDSU	1,530	7.4	10.5	.1	-129	190	450	549
	05-14-93	SDSU	SDSU	1,560	7.5	11.0	.1	-49	200	453	552
	06-01-93	SDSU	SDSU	1,560	7.4	10.5	.1	-135	200	460	561
442119098173603	01-08-91	SDSU	SDSU	1,630	7.6	9.5	.0	-27	--	452	551
(CO-67-90)	08-14-91	SDSU	SDSU	1,610	7.6	12.5	.0	-54	--	553	674
	09-02-92	SDSU	SDSU	1,830	7.0	11.0	.2	-26	240	470	573
	04-15-93	SDSU	SDSU	1,780	7.4	11.0	.1	-116	230	462	563
	05-14-93	SDSU	SDSU	1,840	7.5	11.0	.1	-85	240	463	565
	06-01-93	SDSU	SDSU	1,830	7.4	10.5	.1	-121	240	467	569
442123098174002	01-08-91	SDSU	SDSU	1,660	7.4	10.5	.1	-36	--	468	571
(CO-08-90)	04-04-91	SDSU	SDSU	1,660	7.4	11.0	.0	-41	--	475	579
	08-26-91	SDSU	SDSU	1,640	7.4	13.0	.0	-125	--	490	597
	04-16-93	SDSU	SDSU	1,520	7.4	11.0	.1	-94	160	468	571
	05-14-93	SDSU	SDSU	1,630	7.6	12.0	.1	-108	170	475	579
	06-01-93	SDSU	SDSU	1,620	7.4	10.5	.1	-102	170	474	578
442118098174001	01-08-91	SDSU	SDSU	1,660	7.4	10.0	.0	-90	--	449	547
(CO-16-90)	04-04-91	SDSU	SDSU	1,660	7.5	10.5	.0	-92	--	467	569
	08-26-91	SDSU	SDSU	1,660	7.6	12.5	.0	-159	--	490	597
	09-02-92	SDSU	SDSU	1,620	7.0	11.5	.1	-152	160	469	572
	04-15-93	SDSU	SDSU	1,600	7.5	10.5	.1	-128	150	476	580
	05-13-93	SDSU	SDSU	1,630	7.5	11.0	.1	-139	160	474	578
	06-01-93	SDSU	SDSU	1,630	7.4	10.5	.1	-120	160	469	572
442118098174002	01-08-91	SDSU	SDSU	1,650	7.4	10.0	.0	-84	--	457	557
(CO-33-90)	08-26-91	SDSU	SDSU	1,660	7.6	12.5	.0	-137	--	548	668
	09-02-92	SDSU	SDSU	1,690	7.0	11.5	.1	-128	210	465	567
	04-15-93	SDSU	SDSU	1,650	7.4	11.0	.1	-132	190	463	565
	05-13-93	SDSU	SDSU	1,730	7.5	11.0	.1	-137	210	462	563
	06-01-93	SDSU	SDSU	1,800	7.4	10.5	.1	-67	240	468	571
442118098174003	08-26-91	SDSU	SDSU	3,650	7.5	12.5	.0	-109	--	507	618
(CO-34-90)	09-02-92	SDSU	SDSU	3,470	6.9	12.0	.1	-115	710	475	579
	04-15-93	SDSU	SDSU	3,250	7.4	10.5	.1	-92	710	468	571
	05-13-93	SDSU	SDSU	3,090	7.4	11.0	.1	-96	650	464	566
	06-01-93	SDSU	SDSU	3,220	7.3	10.5	.1	-98	670	464	566
442117098173601	01-08-91	SDSU	SDSU	1,650	7.4	11.5	.1	-54	--	463	565
(CO-45-90)	07-08-91	SDSU	SDSU	1,580	7.5	11.0	.0	-142	--	498	607
	09-02-92	SDSU	SDSU	1,620	7.0	12.0	.1	-148	150	476	580
	04-15-93	SDSU	SDSU	1,590	7.5	10.5	.1	-133	150	492	600

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Magnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtared (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Manganeae (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
0	--	11	--	290	--	--	320	--	35	2,000	--	230	--
0	--	15	--	280	--	--	280	--	35	1,900	--	250	--
0	56	--	15	--	320	10	--	340	34	--	2,200	--	210
0	51	--	16	--	290	9	--	--	34	--	2,300	--	220
0	54	--	15	--	300	9	--	--	33	--	2,300	--	210
0	53	--	16	--	280	9	--	--	33	--	2,300	--	210
0	--	13	--	290	--	--	350	--	32	430	--	530	--
0	--	20	--	330	--	--	460	--	42	430	--	620	--
0	59	--	22	--	360	10	--	460	40	--	610	--	500
0	58	--	22	--	340	10	--	--	37	--	800	--	500
0	61	--	22	--	350	10	--	--	37	--	790	--	480
0	62	--	22	--	330	9	--	--	37	--	780	--	500
0	--	11	--	350	--	--	300	--	51	2,400	--	1,200	--
0	--	13	--	310	--	--	340	--	42	1,000	--	1,100	--
0	--	12	--	330	--	--	330	--	37	680	--	620	--
0	44	--	12	--	330	11	--	--	40	--	800	--	510
0	47	--	12	--	350	12	--	--	40	--	940	--	480
0	46	--	13	--	310	11	--	--	40	--	910	--	480
0	--	10	--	330	--	--	330	--	43	1,700	--	330	--
0	--	11	--	320	--	--	350	--	38	2,000	--	310	--
0	--	12	--	330	--	--	340	--	34	1,900	--	280	--
0	42	--	13	--	310	11	--	340	38	--	2,100	--	230
0	41	--	12	--	330	12	--	--	36	--	2,100	--	240
0	43	--	12	--	380	13	--	--	36	--	2,100	--	230
0	44	--	12	--	320	11	--	--	36	--	2,100	--	230
0	--	12	--	320	--	--	350	--	40	1,100	--	170	--
0	--	16	--	330	--	--	370	--	30	1,200	--	170	--
0	58	--	16	--	300	9	--	400	37	--	1,300	--	150
0	49	--	15	--	320	10	--	--	34	--	1,600	--	140
0	57	--	17	--	350	10	--	--	35	--	1,700	--	150
0	64	--	20	--	310	9	--	--	37	--	1,700	--	170
0	--	110	--	630	--	--	1,700	--	40	410	--	610	--
0	100	--	110	--	590	10	--	1,500	50	--	370	--	350
0	100	--	110	--	560	9	--	--	46	--	360	--	310
0	89	--	100	--	560	10	--	--	42	--	320	--	290
0	94	--	110	--	540	9	--	--	43	--	400	--	280
0	--	10	--	340	--	--	340	--	48	1,900	--	360	--
0	--	12	--	320	--	--	330	--	37	2,000	--	330	--
0	41	--	11	--	330	12	--	340	39	--	2,100	--	280
0	42	--	12	--	320	11	--	--	39	--	2,200	--	290

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442117098173601	05-13-93	SDSU	SDSU	1,630	7.5	11.0	0.1	-139	160	482	588
(CO-45-90)–Cont.	06-02-93	SDSU	SDSU	1,620	7.5	10.5	--	-140	150	476	580
442117098173603	01-08-91	SDSU	SDSU	1,610	7.4	10.0	.1	-83	--	453	552
(CO-47-90)	07-08-91	SDSU	SDSU	1,510	7.4	11.0	.0	-129	--	400	488
	09-02-92	SDSU	SDSU	1,540	7.0	12.0	.2	-145	170	466	568
	04-15-93	SDSU	SDSU	1,540	7.4	10.5	.1	-118	180	459	560
	05-13-93	SDSU	SDSU	1,580	7.2	11.0	.1	-126	190	466	568
	06-02-93	SDSU	SDSU	1,560	7.4	10.5	--	1,563	190	455	555
442117098173604	01-08-91	SDSU	SDSU	1,580	7.4	10.0	.1	-45	--	451	550
(CO-48-90)	07-08-91	SDSU	SDSU	1,510	7.5	11.0	.0	-113	--	484	590
	09-02-92	SDSU	SDSU	1,700	7.0	12.5	.2	-108	290	460	561
	04-15-93	SDSU	SDSU	1,700	7.4	11.0	.1	-101	290	457	557
	05-13-93	SDSU	SDSU	1,710	7.4	11.0	.1	-106	290	--	--
	06-02-93	SDSU	SDSU	1,890	7.4	11.0	--	-96	400	447	545
442117098173501	01-08-91	SDSU	SDSU	1,670	7.6	10.5	.1	-26	--	540	658
(CO-49-90)	07-08-91	SDSU	SDSU	1,670	7.4	11.5	.0	-119	--	484	590
	01-31-92	SDSU	SDSU	1,470	7.3	10.5	.2	-102	170	485	591
	09-02-92	SDSU	SDSU	1,630	7.0	12.0	.1	-134	160	482	588
	04-15-93	SDSU	SDSU	1,600	7.5	11.0	.1	-91	150	475	579
	05-13-93	SDSU	SDSU	1,640	7.5	11.5	.1	-113	160	--	--
	06-02-93	SDSU	SDSU	1,630	7.5	10.5	--	-132	170	473	577
442117098173502	01-08-91	SDSU	SDSU	1,580	7.6	10.0	.0	-80	--	430	524
(CO-50-90)	07-08-91	SDSU	SDSU	1,580	7.4	11.5	.0	-134	--	474	578
	01-31-92	SDSU	SDSU	1,390	7.3	10.5	.2	-74	180	455	555
	09-02-92	SDSU	SDSU	1,550	7.0	11.5	.2	-131	160	458	558
	04-15-93	SDSU	SDSU	1,520	7.5	10.5	.1	-32	180	460	561
	05-13-93	SDSU	SDSU	1,560	7.5	11.5	.1	-130	190	458	558
	06-02-93	SDSU	SDSU	1,550	7.5	11.0	--	-128	190	459	560
442117098173503	01-08-91	SDSU	SDSU	1,630	7.6	9.5	.1	-41	--	500	610
(CO-51-90)	07-08-91	SDSU	SDSU	1,610	7.4	12.0	.1	-83	--	453	552
	01-31-92	SDSU	SDSU	1,370	7.3	10.5	.2	-12	200	457	557
	09-02-92	SDSU	SDSU	1,590	7.0	11.5	.2	-110	210	461	562
	04-15-93	SDSU	SDSU	1,560	7.3	10.0	.2	82	200	463	565
	05-14-93	SDSU	SDSU	1,600	7.6	11.5	.1	-108	200	460	561
	06-02-93	SDSU	SDSU	1,580	7.5	11.0	--	-84	210	463	565
442117098174002	01-08-91	SDSU	SDSU	2,410	7.4	11.0	.1	-74	--	483	589
(CO-39-90)	04-04-91	SDSU	SDSU	1,930	7.4	11.0	.0	-5	--	460	561
	10-28-91	SDSU	SDSU	2,520	7.2	10.5	.1	-98	--	467	569
	09-02-92	SDSU	SDSU	3,300	6.8	12.0	.1	-122	650	496	605
	04-16-93	SDSU	SDSU	3,050	7.4	10.5	.1	-102	570	485	591

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Magnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L aa Fe) (01045)	Iron, filtered (µg/L ae Fe) (01046)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
0	44	--	12	--	330	11	--	--	38	--	2,100	--	280
0	44	--	11	--	330	12	--	--	38	--	2,200	--	290
0	--	12	--	310	--	--	320	--	43	1,500	--	340	--
0	--	14	--	300	--	--	320	--	36	1,800	--	280	--
0	47	--	13	--	300	10	--	330	36	--	2,000	--	250
0	49	--	14	--	300	10	--	--	35	--	2,100	--	270
0	52	--	15	--	320	10	--	--	34	--	2,000	--	260
0	51	--	15	--	270	9	--	--	34	--	2,100	--	260
0	--	16	--	290	--	--	340	--	38	940	--	630	--
0	--	18	--	280	--	--	330	--	32	670	--	610	--
0	74	--	26	--	300	8	--	430	41	--	370	--	370
0	66	--	29	--	290	7	--	--	41	--	400	--	350
--	68	--	29	--	310	8	--	--	38	--	450	--	350
0	86	--	44	--	270	6	--	--	50	--	400	--	370
0	--	10	--	350	--	--	330	--	49	1,000	--	430	--
0	--	12	--	310	--	--	340	--	42	950	--	480	--
0	46	--	12	--	330	11	--	330	48	--	1,000	--	430
0	46	--	10	--	330	12	--	340	42	--	1,000	--	450
0	43	--	11	--	320	11	--	--	41	--	1,200	--	440
--	46	--	12	--	330	11	--	--	40	--	1,300	--	420
0	46	--	13	--	330	11	--	--	40	--	1,200	--	430
0	--	13	--	320	--	--	330	--	34	2,100	--	290	--
0	--	15	--	290	--	--	340	--	34	2,200	--	300	--
0	51	--	13	--	310	10	--	320	40	--	2,300	--	260
0	46	--	12	--	290	10	--	330	35	--	2,200	--	270
0	49	--	15	--	300	10	--	--	33	--	2,200	--	280
0	51	--	15	--	300	9	--	--	33	--	2,200	--	260
0	51	--	16	--	280	9	--	--	32	--	2,300	--	270
0	--	15	--	320	--	--	340	--	17	750	--	690	--
0	--	16	--	300	--	--	350	--	32	220	--	600	--
0	52	--	17	--	340	10	--	340	40	--	240	--	510
0	58	--	16	--	340	10	--	350	33	--	210	--	520
0	50	--	17	--	300	9	--	--	32	--	200	--	560
0	53	--	17	--	290	9	--	--	32	--	260	--	530
0	53	--	18	--	290	9	--	--	32	--	240	--	530
0	--	42	--	460	--	--	790	--	47	690	--	250	--
0	--	26	--	350	--	--	520	--	34	940	--	310	--
0	--	59	--	510	--	--	870	--	41	810	--	260	--
0	100	--	95	--	620	11	--	1,400	46	--	1,300	--	360
0	92	--	83	--	550	10	--	--	41	--	1,500	--	330

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900`	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442117098174002	05-14-93	SDSU	SDSU	3,130	7.5	11.0	0.1	-129	600	475	579
(CO-39-90)–Cont.	06-01-93	SDSU	SDSU	2,820	7.3	10.5	.1	-95	500	482	588
442117098174003	01-08-91	SDSU	SDSU	1,650	7.4	10.5	.0	-81	--	460	561
(CO-40-90)	10-28-91	SDSU	SDSU	1,430	7.3	10.5	.1	-124	--	498	607
	09-02-92	SDSU	SDSU	1,590	7.0	11.5	.1	-128	170	471	574
	04-16-93	SDSU	SDSU	1,690	7.3	10.5	.1	21	180	466	568
	05-14-93	SDSU	SDSU	1,720	7.5	11.0	.1	-140	190	473	577
	06-01-93	SDSU	SDSU	1,740	7.4	10.5	.1	-136	190	471	574
442117098174001	01-08-91	SDSU	SDSU	1,670	7.4	10.5	.0	-93	--	460	561
(CO-17-90)	10-28-91	SDSU	SDSU	1,630	7.3	10.0	.1	-142	--	482	588
	09-02-92	SDSU	SDSU	1,610	7.0	11.5	.1	-144	160	495	603
	04-16-93	SDSU	SDSU	1,620	7.5	11.0	.1	-95	160	469	572
	05-14-93	SDSU	SDSU	1,650	7.5	10.5	.1	-134	170	469	572
	06-01-93	SDSU	SDSU	1,660	7.4	10.5	.1	-129	160	468	571
442115098174202	01-08-91	SDSU	SDSU	1,670	7.5	10.5	.1	-67	--	459	560
(CO-63-90)	07-08-91	SDSU	SDSU	1,680	7.5	11.0	.0	-128	--	466	568
	08-13-92	SDSU	SDSU	1,650	7.4	11.0	.1	-117	180	476	580
	04-15-93	SDSU	SDSU	1,610	7.5	10.5	.1	-124	180	467	569
	05-13-93	SDSU	SDSU	1,640	7.5	11.0	.1	-139	180	466	568
	06-01-93	SDSU	SDSU	1,630	7.5	10.5	.0	-138	180	471	574
442115098174203	01-08-91	SDSU	SDSU	1,660	7.6	9.5	.1	-37	--	452	551
(CO-64-90)	07-08-91	SDSU	SDSU	1,660	7.5	11.5	.0	-103	--	480	585
	08-13-92	SDSU	SDSU	1,670	7.3	11.0	.2	-106	190	478	583
	04-15-93	SDSU	SDSU	1,660	7.5	10.5	.1	-114	190	476	580
	05-13-93	SDSU	SDSU	1,750	7.5	11.0	.1	-127	210	469	572
	06-01-93	SDSU	SDSU	1,730	7.5	10.5	.1	-125	220	465	567
442115098174201	01-08-91	SDSU	SDSU	1,740	7.6	10.0	.1	-46	--	498	607
(CO-62-90)	07-08-91	SDSU	SDSU	1,690	7.6	11.0	.0	-126	--	492	600
	08-13-92	SDSU	SDSU	1,690	7.5	11.0	.1	-119	130	482	588
	04-15-93	SDSU	SDSU	1,680	7.5	10.5	.1	-133	130	486	593
	05-14-93	SDSU	SDSU	1,710	7.5	11.0	.1	-137	130	493	601
	06-01-93	SDSU	SDSU	1,710	7.5	10.5	.1	-134	130	491	599
442115098173903	09-16-91	SDSU	SDSU	3,890	7.1	11.0	.1	-38	--	428	522
(CO-58-90)	09-02-92	SDSU	SDSU	4,190	6.6	11.5	.1	-93	1,40C	448	546
	05-14-93	SDSU	SDSU	4,190	7.2	11.0	.1	-90	1,40C	473	577
442115098173901	01-08-91	SDSU	SDSU	1,740	7.5	10.0	.0	-101	--	490	597
(CO-56-90)	09-16-91	SDSU	SDSU	1,710	7.4	11.5	.1	-118	--	519	633
	09-02-92	SDSU	SDSU	1,670	7.0	11.5	.1	-118	12C	483	589
	05-14-93	SDSU	SDSU	1,690	7.6	11.0	.1	1,686	12C	482	588

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Magnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
0	95	--	89	--	560	10	--	--	41	--	1,300	--	340
0	82	--	73	--	500	10	--	--	38	--	1,200	--	300
0	--	13	--	320	--	--	330	--	42	1,800	--	310	--
0	--	13	--	350	--	--	340	--	35	1,700	--	180	--
0	44	--	15	--	360	12	--	350	34	--	1,300	--	160
0	50	--	14	--	320	10	--	--	32	--	2,000	--	170
0	53	--	15	--	340	11	--	--	32	--	2,000	--	170
0	54	--	14	--	310	10	--	--	32	--	2,100	--	160
0	--	11	--	330	--	--	340	--	44	1,800	--	270	--
0	--	13	--	360	--	--	370	--	39	2,000	--	200	--
0	44	--	12	--	320	11	--	350	36	--	2,000	--	190
0	44	--	13	--	330	11	--	--	35	--	2,100	--	190
0	47	--	13	--	380	13	--	--	35	--	2,100	--	190
0	47	--	11	--	320	11	--	--	34	--	2,100	--	--
0	--	12	--	330	--	--	340	--	43	1,600	--	300	--
0	--	15	--	320	--	--	380	--	37	1,400	--	270	--
0	48	--	14	--	310	10	--	360	37	--	1,500	--	240
0	47	--	15	--	320	10	--	--	33	--	1,700	--	230
0	48	--	14	--	310	10	--	--	33	--	1,700	--	220
0	48	--	15	--	300	10	--	--	32	--	1,700	--	230
0	--	13	--	320	--	--	330	--	41	930	--	660	--
0	--	15	--	320	--	--	360	--	34	420	--	530	--
0	49	--	16	--	300	9	--	370	37	--	510	--	470
0	49	--	17	--	320	10	--	--	36	--	550	--	460
0	55	--	19	--	330	10	--	--	36	--	510	--	450
0	54	--	20	--	320	9	--	--	36	--	500	--	460
0	--	8.7	--	370	--	--	340	--	58	1,100	--	430	--
0	--	11	--	350	--	--	350	--	45	660	--	540	--
0	32	--	12	--	350	13	--	380	47	--	900	--	510
0	34	--	10	--	330	13	--	--	45	--	1,000	--	450
0	35	--	10	--	400	15	--	--	44	--	1,200	--	430
0	35	--	9.9	--	360	14	--	--	34	--	880	--	430
0	--	170	--	490	--	--	2,000	--	110	370	--	840	--
0	280	--	170	--	670	8	--	2,100	150	--	480	--	710
0	290	--	180	--	610	7	--	--	140	--	420	--	630
0	--	7.5	--	380	--	--	380	--	38	1,400	--	190	--
0	--	10	--	360	--	--	350	--	43	1,300	--	160	--
0	32	--	11	--	380	15	--	360	42	--	1,200	--	160
0	31	--	9.9	--	380	15	--	--	40	--	1,500	--	160

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442113098174202	01-08-91	SDSU	SDSU	1,700	7.5	10.0	0.0	-101	--	462	563
(CO-60-90)	07-08-91	SDSU	SDSU	1,690	7.5	11.5	.0	-132	--	487	594
	08-13-92	SDSU	SDSU	1,640	7.5	11.5	.2	-128	170	470	573
	04-16-93	SDSU	SDSU	1,630	7.5	10.5	.1	-126	180	462	563
	05-14-93	SDSU	SDSU	1,660	7.3	10.5	.1	-56	180	466	568
	06-01-93	SDSU	SDSU	1,660	7.3	10.5	.1	56	180	469	572
442113098174203	07-08-91	SDSU	SDSU	2,630	7.3	11.5	.0	-82	--	453	552
(CO-61-90)	08-13-92	SDSU	SDSU	2,360	7.4	11.5	.1	-103	410	468	571
	04-16-93	SDSU	SDSU	2,360	7.4	10.5	.1	-113	410	469	572
	05-14-93	SDSU	SDSU	2,340	7.4	10.5	.1	-93	410	471	574
	06-01-93	SDSU	SDSU	2,250	7.3	10.5	.1	-8	390	477	582
442110098174201	01-08-91	SDSU	SDSU	1,760	7.5	10.5	.1	-82	--	472	576
(CO-09-90)	05-20-91	SDSU	SDSU	1,810	7.5	11.5	.0	--	--	380	463
	05-18-92	SDSU	SDSU	1,790	7.3	11.5	.1	-118	150	484	590
	04-16-93	SDSU	SDSU	1,670	7.5	10.5	.1	-117	150	479	584
	05-14-93	SDSU	SDSU	1,770	7.6	11.5	.1	-127	150	486	593
442110098172501	01-08-91	SDSU	SDSU	1,770	7.6	10.5	.2	-71	--	657	801
(CO-19-90)	08-14-91	SDSU	SDSU	1,600	7.5	12.0	.1	-125	--	551	672
	01-06-92	SDSU	SDSU	1,270	7.4	10.0	.1	-126	170	544	663
	04-17-92	SDSU	SDSU	1,580	7.4	10.5	.1	-96	140	522	636
	05-18-92	SDSU	SDSU	1,590	7.3	11.0	.1	-89	130	522	636
	06-12-92	SDSU	SDSU	1,580	7.3	12.0	.1	-102	130	524	639
	07-01-92	SDSU	SDSU	1,600	7.2	10.5	.1	-85	130	523	638
	07-16-92	SDSU	SDSU	1,580	7.0	11.0	.1	-127	140	507	618
	08-13-92	SDSU	SDSU	1,570	7.5	10.5	.1	-94	140	474	578
	09-16-92	SDSU	SDSU	1,540	7.5	10.5	.1	-95	140	532	649
	10-02-92	SDSU	SDSU	1,540	7.5	10.5	.1	-121	140	502	612
	10-21-92	SDSU	SDSU	1,530	7.4	10.5	.1	-110	140	524	639
	11-19-92	SDSU	SDSU	1,510	7.6	9.0	.1	-99	140	601	733
	12-10-92	SDSU	SDSU	1,520	7.5	10.5	.1	38	140	541	660
	01-05-93	SDSU	SDSU	1,460	7.5	9.0	.2	-42	140	536	653
	01-18-93	SDSU	SDSU	1,410	7.5	10.5	.2	-98	140	505	616
	02-06-93	SDSU	SDSU	1,470	7.4	10.0	.2	-79	140	522	636
	02-25-93	SDSU	SDSU	1,440	7.4	10.0	.1	-128	150	522	636
	03-20-93	SDSU	SDSU	1,480	7.4	10.0	.2	25	150	516	629
	07-28-93	SDSU	SDSU	1,590	7.5	11.0	.1	--	140	532	649
	09-22-93	SDSU	SDSU	1,590	7.5	10.5	.1	--	150	537	655
442108098173101	01-08-91	SDSU	SDSU	1,680	7.6	10.0	.1	-88	--	467	569
(CO-32-90)	08-14-91	SDSU	SDSU	1,660	7.5	11.5	.1	-100	--	482	588
	01-06-92	SDSU	SDSU	1,620	7.4	10.0	.1	-144	160	502	612
	06-12-92	SDSU	SDSU	1,650	7.3	12.5	.1	-125	150	467	569
	04-16-93	SDSU	SDSU	1,540	7.5	10.5	.1	-126	150	453	552

Carbonate, fisld, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ca) (00915)	Magnasium (mg/L as Mg) (00927)	Magnesium, filtarad (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtared (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Suifata (mg/L as SO_4) (00946)	Sulfata, filterad (mg/L as SO_4) (00945)	Chlorida, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtared (µg/L as Fe) (01046)	Manganesa (µg/L as Mn) (C1055)	Manganesa, filterad (µg/L as Mn) (01056)
0	--	11	--	330	--	--	360	--	8.8	2,400	--	150	--
0	--	14	--	310	--	--	360	--	37	2,400	--	170	--
0	47	--	14	--	400	13	--	350	38	--	2,200	--	150
0	48	--	14	--	320	10	--	--	36	--	2,300	--	150
0	51	--	13	--	340	11	--	--	35	--	2,300	--	150
0	49	--	14	--	310	10	--	--	35	--	2,300	--	160
0	--	51	--	430	--	--	900	--	57	1,000	--	510	--
0	96	--	42	--	390	8	--	790	50	--	830	--	400
0	94	--	43	--	400	9	--	--	46	--	940	--	410
0	95	--	42	--	430	9	--	--	44	--	930	--	400
0	93	--	38	--	380	8	--	--	44	--	880	--	380
0	--	11	--	420	--	--	370	--	44	1,600	--	300	--
0	--	15	--	350	--	--	410	--	38	1,600	--	270	--
0	34	--	15	--	380	13	--	410	37	--	1,100	--	240
0	35	--	16	--	370	13	--	--	37	--	1,400	--	260
0	35	--	15	--	440	16	--	--	37	--	1,500	--	260
0	--	10	--	320	--	--	290	--	37	1,600	--	590	--
0	--	10	--	310	--	--	280	--	40	1,300	--	380	--
0	38	--	19	--	330	11	--	280	41	--	1,400	--	330
0	37	--	12	--	300	11	--	280	39	--	1,400	--	330
0	35	--	9.9	--	310	12	--	280	37	--	1,400	--	340
0	37	--	9.8	--	280	11	--	290	39	--	1,300	--	350
0	37	--	9.5	--	280	10	--	290	39	--	1,400	--	330
0	40	--	10	--	280	10	--	300	38	--	1,400	--	340
0	37	--	12	--	300	11	--	270	39	--	1,400	--	330
0	36	--	12	--	300	11	--	300	39	--	1,500	--	330
0	40	--	9.9	--	320	12	--	280	39	--	1,400	--	340
0	41	--	10	--	320	12	--	280	40	--	1,500	--	330
0	40	--	9.2	--	320	12	--	290	42	--	1,500	--	330
0	41	--	9.8	--	320	12	--	280	38	--	1,400	--	340
0	41	--	9.0	--	310	11	--	290	39	--	1,400	--	330
0	40	--	10	--	330	12	--	290	38	--	1,500	--	330
0	40	--	9.4	--	310	11	--	290	38	--	1,500	--	330
0	40	--	13	--	310	11	--	290	38	--	1,600	--	330
0	39	--	12	--	330	12	--	300	37	--	1,600	--	330
0	40	--	9.9	--	350	13	--	290	37	--	1,500	--	340
0	39	--	12	--	320	12	--	300	36	--	1,500	--	340
0	--	10	--	320	--	--	340	--	30	2,400	--	460	--
0	--	12	--	310	--	--	330	--	38	1,900	--	280	--
0	42	--	12	--	330	11	--	340	41	--	2,000	--	200
0	41	--	12	--	280	10	--	370	38	--	1,800	--	210
0	40	--	12	--	330	12	--	--	36	--	1,900	--	190

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
442108098173101	05-14-93	SDSU	SDSU	1,650	7.6	11.0	0.1	-123	150	461	562
(CO-32-90)–Cont.	06-02-93	SDSU	SDSU	1,650	7.5	10.5	--	-125	150	456	556
442032098172501	07-08-91	SDSU	SDSU	1,960	7.5	11.0	.1	--	--	525	640
(CO-13-90)	07-22-91	SDSU	SDSU	1,950	7.5	11.0	.0	-139	--	536	653
	08-14-91	SDSU	SDSU	1,920	7.7	12.0	.0	-145	--	525	640
	08-26-91	SDSU	SDSU	1,920	7.8	12.5	.0	-155	--	606	739
	09-16-91	SDSU	SDSU	1,910	7.4	11.0	.1	-126	--	576	702
	10-07-91	SDSU	SDSU	1,620	7.4	11.0	.0	-131	--	513	626
	10-28-91	SDSU	SDSU	1,920	7.3	10.5	.1	-107	--	495	603
	11-25-91	SDSU	SDSU	1,910	7.4	10.0	.0	-149	--	488	595
	01-06-92	SDSU	SDSU	1,880	7.4	10.0	.1	-140	190	522	636
	01-31-92	SDSU	SDSU	1,850	7.3	10.0	.2	112	180	502	612
	03-11-92	SDSU	SDSU	1,960	7.4	10.0	.1	-97	170	509	621
	04-17-92	SDSU	SDSU	1,910	7.4	10.5	.1	10	150	506	617
	05-18-92	SDSU	SDSU	1,920	7.3	11.0	.2	-85	150	505	616
	06-12-92	SDSU	SDSU	1,900	7.3	11.5	.1	-85	140	505	616
	07-01-92	SDSU	SDSU	1,910	7.3	10.5	.1	-70	150	511	623
	07-16-92	SDSU	SDSU	1,890	7.0	11.0	.1	-133	150	501	611
	08-13-92	SDSU	SDSU	1,870	7.5	11.0	.1	-100	140	500	610
	09-16-92	SDSU	SDSU	1,820	7.5	10.5	.1	-50	140	515	628
	10-02-92	SDSU	SDSU	1,870	7.6	11.5	.2	-95	150	506	617
	10-21-92	SDSU	SDSU	1,870	7.4	11.5	.1	-12	160	504	615
	11-19-92	SDSU	SDSU	1,790	7.5	10.0	.2	-75	150	515	628
	12-10-92	SDSU	SDSU	1,800	7.5	10.0	.1	-53	150	569	694
	01-05-93	SDSU	SDSU	1,700	7.6	10.5	.2	-97	150	519	633
	01-18-93	SDSU	SDSU	1,710	7.5	10.5	.2	-58	160	527	643
	02-06-93	SDSU	SDSU	1,770	7.5	10.0	.2	-94	160	408	497
	02-25-93	SDSU	SDSU	1,770	7.5	10.0	.1	-120	160	509	621
	03-20-93	SDSU	SDSU	1,760	7.6	10.0	.1	15	180	518	632
	09-22-93	SDSU	SDSU	1,880	7.6	10.5	.1	--	140	506	617
441937098163001	06-25-91	SDSU	SDSU	1,850	7.0	13.0	.1	-6	--	413	503
(CO-21-90)	07-22-91	SDSU	SDSU	2,310	7.1	11.5	.0	-46	--	420	512
	08-14-91	SDSU	SDSU	2,190	7.3	12.0	.0	-83	--	413	503
	08-26-91	SDSU	SDSU	2,200	7.8	12.0	.0	-101	--	543	662
	09-16-91	SDSU	SDSU	2,050	7.1	11.0	.1	-66	--	455	555
	10-07-91	SDSU	SDSU	2,060	7.1	11.0	.0	-64	--	429	523
	10-28-91	SDSU	SDSU	2,050	7.0	10.0	.1	-87	--	419	511
	11-25-91	SDSU	SDSU	1,990	7.1	9.5	.1	-111	--	424	517
	01-06-92	SDSU	SDSU	1,790	7.1	10.0	.1	-145	400	437	533
	01-31-92	SDSU	SDSU	2,030	7.1	10.5	.2	-24	370	426	519
	03-11-92	SDSU	SDSU	2,080	7.0	10.0	.2	-39	410	535	652
	04-17-92	SDSU	SDSU	2,130	7.1	10.5	.1	-9	480	425	518
	05-18-92	SDSU	SDSU	2,280	7.0	11.5	.1	-69	560	438	534
	06-12-92	SDSU	SDSU	2,210	7.0	11.5	.1	-70	520	422	515

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L as Ce) (00915)	Magnesium (mg/L as Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium adsorption ratio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Ci) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
0	42	--	11	--	380	13	--	--	35	--	2,000	--	190
0	43	--	11	--	320	11	--	--	36	--	2,000	--	190
0	--	13	--	320	--	--	530	--	41	2,100	--	240	--
0	--	14	--	390	--	--	470	--	41	2,200	--	220	--
0	--	13	--	380	--	--	460	--	41	2,000	--	180	--
0	--	13	--	390	--	--	450	--	36	2,000	--	190	--
0	--	12	--	390	--	--	450	--	40	2,100	--	160	--
0	--	13	--	360	--	--	440	--	40	2,000	--	170	--
0	--	15	--	430	--	--	490	--	46	2,400	--	200	--
0	--	15	--	420	--	--	500	--	44	2,600	--	210	--
0	45	--	20	--	390	12	--	470	44	--	2,400	--	200
0	48	--	14	--	410	13	--	500	48	--	2,500	--	190
0	44	--	15	--	410	14	--	470	49	--	2,200	--	190
0	40	--	13	--	350	12	--	430	40	--	2,000	--	190
0	39	--	12	--	400	14	--	450	39	--	2,000	--	190
0	38	--	12	--	370	13	--	450	40	--	1,900	--	190
0	39	--	12	--	370	13	--	400	41	--	1,900	--	210
0	40	--	12	--	390	14	--	450	40	--	1,900	--	200
0	35	--	13	--	410	15	--	450	41	--	1,900	--	180
0	35	--	13	--	380	14	--	450	41	--	1,900	--	170
0	42	--	12	--	390	14	--	470	39	--	2,100	--	190
0	44	--	12	--	360	12	--	520	43	--	2,100	--	190
0	41	--	12	--	390	14	--	450	44	--	2,000	--	190
0	40	--	12	--	380	14	--	460	39	--	2,000	--	180
0	40	--	12	--	380	14	--	450	39	--	1,900	--	190
0	43	--	13	--	280	10	--	470	40	--	2,200	--	190
0	44	--	13	--	380	13	--	490	40	--	2,200	--	200
0	43	--	13	--	390	13	--	500	42	--	2,200	--	190
0	41	--	18	--	330	11	--	500	42	--	2,100	--	190
0	37	--	12	--	390	14	--	450	36	--	2,000	--	180
0	--	63	--	300	--	--	780	--	64	170	--	770	--
0	--	54	--	310	--	--	880	--	57	180	--	690	--
0	--	49	--	310	--	--	740	--	53	340	--	770	--
0	--	50	--	320	--	--	720	--	43	110	--	770	--
0	--	45	--	320	--	--	720	--	47	140	--	740	--
0	--	40	--	310	--	--	490	--	44	100	--	740	--
0	--	41	--	360	--	--	660	--	47	150	--	740	--
0	--	34	--	340	--	--	660	--	47	150	--	770	--
0	99	--	37	--	320	7	--	640	44	--	160	--	730
0	94	--	34	--	330	7	--	620	46	--	210	--	750
0	100	--	36	--	320	7	--	670	51	--	170	--	780
0	120	--	41	--	310	6	--	720	48	--	190	--	740
0	140	--	50	--	310	6	--	790	52	--	210	--	740
0	130	--	46	--	290	5	--	740	52	--	240	--	730

Table 6. Water-quality data obtained from screening samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, water, field (deg C) (00010)	Dissolved oxygen, field (mg/L) (00300)	Oxidation-reduction potential, field (mV) (00090)	Hardness (mg/L as $CaCO_3$)[1] (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Bicarbonate field, FET mg/L as HCO_3 (00440)
441937098163001	07-01-92	SDSU	SDSU	2,100	6.9	10.5	0.1	-51	490	429	523
(CO-21-90)	07-16-92	SDSU	SDSU	2,210	6.8	11.0	.1	-106	520	415	506
	08-13-92	SDSU	SDSU	2,190	7.3	11.0	.1	-45	520	420	512
	09-16-92	SDSU	SDSU	2,050	7.2	10.5	.1	-44	490	427	521
	10-02-92	SDSU	SDSU	2,150	7.2	11.5	.2	-91	510	426	519
	10-21-92	SDSU	SDSU	2,070	7.1	11.0	.1	-56	560	433	528
	11-19-92	SDSU	SDSU	1,940	7.1	10.0	.2	-62	540	435	530
	12-10-92	SDSU	SDSU	2,030	7.2	10.0	.1	24	550	440	536
	01-05-93	SDSU	SDSU	1,890	7.1	10.5	.2	-34	490	431	526
	01-18-93	SDSU	SDSU	1,850	7.2	10.5	.2	-16	540	434	529
	02-06-93	SDSU	SDSU	1,910	7.2	10.0	.2	16	520	435	530
	02-25-93	SDSU	SDSU	1,910	7.1	10.0	.1	-67	510	424	517
	03-20-93	SDSU	SDSU	1,830	7.3	10.0	.1	31	530	417	508
	07-28-93	SDSU	SDSU	3,100	7.9	10.5	.1	--	540	430	524
	09-22-93	SDSU	SDSU	2,120	7.4	10.5	.2	--	440	452	551

[1]Determined from incremental titration.

Carbonate, field, FET mg/L as CO_3 (00445)	Calcium, filtered (mg/L es Ca) (00915)	Magnesium (mg/L es Mg) (00927)	Magnesium, filtered (mg/L as Mg) (00925)	Sodium (mg/L as Ne) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium adsorption retio (00931)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as Cl) (00940)	Iron, (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Manganese (µg/L es Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)
0	120	--	45	--	290	6	--	700	49	--	250	--	700
0	130	--	48	--	290	6	--	770	50	--	250	--	710
0	130	--	48	--	350	7	--	730	51	--	260	--	720
0	120	--	46	--	320	6	--	710	48	--	320	--	690
0	130	--	47	--	330	6	--	760	47	--	320	--	680
0	140	--	52	--	320	6	--	760	49	--	290	--	670
0	130	--	49	--	320	6	--	740	50	--	350	--	700
0	130	--	52	--	320	6	--	790	47	--	330	--	700
0	120	--	47	--	320	6	--	730	44	--	350	--	660
0	130	--	51	--	270	5	--	800	44	--	350	--	680
0	130	--	49	--	310	6	--	760	46	--	330	--	690
0	120	--	49	--	310	6	--	760	45	--	400	--	700
0	130	--	50	--	410	8	--	770	43	--	400	--	710
0	140	--	44	--	330	6	--	730	45	--	520	--	710
0	110	--	39	--	330	7	--	650	40	--	480	--	700

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples

[All analyses on unfiltered samples unless otherwise specified. Agency collecting or analyzing sample: USGS, U.S. Geological Survey; SDSU, South Dakota State University; NWQL, National Water Quality Laboratory; SDDHL, South Dakota Department of Health Laboratory. µS/cm, microsiemens per centimeter; mg/L, milligrams per liter; mm, millimeter; mV, millivolt; mL, milliliter; µg/L, micrograms per liter; pci/L, picocuries per liter; deg, degrees; FET, fixed end point titration; IT, incremental titration; NTU, nephelometric turbidity units; µm-mf, mimcrometer-membrane filter; cols, colonies; <, less than; --, no data]

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, air, field (deg C) (00020)	Temperature, water, field (deg C) (00010)	Turbidity, field (NTU) (00076)	Barometric pressure, field (mm of Hg) (00025)	Dissolved oxygen, field (mg/L) (00300)	Dissolved oxygen, percent saturation, field (00301)
442150098120601	05-29-91	USGS	NWQL	1,560	8.2	--	22.0	13	--	4.8	--
(James River at	07-15-91	USGS	NWQL	1,070	8.2	--	26.5	12	--	5.9	--
Morningside)	04-14-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	04-14-92	USGS	NWQL	1,560	8.4	--	8.0	1.3	731	9.4	84
	05-28-92	USGS	NWQL	1,850	8.5	14.0	14.5	12	724	8.2	85
	06-03-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-03-92	USGS	USGS	1,880	8.3	25.0	19.5	--	723	6.8	79
	06-23-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-23-92	USGS	NWQL	571	7.7	25.0	21.5	49	726	4.5	54
	03-30-93	USGS	NWQL	1,120	8.4	5.0	6.0	8.3	728	11.7	98
	04-06-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-25-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-25-93	USGS	NWQL	1,250	8.3	17.0	17.0	19	735	7.4	80
	06-23-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-23-93	USGS	NWQL	1,110	7.9	--	24.0	24	726	5.9	74
442150098120602	05-29-91	USGS	NWQL	1,420	9.0	--	22.5	.40	--	6.8	--
(Huron Water	07-16-91	USGS	NWQL	860	9.0	--	25.5	.30	--	6.3	--
Treatment Plant	04-14-92	USGS	SDDHL	--	--	--	--	--	--	--	--
effluent)	04-14-92	USGS	NWQL	1,250	8.5	--	11.5	6.6	731	9.6	92
	05-28-92	USGS	NWQL	1,590	8.7	--	15.5	.50	--	8.1	81
	06-03-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-03-92	USGS	USGS	1,600	8.4	--	18.5	--	--	7.7	--
	06-23-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-23-92	USGS	NWQL	883	8.4	--	21.0	.50	--	7.1	--
	03-30-93	USGS	NWQL	923	8.9	9.0	5.0	1.3	728	12.5	103
	04-06-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-25-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-25-93	USGS	NWQL	1,080	8.9	12.0	17.5	1.0	736	7.7	84
	06-23-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-23-93	USGS	NWQL	976	8.9	--	20.5	.20	726	7.1	83
442150098174401	01-08-91	SDSU	SDSU	1,580	7.6	--	9.0	--	--	.1	--
(CO-05-90)	04-04-91	SDSU	SDSU	1,560	7.4	--	11.0	--	--	.0	--
	05-20-91	SDSU	SDSU	1,570	7.5	--	11.0	--	--	.2	--
	05-28-91	SDSU	SDSU	1,550	7.2	--	11.5	--	--	.0	--
	05-28-91	USGS	NWQL	1,550	7.2	--	11.5	2.9	--	.0	--
	07-15-91	USGS	NWQL	1,510	7.4	--	13.0	5.2	--	.0	--
	09-18-91	USGS	NWQL	1,560	7.5	12.0	10.5	2.0	732	.1	1
	12-23-91	USGS	NWQL	1,460	7.1	-5.5	10.5	2.4	--	.1	--
	01-22-92	USGS	USGS	1,500	7.3	6.5	10.5	--	--	.2	--
	03-25-92	USGS	SDDHL	--	--	--	--	--	--	--	--

Oxidation-reduction potential, field (mV) (00090)	Coliform, fecal, 0.7 µm-mf (cols/ 100 mL) (31625)	Streptococci fecal, KF agar (cols per 100 mL) (31673)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Alkalinity, field, filtered, IT mg/L as $CaCO_3$ (39086)	Bicarbonate, field, FET mg/L as HCO_3 (00440)	Bicarbonate, field, filtered mg/L as HCO_3 (00453)	Carbonate, field, FET mg/L as CO_3 (00447)	Carbonate, field, filtered mg/L as CO_3 (00452)	Calcium (mg/L as Ca) (00916)	Calcium, filtered (mg/L as Ca) (01915)	Megnesium (mg/L as Mg) (00927)
--	--	--	420	--	251	--	306	--	0	--	88	--
--	--	--	310	--	253	--	308	--	0	--	68	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K55	K5	200	369	369	--	349	--	50	--	35	--
209	--	--	540	349	356	--	376	--	29	--	120	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	40	60	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
150	500	940	140	115	114	--	140	--	0	--	31	--
--	K11	K35	260	--	227	--	223	--	26	--	54	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K25	K35	340	--	237	--	262	--	13	--	69	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	82	82	340	--	220	--	268	--	0	--	72	--
--	--	--	220	--	51	--	40	--	11	--	53	--
--	--	--	140	--	48	--	44	--	7	--	37	--
--	--	--	--	--	--	--	--	--	--	--	--	--
149	K0	K0	460	74	74	--	78	--	6	--	100	--
213	--	--	300	73	73	--	73	--	8	--	58	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	160	--	58	--	66	--	2	--	41	--
--	0	0	170	--	55	--	60	--	4	--	53	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	190	--	61	--	57	--	8	--	43	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	240	--	93	--	82	--	16	--	74	--
-68	--	--	--	465	--	567	--	0	--	--	--	11
--	--	--	--	458	--	558	--	0	--	--	--	12
-53	--	--	--	456	--	556	--	0	--	--	--	11
-59	--	--	--	467	--	569	--	0	--	--	--	10
--	--	--	150	--	478	--	583	--	0	--	45	--
--	--	--	150	--	452	--	551	--	0	--	44	--
--	--	--	160	479	489	--	596	--	0	--	46	--
--	--	--	160	--	455	--	555	--	0	--	46	--
--	<1	<1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Magnesium, filtered (mg/L as Mg) (00925)	Sodium, (mg/L as Na) (00929)	Sodium, filtered (mg/L as Ns) (00930)	Sodium percent (00932)	Sodium adsorption ratio (00931)	Potassium, filtered (mg/L as K) (00935)	Alkalinity, lsb (mg/L as $CaCO_3$) (90410)	Sulfste (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as CL) (00940)
442150098120601	05-29-91	48	--	170	46	4	20	252	--	420	110
(James River at	07-15-91	35	--	98	39	2	19	253	--	230	66
Morningside)	04-14-92	--	--	--	--	--	--	--	--	--	--
	04-14-92	28	--	160	60	5	20	--	--	320	130
	05-28-92	58	--	200	44	4	21	353	--	420	170
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	14	--	57	45	2	11	119	--	94	42
	03-30-93	30	--	120	48	3	17	222	--	190	83
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	41	--	130	44	3	17	270	--	290	75
	06-23-93	--	--	--	--	--	--	--	--	--	--
	06-23-93	39	--	96	37	2	16	214	--	320	44
442150098120602	05-29-91	20	--	190	63	6	20	48	--	440	100
(Huron Water	07-16-91	12	--	100	56	4	23	45	--	240	69
Treatment	04-14-92	--	--	--	--	--	--	--	--	--	--
Plant effluent)	04-14-92	50	--	170	44	3	19	--	--	290	140
	05-28-92	37	--	210	58	5	22	74	--	440	170
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	14	--	100	54	3	17	59	--	230	83
	03-30-93	9.9	--	100	53	3	15	51	--	260	71
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	19	--	130	57	4	19	65	--	330	83
	06-23-93	--	--	--	--	--	--	--	--	--	--
	06-23-93	13	--	110	48	3	15	90	--	330	57
442150098174401	01-08-91	--	350	--	--	--	--	--	300	--	51
(CO-05-90)	04-04-91	--	300	--	--	--	--	--	310	--	41
	05-20-91	--	290	--	--	--	--	--	310	--	41
	05-28-91	--	300	--	--	--	--	--	310	--	40
	05-28-91	9.9	--	280	79	10	9.5	466	--	300	40
	07-15-91	10	--	310	80	11	10	461	--	320	43
	09-18-91	10	--	300	79	10	11	470	--	300	46
	12-23-91	10	--	300	79	10	10	477	--	330	46
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	--	--	--	--	--	--	--

Fluoride, filtered (mg/L as F) (00950)	Silica, filtered (mg/L as SiO2) (00955)	Solids, sum of constituents, filtered (mg/L) (70301)	Solids, residue at 180 deg C, filtered (mg/L) (70300)	Solids, filtered (tons per acre-feet) (70303)	Solids, residue at 105 deg C (mg/L) (00500)	Residue at 105 deg C, filtered (mg/L) (00515)	Residue et 105 deg C, suspended (mg/L) (00530)	Nitrogen,emmonia, (mg/L as N) (00610)	Nitrogen, ammonia, filtered (mg/L es N) (00608)	Nitrogen, ammonie, filtered (mg/L as NH_4) (71846)	Nitrogen, ammonie + organic (mg/L as N) (00625)	Nitrogen, emmonia + organic, filtered (mg/L as N) (00623)
0.30	9.1	1,020	1,030	1.40	1,120	1,040	--	--	--	--	--	--
.30	17	687	706	.96	762	738	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	<0.020	--	--	0.96
1.3	9.6	926	752	1.02	790	797	28	--	--	--	--	--
.20	17	1,220	1,290	1.75	1,330	1,300	32	--	--	--	--	--
--	--	--	--	--	--	--	--	--	<.020	--	--	1.2
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.260	0.33	--	1.4
.20	9.8	329	356	.48	439	357	86	--	--	--	--	--
.20	12	643	688	.94	728	726	35	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.180	.23	--	3.7
--	--	--	--	--	--	--	--	--	<.020	--	--	1.1
.30	15	781	826	1.12	884	860	32	--	--	--	--	--
--	--	--	--	--	--	--	--	--	<.020	--	--	1.1
.20	22	742	764	1.04	880	818	48	--	--	--	--	--
.90	4.6	860	911	1.24	938	944	--	--	--	--	--	--
.80	8.8	520	558	.76	558	558	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.830	1.1	--	1.6
.40	11	826	1,030	1.40	1,070	1,070	37	--	--	--	--	--
1.2	11	994	1,040	1.41	1,060	1,070	5	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.590	.76	--	1.6
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.970	1.2	--	1.7
1.4	8.3	530	533	.72	549	561	6	--	--	--	--	--
1.2	8.6	553	564	.77	594	589	18	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.650	.84	--	1.6
--	--	--	--	--	--	--	--	--	1.09	1.4	--	1.6
1.3	9.2	671	692	.94	702	706	<1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.810	1.0	--	2.0
1.3	13	670	690	.94	714	722	4	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
.40	31	1,000	1,010	1.37	1,070	1,050	--	--	--	--	--	--
.40	30	1,040	1,010	1.37	1,040	1,030	--	--	--	--	--	--
.50	30	1,040	1,020	1.39	1,000	--	--	--	--	--	--	--
.60	29	1,050	1,080	1.47	1,070	884	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.570	.73	--	1.1

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nitrogen, nitrite (mg/L as N) (00615)	Nitrogen, nitrite, filtered (mg/L as N) (00613)	Nitrogen, NO_2+NO_3 (mg/L as N) (00630)	Nitrogen, NO_2+NO_3, filtered (mg/L as N) (00631)	Phosphorus (mg/L as P) (00665)	Phosphorus ortho (mg/L as P) (70507)	Phosphorus ortho, filtered (mg/L as P) (00671)	Arsenic, filtered (µg/L as As) (01000)	Barium, filtered (µg/L as Ba) (01005)	Beryllium, filtered (µg/L as Be) (01010)
442150098120601	05-29-91	--	--	--	--	--	--	--	3	76	<0.5
(James River at	07-15-91	--	--	--	--	--	--	--	5	71	<.5
Morningside)	04-14-92	--	--	--	<0.100	--	--	0.135	--	--	--
	04-14-92	--	--	--	--	--	--	--	<1	7	<.5
	05-28-92	--	--	--	--	--	--	--	4	100	.7
	06-03-92	--	--	--	.100	0.146	--	.130	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	.300	.392	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	4	71	<.5
	03-30-93	--	--	--	--	--	--	--	3	36	<.5
	04-06-93	--	--	--	.500	.412	--	.362	--	--	--
	05-25-93	--	--	--	<.100	.149	--	.150	--	--	--
	05-25-93	--	--	--	--	--	--	--	4	65	<.5
	06-23-93	--	--	--	<.100	.498	--	.210	--	--	--
	06-23-93	--	--	--	--	--	--	--	4	67	1
442150098120602	05-29-91	--	--	--	--	--	--	--	1	20	<.5
(Huron Water	07-16-91	--	--	--	--	--	--	--	<1	13	<.5
Treatment	04-14-92	--	--	--	<.100	.594	--	.087	--	--	--
Plant effluent)	04-14-92	--	--	--	--	--	--	--	3	62	<.5
	05-28-92	--	--	--	--	--	--	--	<1	18	.7
	06-03-92	--	--	--	.100	.578	--	.063	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	.200	.541	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	<1	12	<.5
	03-30-93	--	--	--	--	--	--	--	<1	8	<.5
	04-06-93	--	--	--	.400	.295	--	.027	--	--	--
	05-25-93	--	--	--	.100	.462	--	.063	--	--	--
	05-25-93	--	--	--	--	--	--	--	<1	13	<.5
	06-23-93	--	--	--	.300	.525	--	.118	--	--	--
	06-23-93	--	--	--	--	--	--	--	<1	17	1
442150098174401	01-08-91	--	--	--	--	--	--	--	--	--	--
(CO-05-90)	04-04-91	--	--	--	--	--	--	--	--	--	--
	05-20-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	1	23	<.5
	07-15-91	--	--	--	--	--	--	--	<1	24	<.5
	09-18-91	--	--	--	--	--	--	--	1	23	<.5
	12-23-91	--	--	<0.050	--	.120	--	--	1	23	<.5
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	<.100	.133	--	<.005	--	--	--
	03-25-92	--	--	--	--	--	--	--	1	23	<.5

Boron, filtered (µg/L as B) (01020)	Cadmium, filtered (µg/L es Cd) (01025)	Chromium, filtered (µg/L es Cr) (01030)	Cobait, filtered (µg/L as Co) (01035)	Copper, filtered (µg/L as Cu) (01040)	Iron (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Lead, filtered (µg/L as Pb) (01049)	Lithium, filtered (µg/L es Li) (01130)	Manganese (µg/L es Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)	Mercury, filtered (µg/L as Hg) (71890)	Molybdenum, filtered (µg/L as Mo) (01060)
400	<1.0	<5	<3	20	--	20	<10	74	--	110	<0.1	<10
310	<1.0	<5	<3	<10	--	9	<10	49	--	890	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
350	<1.0	<5	<3	<10	--	14	<10	76	--	9	<.1	<10
550	<1.0	<5	<3	<10	--	<3	<10	88	--	810	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
200	<1.0	<5	<3	<10	--	78	<10	24	--	190	<.1	<10
300	<1.0	<5	<3	<10	--	33	<10	49	--	310	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
330	<1.0	<5	<3	<10	--	<3	<10	67	--	590	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
280	<1.0	<5	<3	<10	--	20	<10	59	--	550	<.1	<10
400	<1.0	<5	<3	<10	--	7	<10	70	--	2	<.1	<10
200	<1.0	<5	<3	<10	--	9	<10	52	--	3	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
420	<1.0	<5	<3	20	--	7	<10	79	--	120	<.1	<10
410	<1.0	<5	<3	<10	--	4	<10	94	--	4	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
230	<1.0	<5	<3	<10	--	5	<10	50	--	3	<.1	<10
230	<1.0	<5	<3	<10	--	3	<10	52	--	4	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
210	<1.0	<5	<3	<10	--	<3	<10	68	--	2	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
180	1.0	<5	<3	<10	--	6	<10	61	--	4	<.1	<10
--	--	--	--	--	2,400	--	--	--	1,200	--	--	--
--	--	--	--	--	1,400	--	--	--	1,100	--	--	--
--	--	--	--	--	1,300	--	--	--	690	--	--	--
--	--	--	--	--	1,100	--	--	--	460	--	--	--
350	<1.0	<5	<3	<10	--	1,000	<10	83	--	460	<.1	10
350	<1.0	<5	<3	<10	--	1,000	<10	89	--	430	<.1	<10
--	<1.0	<5	<3	<10	--	1,100	10	87	--	450	<.1	<10
260	<1.0	<5	<3	<10	--	1,100	<10	90	--	440	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
340	1.0	<5	<3	<10	--	1,100	<10	91	--	440	<.1	10

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nickel, filtered (µg/L as Ni) (01065)	Sele-nium, filtered (µg/L es Se) (01145)	Sliver, filtered (µg/L as Ag) (01075)	Stron-tium, filtered (µg/L as Sr) (01080)	Vana-dium, filtered (µg/L as V) (01085)	Zinc, filtered (µg/L as Zn) (01090)	Gross alpha, filtered (µg/L as natural uranium) (80030)	Alpha, count, 2 sigma, filtered as natural uranium (µg/L) (75986)	Alpha radio, filtered as Th-230 (pcl/L) (04126)	Alpha count, 2 sigma, filtered as Th-230 (pcl/L) (75987)
442150098120601	05-29-91	10	<1	<1.0	550	<6	13	<0.6	3.9	--	<0.60
(James River at	07-15-91	<10	<1	3.0	460	<6	6	2.4	3.5	--	1.7
Morningside)	04-14-92	--	--	--	--	--	--	--	--	--	--
	04-14-92	<10	<1	<1.0	240	<6	<3	<.6	2.7	<0.6	2.1
	05-28-92	<10	<1	<1.0	770	<6	5	.8	4.7	<.6	3.6
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	<10	<1	<1.0	180	<6	12	1.2	1.5	.8	1.1
	03-30-93	<10	<1	<1.0	360	<6	<3	<.6	2.0	<.6	1.5
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	<10	<1	<1.0	460	<6	7	1.1	3.0	.8	2.3
	06-23-93	--	--	--	--	--	--	--	--	--	--
	06-23-93	<10	<1	<1.0	490	<6	<3	1.2	3.1	.8	2.2
442150098120602	05-29-91	<10	<1	<1.0	370	<6	<3	<.6	4.0	--	<.60
(Huron Water	07-16-91	<10	<1	<1.0	240	<6	4	1.2	2.5	--	.90
Treatment	04-14-92	--	--	--	--	--	--	--	--	--	--
Plant effuent)	04-14-92	<10	<1	<1.0	620	<6	11	3.7	4.5	2.8	3.4
	05-28-92	<10	<1	1.0	370	<6	<3	1.0	4.2	.7	2.7
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	<10	<1	<1.0	240	<6	<3	<.6	2.1	<.6	1.5
	03-30-93	<10	<1	<1.0	230	<6	17	.8	2.4	.6	1.7
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	<10	<1	<1.0	250	<6	25	<.6	2.4	<.6	1.8
	06-23-93	--	--	--	--	--	--	--	--	--	--
	06-23-93	<10	<1	<1.0	330	<6	15	<.6	2.7	<.6	2.0
442150098174401	01-08-91	--	--	--	--	--	--	--	--	--	--
(CO-05-90)	04-04-91	--	--	--	--	--	--	--	--	--	--
	05-20-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	<10	<1	1.0	450	<6	<3	1.0	5.6	--	.80
	07-15-91	<10	<1	<1.0	460	<6	5	6.9	6.6	--	5.0
	09-18-91	<10	<1	<1.0	440	<6	<3	4.4	6.8	--	3.1
	12-23-91	<10	<1	<1.0	440	<6	<3	<.6	3.7	--	<.60
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	--	--	--	--	--	--	--

Gross alpha, filtered (pci/L as U-natural) (01515)	Alpha, filtered, counting error (pci/L) (01504)	Gross beta, filtered (pci/L as CS-137) (03515)	Beta, 2 sigma, filtered as CS-137 (pci/L) (75989)	Gross beta, filtered (pci/L as Sr/ Yt-90) (80050)	Beta, 2 sigma, filtered as Sr90/ Y90 (pci/L) (75988)	Gross beta, counting error (pci/L as Sr90) (03528)	Radium 226, filtered, radon method (pci/L) (09511)	Radium 226, filtered, counting error (pci/L) (09504)	Radium 228, filtered (pci/L as Ra-228) (81366)	Radium 228, filtered, counting error (pci/L) (81367)	Carbon, organic (mg/L aa C) (00680)
--	--	29	5.3	22	3.9	--	--	--	--	--	13
--	--	11	2.6	8.2	2.0	--	--	--	--	--	15
6.6	8.6	--	--	24	--	6.4	0.10	0.1	0.0	2.4	--
--	--	20	3.6	15	2.7	--	--	--	--	--	8.9
--	--	31	5.9	23	4.4	--	--	--	--	--	14
2.8	11	--	--	24	--	8.2	.30	.2	.0	.40	--
--	--	--	--	--	--	--	--	--	--	--	--
1.4	4.2	--	--	22	--	3.3	.50	.1	.70	.70	--
--	--	16	2.5	12	1.9	--	--	--	--	--	12
--	--	21	3.6	16	2.7	--	--	--	--	--	21
5.9	5.0	--	--	21	--	3.9	.20	.1	.10	.03	--
1.7	6.6	--	--	19	--	6.0	.40	.2	.30	.10	--
--	--	25	4.4	18	3.3	--	--	--	--	--	18
5.7	6.6	--	--	21	--	4.9	.40	.3	.70	.20	--
--	--	26	4.4	20	3.3	--	--	--	--	--	17
--	--	24	4.3	18	3.2	--	--	--	--	--	6.6
--	--	7.5	1.8	5.6	1.3	--	--	--	--	--	7.3
4.5	6.4	--	--	22	--	4.6	.10	.1	.0	.40	--
--	--	29	5.5	22	4.1	--	--	--	--	--	16
--	--	31	5.3	23	4.0	--	--	--	--	--	7.8
0	7.4	--	--	17	--	6.1	.10	.1	.0	.40	--
--	--	--	--	--	--	--	--	--	--	--	--
0	4.0	--	--	14	--	3.3	.10	.1	.0	.80	--
--	--	21	3.4	16	2.5	--	--	--	--	--	5.8
--	--	22	3.3	16	2.5	--	--	--	--	--	6.3
1.8	4.4	--	--	19	--	3.1	.0	.1	.60	.20	--
1.8	5.4	--	--	23	--	4.6	.0	.1	.0	.02	--
--	--	27	4.1	20	3.1	--	--	--	--	--	8.0
0	5.4	--	--	15	--	4.0	.0	.2	.50	.20	--
--	--	27	4.2	20	3.2	--	--	--	--	--	8.0
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	14	3.6	10	2.7	--	--	--	--	--	6.4
--	--	3.4	2.1	2.6	1.6	--	--	--	--	--	6.4
--	--	12	3.3	9.1	2.5	--	--	--	--	--	6.0
--	--	15	3.6	11	2.7	--	--	--	--	--	6.8
--	--	--	--	--	--	--	--	--	--	--	--
0	7.6	--	--	5.6	--	3.8	.10	.1	.0	.04	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency enelyzing semple	Specific conduct-ence, field (µS/cm) (00095)	pH, field (stand-srd units) (00400)	Temper-ature, air, field (deg C) (00020)	Temper-ature, water, field (deg C) (00010)	Tur-bidity, field (NTU) (00076)	Baro-metric pressure, field (mm of Hg) (00025)	Dis-solved oxygen, field (mg/L) (00300)	Dissolved oxygen, percent satur-ation, field (00301)
442150098174401	03-25-92	USGS	NWQL	1,550	7.1	8.5	10.5	2.1	730	0.2	1
(CO-05-90)–Cont.	04-15-92	USGS	NWQL	1,540	7.4	8.5	10.5	--	728	.1	1
	04-17-92	SDSU	SDSU	1,540	7.3	--	10.5	--	--	.1	--
	05-18-92	SDSU	SDSU	1,540	7.3	--	11.0	--	--	.2	--
	05-27-92	USGS	NWQL	1,540	7.3	15.5	10.5	2.5	732	.2	1
	06-04-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-04-92	USGS	USGS	1,550	7.2	15.5	11.0	--	724	.1	1
	06-12-92	SDSU	SDSU	1,550	7.1	--	11.0	--	--	.1	--
	07-01-92	SDSU	SDSU	1,610	7.2	--	10.5	--	--	.1	--
	07-16-92	SDSU	SDSU	1,550	7.1	--	11.5	--	--	.1	--
	08-13-92	SDSU	SDSU	1,540	7.5	--	10.5	--	--	.2	--
	09-16-92	SDSU	SDSU	1,500	7.3	--	11.5	--	--	.2	--
	09-22-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	09-22-92	USGS	NWQL	1,500	7.6	19.5	10.5	2.5	737	.1	1
	10-02-92	SDSU	SDSU	1,510	7.5	--	11.0	--	--	.1	--
	10-21-92	SDSU	SDSU	1,500	7.2	--	10.5	--	--	.2	--
	11-19-92	SDSU	SDSU	1,450	7.3	--	10.0	--	--	.2	--
	12-10-92	SDSU	SDSU	1,500	7.4	--	10.0	--	--	.1	--
	12-15-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	12-15-92	USGS	NWQL	1,460	7.4	7.5	10.5	2.7	721	.1	1
	01-05-93	SDSU	SDSU	1,470	7.5	--	9.5	--	--	.2	--
	01-18-93	SDSU	SDSU	1,370	7.4	--	10.0	--	--	.3	--
	02-06-93	SDSU	SDSU	1,450	7.4	--	10.0	--	--	.2	--
	02-25-93	SDSU	SDSU	1,410	7.4	--	9.5	--	--	.1	--
	03-20-93	SDSU	SDSU	1,440	7.2	--	10.5	--	--	.2	--
	03-31-93	USGS	NWQL	1,570	7.5	1.0	9.5	3.3	728	.1	1
	04-06-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-26-93	USGS	NWQL	1,560	7.3	20.0	10.5	3.0	732	.1	1
	05-27-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-22-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-22-93	USGS	NWQL	1,540	7.3	23.0	11.0	2.0	723	.2	2
	07-28-93	SDSU	SDSU	1,560	7.5	--	11.0	--	--	.1	--
	08-25-93	SDSU	SDSU	2,030	7.9	--	11.5	--	--	.2	--
	09-08-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	09-08-93	USGS	NWQL	1,560	7.6	24.0	11.0	1.8	727	.1	1
	09-22-93	SDSU	SDSU	1,550	7.5	--	10.5	--	--	.1	--
442124098181601	01-08-91	SDSU	SDSU	1,800	7.6	--	9.5	--	--	.2	--
(CO-14-90)	04-04-91	SDSU	SDSU	1,790	7.4	--	11.5	--	--	.0	--
	05-20-91	SDSU	SDSU	1,800	7.5	--	11.0	--	--	.4	--
	05-28-91	SDSU	SDSU	1,790	7.5	--	11.5	--	--	.0	--
	05-28-91	USGS	NWQL	1,790	7.5	--	11.5	22	--	.0	--
	06-25-91	SDSU	SDSU	1,800	7.4	--	12.5	--	--	.0	--
	07-22-91	SDSU	SDSU	1,800	7.4	--	12.0	--	--	.1	--
	08-14-91	SDSU	SDSU	1,630	7.7	--	11.5	--	--	.1	--
	08-26-91	SDSU	SDSU	1,790	7.6	--	11.5	--	--	.1	--
	09-16-91	SDSU	SDSU	1,790	7.4	--	11.0	--	--	.0	--

Oxidation-reduction potential, field (mV) (00090)	Coliform, fecal, 0.7 µm-mf (cols/ 100 mL) (31625)	Streptococci fecal, KF agar (cols per 100 mL) (31673)	Hardness (mg/L as $CaCO_3$) (00900)	Alkalinity, field, FET mg/L as $CaCO_3$ (00410)	Alkalinity, field, filtered, IT mg/L as $CaCO_3$ (39086)	Bicarbonate, field, FET mg/L as HCO_3 (00440)	Bicarbonate, field, filtered mg/L as HCO_3 (00453)	Carbonate, field, FET mg/L as CO_3 (00447)	Carbonate, field, filtered mg/L as CO_3 (00452)	Calcium (mg/L as Ca) (00916)	Calcium, filtered (mg/L as Ca) (00915)	Magnesium (mg/L aa Mg) (00927)
--	--	--	150	440	449	--	548	--	0	--	44	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
142	--	--	140	460	--	561	--	0	--	--	40	--
93	--	--	150	461	--	562	--	0	--	--	40	--
95	--	--	150	468	478	--	583	--	0	--	45	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
129	--	--	150	464	--	566	--	0	--	--	42	--
40	--	--	130	452	--	551	--	0	--	--	39	--
-80	--	--	140	450	--	549	--	0	--	--	41	--
-52	--	--	110	462	--	563	--	0	--	--	30	--
-37	--	--	140	452	--	551	--	0	--	--	40	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	150	--	465	--	567	--	0	--	44	--
-82	--	--	150	451	--	550	--	0	--	--	43	--
-111	--	--	150	462	--	563	--	0	--	--	43	--
-21	--	--	150	460	--	561	--	0	--	--	44	--
133	--	--	150	476	--	580	--	0	--	--	42	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	150	--	441	--	539	--	0	--	43	--
84	--	--	160	462	--	563	--	0	--	--	47	--
55	--	--	150	460	--	561	--	0	--	--	44	--
95	--	--	150	463	--	565	--	0	--	--	43	--
-88	--	--	150	477	--	582	--	0	--	--	43	--
17	--	--	--	457	--	557	--	0	--	--	--	--
--	0	0	150	--	441	--	538	--	0	--	44	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	150	--	462	--	562	--	0	--	43	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	150	--	459	--	560	--	0	--	44	--
--	--	--	150	484	--	590	--	0	--	--	42	--
--	--	--	150	--	--	--	--	0	--	--	42	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	160	--	458	--	559	--	0	--	48	--
--	--	--	150	482	--	588	--	0	--	--	41	--
-47	--	--	--	480	--	585	--	0	--	--	--	16
-81	--	--	--	437	--	533	--	0	--	--	--	18
-78	--	--	--	454	--	553	--	0	--	--	--	18
-96	--	--	--	461	--	562	--	0	--	--	--	18
--	--	--	240	--	447	--	545	--	0	--	68	--
-124	--	--	--	433	--	528	--	0	--	--	--	18
-106	--	--	--	432	--	527	--	0	--	--	--	19
-131	--	--	--	447	--	545	--	0	--	--	--	18
-147	--	--	--	484	--	590	--	0	--	--	--	18
-136	--	--	--	460	--	561	--	0	--	--	--	18

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station numbar (other identifier)	Date	Magnesium, filterad (mg/L as Mg) (00925)	Sodium, (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium percent (00932)	Sodium adsorption ratio (00931)	Potassium, filtarad (mg/L as K) (00935)	Alkalinity, lab (mg/L as $CaCO_3$) (90410)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chlorida, filtered (mg/L as CL) (00940)
442150098174401	03-25-92	9.9	--	300	80	11	8.0	460	--	290	44
(CO-05-90)–Cont.	04-15-92	--	--	--	--	--	--	--	--	--	--
	04-17-92	10	--	370	--	13	--	--	--	300	39
	05-18-92	12	--	290	--	10	--	--	--	310	39
	05-27-92	9.5	--	290	79	10	9.5	461	--	280	45
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-12-92	10	--	280	--	10	--	--	--	310	40
	07-01-92	9.0	--	280	--	11	--	--	--	400	41
	07-16-92	9.7	--	260	--	10	--	--	--	300	39
	08-13-92	8.5	--	280	--	12	--	--	--	320	42
	09-16-92	9.8	--	320	--	12	--	--	--	320	41
	09-22-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	9.5	--	290	80	10	10	465	--	290	42
	10-02-92	10	--	310	--	11	--	--	--	310	40
	10-21-92	9.8	--	300	--	11	--	--	--	310	41
	11-19-92	10	--	300	--	11	--	--	--	300	44
	12-10-92	10	--	290	--	10	--	--	--	300	40
	12-15-92	--	--	--	--	--	--	--	--	--	--
	12-15-92	9.8	--	290	80	10	10	452	--	300	39
	01-05-93	9.9	--	300	--	10	--	--	--	300	40
	01-18-93	9.8	--	310	--	11	--	--	--	300	40
	02-06-93	9.7	--	290	--	10	--	--	--	310	40
	02-25-93	9.5	--	290	--	11	--	--	--	310	41
	03-20-93	--	--	--	--	--	--	--	--	330	41
	03-31-93	9.6	--	280	79	10	9.9	465	--	290	40
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	9.5	--	280	79	10	10	458	--	300	40
	05-27-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	9.5	--	290	79	10	11	451	--	300	38
	07-28-93	9.8	--	320	--	12	--	--	--	300	38
	08-25-93	9.9	--	320	--	11	--	--	--	330	40
	09-08-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	10	--	300	79	10	9.6	455	--	300	39
	09-22-93	11	--	300	--	11	--	--	--	310	37
442124098181601	01-08-91	--	330	--	--	--	--	--	360	--	37
(CO-14-90)	04-04-91	--	310	--	--	--	--	--	460	--	34
	05-20-91	--	310	--	--	--	--	--	470	--	34
	05-28-91	--	310	--	--	--	--	--	480	--	33
	05-28-91	17	--	310	73	9	12	449	--	470	34
	06-25-91	--	310	--	--	--	--	--	460	--	33
	07-22-91	--	320	--	--	--	--	--	440	--	34
	08-14-91	--	310	--	--	--	--	--	470	--	37
	08-26-91	--	330	--	--	--	--	--	460	--	30
	09-16-91	--	340	--	--	--	--	--	480	--	34

Fluo-ride, filtered (mg/L es F) (00950)	Silica, filtered (mg/L as Si02) (00955)	Solids, sum of consti-tuents, filtered (mg/L) (70301)	Solids, residue st 180 deg C, filtered (mg/L) (70300)	Solids, filtered (tons per ecre-feet) (70303)	Solids, residue at 105 deg C (mg/L) (00500)	Residue at 105 deg C, filtered (mg/L) (00515)	Residue at 105 deg C, sus-pended (mg/L) (00530)	Nitro-gen,em-monia, (mg/L as N) (00610)	Nitro-gen, em-monie, filtered (mg/L es N) (00608)	Nitro-gen, am-monia, filtered (mg/L es NH_4) (71846)	Nitrogen, ammonia + organic (mg/L as N) (00625)	Nitrogen, ammonie + organic, filtered (mg/L es N) (00623)
0.40	29	997	1,010	1.37	1,010	1,010	<1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
.50	28	997	1,030	1.40	1,030	1,020	11	--	--	--	--	--
--	--	--	--	--	--	--	--	--	0.550	0.71	--	1.3
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.650	.84	--	1.3
.30	29	996	1,030	1.40	1,030	1,040	<1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.600	.77	--	1.1
.40	30	990	996	1.35	1,020	1,100	25	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
.40	29	970	1,030	1.40	1,040	1,040	14	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.480	.62	--	1.3
.40	29	991	1,020	1.39	1,060	1,060	1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.930	1.2	--	1.2
--	--	--	--	--	--	--	--	--	.490	.63	--	1.1
.40	29	1,000	1,030	1.40	1,040	1,020	5	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.490	.63	--	1.3
.40	31	1,020	1,030	1.40	1,020	1,020	3	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
.40	31	1,210	1,230	1.67	1,210	1,300	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nitrogen, nitrite (mg/L as N) (00615)	Nitrogen, nitrite, filtered (mg/L as N) (00613)	Nitrogen, NO_2+NO_3 (mg/L es N) (00630)	Nitrogen, NO_2+NO_3, filtered (mg/L as N) (00631)	Phosphorus (mg/L as P) (00665)	Phosphorus ortho (mg/L as P) (70507)	Phosphorus ortho, filtered (mg/L as P) (00671)	Arsenic, filtered (µg/L as As) (01000)	Barium, filtered (µg/L as Ba) (01005)	Beryllium, filtered (µg/L as Be) (01010)
442150098174401	04-15-92	--	--	--	--	--	--	--	--	--	--
(CO-05-90)–Cont.	04-17-92	--	--	--	--	--	--	--	--	--	--
	05-18-92	--	--	--	--	--	--	--	--	--	--
	05-27-92	--	--	--	--	--	--	--	2	16	<0.5
	06-04-92	--	--	--	<0.100	0.120	--	0.035	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-12-92	--	--	--	--	--	--	--	--	--	--
	07-01-92	--	--	--	--	--	--	--	--	--	--
	07-16-92	--	--	--	--	--	--	--	--	--	--
	08-13-92	--	--	--	--	--	--	--	--	--	--
	09-16-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	<.100	.116	--	.031	--	--	--
	09-22-92	--	--	--	--	--	--	--	<1	20	<.5
	10-02-92	--	--	--	--	--	--	--	--	--	--
	10-21-92	--	--	--	--	--	--	--	--	--	--
	11-19-92	--	--	--	--	--	--	--	--	--	--
	12-10-92	--	--	--	--	--	--	--	--	--	--
	12-15-92	--	--	--	<.100	.073	--	.033	--	--	--
	12-15-92	--	--	--	--	--	--	--	2	19	<.5
	01-05-93	--	--	--	--	--	--	--	--	--	--
	01-18-93	--	--	--	--	--	--	--	--	--	--
	02-06-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	03-20-93	--	--	--	--	--	--	--	--	--	--
	03-31-93	--	--	--	--	--	--	--	1	19	<.5
	04-06-93	--	--	--	<.100	.129	--	.032	--	--	--
	05-26-93	--	--	--	--	--	--	--	1	20	<.5
	05-27-93	--	--	--	<.100	.120	--	.029	--	--	--
	06-22-93	--	--	--	<.100	.136	--	.022	--	--	--
	06-22-93	--	--	--	--	--	--	--	1	19	<.5
	07-28-93	--	--	--	--	--	--	--	--	--	--
	08-25-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	--	--	--	<.100	.109	--	.031	--	--	--
	09-08-93	--	--	--	--	--	--	--	<1	20	<.5
	09-22-93	--	--	--	--	--	--	--	--	--	--
442124098181601	01-08-91	--	--	--	--	--	--	--	--	--	--
(CO-14-90)	04-04-91	--	--	--	--	--	--	--	--	--	--
	05-20-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	4	18	<.5
	06-25-91	--	--	--	--	--	--	--	--	--	--
	07-22-91	--	--	--	--	--	--	--	--	--	--
	08-14-91	--	--	--	--	--	--	--	--	--	--
	08-26-91	--	--	--	--	--	--	--	--	--	--
	09-16-91	--	--	--	--	--	--	--	--	--	--

Boron, filtered (µg/L as B) (01020)	Cadmium, filtered (µg/L as Cd) (01025)	Chromium, filtered (µg/L aa Cr) (01030)	Cobalt, filtered (µg/L as Co) (01035)	Copper, filtered (µg/L as Cu) (01040)	Iron (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Lead, filtered (µg/L as Pb) (01049)	Lithium, filtered (µg/L as Li) (01130)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)	Mercury, filtered (µg/L as Hg) (71890)	Molybdenum, filtered (µg/L ae Mo) (01060)
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	1,000	--	--	--	460	--	--
--	--	--	--	--	--	1,000	--	--	--	460	--	--
310	<1.0	<5	<3	<10	--	1,100	<10	88	--	430	<0.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	1,000	--	--	--	450	--	--
--	--	--	--	--	--	1,000	--	--	--	440	--	--
--	--	--	--	--	--	1,000	--	--	--	440	--	--
--	--	--	--	--	--	1,000	--	--	--	450	--	--
--	--	--	--	--	--	1,100	--	--	--	440	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
340	<1.0	<5	<3	<10	--	1,100	<10	85	--	410	<.1	10
--	--	--	--	--	--	1,100	--	--	--	430	--	--
--	--	--	--	--	--	1,100	--	--	--	440	--	--
--	--	--	--	--	--	1,100	--	--	--	430	--	--
--	--	--	--	--	--	1,100	--	--	--	440	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
350	<1.0	<5	<3	<10	--	1,100	<10	88	--	410	<.1	<10
--	--	--	--	--	--	1,100	--	--	--	450	--	--
--	--	--	--	--	--	1,100	--	--	--	450	--	--
--	--	--	--	--	--	1,000	--	--	--	450	--	--
--	--	--	--	--	--	1,200	--	--	--	440	--	--
--	--	--	--	--	--	1,200	--	--	--	440	--	--
340	1.0	<5	<3	<10	--	1,100	<10	80	--	400	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
330	<1.0	<5	<3	<10	--	1,100	<10	85	--	390	<.1	30
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
350	<1.0	<5	<3	<10	--	1,100	<10	84	--	410	<.1	20
--	--	--	--	--	--	1,100	--	--	--	440	--	--
--	--	--	--	--	--	1,200	--	--	--	460	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
330	<1.0	<5	<3	<10	--	1,200	<10	86	--	430	<.1	10
--	--	--	--	--	--	1,200	--	--	--	440	--	--
--	--	--	--	--	2,500	--	--	--	440	--	--	--
--	--	--	--	--	2,600	--	--	--	420	--	--	--
--	--	--	--	--	2,700	--	--	--	360	--	--	--
--	--	--	--	--	2,700	--	--	--	340	--	--	--
310	<1.0	<5	<3	<10	--	2,700	<10	97	--	350	<.1	10
--	--	--	--	--	2,800	--	--	--	360	--	--	--
--	--	--	--	--	2,800	--	--	--	360	--	--	--
--	--	--	--	--	2,700	--	--	--	350	--	--	--
--	--	--	--	--	2,700	--	--	--	370	--	--	--
--	--	--	--	--	2,800	--	--	--	340	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nickel, filtered (µg/L as Ni) (01065)	Selenium, filtered (µg/L es Se) (01145)	Silver, filtered (µg/L as Ag) (01075)	Strontium, filtered (µg/L as Sr) (01080)	Vanadium, filtered (µg/L as V) (01085)	Zinc, filtered (µg/L es Zn) (01090)	Gross alpha, filtered (µg/L as natural uranium) (80030)	Alpha, count, 2 sigma, filtered as natural uranium (µg/L) (75986)	Alpha radio, filterad as Th-230 (pci/L) (04126)	Alpha count, 2 sigma, filtered as Th-230 (pci/L) (75987)
442150098174401	03-25-92	<10	<1	<1.0	450	<6	<3	2.6	5.1	--	1.7
(CO-05-90)–Cont.	04-15-92	--	--	--	--	--	--	--	--	--	--
	04-17-92	--	--	--	--	--	--	--	--	--	--
	05-18-92	--	--	--	--	--	--	--	--	--	--
	05-27-92	<10	<1	<1.0	440	<6	<3	3.6	4.9	2.7	3.6
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-12-92	--	--	--	--	--	--	--	--	--	--
	07-01-92	--	--	--	--	--	--	--	--	--	--
	07-16-92	--	--	--	--	--	--	--	--	--	--
	08-13-92	--	--	--	--	--	--	--	--	--	--
	09-16-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	<10	<1	<1.0	430	<6	<3	2.2	4.4	1.6	3.1
	10-02-92	--	--	--	--	--	--	--	--	--	--
	10-21-92	--	--	--	--	--	--	--	--	--	--
	11-19-92	--	--	--	--	--	--	--	--	--	--
	12-10-92	--	--	--	--	--	--	--	--	--	--
	12-15-92	--	--	--	--	--	--	--	--	--	--
	12-15-92	<10	<1	<1.0	430	<6	4	1.5	4.4	1.1	3.3
	01-05-93	--	--	--	--	--	--	--	--	--	--
	01-18-93	--	--	--	--	--	--	--	--	--	--
	02-06-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	03-20-93	--	--	--	--	--	--	--	--	--	--
	03-31-93	<10	<1	<1.0	420	<6	3	<.6	2.1	<.6	1.6
	04-06-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	<10	<1	1.0	440	<6	5	1.4	4.5	1.0	3.2
	05-27-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	<10	<1	<1.0	420	<6	<3	2.5	4.6	1.8	3.3
	07-28-93	--	--	--	--	--	--	--	--	--	--
	08-25-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	<10	<1	<1.0	450	<6	<3	4.2	5.7	3.0	4.0
	09-22-93	--	--	--	--	--	--	--	--	--	--
442124098181601	01-08-91	--	--	--	--	--	--	--	--	--	--
(CO-14-90)	04-04-91	--	--	--	--	--	--	--	--	--	--
	05-20-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	<10	<1	<1.0	700	<6	3	3.3	6.1	--	2.3
	06-25-91	--	--	--	--	--	--	--	--	--	--
	07-22-91	--	--	--	--	--	--	--	--	--	--
	08-14-91	--	--	--	--	--	--	--	--	--	--
	08-26-91	--	--	--	--	--	--	--	--	--	--
	09-16-91	--	--	--	--	--	--	--	--	--	--

Gross alpha, filtered (pci/L as U-natural) (01515)	Alpha, filtered, counting error (pci/L) (01504)	Gross beta, filtered (pci/L es CS-137) (03515)	Beta, 2 sigme, filtered as CS-137 (pci/L) (75989)	Gross beta, filtered (pci/L es Sr/ Yt-90) (80050)	Beta, 2 sigme, filtered es Sr90/ Y90 (pci/L) (75988)	Gross bete, counting error (pci/L es Sr90) (03528)	Redium 226, filtered, radon method (pci/L) (09511)	Radium 226, filtered, counting error (pci/L) (09504)	Radium 228, filtered (pci/L ae Re-228) (81366)	Radium 228, filtered, counting error (pci/L) (81367)	Carbon, orgenic (mg/L as C) (00680)
--	--	13	3.4	9.5	2.5	--	--	--	--	--	6.6
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--
--	--	14	3.6	10	2.7	--	--	--	--	--	6.3
0	8.9	--	--	8.2	--	6.6	0.30	0.1	0.80	0.40	--
--	--	--	--	--	--	--	--	--	--	--	--
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2.6	10	--	--	10	--	6.7	.30	.2	.70	.20	--
--	--	10	2.8	7.7	2.1	--	--	--	--	--	6.2
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--
--	--	12	3.1	8.8	2.3	--	--	--	--	--	6.4
6.9	11	--	--	11	--	5.8	.30	.1	.0	.20	--
--	--	11	3.1	8.3	2.3	--	--	--	--	--	6.5
.8	8.6	--	--	7.9	--	6.4	.50	.2	.0	.20	--
18	12	--	--	17	--	7.0	.50	.3	.0	.10	--
--	--	10	3.1	7.6	2.3	--	--	--	--	--	6.5
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
0	3.7	--	--	9.7	--	2.5	.40	.4	.70	.20	--
--	--	13	3.3	9.9	2.5	--	--	--	--	--	14
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--
--	--	15	3.9	11	3.0	--	--	--	--	--	4.3
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, air, field (deg C) (00020)	Temperature, water, field (deg C) (00010)	Turbidity, field (NTU) (00076)	Barometric pressure, field (mm of Hg) (00025)	Dissolved oxygen, field (mg/L) (00300)	Dissolved oxygen, percent saturation, field (00301)
442124098181601	10-07-91	SDSU	SDSU	1,780	7.3	--	10.5	--	--	0.1	--
(CO-14-90)–Cont.	10-28-91	SDSU	SDSU	1,760	7.1	--	10.0	--	--	.1	--
	11-25-91	SDSU	SDSU	1,740	7.1	--	10.0	--	--	.1	--
	11-25-91	USGS	NWQL	1,740	7.1	--	10.0	--	--	.1	--
	01-06-92	SDSU	SDSU	1,710	7.3	--	10.0	--	--	.1	--
	01-31-92	SDSU	SDSU	1,760	7.3	--	10.0	--	--	.2	--
	03-11-92	SDSU	SDSU	1,780	7.4	--	10.0	--	--	.1	--
	03-11-92	USGS	NWQL	1,780	7.4	5.0	10.0	--	725	.1	1
	04-17-92	SDSU	SDSU	1,770	7.3	--	10.0	--	--	.1	--
	05-18-92	SDSU	SDSU	1,790	7.3	--	11.0	--	--	.1	--
	06-12-92	SDSU	SDSU	1,790	7.2	--	11.5	--	--	.1	--
	07-01-92	SDSU	SDSU	1,810	7.2	--	10.5	--	--	.1	--
	07-16-92	SDSU	SDSU	1,780	7.1	--	11.5	--	--	.1	--
	08-13-92	SDSU	SDSU	1,770	7.5	--	11.0	--	--	.1	--
	09-16-92	SDSU	SDSU	1,720	7.3	--	11.5	--	--	.1	--
	10-02-92	SDSU	SDSU	1,740	7.5	--	11.5	--	--	.1	--
	10-21-92	SDSU	SDSU	1,720	7.3	--	10.5	--	--	.2	--
	11-19-92	SDSU	SDSU	1,650	7.4	--	10.0	--	--	.2	--
	12-10-92	SDSU	SDSU	1,690	7.4	--	10.5	--	--	.1	--
	01-05-93	SDSU	SDSU	1,620	7.5	--	10.0	--	--	.2	--
	01-18-93	SDSU	SDSU	1,580	7.4	--	10.0	--	--	.2	--
	02-06-93	SDSU	SDSU	1,640	7.4	--	10.0	--	--	.2	--
	02-25-93	SDSU	SDSU	1,680	7.3	--	10.0	--	--	.2	--
	02-25-93	USGS	NWQL	1,600	7.3	17.0	10.0	--	734	.2	1
	03-20-93	SDSU	SDSU	1,610	7.5	--	10.5	--	--	.2	--
	07-28-93	SDSU	SDSU	1,810	7.5	--	11.0	--	--	.1	--
	08-25-93	SDSU	SDSU	2,000	7.7	--	12.0	--	--	.1	--
	09-22-93	SDSU	SDSU	1,790	7.5	--	10.5	--	--	.1	--
442122098174300	06-12-91	USGS	SDDHL	--	--	--	--	--	--	--	--
(Stony Run trib.)	06-12-91	USGS	NWQL	220	6.9	26.5	25.5	3.9	721	.1	1
442111098173801	05-20-91	SDSU	SDSU	1,660	7.4	--	10.5	--	--	.1	--
(CO-18-90)	05-28-91	SDSU	SDSU	1,640	7.4	--	11.0	--	--	.0	--
	05-28-91	USGS	NWQL	1,640	7.5	--	11.0	2.9	--	.0	--
	07-16-91	USGS	NWQL	1,640	7.5	--	12.5	2.3	--	.0	--
	09-23-91	USGS	NWQL	1,650	7.5	13.0	10.0	1.5	743	.1	1
	12-23-91	USGS	NWQL	1,560	7.2	-3.5	10.0	3.5	--	.1	--
	01-22-92	USGS	USGS	1,570	7.4	2.5	10.0	--	--	.2	--
	03-25-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	03-25-92	USGS	NWQL	1,620	7.2	12.0	10.5	4.0	728	.2	2
	04-15-92	USGS	USGS	1,620	7.5	9.0	--	--	728	.1	--
	05-27-92	USGS	NWQL	1,610	7.3	27.0	10.5	3.2	730	.1	1
	06-04-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-04-92	USGS	USGS	1,630	7.3	18.0	10.5	--	724	.1	1
	09-22-92	USGS	SDDHL	--	--						
	09-22-92	USGS	NWQL	1,580	7.6	9.5	10.0	2.7	737	.1	1

Oxid-etion-reduction potential, field (mV) (00090)	Coli-form, fecal, 0.7 µm-mf (cols/ 100 mL) (31625)	Strep-tococci fecal, KF agar (cols per 100 mL) (31673)	Herd-ness (mg/L as $CaCO_3$) (00900)	Alka-linity, field, FET mg/L es $CaCO_3$ (00410)	Alka-linity, field, filtered, IT mg/L es $CaCO_3$ (39086)	Bicer-bonete, field, FET mg/L as HCO_3 (00440)	Bicar-bonate, field, filtered mg/L as HCO_3 (00453)	Cer-bonate, field, FET mg/L as CO_3 (00447)	Car-bonete, field, filtered mg/L as CO_3 (00452)	Celcium (mg/L as Ca) (00916)	Ca'cium, filtered (mg/L as Ce) (00915)	Magne-sium (mg/L as Mg) (00927)
-124	--	--	--	502	--	612	--	0	--	--	--	18
-120	--	--	--	436	--	532	--	0	--	--	--	18
-137	--	--	--	517	--	630	--	0	--	--	--	17
--	--	--	220	--	--	--	--	--	--	--	66	--
-125	--	--	240	455	--	555	--	0	--	--	62	--
-42	--	--	240	442	--	539	--	0	--	--	64	--
-147	--	--	220	449	--	547	--	0	--	--	60	--
--	--	--	--	--	466	--	568	--	0	--	--	--
113	--	--	220	446	--	544	--	0	--	--	61	--
26	--	--	220	451	--	550	--	0	--	--	61	--
-6	--	--	210	457	--	557	--	0	--	--	60	--
-73	--	--	200	454	--	553	--	0	--	--	59	--
-127	--	--	220	436	--	532	--	0	--	--	60	--
-110	--	--	220	446	--	544	--	0	--	--	58	--
-89	--	--	220	450	--	549	--	0	--	--	58	--
-79	--	--	220	451	--	550	--	0	--	--	62	--
-168	--	--	230	457	--	557	--	0	--	--	64	--
-75	--	--	230	464	--	566	--	0	--	--	65	--
-75	--	--	230	471	--	574	--	0	--	--	65	--
-46	--	--	230	464	--	566	--	0	--	--	64	--
-3	--	--	230	471	--	574	--	0	--	--	64	--
45	--	--	220	451	--	550	--	0	--	--	63	--
4	--	--	230	453	--	552	--	0	--	--	64	--
--	--	--	250	--	910	--	1,110	--	0	--	69	--
35	--	--	--	452	--	551	--	0	--	--	--	--
--	--	--	230	459	--	560	--	0	--	--	63	--
--	--	--	220	--	--	--	--	0	--	--	62	--
--	--	--	230	469	--	572	--	0	--	--	63	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	75	--	84	--	103	--	0	--	20	--
--	--	--	--	366	--	446	--	0	--	--	--	14
-59	--	--	--	470	--	573	--	0	--	--	--	13
--	--	--	180	--	488	--	595	--	0	--	51	--
--	--	--	180	--	490	--	597	--	0	--	50	--
--	--	--	180	479	488	--	595	--	0	--	49	--
--	--	--	180	--	480	--	586	--	0	--	51	--
--	<1	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	170	469	479	--	584	--	0	--	48	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
-9	--	--	180	478	485	--	592	--	0	--	49	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
--	0	0	170	--	478	--	584	--	0	--	48	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Magnesium, filtered (mg/L as Mg) (00925)	Sodium, (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium percent (00932)	Sodium adsorption ratio (00931)	Potassium, filtered (mg/L as K) (00935)	Alkalinity, lab (mg/L as $CaCO_3$) (90410)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L as CL) (00940)
442124098181601	10-07-91	--	310	--	--	--	--	--	450	--	34
(CO-14-90)–Cont.	10-28-91	--	370	--	--	--	--	--	450	--	39
	11-25-91	--	350	--	--	--	--	--	470	--	35
	11-25-91	14	--	300	--	9	--	--	--	490	29
	01-06-92	22	--	330	--	9	--	--	--	440	35
	01-31-92	19	--	330	--	9	--	--	--	450	40
	03-11-92	18	--	370	--	11	--	--	--	440	41
	03-11-92	--	--	--	--	--	--	--	--	440	38
	04-17-92	16	--	310	--	9	--	--	--	430	34
	05-18-92	15	--	310	--	9	--	--	--	460	33
	06-12-92	14	--	320	--	10	--	--	--	450	35
	07-01-92	13	--	290	--	9	--	--	--	450	36
	07-16-92	18	--	290	--	8	--	--	--	470	36
	08-13-92	19	--	340	--	10	--	--	--	480	36
	09-16-92	18	--	340	--	10	--	--	--	470	36
	10-02-92	17	--	330	--	10	--	--	--	430	36
	10-21-92	16	--	370	--	11	--	--	--	450	36
	11-19-92	17	--	330	--	9	--	--	--	440	36
	12-10-92	17	--	340	--	10	--	--	--	480	34
	01-05-93	17	--	320	--	9	--	--	--	450	35
	01-18-93	17	--	300	--	9	--	--	--	470	34
	02-06-93	16	--	310	--	9	--	--	--	460	35
	02-25-93	18	--	320	--	9	--	--	--	480	37
	02-25-93	18	--	320	--	9	--	--	--	--	37
	03-20-93	--	--	--	--	--	--	--	--	490	35
	07-28-93	17	--	350	--	10	--	--	--	480	33
	08-25-93	16	--	350	--	10	--	--	--	480	35
	09-22-93	17	--	330	--	9	--	--	--	460	35
442122098174300	06-12-91	--	--	--	--	--	--	--	--	--	--
(Stony Run trib.)	06-12-91	6.0	--	6.0	12	.3	14	89	--	12	3.9
442111098173801	05-20-91	--	300	--	--	--	--	--	360	--	34
(CO-18-90)	05-28-91	--	300	--	--	--	--	--	360	--	33
	05-28-91	13	--	300	77	10	10	471	--	350	34
	07-16-91	13	--	310	77	10	14	475	--	350	36
	09-23-91	13	--	300	77	10	12	437	--	360	34
	12-23-91	13	--	310	78	10	11	489	--	370	35
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	12	--	300	78	10	11	459	--	350	39
	04-15-92	--	--	--	--	--	--	--	--	--	--
	05-27-92	13	--	290	77	10	11	472	--	320	39
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	12	--	300	78	10	10	477	--	340	36

Fluoride, filtered (mg/L as F) (00950)	Silica, filtered (mg/L as Si02) (00955)	Solids, sum of constituents, filtered (mg/L) (70301)	Solids, residue at 180 deg C, filtered (mg/L) (70300)	Solids, filtered (tons per acre-feet) (70303)	Solids, residue at 105 deg C (mg/L) (00500)	Residue at 105 deg C, filtered (mg/L) (00515)	Residue at 105 deg C, suspended (mg/L) (00530)	Nitrogen,ammonia, (mg/L as N) (00610)	Nitrogen, ammonia, filtered (mg/L as N) (00608)	Nitrogen, ammonia, filtered (mg/L as NH_4) (71846)	Nitrogen, ammonia + organic (mg/L as N) (006?5)	Nitrogen, ammonia + organic, filtered (mg/L as N) (00623)
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--	--	--	--	--	--	--	--	--	0.070	0.09	--	1.3
<0.10	21	136	151	0.21	168	152	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
.50	29	1,080	1,040	1.41	1,080	1,110	--	--	--	--	--	--
.50	27	1,100	1,110	1.51	1,110	1,100	--	--	--	--	--	--
.40	27	1,090	1,070	1.46	1,100	1,080	--	--	--	--	--	--
.70	27	1,110	1,110	1.51	1,090	1,080	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	.610	.79	--	1.6
.50	27	1,080	1,070	1.46	1,040	1,060	3	--	--	--	--	--
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.50	26	1,040	1,100	1.50	1,060	1,070	15	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.530	.68	--	1.3
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.640	.82	--	1.1
.40	26	1,060	1,080	1.47	1,080	1,060	<1	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nitrogen, nitrite (mg/L as N) (00615)	Nitrogen, nitrite, filtered (mg/L as N) (00613)	Nitrogen, NO_2+NO_3 (mg/L as N) (00630)	Nitrogen, NO_2+NO_3, filtered (mg/L as N) (00631)	Phosphorus (mg/L as P) (00665)	Phosphorus ortho (mg/L as P) (70507)	Phosphorus ortho, filtered (mg/L as P) (00671)	Arsenic, filtered (µg/L as As) (01000)	Barium, filtered (µg/L as Ba) (01005)	Beryllium, filtered (µg/L as Be) (01010)
442124098181601	10-07-91	--	--	--	--	--	--	--	--	--	--
(CO-14-90)–Cont.	10-28-91	--	--	--	--	--	--	--	--	--	--
	11-25-91	--	--	--	--	--	--	--	--	--	--
	11-25-91	--	--	--	--	--	--	--	--	--	--
	01-06-92	--	--	--	--	--	--	--	--	--	--
	01-31-92	--	--	--	--	--	--	--	--	--	--
	03-11-92	--	--	--	--	--	--	--	--	--	--
	03-11-92	--	--	--	--	--	--	--	--	--	--
	04-17-92	--	--	--	--	--	--	--	--	--	--
	05-18-92	--	--	--	--	--	--	--	--	--	--
	06-12-92	--	--	--	--	--	--	--	--	--	--
	07-01-92	--	--	--	--	--	--	--	--	--	--
	07-16-92	--	--	--	--	--	--	--	--	--	--
	08-13-92	--	--	--	--	--	--	--	--	--	--
	09-16-92	--	--	--	--	--	--	--	--	--	--
	10-02-92	--	--	--	--	--	--	--	--	--	--
	10-21-92	--	--	--	--	--	--	--	--	--	--
	11-19-92	--	--	--	--	--	--	--	--	--	--
	12-10-92	--	--	--	--	--	--	--	--	--	--
	01-05-93	--	--	--	--	--	--	--	--	--	--
	01-18-93	--	--	--	--	--	--	--	--	--	--
	02-06-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	03-20-93	--	--	--	--	--	--	--	--	--	--
	07-28-93	--	--	--	--	--	--	--	--	--	--
	08-25-93	--	--	--	--	--	--	--	--	--	--
	09-22-93	--	--	--	--	--	--	--	--	--	--
442122098174300	06-12-91	--	--	--	0.600	0.854	--	0.650	--	--	--
(Stony Run trib.)	06-12-91	--	--	--	--	--	--	--	4	63	<0.5
442111098173801	05-20-91	--	--	--	--	--	--	--	--	--	--
(CO-18-90)	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	--	--	--	--	--	--	--	9	27	<.5
	07-16-91	--	--	--	--	--	--	--	9	26	<.5
	09-23-91	--	--	--	--	--	--	--	7	28	<.5
	12-23-91	--	--	<0.050	--	.060	--	--	7	22	<.5
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	<.100	.070	--	<.005	--	--	--
	03-25-92	--	--	--	--	--	--	--	8	21	<.5
	04-15-92	--	--	--	--	--	--	--	--	--	--
	05-27-92	--	--	--	--	--	--	--	9	23	<.5
	06-04-92	--	--	--	<.100	.063	--	.018	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	<.100	.060	--	.012	--	--	--
	09-22-92	--	--	--	--	--	--	--	9	22	<.5

Boron, filtered (µg/L es B) (01020)	Cadmium, filtered (µg/L as Cd) (01025)	Chromium, filtered (µg/L as Cr) (01030)	Cobalt, filtered (µg/L as Co) (01035)	Copper, filtered (µg/L as Cu) (01040)	Iron (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Lead, filtered (µg/L as Pb) (01049)	Lithium, filtered (µg/L as Li) (01130)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)	Mercury, filtered (µg/L as Hg) (71890)	Molybdenum, filtered (µg/L as Mo) (01060)
--	--	--	--	--	2,700	--	--	--	340	--	--	--
--	--	--	--	--	2,700	--	--	--	320	--	--	--
--	--	--	--	--	2,900	--	--	--	330	--	--	--
--	--	--	--	--	--	2,600	--	--	--	320	--	--
--	--	--	--	--	--	2,800	--	--	--	330	--	--
--	--	--	--	--	--	2,800	--	--	--	310	--	--
--	--	--	--	--	--	2,800	--	--	--	330	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	2,800	--	--	--	330	--	--
--	--	--	--	--	--	2,800	--	--	--	340	--	--
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--	--	--	--	--	--	3,100	--	--	--	370	--	--
--	--	--	--	--	--	2,800	--	--	--	340	--	--
--	--	--	--	--	--	2,800	--	--	--	350	--	--
--	--	--	--	--	--	3,000	--	--	--	340	--	--
--	--	--	--	--	--	2,800	--	--	--	340	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
50	<1.0	<5	<3	<10	--	1,100	<10	4	--	1,600	<0.1	<10
--	--	--	--	--	840	--	--	--	480	--	--	--
--	--	--	--	--	790	--	--	--	460	--	--	--
280	<1.0	<5	<3	<10	--	740	<10	84	--	480	<.1	20
260	<1.0	<5	<3	<10	--	730	<10	89	--	480	<.1	20
260	<1.0	<5	<3	<10	--	760	<10	85	--	460	<.1	<10
200	1.0	<5	<3	<10	--	1,000	<10	91	--	430	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
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270	<1.0	<5	<3	<10	--	980	<10	90	--	410	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
240	1.0	<5	<3	<10	--	940	10	87	--	430	<.1	20
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270	<1.0	<5	<3	<10	--	880	<10	86	--	400	<.1	20

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (othar identifier)	Date	Nickel, filtered (µg/L es Ni) (01065)	Sele-nium, filtered (µg/L aa Se) (01145)	Silver, filtered (µg/L es Ag) (01075)	Stron-tium, filtered (µg/L as Sr) (01080)	Vana-dium, filtered (µg/L as V) (01085)	Zinc, filtered (µg/L as Zn) (01090)	Gross alpha, filtered (µg/L as netural uranium) (80030)	Alpha, count, 2 sigma, filtered as netural uranium (µg/L) (75986)	Alpha radio, filtared as Th-230 (pci/L) (04126)	Alpha count, 2 sigma, filtered as Th-230 (pci/L) (75987)
442124098181601	10-07-91	--	--	--	--	--	--	--	--	--	--
(CO-14-90)–Cont.	10-28-91	--	--	--	--	--	--	--	--	--	--
	11-25-91	--	--	--	--	--	--	--	--	--	--
	11-25-91	--	--	--	--	--	--	--	--	--	--
	01-06-92	--	--	--	--	--	--	--	--	--	--
	01-31-92	--	--	--	--	--	--	--	--	--	--
	03-11-92	--	--	--	--	--	--	--	--	--	--
	03-11-92	--	--	--	--	--	--	--	--	--	--
	04-17-92	--	--	--	--	--	--	--	--	--	--
	05-18-92	--	--	--	--	--	--	--	--	--	--
	06-12-92	--	--	--	--	--	--	--	--	--	--
	07-01-92	--	--	--	--	--	--	--	--	--	--
	07-16-92	--	--	--	--	--	--	--	--	--	--
	08-13-92	--	--	--	--	--	--	--	--	--	--
	09-16-92	--	--	--	--	--	--	--	--	--	--
	10-02-92	--	--	--	--	--	--	--	--	--	--
	10-21-92	--	--	--	--	--	--	--	--	--	--
	11-19-92	--	--	--	--	--	--	--	--	--	--
	12-10-92	--	--	--	--	--	--	--	--	--	--
	01-05-93	--	--	--	--	--	--	--	--	--	--
	01-18-93	--	--	--	--	--	--	--	--	--	--
	02-06-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	02-25-93	--	--	--	--	--	--	--	--	--	--
	03-20-93	--	--	--	--	--	--	--	--	--	--
	07-28-93	--	--	--	--	--	--	--	--	--	--
	08-25-93	--	--	--	--	--	--	--	--	--	--
	09-22-93	--	--	--	--	--	--	--	--	--	--
442122098174300	06-12-91	--	--	--	--	--	--	--	--	--	--
(Stony Run trib.)	06-12-91	<10	<1	<1.0	110	<6	8	<0.6	0.80	--	<0.60
442111098173801	05-20-91	--	--	--	--	--	--	--	--	--	--
(CO-18-90)	05-28-91	--	--	--	--	--	--	--	--	--	--
	05-28-91	<10	<1	1.0	550	<6	<3	2.7	6.4	--	1.7
	07-16-91	<10	<1	<1.0	540	<6	<3	6.6	6.6	--	4.7
	09-23-91	<10	<1	<1.0	550	<6	<3	1.8	5.7	--	1.4
	12-23-91	<10	<1	<1.0	550	<6	<3	<.6	4.1	--	<.60
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	--	--	--	--	--	--	--	--	--	--
	03-25-92	<10	<1	<1.0	530	<6	<3	4.7	6.3	--	3.4
	04-15-92	--	--	--	--	--	--	--	--	--	--
	05-27-92	<10	<1	<1.0	540	<6	4	2.8	5.0	2.0	3.6
	06-04-92	--	--	--	--	--	--	--	--	--	--
	06-04-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	<10	<1	<1.0	520	<6	8	4.3	6.1	3.3	4.7

Gross eiphe, filtered (pci/L as U-neturei) (01515)	Alphe, filtered, counting error (pci/L) (01504)	Gross beta, fiitered (pci/L es CS-137) (03515)	Beta, 2 sigms, filtered as CS-137 (pci/L) (75989)	Gross beta, filtered (pci/L es Sr/ Yt-90) (80050)	Beta, 2 sigme, filtered es Sr90/ Y90 (pci/L) (75988)	Gross beta, counting error (pci/L es Sr90) (03528)	Rsdlum 226, fiitered, redon method (pci/L) (09511)	Radium 226, filtered, counting error (pci/L) (09504)	Redlum 228, filtered (pci/L as Re-228) (81366)	Radium 228, filtered, counting error (pci/L) (81387)	Cerbon, orgenic (mg/L as C) (00680)
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--	--	17	3.4	13	1.8	--	--	--	--	--	30
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--	--	--	--	--	--	--	--	--	--	--	--
--	--	15	3.8	11	2.8	--	--	--	--	--	5.2
--	--	2.5	2.0	1.9	1.5	--	--	--	--	--	5.2
--	--	16	4.0	12	2.9	--	--	--	--	--	4.9
--	--	14	3.5	10	2.6	--	--	--	--	--	5.6
--	--	--	--	--	--	--	--	--	--	--	--
0	8.4	--	--	3.1	--	6.2	0.20	0.2	0.10	0.03	--
--	--	17	4.1	13	3.1	--	--	--	--	--	5.3
--	--	--	--	--	--	--	--	--	--	--	--
--	--	15	3.8	11	2.8	--	--	--	--	--	5.1
2.4	9.4	--	--	8.6	--	6.6	.30	.1	1.3	.40	--
--	--	--	--	--	--	--	--	--	--	--	--
5.8	12	--	--	13	--	6.9	.30	.2	.90	.30	--
--	--	14	3.5	10	2.6	--	--	--	--	--	5.3

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Agency collecting sample	Agency analyzing sample	Specific conductance, field (µS/cm) (00095)	pH, field (standard units) (00400)	Temperature, air, field (deg C) (00020)	Temperature, water, field (deg C) (00010)	Turbidity, field (NTU) (00076)	Barometric pressure, field (mm of Hg) (00025)	Dissolved oxygen, field (mg/L) (00300)	Dissolved oxygen, percent saturation, field (00301)
442111098173801	12-15-92	USGS	SDDHL	--	--	--	--	--	--	--	--
(CO-18-90)–Cont.	12-15-92	USGS	NWQL	1,440	7.5	7.5	10.0	3.9	720	0.1	1
	03-31-93	USGS	NWQL	1,640	7.6	2.0	9.5	3.6	728	.9	8
	04-06-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	04-16-93	SDSU	SDSU	1,500	7.5	--	10.5	--	--	.1	--
	05-14-93	SDSU	SDSU	1,610	7.6	--	11.0	--	--	.1	--
	05-26-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-26-93	USGS	NWQL	1,630	7.4	20.0	10.5	3.9	730	.1	1
	06-22-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-22-93	USGS	NWQL	1,630	7.5	26.0	10.5	3.3	724	.2	1
	09-08-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	09-08-93	USGS	NWQL	1,650	7.3	19.0	10.5	2.7	729	.2	2
442106098174001	09-26-90	USGS	SDDHL	--	--	--	--	--	--	--	--
(Stock well)	09-26-90	USGS	NWQL	--	7.5	33.0	12.0	7.0	722	.9	--
	01-24-91	USGS	NWQL	1,740	7.3	--	10.5	8.0	--	.4	--
	05-29-91	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-29-91	USGS	NWQL	1,730	7.4	--	11.0	6.0	--	1.5	--
	07-16-91	USGS	SDDHL	--	--	--	--	--	--	--	--
	07-16-91	USGS	NWQL	1,740	7.5	--	11.5	5.4	--	1.3	--
	09-23-91	USGS	NWQL	1,740	7.3	10.0	10.5	--	742	1.3	12
	12-23-91	USGS	SDDHL	--	--	--	--	--	--	--	--
	12-23-91	USGS	NWQL	1,620	7.1	6.0	11.0	6.6	--	1.4	--
	01-22-92	USGS	USGS	1,630	7.3	5.0	10.5	--	--	1.4	--
	03-26-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	03-26-92	USGS	NWQL	1,700	7.3	4.0	10.5	5.1	733	1.4	13
	04-15-92	USGS	USGS	1,700	7.4	8.5	10.5	--	728	1.4	13
442121098140001	05-30-91	USGS	NWQL	1,410	9.0	--	16.0	--	--	7.1	--
(First Assembly	07-15-91	USGS	NWQL	760	8.9	--	22.0	.50	--	6.4	--
Church)	04-15-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	04-15-92	USGS	NWQL	1,250	8.6	9.0	9.5	.80	728	9.5	87
	05-27-92	USGS	NWQL	1,590	8.7	21.0	16.0	.50	704	8.2	90
	06-03-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-03-92	USGS	USGS	1,580	8.5	--	16.0	--	724	7.8	83
	06-23-92	USGS	SDDHL	--	--	--	--	--	--	--	--
	06-23-92	USGS	NWQL	1,160	8.5	19.0	17.5	.80	724	7.3	81
	05-25-93	USGS	SDDHL	--	--	--	--	--	--	--	--
	05-25-93	USGS	NWQL	1,110	9.0	20.0	13.5	1.0	735	7.2	72
	06-01-93	USGS	NWQL	--	--	--	--	--	--	--	--

Oxid-ation-reduction potential, field (mV) (00090)	Coli-form, fecal, 0.7 µm-mf (cols/ 100 mL) (31625)	Strep-tococci fecal, KF agar (cols per 100 mL) (31673)	Hard-ness (mg/L aa $CaCO_3$) (00900)	Alka-linity, field, FET mg/L as $CaCO_3$ (00410)	Alka-linity, field, filtered, IT mg/L as $CaCO_3$ (39086)	Bicar-bonate, field, FET mg/L as HCO_3 (00440)	Bicar-bonate, field, filtered mg/L as HCO_3 (00453)	Car-bonate, field, FET mg/L as CO_3 (00447)	Car-bonate, field, filtered mg/L as CO_3 (00452)	Calcium (mg/L as Ca) (00916)	Calcium, filtered (mg/L as Ca) (00915)	Magne-sium (mg/L as Mg) (00927)
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	170	--	449	--	547	--	0	--	47	--
--	0	0	170	--	476	--	581	--	0	--	48	--
--	--	--	--	--	--	--	--	--	--	--	--	--
-117	--	--	170	464	--	566	--	0	--	--	45	--
-121	--	--	170	464	--	566	--	0	--	--	47	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	170	--	490	--	597	--	0	--	49	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	170	--	466	--	569	--	0	--	50	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	180	--	478	--	583	--	0	--	52	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	200	451	455	--	555	--	0	--	57	--
--	--	--	190	489	495	--	604	--	0	--	51	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	180	--	478	--	583	--	0	--	49	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	180	--	500	--	610	--	0	--	52	--
--	--	--	190	484	492	--	600	--	0	--	54	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	180	--	498	--	607	--	0	--	50	--
--	<1	<1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	180	494	500	--	610	--	0	--	49	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	48	--	40	--	9	--	--	--
--	--	--	140	--	44	--	34	--	10	--	38	--
--	--	--	--	--	--	--	--	--	--	--	--	--
112	--	--	200	78	78	--	88	--	4	--	35	--
1	--	--	290	76	75	--	74	--	8	--	58	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	K0	K0	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	220	--	63	--	64	--	6	--	54	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	0	0	190	--	68	--	66	--	8	--	46	--
--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Magnesium, filtered (mg/L as Mg) (00925)	Sodium, (mg/L as Na) (00929)	Sodium, filtered (mg/L as Na) (00930)	Sodium percent (00932)	Sodium adsorption ratio (00931)	Potassium, filtered (mg/L as K) (00935)	Alkalinity, lab (mg/L as $CaCO_3$) (90410)	Sulfate (mg/L as SO_4) (00946)	Sulfate, filtered (mg/L as SO_4) (00945)	Chloride, filtered (mg/L aa CL) (00940)
442111098173801	12-15-92	--	--	--	--	--	--	--	--	--	--
(CO-18-90)–Cont.	12-15-92	12	--	300	78	10	10	467	--	340	31
	03-31-93	12	--	290	77	10	11	478	--	330	32
	04-06-93	--	--	--	--	--	--	--	--	--	--
	04-16-93	13	--	320	--	11	--	--	--	--	31
	05-14-93	13	--	330	--	11	--	--	--	--	32
	05-26-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	12	--	290	77	10	11	468	--	320	32
	06-22-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	12	--	310	78	10	10	459	--	--	--
	09-08-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	13	--	310	78	10	9.1	468	--	340	33
442106098174001	09-26-90	--	--	--	--	--	--	--	--	--	--
(Stock well)	09-26-90	15	--	330	77	10	12	488	--	420	36
	01-24-91	14	--	320	78	10	12	488	--	400	36
	05-29-91	--	--	--	--	--	--	--	--	--	--
	05-29-91	13	--	330	79	11	14	482	--	430	39
	07-16-91	--	--	--	--	--	--	--	--	--	--
	07-16-91	13	--	330	78	11	11	478	--	390	35
	09-23-91	14	--	330	77	10	13	480	--	410	33
	12-23-91	--	--	--	--	--	--	--	--	--	--
	12-23-91	13	--	330	79	11	11	492	--	340	36
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-26-92	--	--	--	--	--	--	--	--	--	--
	03-26-92	13	--	310	78	10	11	478	--	370	37
	04-15-92	--	--	--	--	--	--	--	--	--	--
442121098140001	05-30-91	--	--	--	--	--	--	--	--	--	--
(First Assembly	07-15-91	9.9	--	91	55	3	21	48	--	230	62
Church)	04-15-92	--	--	--	--	--	--	--	--	--	--
	04-15-92	28	--	170	--	5	<.10	75	--	320	130
	05-27-92	35	--	210	59	5	23	77	--	410	170
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	21	--	140	55	4	20	65	--	330	110
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	19	--	140	58	4	19	68	--	340	85
	06-01-93	--	--	--	--	--	--	--	--	--	--

Fluoride, filtered (mg/L as F) (00950)	Silica, filtered (mg/L as SiO2) (00955)	Solids, sum of constituents, filtered (mg/L) (70301)	Solids, residue at 180 deg C, filtered (mg/L) (70300)	Solids, filtered (tons per acre-feet) (70303)	Solids, residue at 105 deg C (mg/L) (00500)	Residue at 105 deg C, filtered (mg/L) (00515)	Residue et 105 deg C, suspended (mg/L) (00530)	Nitrogen,emmonia, (mg/L as N) (00610)	Nitrogen, ammonie, filtered (mg/L as N) (00608)	Nitrogen, emmonia, filtered (mg/L as NH_4) (71846)	Nitrogen, ammonia + organic (mg/L as N) (00625)	Nitrogen, ammonie + organic, filtered (mg/L as N) (00623)
--	--	--	--	--	--	--	--	--	0.590	0.76	--	1.2
0.40	28	1,040	1,080	1.47	1,090	1,080	3	--	--	--	--	--
.50	27	1,040	1,080	1.47	1,110	1,090	<1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.520	.67	--	1.2
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.910	1.2	--	1.2
.30	28	1,040	1,080	1.47	1,090	1,080	2	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.490	.63	--	1.3
--	29	--	--	--	176	--	10	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.500	.64	--	1.1
.50	29	1,080	1,060	1.44	1,080	1,070	3	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.850	1.1	--	1.1
<.10	28	1,170	1,170	1.59	1,200	1,180	--	--	--	--	--	--
.20	27	1,160	1,140	1.55	1,150	1,090	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.890	1.1	--	1.1
.50	28	1,190	1,150	1.56	1,150	1,020	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.670	.86	--	1.6
.50	27	1,160	1,160	1.58	1,190	1,180	--	--	--	--	--	--
.40	27	1,180	1,140	1.55	1,150	1,170	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.430	.55	--	1.1
.60	27	1,110	1,170	1.59	918	1,070	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.530	.68	--	1.3
.30	26	1,120	1,120	1.52	1,130	1,110	<1	0.910	.930	1.2	1.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
1.5	8.3	489	493	.67	487	508	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.800	1.0	--	1.7
1.4	9.1	--	756	--	794	804	25	--	--	--	--	--
1.4	9.9	963	1,060	1.44	1,070	1,040	12	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.740	.95	--	1.9
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	.740	.95	--	1.5
1.3	8.5	723	722	.98	751	753	12	--	--	--	--	--
--	--	--	--	--	--	--	--	--	1.04	1.3	--	1.7
1.3	9.4	701	718	.98	726	740	<1	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nitrogen, nitrite (mg/L as N) (00615)	Nitrogen, nitrite, filtered (mg/L as N) (00613)	Nitrogen, NO_2+NO_3 (mg/L as N) (00630)	Nitrogen, NO_2+NO_3, filtered (mg/L as N) (00631)	Phosphorus (mg/L as P) (00665)	Phosphorus ortho (mg/L as P) (70507)	Phosphorus ortho, filtered (mg/L as P) (00671)	Arsenic, filtered (µg/L as As) (01000)	Barium, filtered (µg/L as Ba) (01005)	Beryllium, filtered (µg/L as Be) (01010)
442111098173801	12-15-92	--	--	--	<0.100	0.066	--	0.017	--	--	--
(CO-18-90)–Cont.	12-15-92	--	--	--	--	--	--	--	9	18	<0.5
	03-31-93	--	--	--	--	--	--	--	10	33	<.5
	04-06-93	--	--	--	<.100	.060	--	.010	--	--	--
	04-16-93	--	--	--	--	--	--	--	--	--	--
	05-14-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	--	--	--	<.100	.063	--	.011	--	--	--
	05-26-93	--	--	--	--	--	--	--	8	21	<.5
	06-22-93	--	--	--	<.100	.070	--	.009	--	--	--
	06-22-93	--	--	--	--	--	--	--	9	21	<.5
	09-08-93	--	--	--	<.100	.053	--	.015	--	--	--
	09-08-93	--	--	--	--	--	--	--	9	21	<.5
442106098174001	09-26-90	--	--	--	<.100	.020	--	.018	--	--	--
(Stock well)	09-26-90	--	--	--	--	--	--	--	4	17	<.5
	01-24-91	--	--	--	--	--	--	--	3	16	<.5
	05-29-91	--	--	--	<.100	.061	--	.020	--	--	--
	05-29-91	--	--	--	--	--	--	--	4	13	<.5
	07-16-91	--	--	--	.500	.085	--	<.005	--	--	--
	07-16-91	--	--	--	--	--	--	--	4	15	<.5
	09-23-91	--	--	--	--	--	--	--	3	17	<.5
	12-23-91	--	--	--	<.100	.053	--	.005	--	--	--
	12-23-91	--	--	<0.050	--	.060	--	--	3	15	<.5
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-26-92	--	--	--	<.100	.066	--	<.005	--	--	--
	03-26-92	<0.010	0.010	<.050	<.050	.050	0.030	.030	3	15	<.5
	04-15-92	--	--	--	--	--	--	--	--	--	--
442121098140001	05-30-91	--	--	--	--	--	--	--	--	--	--
(First Assembly	07-15-91	--	--	--	--	--	--	--	<1	14	<.5
Church)	04-15-92	--	--	--	.100	.551	--	.109	--	--	--
	04-15-92	--	--	--	--	--	--	--	<1	9	<.5
	05-27-92	--	--	--	--	--	--	--	2	13	<.5
	06-03-92	--	--	--	.100	.574	--	.118	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	.200	.505	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	<1	15	<.5
	05-25-93	--	--	--	.100	.475	--	.109	--	--	--
	05-25-93	--	--	--	--	--	--	--	<1	14	<.5
	06-01-93	--	--	--	--	--	--	--	--	--	--

Boron, filtered (µg/L as B) (01020)	Cadmium, filtered (µg/L as Cd) (01025)	Chromium, filtered (µg/L es Cr) (01030)	Cobalt, filtered (µg/L as Co) (01035)	Copper, filtered (µg/L as Cu) (01040)	Iron (µg/L as Fe) (01045)	Iron, filtered (µg/L as Fe) (01046)	Lead, filtered (µg/L as Pb) (01049)	Lithium, filtered (µg/L as Li) (01130)	Manganese (µg/L as Mn) (01055)	Manganese, filtered (µg/L as Mn) (01056)	Mercury, filtered (µg/L as Hg) (71890)	Molybdenum, filtered (µg/L as Mo) (01060)
--	--	--	--	--	--	--	--	--	--	--	--	--
250	<1.0	<5	<3	<10	--	1,000	10	87	--	400	<0.1	10
250	<1.0	<5	<3	<10	--	1,000	<10	83	--	410	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	1,000	--	--	--	430	--	--
--	--	--	--	--	--	1,100	--	--	--	420	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
260	<1.0	<5	<3	<10	--	1,000	10	81	--	400	<.1	20
--	--	--	--	--	--	--	--	--	--	--	--	--
260	1.0	<5	<3	<10	--	1,100	<10	87	--	430	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
260	<1.0	<5	<3	<10	--	960	<10	87	--	430	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
360	<1.0	<5	<3	<10	--	1,600	<10	95	--	360	<.1	10
310	<1.0	<5	<3	<10	--	1,600	<10	88	--	320	.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
340	<1.0	<5	<3	<10	--	1,400	<10	87	--	300	<.1	20
--	--	--	--	--	--	--	--	--	--	--	--	--
330	<1.0	<5	<3	<10	--	1,400	<10	90	--	310	<.1	20
340	<1.0	<5	<3	<10	--	1,600	<10	86	--	310	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
250	2.0	<5	<3	<10	--	1,600	<10	91	--	270	<.1	20
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
330	<1.0	<5	<3	<10	--	1,400	<10	86	--	280	<.1	10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
190	<1.0	<5	<3	<10	--	11	<10	46	--	4	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
340	<1.0	<5	<3	<10	--	7	<10	77	--	4	<.1	<10
350	<1.0	<5	<3	<10	--	7	<10	95	--	<1	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
270	<1.0	<5	<3	<10	--	11	<10	70	--	6	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--
220	<1.0	<5	<3	<10	--	4	<10	70	--	6	<.1	<10
--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7. Physical properties and concentrations of inorganic constituents, radioactive nuclides, and total organic carbon obtained from detailed samples—Continued

Station number (other identifier)	Date	Nickel, filtered (µg/L as Ni) (01065)	Selenium, filtered (µg/L as Se) (01145)	Silver, filtered (µg/L as Ag) (01075)	Strontium, filtered (µg/L as Sr) (01080)	Vanadium, filtered (µg/L as V) (01085)	Zinc, filtered (µg/L as Zn) (01090)	Gross alpha, filtered (µg/L as natural uranium) (80030)	Alpha, count, 2 sigma, filtered as natural uranium (µg/L) (75986)	Alpha radio, filtered as Th-230 (pci/L) (04126)	Alpha count, 2 sigma, filtered as Th-230 (pci/L) (75987)
442111098173801	12-15-92	--	--	--	--	--	--	--	--	--	--
(CO-18-90)–Cont.	12-15-92	<10	<1	1.0	530	<6	<3	3.9	6.0	3.0	4.6
	03-31-93	<10	<1	<1.0	510	<6	4	4.3	5.9	2.8	3.8
	04-06-93	--	--	--	--	--	--	--	--	--	--
	04-16-93	--	--	--	--	--	--	--	--	--	--
	05-14-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	--	--	--	--	--	--	--	--	--	--
	05-26-93	<10	<1	<1.0	530	<6	<3	3.4	5.5	2.4	3.9
	06-22-93	--	--	--	--	--	--	--	--	--	--
	06-22-93	<10	<1	<1.0	530	<6	<3	5.3	6.0	3.9	4.5
	09-08-93	--	--	--	--	--	--	--	--	--	--
	09-08-93	<10	--	<1.0	530	<6	<3	3.4	5.8	2.5	4.2
442106098174001	09-26-90	--	--	--	--	--	--	--	--	--	--
(Stock well)	09-26-90	<10	<1	<1.0	610	<6	<3	6.8	--	--	--
	01-24-91	<10	<1	<1.0	560	<6	<3	7.9	8.3	--	5.0
	05-29-91	--	--	--	--	--	--	--	--	--	--
	05-29-91	<10	<1	<1.0	560	<6	5	<.6	5.6	--	<.60
	07-16-91	--	--	--	--	--	--	--	--	--	--
	07-16-91	<10	<1	<1.0	540	<6	<3	3.9	5.8	--	2.8
	09-23-91	<10	<1	<10	590	<6	4	5.7	7.5	--	4.3
	12-23-91	--	--	--	--	--	--	--	--	--	--
	12-23-91	<10	<1	<1.0	540	<6	3	5.0	6.7	--	3.6
	01-22-92	--	--	--	--	--	--	--	--	--	--
	03-26-92	--	--	--	--	--	--	--	--	--	--
	03-26-92	<10	<1	<1.0	520	<6	6	1.4	5.2	--	1.0
	04-15-92	--	--	--	--	--	--	--	--	--	--
442121098140001	05-30-91	--	--	--	--	--	--	<.6	2.1	--	<.60
(First Assembly	07-15-91	<10	<1	<1.0	250	<6	<3	.8	2.2	--	.60
Church)	04-15-92	--	--	--	--	--	--	--	--	--	--
	04-15-92	<10	<1	<1.0	240	<6	<3	2.7	3.8	1.9	2.7
	05-27-92	<10	<1	<1.0	370	<6	5	<.6	2.8	<.6	2.0
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-03-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	--	--	--	--	--	--	--	--	--	--
	06-23-92	<10	<1	<1.0	330	<6	<3	<.6	2.2	<.6	1.6
	05-25-93	--	--	--	--	--	--	--	--	--	--
	05-25-93	<10	<1	<1.0	270	<6	6	1.1	3.2	.7	2.0
	06-01-93	--	--	--	--	--	--	--	--	--	--

K Non-ideal colony count

Gross alpha, filtered (pci/L as U-natural) (01515)	Alpha, filtered, counting error (pci/L) (01504)	Gross beta, filtered (pci/L as CS-137) (03515)	Beta, 2 sigma, filtered as CS-137 (pci/L) (75989)	Gross beta, filtered (pci/L as Sr/ Yt-90) (80050)	Beta, 2 sigma, filtered as Sr90/ Y90 (pci/L) (75988)	Gross beta, counting error (pci/L as Sr90) (03528)	Radium 226, filtered, radon method (pci/L) (09511)	Redium 226, filtered, counting error (pci/L) (09504)	Radium 228, filtered (pci/L as Ra-228) (81366)	Radium 228, filtered, counting error (pci/L) (81367)	Carbon, organic (mg/L es C) (00680)
0	9.2	--	--	36	--	54.3	0.30	0.2	0.40	0.10	--
--	--	15	3.6	11	2.7	--	--	--	--	--	5.3
--	--	15	3.5	11	2.7	--	--	--	--	--	--
2.9	11	--	--	12	--	6.9	.10	.1	.30	.10	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
0	8.4	--	--	8.4	--	6.5	.20	.2	.10	.10	--
--	--	15	3.6	11	2.7	--	--	--	--	--	5.4
6.2	11	--	--	15	--	6.9	.30	.3	.0	.03	--
--	--	38	6.1	29	4.7	--	--	--	--	--	5.5
1.8	3.9	--	--	12	--	2.6	.30	.4	.40	.10	--
--	--	15	3.6	11	2.8	--	--	--	--	--	5.3
10	10	--	--	18	--	6.9	.20	.2	.0	.40	--
--	--	15	--	11	--	--	--	--	--	--	--
--	--	14	3.8	11	2.8	--	--	--	--	--	5.1
1.6	9.4	--	--	13	--	6.8	.10	.2	.0	.40	--
--	--	17	4.1	13	3.1	--	--	--	--	--	5.1
6.5	10	--	--	16	--	6.9	.10	.2	.40	.40	--
--	--	4.3	2.3	3.2	1.8	--	--	--	--	--	5.2
--	--	17	4.3	13	3.2	--	--	--	--	--	5.0
--	--	--	--	--	--	--	--	--	--	--	--
--	--	21	4.5	15	3.4	--	--	--	--	--	5.4
--	--	--	--	--	--	--	--	--	--	--	--
0	9.6	--	--	11	--	6.7	.20	.2	.0	.07	--
--	--	16	4.0	12	3.0	--	--	--	--	--	5.4
--	--	--	--	--	--	--	--	--	--	--	--
--	--	25	4.4	19	3.3	--	--	--	--	--	5.8
--	--	26	3.8	19	2.8	--	--	--	--	--	7.1
1.0	5.8	--	--	16	--	4.3	.20	.1	.40	.40	--
--	--	24	4.1	18	3.1	--	--	--	--	--	8.9
--	--	31	5.4	23	4.1	--	--	--	--	--	8.5
2.0	7.7	--	--	17	--	5.4	.20	.1	.0	.40	--
--	--	--	--	--	--	--	--	--	--	--	--
0	5.5	--	--	18	--	4.4	.0	.1	.20	.40	--
--	--	28	4.4	21	3.4	--	--	--	--	--	6.7
.5	5.4	--	--	.5	--	5.4	.20	.2	.20	.10	--
--	--	27	4.2	21	3.2	--	--	--	--	--	8.4
--	--	--	--	--	--	--	--	--	--	--	--

Table 8. Concentrations of dicamba, picloram, and chlorophenoxy-acid herbicides obtained from detailed samples

[All analyses on unfiltered samples. All samples collected by U.S. Geological Survey and analyzed by National Water Quality Laboratory. µg/L, micrograms per liter; <, less than]

Station number (other identifier)	Date	Dicamba (Mediben) (Ban Vel D) (µg/L) (82052)	Picloram (Tordon) (Amdon) (µg/L) (39720)	Silvex (µg/L) (39760)	2,4-D, (µg/L) (39730)	2,4,5-T (µg/L) (39740)	2,4-DP (µg/L) (82183)
442150098120601 (James River at Morningside)	05-29-91	0.03	<0.01	<0.01	0.18	<0.01	<0.01
	07-15-91	<.01	<.01	<.01	<.01	<.01	<.01
	04-14-92	.02	<.01	<.01	.04	<.01	<.01
	05-28-92	.03	<.01	<.01	<.01	<.01	.04
	06-23-92	.11	<.01	<.01	.14	<.01	<.01
	03-30-93	.02	<.01	<.01	.11	<.01	<.01
	05-25-93	<.01	<.01	<.01	<.01	<.01	<.01
	06-23-93	.27	<.01	<.01	.14	<.01	<.01
442150098120602 (Huron Water Treatment Plant effluent)	05-29-91	<.01	<.01	<.01	.25	<.01	<.01
	07-16-91	<.01	<.01	<.01	.13	0.01	<.01
	04-14-92	.02	<.01	<.01	.05	<.01	<.01
	05-28-92	<.01	<.01	<.01	<.01	<.01	<.01
	06-23-92	.10	<.01	<.01	<.01	<.01	<.01
	03-30-93	<.01	<.01	<.01	<.01	<.01	<.01
	05-25-93	<.01	<.01	<.01	<.01	<.01	<.01
	06-23-93	.27	<.01	<.01	.21	<.01	<.01
442150098174401 (CO-05-90)	05-28-91	<.01	<.01	<.01	<.01	<.01	<.01
	07-15-91	<.01	<.01	<.01	<.01	<.01	<.01
	09-18-91	<.01	<.01	<.01	<.01	<.01	<.01
	12-23-91	<.01	<.01	<.01	<.01	<.01	<.01
	03-25-92	<.01	<.01	<.01	<.01	<.01	<.01
	05-27-92	<.01	<.01	<.01	<.01	<.01	<.01
	09-22-92	<.01	<.01	<.01	<.01	<.01	<.01
	03-31-93	<.01	<.01	<.01	<.01	<.01	<.01
	05-26-93	<.01	<.01	<.01	<.01	<.01	<.01
	06-22-93	<.01	<.01	<.01	<.01	<.01	<.01
	09-08-93	<.01	<.01	<.01	<.01	<.01	<.01
442124098181601 (CO-14-90)	05-28-91	<.01	<.01	<.01	<.01	<.01	<.01
442122098174300 (Stony Run trib.)	06-12-91	.10	<.10	<.10	.38	<.10	<.10
442111098173801 (CO-18-90)	05-28-91	<.01	<.01	<.01	<.01	<.01	<.01
	07-16-91	<.01	<.01	<.01	<.01	<.01	<.01
	09-23-91	<.01	<.01	<.01	<.01	<.01	<.01
	12-23-91	<.01	<.01	<.01	<.01	<.01	<.01
	03-25-92	<.01	<.01	<.01	<.01	<.01	<.01
	05-27-92	<.01	<.01	<.01	<.01	<.01	.11
	09-22-92	<.01	<.01	<.01	<.01	<.01	<.01
	12-15-92	<.01	<.01	<.01	<.01	<.01	<.01
	03-31-93	<.01	<.01	<.01	<.01	<.01	<.01
	05-26-93	<.01	<.01	<.01	<.01	<.01	<.01
	06-22-93	<.01	<.01	<.01	<.01	<.01	<.01
	09-08-93	<.01	<.01	<.01	<.01	<.01	<.01

Table 8. Concentrations of dicamba, picloram, and chlorophenoxy-acid herbicides obtained from detailed samples—Continued

Station number (other identifier)	Date	Dicamba (Mediben) (Ban Val D) (µg/L) (82052)	Picloram (Tordon) (Amdon) (µg/L) (39720)	Silvex (µg/L) (39760)	2,4-D, (µg/L) (39730)	2,4,5-T (µg/L) (39740)	2,4-DP (µg/L) (82183)
442106098174001 (Stock well)	09-26-90	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	01-24-91	<.01	<.01	<.01	<.01	<.01	<.01
	05-29-91	<.01	<.01	<.01	<.01	<.01	<.01
	07-16-91	<.01	<.01	<.01	<.01	<.01	<.01
	09-23-91	<.01	<.01	<.01	<.01	<.01	<.01
	12-23-91	<.01	<.01	<.01	<.01	<.01	<.01
	03-26-92	<.01	<.01	<.01	<.01	<.01	<.01
442121098140001 (First Assembly Church)	05-30-91	<.01	<.01	<.01	.30	<.01	<.01
	07-15-91	<.01	<.01	<.01	<.01	<.01	<.01
	04-15-92	<.01	<.01	<.01	<.01	<.01	<.01
	05-27-92	<.01	<.01	<.01	<.01	<.01	.24
	06-23-92	.04	<.01	<.01	.10	<.01	<.01
	06-01-93	<.01	<.01	<.01	<.01	<.01	<.01

Table 9. Concentrations of organochlorine insecticides, gross polychlorinated biphenols (PCB's), and gross polychlorinated naphthalenes (PCN's) obtained from detailed samples

[All analyses on unfiltered samples. All samples collected by U.S. Geological Survey and analyzed by National Water Quality Laboratory. µg/L, micrograms per liter; <, less than]

Station number (other identifier)	Date	Aldrin (µg/L) (39330)	Chlordane (µg/L) (39350)	DDD (µg/L) (39360)	DDE (µg/L) (39365)	DDT (µg/L) (39370)	Dieldrin (µg/L) (39380)	Endosulfan (µg/L) (39388)
442150098120601 (James River at Morningside)	05-29-91	<0.010	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010
	07-15-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	04-14-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-28-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-23-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-30-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-23-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442150098120602 (Huron Water Treatment Plant effluent)	05-29-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	07-16-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	04-14-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-28-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-23-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-30-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-25-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-23-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442150098174401 (CO-05-90)	05-28-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	07-15-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-18-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	12-23-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	04-15-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-27-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-22-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-31-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-26-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-22-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-08-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442124098181601 (CO-14-90)	05-28-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442122098174300 (Stony Run trib.)	06-12-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442111098173801 (CO-18-90)	05-28-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	07-16-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-23-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	12-23-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-25-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-27-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-22-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	12-15-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-31-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-26-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-22-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-08-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010

Endrin (µg/L) (39390)	Heptachlor (µg/L) (39410)	Heptachlor epoxide (µg/L) (39420)	Lindane (µg/L) (39340)	Methoxy-chlor (µg/L) (39480)	Mirex (µg/L) (39755)	Perthane (µg/L) (39034)	PCB (µg/L) (39516)	PCN (µg/L) (39250)	Toxaphene (µg/L) (39400)
<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.1	<0.1	<0.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1

Table 9. Concentrations of organochlorine insecticides, gross polychlorinated biphenols (PCB's), and gross polychlorinated naphthalenes (PCN's) obtained from detailed samples—Continued

Station number (other identifier)	Date	Aldrin (µg/L) (39330)	Chlordane (µg/L) (39350)	DDD (µg/L) (39360)	DDE (µg/L) (39365)	DDT (µg/L) (39370)	Dieldrin (µg/L) (39380)	Endosulfan (µg/L) (39388)
442106098174001 (Stock well)	09-26-90	<0.010	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010
	01-24-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-29-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	07-16-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	09-23-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	12-23-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	03-26-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
442121098140001 (First Assembly Church)	05-30-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	07-15-91	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	04-15-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-27-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	06-23-92	<.010	<.1	<.010	<.010	<.010	<.010	<.010
	05-25-93	<.010	<.1	<.010	<.010	<.010	<.010	<.010

Endrin (µg/L) (39390)	Heptachlor (µg/L) (39410)	Heptachlor epoxide (µg/L) (39420)	Lindane (µg/L) (39340)	Methoxy-chlor (µg/L) (39480)	Mirex (µg/L) (39755)	Perthane (µg/L) (39034)	PCB (µg/L) (39516)	PCN (µg/L) (39250)	Toxaphene (µg/L) (39400)
<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.1	<0.1	<0.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1
<.010	<.010	<.010	<.010	<.01	<.01	<.1	<.1	<.10	<1

Table 10. Concentrations of volatile organic compounds obtained from detailed samples

[All analyses on unfiltered samples. All samples collected by U.S. Geological Survey and analyzed by National Water Quality Laboratory. µg/L, micrograms per liter; <, less than; --, no data]

Station number (other identifier)	Date	Acrolein (µg/L) (34210)	Acrylo-nitrile (µg/L) (34215)	Benzene (µg/L) (34030)	Bromo-benzene (µg/L) (81555)	Benzene, n-butyl- (µg/L) (77342)	Benzene, sec-butyl- (µg/L) (77350)	Benzene, tert-butyl- (µg/L) (77353)	Chloro-benzene (µg/L) (34301)	Benzene, o-chloro- (µg/L) (34536)	Benzene, 1,3-di-chloro- (µg/L) (34566)
442150098120601	05-29-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(James River at	07-15-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
Morningisde)	04-14-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-28-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098120602	05-29-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(Huron Water	04-14-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Treatment	05-28-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Plant effluent)	06-23-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098174401	05-28-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(CO-05-90)	07-15-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	09-18-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	12-23-91	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-15-92	--	--	--	--	<3.0	--	<3.0	--	--	--
	03-31-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442122098174300 (Stony Run trib.)	06-12-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
442111098173801	05-28-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(CO-18-90)	07-16-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	09-23-91	<20	<20	<3.0	<.2	--	--	--	<3.0	<3.0	<3.0
	12-23-91	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	--	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	<3.0	<3.0	<3.0	--	--	--
	12-15-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-31-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Benzene, 1,4-di-chloro- (µg/L) (34571)	Benzene, 1,2,3-tri-chloro- (µg/L) (77613)	Benzene, 1,2,4-tri-chloro- (µg/L) (34551)	Ethyl-benzene (µg/L) (34371)	Benzene, n-propyl- (µg/L) (77224)	Iso-propyl-benzene (µg/L) (77223)	Methyl-bromide, (µg/L) (34413)	Bromo-form, (µg/L) (32104)	Hexe-chloro-but-adiene, (µg/L) (39702)	Carbon tetra-chloride, (µg/L) (32102)	Methyl-chloride, (µg/L) (34418)	Methyl-ene chloride, (µg/L) (34423)
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	7.3	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	8.4	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
--	--	--	--	--	<3.0	--	--	--	--	--	--
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	<3.0	<3.0	--	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
--	--	--	--	--	--	--	--	--	--	--	--
--	<3.0	--	--	<3.0	<3.0	--	--	--	--	--	--
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table 10. Concentrations of volatile organic compounds obtained from detailed samples—Continued

Station number (other idenitifer)	Date	Chloro-form (µg/L) (32106)	1,2-Dibromo ethane (µg/L) (77651)	Chloro-ethane (µg/L) (34311)	1,1-Di-chloro-ethane (µg/L) (34496)	1,2-Di-chloro-ethane (µg/L) (32103)	Ethane, 1,1,1,2-tetra-chloro- (µg/L) (77562)	Ethane, 1,1,2,2-tetra-chloro- (µg/L) (34516)	1,1,1-Tri-chloro-ethane (µg/L) (34506)	1,1,2-Tri-chloro-ethene (µg/L) (34511)
442150098120601	05-29-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(James River at	07-15-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
Morningside)	04-14-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-28-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098120602	05-29-91	9.3	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(Huron Water	04-14-92	23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Treatment	05-28-92	18	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Plant effluent)	06-23-92	21	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	21	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	34	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	29	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098174401	05-28-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(CO-05-90)	07-15-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	09-18-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-15-92	--	--	--	--	--	--	--	--	--
	03-31-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442122098174300 (Stony Run trib.)	06-12-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
442111098173801	05-28-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(CO-18-90)	07-16-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	09-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	--	--	--	--	--
	12-15-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-31-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Cis-1,2-di-chloro-ethene (µg/L) (77093)	1,2-Transdi-chloro-ethene (µg/L) (34546)	2-Chloro-ethyl-vinyl-ether (µg/L) (34576)	Methyl-ether, tert-butyl- (µg/L) (78032)	1,1-Di-chloro-ethylene (µg/L) (34501)	Tetra-chloro-ethylene (µg/L) (34475)	Tri-chloro-ethylene (µg/L) (39180)	Freon-113 (µg/L) (77652)	Mesit-ylene (µg/L) (77226)	Methane, bromo-chloro- (µg/L) (77297)	Chloro-dibromo-methane (µg/L) (32105)	Dibromo-methane (µg/L) (30217)
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	3.5	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	49	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	30	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	17	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	8.5	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	17	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	7.1	<3.0
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
--	--	--	--	--	--	--	--	<3.0	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.00	<3.0	<3.0
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
--	--	--	<5.0	--	--	--	--	--	<3.00	--	--
--	--	--	--	--	--	--	--	<3.0	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	<5.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.00	<3.0	<3.0

Table 10. Concentrations of volatile organic compounds obtained from detailed samples—Continued

Station numbar (other identifier)	Date	Dichloro-bromo-methane (µg/L) (32101)	Dichloro-difluoro-methane (µg/L) (34668)	Trichloro-fluoro-methane (µg/L) (34488)	Naphth-aiene (µg/L) (34696)	Dibromo chloro-propane (µg/L) (82625)	1,2-Di-chloro-propane (µg/L) (34541)	1,3-Di-chloro-propane (µg/L) (77173)	2,2-Di-chloro-propane (µg/L) (77170)	1,2,3-Tri-chloro-propane (µg/L) (77443)
442150098120601	05-29-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
(James River at	07-15-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
Morningside)	04-14-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-28-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098120602	05-29-91	7.5	<3.0	<3.0	--	--	<3.0	--	--	--
(Huron Water	04-14-92	31	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Treatment	05-28-92	34	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Plant effluent)	06-23-92	21	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-30-93	16	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-93	14	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442150098174401	05-28-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
(CO-05-90)	07-15-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	09-18-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-15-92	--	--	--	--	--	--	--	--	--
	03-31-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442122098174300 (Stony Run trib.)	06-12-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
442111098173801	05-28-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
(CO-18-90)	07-16-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	09-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-25-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-22-92	--	--	--	--	--	--	--	--	--
	09-22-92	--	--	--	--	--	--	--	--	--
	12-15-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-31-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-26-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-22-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	09-08-93	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

1,1-Dichloropropene (µg/L) (77168)	1,3-Dichloropropene (µg/L) (34561)	Cis 1,3-dichloropropene (µg/L) (34704)	Trans-1,3-dichloropropene (µg/L) (34699)	Pseudocumene (µg/L) (77222)	Styrene (µg/L) (77128)	Toluene (µg/L) (34010)	O-chlorotoluene (µg/L) (77275)	Toluene p-chlor (µg/L) (77277)	P-isopropyltoluene (µg/L) (77356)	Vinyl chloride (µg/L) (39175)	Xylene (µg/L) (81551)
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	--	--	--	<3.0	--	--	--	--	<3.0	--	--
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	--	<3.0	<3.0	<3.0	<3.0	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	<3.0	--	--	--	--	<3.0	--	--
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0

Table 10.--Concentrations of volatile organic compounds obtained from detailed samples—Continued

Station number (other identifier)	Date	Acrolein (µg/L) (34210)	Acrylo-nitrile (µg/L) (34215)	Benzene (µg/L) (34030)	Bromo-benzene (µg/L) (81555)	Benzene, n-butyl- (µg/L) (77342)	Benzene, sec-butyl- (µg/L) (77350)	Benzene, tert-butyl- (µg/L) (77353)	Chloro-benzene (µg/L) (34301)	Benzene, o-chloro- (µg/L) (34536)	Benzene, 1,3-di-chloro- (µg/L) (34566)
442106098174001	09-26-90	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(Stock well)	01-24-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	05-29-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	07-16-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
	09-23-91	<20	<20	<3.0	<0.2	--	--	--	<3.0	<3.0	<3.0
	12-23-91	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-26-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442121098140001	05-30-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
(First Assembly	07-15-91	--	--	<3.0	--	--	--	--	<3.0	<3.0	<3.0
Church)	04-15-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	<20	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Benzene, 1,4-di-chloro- (µg/L) (34571)	Benzene, 1,2,3-tri-chloro- (µg/L) (77613)	Benzene, 1,2,4-tri-chloro- (µg/L) (34551)	Ethyl-benzene (µg/L) (34371)	Benzene, n-propyl- (µg/L) (77224)	Iso-propyl-benzene (µg/L) (77223)	Methyl-bromide, (µg/L) (34413)	Bromo-form, (µg/L) (32104)	Hexe-chloro-but-adiene, (µg/L) (39702)	Carbon tetra-chloride, (µg/L) (32102)	Methyl-chloride, (µg/L) (34418)	Methyl-ene chloride, (µg/L) (34423)
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	<3.0	<3.0	--	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	--	--	<3.0	--	--	<3.0	<3.0	--	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	6.6	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	10	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	5.4	<3.0	<3.0	<3.0	<3.0
<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table 10. Concentrations of volatile organic compounds obtained from detailed samples—Continued

Station number (other idenitifer)	Date	Chloro-form (µg/L) (32106)	1,2-Dibromo ethane (µg/L) (77651)	Chloro-ethane (µg/L) (34311)	1,1-Di-chloro-ethane (µg/L) (34496)	1,2-Di-chloro-ethane (µg/L) (32103)	Ethana, 1,1,1,2-tetra-chioro- (µg/L) (77562)	Ethane, 1,1,2,2-tatra-chioro- (µg/L) (34516)	1,1,1-Tri-chioro-ethane (µg/L) (34506)	1,1,2-Tri-chioro-ethane (µg/L) (34511)
442106098174001	09-26-90	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(Stock well)	01-24-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	05-29-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	07-16-91	<3.0	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
	09-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-26-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442121098140001	05-30-91	8.5	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
(First Assembly	07-15-91	17	<3.0	<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0
Church)	04-15-92	24	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	21	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	21	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	35	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Cis-1,2-dichloroethene (µg/L) (77093)	1,2-Transdichloroethene (µg/L) (34546)	2-Chloroethyl-vinyl-ether (µg/L) (34576)	Methyl-ether, tert-butyl- (µg/L) (78032)	1,1-Dichloroethylene (µg/L) (34501)	Tetrachloroethylene (µg/L) (34475)	Trichloroethylene (µg/L) (39180)	Freon-113 (µg/L) (77652)	Mesitylene (µg/L) (77226)	Methane, bromochloro- (µg/L) (77297)	Chlorodibromomethane (µg/L) (32105)	Dibromomethane (µg/L) (30217)
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	<3.0	<3.0
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	3.3	--
--	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	--	--	<3.0	--
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	48	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	34	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	21	<3.0
<3.0	<3.0	<3.0	--	<3.0	<3.0	<3.0	--	<3.0	--	17	<3.0

Table 10. Concentrations of volatile organic compounds obtained from detailed samples—Continued

Station number (other identifier)	Date	Dichloro-bromo-methane (µg/L) (32101)	Dichloro-difluoro-methane (µg/L) (34668)	Trichloro-fluoro-methene (µg/L) (34488)	Naphth-eiene (µg/L) (34696)	Dibromo chloro-propane (µg/L) (82625)	1,2-Di-chloro-propane (µg/L) (34541)	1,3-Di-chloro-propane (µg/L) (77173)	2,2-Di-chloro-propane (µg/L) (77170)	1,2,3-Tri-chloro-propane (µg/L) (77443)
442106098174001	09-26-90	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
(Stock well)	01-24-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	05-29-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	07-16-91	<3.0	<3.0	<3.0	--	--	<3.0	--	--	--
	09-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	12-23-91	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	03-26-92	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
442121098140001	05-30-91	6.7	<3.0	<3.0	--	--	<3.0	--	--	--
(First Assembly	07-15-91	5.9	<3.0	<3.0	--	--	<3.0	--	--	--
Church)	04-15-92	30	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-27-92	36	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	06-23-92	25	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	05-25-93	24	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

1,1-Di-chloro-propene (µg/L) (77168)	1,3-Di-chloro-propene (µg/L) (34561)	Cis 1,3-di-chloro-propene (µg/L) (34704)	Trans-1,3-dichloro-propene (µg/L) (34699)	Pseudo-cumene (µg/L) (77222)	Styrene (µg/L) (77128)	Toluene (µg/L) (34010)	O-chloro-toluene (µg/L) (77275)	Toluene p-chlor (µg/L) (77277)	P-iso-propyl-toluene (µg/L) (77356)	Vinyl chloride (µg/L) (39175)	Xylene (µg/L) (81651)
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	--	<3.0	<3.0	<3.0	<3.0	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
--	<3.0	<3.0	<3.0	--	<3.0	<3.0	--	--	--	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0
<3.0	--	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<3.0

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