U.S. Department of the Interior
U.S. Geological Survey

Selected Hydrologic Data, Through Water Year 1998, Black Hills Hydrology Study, South Dakota

By Daniel G. Driscoll, Wendell L. Bradford, and Michael J. Moran

Open-File Report 00-70

Prepared in cooperation with the South Dakota Department
of Environment and Natural Resources and the
West Dakota Water Development District

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
2000	**N/A**	**-**

4. TITLE AND SUBTITLE **Selected Hydrologic Data, Through Water Year 1998, Black Hills Hydrology Study, South Dakota**	5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **U.S. Department of the Interior 1849 C Street, NW Washington, DC 20240**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S) 11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**SAR**	**288**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

U.S. Department of the Interior

Bruce Babbitt, Secretary

U.S. Geological Survey

Charles G. Groat, Director

The use of firm, trade, and brand names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

Rapid City, South Dakota: 2000

For additional information write to:

District Chief
U.S. Geological Survey
1608 Mt. View Road
Rapid City, SD 57702

Copies of this report can be purchased from:

U.S. Geological Survey
Branch of Information Services
Box 25286
Denver, CO 80225-0286

CONTENTS

Abstract 1
Introduction 1
Description of Study Area 2
Methods of Station Identification 7
Acknowledgments 8
Water-Level Data 8
Observation Wells and Cave Sites 10
Miscellaneous Wells 14
Water-Quality Data 18
Surface-Water Samples 18
Ground-Water Samples 18
Selected References 52
Supplemental Information 53
Section A - Site descriptions, hydrographs, and tabulations of daily water-level records for observation wells and cave sites 55
Section B - Hydrographs for miscellaneous wells 275

ILLUSTRATIONS

1. Map showing area of investigation for the Black Hills Hydrology Study 3
2. Stratigraphic section for the Black Hills 4
3. Map showing outcrops of Madison Limestone and Minnelusa Formation within the study area for Black Hills Hydrology Study 5
4. Geologic cross section A-A' 6
5. Schematic showing simplified hydrogeologic setting of the Black Hills area 7
6. System for assignment of local numbers 9
7. Map showing location of observation wells and cave sites for which daily water-level records are presented 13
8. Map showing location of miscellaneous wells for which annual water-level measurements are presented 15
9. Map showing location of surface-water sampling sites within the study area for which chemical analyses are presented 19
10. Map showing location of ground-water sampling sites for which chemical analyses are presented 27
11. Map showing location of surface- and ground-water interaction sites for which water-quality data are presented 38

TABLES

1. Observation wells and cave sites for which daily water-level records are presented 10
2. Site information and measured water levels for miscellaneous wells 16
3. Site information for surface-water sites for which chemical analyses are presented 18
4. Chemical analyses of surface-water samples 20
5. Site information for ground-water sampling sites for which chemical analyses are presented..... 26
6. Chemical analyses of ground-water samples..... 28
7. Site information for sampling sites located immediately upstream of loss zones for which chemical analyses are presented 36
8. Site information for headwater spring sampling sites for which chemical analyses are presented..... 37
9. Site information for downgradient spring sampling sites for which chemical analyses are presented 37
10. Water-quality data for samples collected immediately upstream of loss zones 39
11. Water-quality data for headwater spring samples..... 40
12. Water-quality data for downgradient spring samples 46

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
acre	4,047	square meter
acre	0.4047	hectare
cubic foot per second (ft^3/s)	0.02832	cubic meter per second
foot (ft)	0.3048	meter
gallon per minute (gal/min)	0.06308	liter per second
inch (in.)	25.4	millimeter
mile (mi)	1.609	kilometer
square mile (mi^2)	259.0	hectare
square mile (mi^2)	2.590	square kilometer
ton	907.2	kilogram

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 North American Vertical Datum of 1988 (NAVD88)--a geodetic datum derived from a general adjustment of various datums, including 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, 1998, is called the “1998 water year.”

Selected Hydrologic Data, Through Water Year 1998, Black Hills Hydrology Study, South Dakota

By Daniel G. Driscoll, Wendell L. Bradford, *and* Michael J. Moran

ABSTRACT

This report presents water-level and water-quality data that have been collected or compiled, through water year 1998, for the Black Hills Hydrology Study. This study is a long-term cooperative effort between the U.S. Geological Survey, the South Dakota Department of Environment and Natural Resources, and the West Dakota Water Development District (which represents various local and county cooperators). This report is the third in a series of project data reports produced for the study.

Daily water-level data are presented for 71 observation wells and 2 cave sites in the Black Hills area of western South Dakota. The wells include a network of observation wells that are maintained in cooperation with the South Dakota Department of Environment and Natural Resources and are completed in various bedrock formations that are utilized as aquifers in the Black Hills area of western South Dakota. Both cave sites are located within outcrops of the Madison Limestone. Data presented include site descriptions, hydrographs, and tables of daily water levels.

Annual measurements of water levels collected during water years 1995-98 from a network of 18 additional, miscellaneous wells are presented. These wells are part of a statewide network of wells completed in bedrock aquifers that was operated from 1959 through 1989 in cooperation with the South Dakota Department of Environment and Natural Resources. Site descriptions and hydrographs for the entire period of record for each site also are presented.

Water-quality data are presented for 9 surface-water sites, 19 ground-water sites, and 30 sites that have been classified as areas of surface- and ground-water interaction in the Black Hills area. The surface- and ground-water interaction sites are further divided into three categories that include 11 loss zone sites, 8 headwater spring sites, and 11 downgradient spring sites.

INTRODUCTION

The Black Hills Hydrology Study is a long-term investigation that was initiated in 1990 as a cooperative effort between the U.S. Geological Survey (USGS), the South Dakota Department of Environment and Natural Resources (DENR), and the West Dakota Water Development District. West Dakota represents various local and county cooperators. The study was planned as a 10-year investigation to assess the quantity, quality, and distribution of surface and ground water in the Black Hills area of western South Dakota (Driscoll, 1992).

An extensive data-collection network has been established for the Black Hills Hydrology Study. Streamflow and precipitation data, which are collected at numerous sites throughout the study area, have been published annually in Water Resources Data for South Dakota (U.S. Geological Survey, 1991-99). Water-level, water-quality, and spring data that were collected or compiled for the Black Hills Hydrology Study, through water year 1992 (ending September 30, 1992), were published in the first of a series of project data reports (Driscoll and Bradford, 1994). Selected hydrologic data that were collected or compiled for the Black

Hills Hydrology Study through water year 1994 were published in the second project data report (Driscoll and others, 1996). This report is the third in the series and presents selected hydrologic data that have been collected or compiled during water years 1995-98. In some cases, data collected prior to water year 1995 are included for purposes of comparison or supplementation.

Description of Study Area

The study area includes the topographically defined Black Hills and adjacent areas as shown in figure 1. The boundaries of the study area have been modified slightly since publication of the original plan of study (Driscoll, 1992).

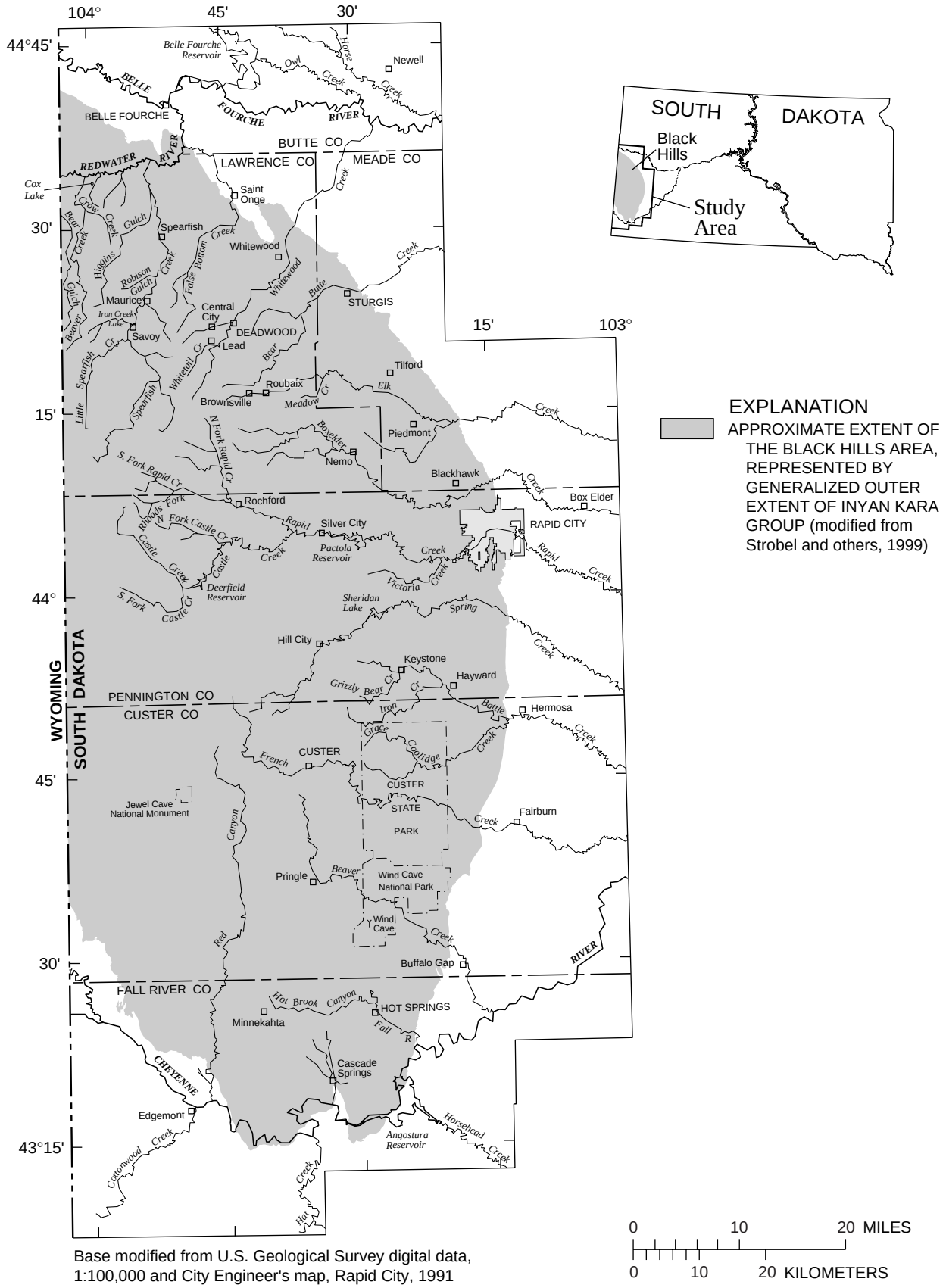
The Black Hills are a dome-shaped uplift of Laramide age, about 125 mi long and 60 mi wide (Feldman and Heimlich, 1980). Elevations range from about 7,200 ft at the higher peaks to about 3,000 ft in the surrounding plains, resulting in an orographically induced microclimate characterized by generally greater precipitation and lower temperatures at the higher elevations. The overall climate of the area is continental, generally with low precipitation amounts, hot summers, cold winters, and extreme variations in both precipitation and temperatures (Johnson, 1933). Average annual precipitation for the Black Hills area is 21.90 in., and ranges from 15.83 in. at Hot Springs to 29.01 in. at Lead. The average annual temperature is 43.9°F, and ranges from 48.7°F at Hot Springs to approximately 37°F near Deerfield Reservoir (U.S. Department of Commerce, 1998).

The oldest geologic units in the Black Hills are the Precambrian metamorphic and igneous rocks (fig. 2), which are exposed in the central core of the Black Hills, extending from near Lead to south of Custer. Surrounding the Precambrian core is a layered series of sedimentary rocks including limestones, sandstones, and shales that are exposed in roughly concentric rings around the uplifted flanks of the Black Hills. The generalized outcrops of the Madison (Pahasapa) Limestone and Minnelusa Formation are shown as examples in figure 3. The generalized outer extent of the Inyan Kara Group, which approximates the outer extent of the Black Hills uplift, also is shown in figure 3. The bedrock sedimentary formations typically dip away from the uplifted Black Hills at angles that approach or exceed 10 degrees near the outcrops, and decrease with distance from the uplift (fig. 4).

Many of the sedimentary formations commonly are used as aquifers, both within and beyond the study area. Recharge to these aquifers is from precipitation upon the outcrops and from stream infiltration along the flanks of the Black Hills (Peter, 1985; Kyllonen and Peter, 1987; Greene, 1993). Within the Paleozoic section, the Deadwood Formation, Madison Limestone, Minnelusa Formation, and Minnekahta Limestone commonly are used as aquifers. These aquifers are collectively confined by the underlying Precambrian rocks and the overlying Spearfish Formation. Individually the aquifers are separated by minor confining layers, or by relatively impermeable layers within the individual formations. Leakance between the aquifers is extremely variable (Peter, 1985; Greene, 1993). Within the Mesozoic section, the Inyan Kara Group, which includes the Lakota and Fall River Formations, is used extensively as an aquifer, with various other units used locally to lesser degrees. A series of Cretaceous shales acts as the upper confining layer to the Mesozoic aquifer units.

Artesian conditions generally exist within the aforementioned aquifers where an upper confining layer is present. This means that water in a well will rise above the top of the aquifer in which it is completed. If the water level, or potentiometric surface, is above the land surface, a flowing well will result. Similarly, artesian springs that originate from confined aquifers are common around the periphery of the Black Hills. The hydrogeologic setting of the Black Hills area is schematically illustrated in figure 5.

Streamflow within the study area is affected by both topography and geology. The base flow of most Black Hills streams originates in the higher elevations, where increased precipitation and reduced evapotranspiration result in excess water being available for springflow and streamflow. Numerous streams have significant headwater springs originating from the Paleozoic formations on the western side of the study area (figs. 3 and 4). Most Black Hills streams generally lose all or part of their flow as they cross the outcrop of the Madison Limestone (Rahn and Gries, 1973; Hortness and Driscoll, 1998). Karst features of the Madison Limestone, including sinkholes, collapse features, solution cavities, and caves are responsible for the Madison's capacity to accept recharge from streamflow. Large springs occur in many locations downgradient from the streamflow-loss zones, most commonly within or near the outcrop of the Spearfish Formation, providing an important source of base flow in many streams beyond the periphery of the Hills (Rahn and Gries, 1973).



Base modified from U.S. Geological Survey digital data, 1:100,000 and City Engineer's map, Rapid City, 1991

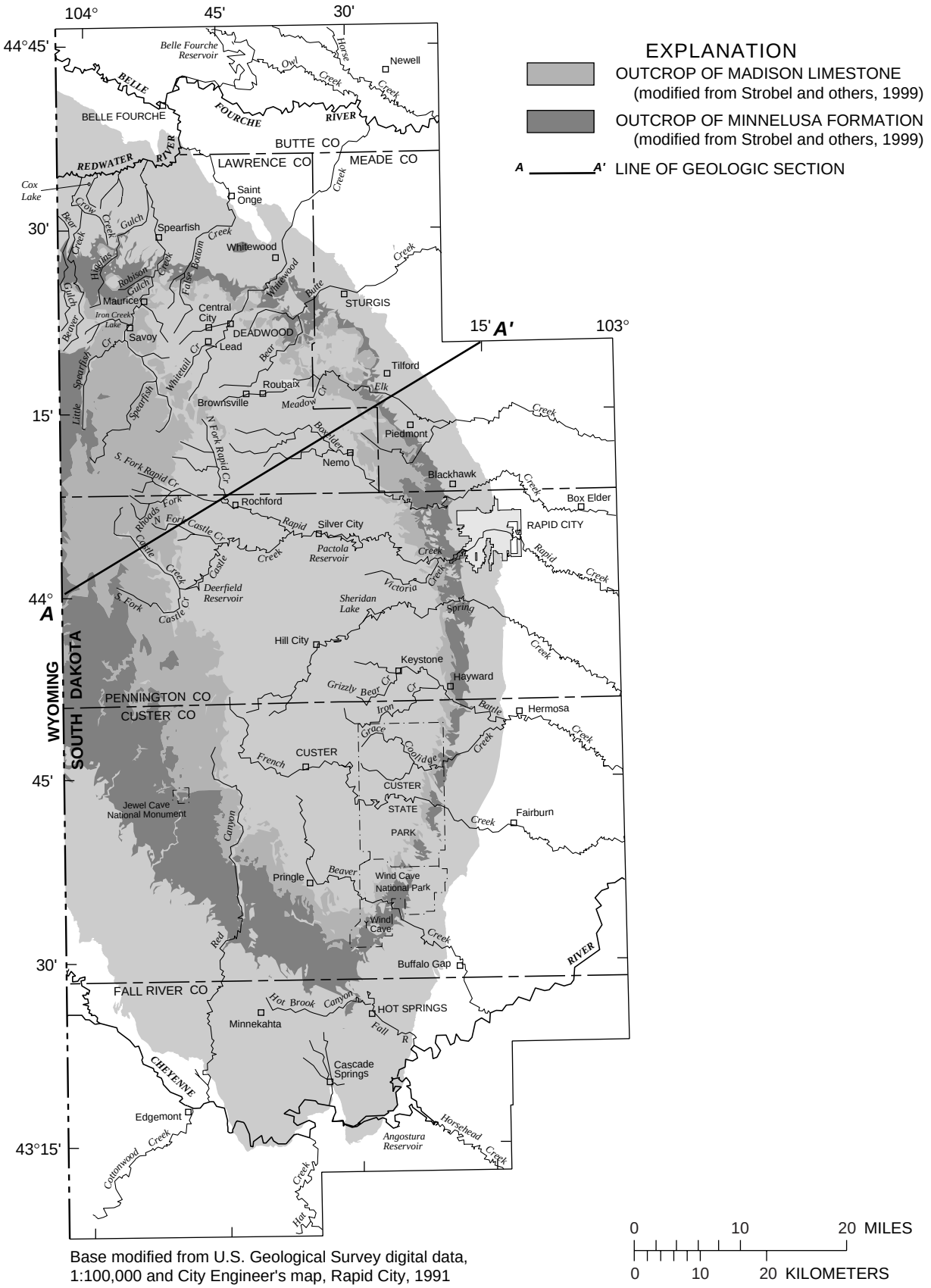
Figure 1. Area of investigation for the Black Hills Hydrology Study.

ERATHEM	SYSTEM	ABBREVIATION FOR STRATIGRAPHIC INTERVAL	GEOLOGIC UNIT	THICKNESS IN FEET	DESCRIPTION
CENOZOIC	QUATERNARY & TERTIARY (?)	QTu	UNDIFFERENTIATED SANDS AND GRAVELS	0-50	Sand, gravel, and boulders
		Tw	WHITE RIVER GROUP	0-300	Light colored clays with sandstone channel fillings and local limestone lenses.
	TERTIARY[1]				
MESOZOIC	CRETACEOUS	Kps	PIERRE SHALE	1,200-2,700	Principal horizon of limestone lenses giving teepee buttes. Dark-gray shale containing scattered concretions. Widely scattered limestone masses, giving small teepee buttes. Black fissile shale with concretions.
			Sharon Springs Mem.		
			NIOBRARA FORMATION	[2]80-300	Impure chalk and calcareous shale.
			CARLILE SHALE: Turner Sandy Member	[2]350-750	Light-gray shale with numerous large concretions and sandy layers.
			CARLILE SHALE: Wall Creek Sands		Dark-gray shale
			GREENHORN FORMATION	(25-30) (200-350)	Impure slabby limestone. Weathers buff. Dark-gray calcareous shale, with thin Orman Lake limestone at base.
			GRANEROS GROUP: BELLE FOURCHE SHALE	150-850	Gray shale with scattered limestone concretions. Clay spur bentonite at base.
			GRANEROS GROUP: MOWRY SHALE	125-230	Light-gray siliceous shale. Fish scales and thin layers of bentonite.
			GRANEROS GROUP: MUDDY SANDSTONE: DYNNESON	20-150	Brown to light yellow and white sandstone.
			GRANEROS GROUP: MUDDY SANDSTONE: NEWCASTLE		
			GRANEROS GROUP: SKULL CREEK SHALE	150-270	Dark gray to black siliceous shale.
		Kik	INYAN KARA GROUP: FALL RIVER FORMATION	10-200	Massive to slabby sandstone.
			INYAN KARA GROUP: LAKOTA FM: Fuson Shale	10-190	Coarse gray to buff cross-bedded conglomeratic sandstone, interbedded with buff, red, and gray clay, especially toward top. Local fine-grained limestone.
			INYAN KARA GROUP: LAKOTA FM: Minnewaste Limestone	0-25	
			INYAN KARA GROUP: LAKOTA FM	25-485	
	JURASSIC	Ju	MORRISON FORMATION	0-220	Green to maroon shale. Thin sandstone.
			UNKPAPA SS	0-225	Massive fine-grained sandstone.
			SUNDANCE FORMATION: Redwater Member, Lak Member, Hulett Member, Stockade Beaver, Canyon Spr Member	250-450	Greenish-gray shale, thin limestone lenses. Glauconltic sandstone; red sandstone near middle.
			GYPSUM SPRING FORMATION	0-45	Red siltstone, gypsum, and limestone.
	TRIASSIC	TRPs	SPEARFISH FORMATION Goose Egg Equivalent	250-800	Red sandy shale, soft red sandstone and siltstone with gypsum and thin limestone layers. Gypsum locally near the base.
PALEOZOIC	PERMIAN	Pmk	MINNEKAHTA LIMESTONE	[2]25-65	Thin to medium-bedded finely-crystaline, purplish gray laminated limestone.
		Po	OPECHE SHALE	[2]25-150	Red shale and sandstone.
		PIPm	MINNELUSA FORMATION	[2]375-1,175	Yellow to red cross-bedded sandstone, limestone, and anhydrite locally at top. Interbedded sandstone, limestone, dolomite, shale, and anhydrite.
	PENNSYLVANIAN				Red shale with interbedded limestone and sandstone at base.
	MISSISSIPPIAN	MDm	MADISON (PAHASAPA) LIMESTONE	[2]250-1,000	Massive light-colored limestone. Dolomite in part. Cavernous in upper part.
	DEVONIAN		ENGLEWOOD FORMATION	30-60	Pink to buff limestone. Shale locally at base.
	ORDOVICIAN	Ou	WHITEWOOD (RED RIVER) FORMATION	[2]0-235	Buff dolomite and limestone.
			WINNIPEG FORMATION	[2]0-150	Green shale with siltstone.
	CAMBRIAN	O€d	DEADWOOD FORMATION	[2]0-500	Massive to thin-bedded buff to purple sandstone. Greenish glauconitic shale flaggy dolomite and flatpebble limestone conglomerate. Sandstone, with conglomerate locally at the base.
PRECAMBRIAN		p€u	UNDIFFERENTIATED METAMORPHIC AND IGNEOUS ROCKS		Schist, slate, quartzite, and arkosic grit. Intruded by diorite, metamorphosed to amphibolite, and by granite and pegmatite.

[1] Also may include intrusive igneous rocks
[2] Modified based on drill-hole data

Modified from information furnished by the Department of Geology and Geological Engineering, South Dakota School of Mines and Technology (written commun., January 1994)

Figure 2. Stratigraphic section for the Black Hills.



Base modified from U.S. Geological Survey digital data, 1:100,000 and City Engineer's map, Rapid City, 1991

Figure 3. Outcrops of Madison Limestone and Minnelusa Formation within the study area for Black Hills Hydrology Study.

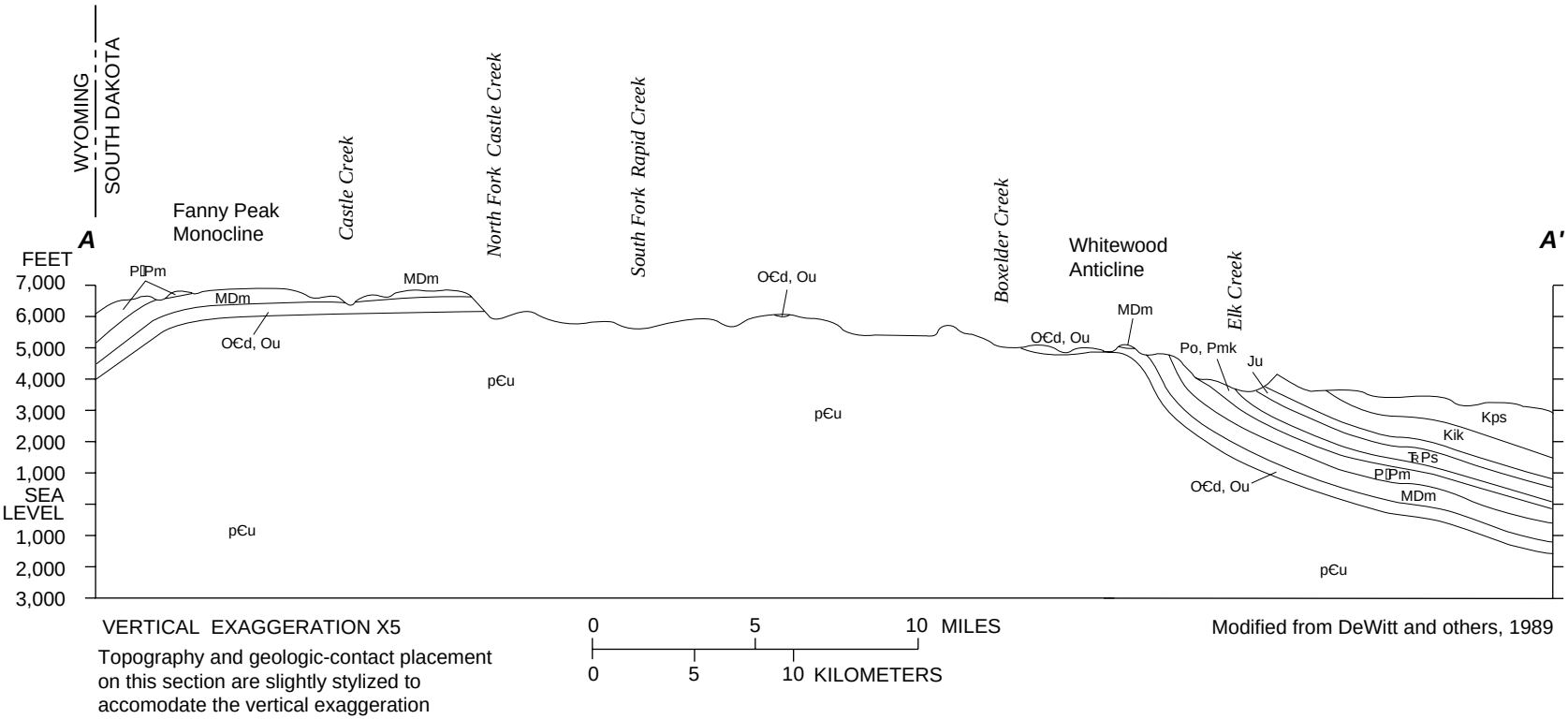


Figure 4. Geologic section A-A'. (Location of section is shown in figure 3. Abbreviations for stratigraphic intervals are explained in figure 2).

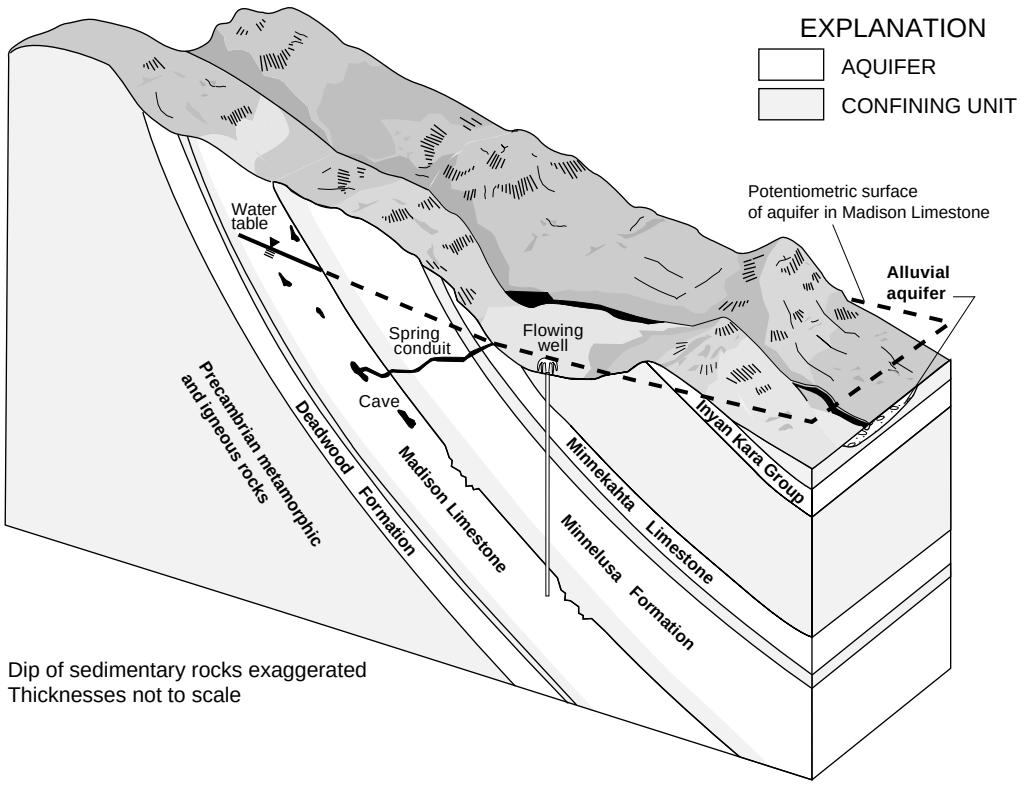


Figure 5. Schematic showing simplified hydrogeologic setting of the Black Hills area.

Water quality within the study area also is affected by geologic conditions. Water within streams draining the Paleozoic formations on the western side of the study area typically is hard and of a calcium bicarbonate type. Streams draining the Precambrian core, by comparison, typically are softer, with significantly lower concentrations of dissolved solids and lower associated values of specific conductance (U.S. Geological Survey, 1975; Meyer, 1984; Driscoll and Bradford, 1994).

The quality of ground water within the study area is extremely variable. Concentrations of dissolved solids in the sedimentary aquifers generally are relatively low, in and near the recharge areas, but increase with distance from the recharge areas. Water within the Madison, Minnelusa, and Minnekahta aquifers generally is of a calcium bicarbonate type near the recharge areas, which is typical of carbonate aquifers (Driscoll and Bradford, 1994; Whalen, 1994). Within the Madison and Minnelusa aquifers, concentrations of sulfate and other ions generally increase in the downgradient direction. Within downgradient Minnelusa wells, sulfate generally is the dominant anion (Whalen, 1994). Many of the large springs around the periphery of the Hills, which originate from the Madison and/or Minnelusa, reflect this change in water quality.

Methods of Station Identification

Various methods of station identification are used within this report to identify sites for which data are presented. The most commonly used method for ground-water sites is the local number, which is based on the Federal land-survey system for western South Dakota (fig. 6). The local number consists of the township number followed by “N” or “S” (north or south of the Black Hills Baseline), the range number followed by “E” or “W” (east or west of the Black Hills Meridian), and the 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 site is located. These letters are assigned in a counterclockwise direction beginning with “A” for the northeast quarter. A serial number following the last letter is

used to distinguish between wells or springs located in the same 2.5-acre tract. Thus, well 4N6E19AABA (fig. 6) is in the NE1/4NW1/4NE1/4NE1/4, sec. 19, T. 4 N., R. 6 E.

Another 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 sites located at the same latitude and longitude. The latitudes or longitudes originally assigned to sites occasionally are determined to be incorrect. In these cases, the latitude or longitude is corrected, but the station identification number generally remains unchanged. Thus, the latitude or longitude for an occasional site may not correspond exactly with the station identification number.

Another method of station identification is the use of any other identifier(s) that may be associated with a site. In the case of many of the observation wells, two other identifiers have been assigned. One is a name assigned by DENR that denotes the county in which the well is located and the year and sequence in which it was drilled. In most cases, another identifier referring to a nearby geographic feature also is used.

Two methods of station identification are used to identify surface-water sites for which water-quality data are presented. Sites that are used only for water-quality sampling are identified by the 15-digit station identification number based on latitude and longitude that was described previously. Sites for which streamflow records also are available are identified by an 8-digit station identification number that increases in a downstream direction.

In addition to the aforementioned methods of station identification, sequential site numbers are assigned to various sites in several subsequent sections of this report. The sequential site numbers are used to display locations of sites on several figures, where displaying longer identification numbers is not feasible because of the close proximity of some sites.

Acknowledgments

The authors wish to acknowledge the efforts of the West Dakota Water Development District for helping make the Black Hills Hydrology Study a reality. West Dakota's coordination of various local and county cooperators has been a key element in making this study possible.

The authors also wish to recognize the efforts of the Water Rights Program of DENR for making possible the publication of numerous water-level records included in this report. The foresightedness of DENR staff in development of the observation-well network has been extremely valuable. The cooperation of DENR staff in sharing responsibilities for collection of field data also is greatly appreciated.

WATER-LEVEL DATA

Water-level data are presented for two different networks of wells that are completed in various bedrock formations in the Black Hills area. The first set of water-level data consists of daily records for a network of observation wells that generally have been constructed by DENR specifically for the purpose of collecting water-level data in the Black Hills area. Most of these observation wells are instrumented with some type of continuous recorder, from which daily water-level records are compiled. This network also includes two cave sites for which daily water-level records are compiled.

The second set of water-level data is for a network of selected miscellaneous wells at which a single annual measurement of water level is collected. These wells are part of a former statewide network of wells completed in bedrock aquifers, that was operated from 1959 through 1989, in cooperation with DENR (Bradford, 1981; Winter, 1994). Many of the wells in this network are privately owned production wells.

Water levels within wells can be affected by several factors. Short-term declines in water levels can result from pumping of nearby wells or dry climatic conditions. Long-term declines generally indicate that the discharge rate from the aquifer exceeds recharge for a given period of time. Conversely, increases in water levels generally correspond with periods of wetter climatic conditions when aquifer recharge exceeds discharge. Changes in barometric pressure also can cause short-term (hourly and daily) changes in water levels in artesian aquifers. Measured water levels are further affected by the recording equipment and methods used to monitor wells.

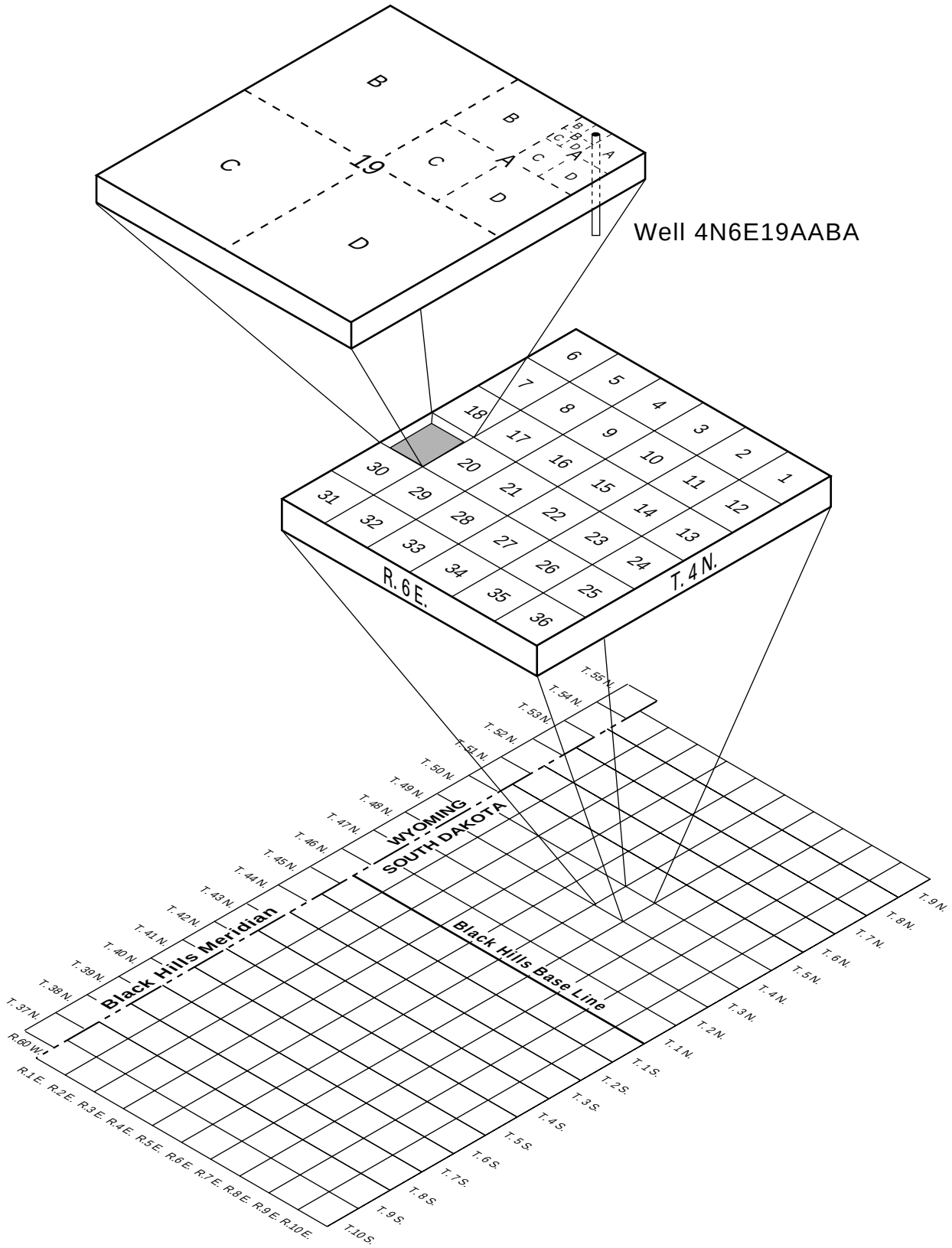


Figure 6. System for assignment of local numbers.

Observation Wells and Cave Sites

This section presents daily water-level data for a network of 71 observations wells and 2 cave sites. Most of the wells have been constructed by DENR and are instrumented with some type of recorder. DENR and USGS personnel have shared responsibility for collection of field data; however, since 1989, most field data collection has been performed by DENR personnel. The USGS generally has been responsible for compilation of the water-level records. Several wells that have been operated by USGS for other studies are included in this report. These records have not been published previously; thus, some records prior to water year 1995 are included. Both cave sites are located within the Madison Limestone and are the only known caves in the Black Hills area that extend to a level at which the Madison Limestone is saturated. The locations of these sites, with assigned site numbers and local well numbers, are presented in figure 7. Additional information for these sites is presented in table 1.

Table 1. Observation wells and cave sites for which daily water-level records are presented

Map number from figure 7	USGS local number	Station identification number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Other identifier(s)	Aquifer	Beginning date of record
			Lawrence County				
1	7N 3E22DAAD	443306103434001	443310.8	1034347.2	LA-90B Saint Onge	Inyan Kara	03-19-91
2	7N 2E10BADC	443515103513901	443513.1	1035143.4	LA-62A Redwater	Minnelusa	06-30-62
3	7N 1E33CCDD3	443100104002003	443104.2	1040025.3	LA-94A State Line Mnkt	Minnekahta	11-30-94
4	7N 1E33CCDD2	443100104002002	443104.2	1040025.3	LA-87B State Line Mnls	Minnelusa	09-24-87
5	7N 1E33CCDD	443100104002001	443104.2	1040025.3	LA-87A State Line Mdsn	Madison	10-05-87
6	6N 3E15DDDA2	442833103434602	442834.0	1034346.2	LA-95A Frawley Ranch Mdsn	Madison	09-18-95
7	6N 3E15DDDA	442833103434601	442834.5	1034346.2	LA-88A Frawley Ranch Mnls	Minnelusa	08-10-88
8	6N 2E19DABA2	442802103544602	442759.6	1035449.2	LA-96C Tinton Road Mnls	Minnelusa	08-29-97
9	6N 2E19DABA	442802103544601	442759.6	1035449.2	LA-96B Tinton Road Mdsn	Madison	07-16-97
10	6N 2E14BCCC2	442854103505602	442854.4	1035053.6	LA-88C Spearfish GC Mdsn	Madison	08-26-88
11	6N 2E14BCCC	442854103505601	442854.4	1035053.6	LA-88B Spearfish GC Mnls	Minnelusa	08-04-88
12	6N 2E 5BBBB2	443100103543002	443104.3	1035437.7	LA-86B Spearfish W Mnkt	Minnekahta	07-25-86
13	6N 2E 5BBBB	443100103543001	443104.3	1035437.7	LA-86A Spearfish W Mnls	Minnelusa	07-12-86
14	5N 4E22ADDA	442301103365501	432301	1033655	LA-96D Boulder Canyon Mdsn	Madison	10-27-97
15	5N 4E14ADD	442344103253401	442343.6	1033525.9	LA-63A Boulder Canyon Mnls	Minnelusa	05-15-63
16	5N 4E 1ABBD2	442545103343702	442544.3	1033437.1	LA-90A Whitewood Mdsn	Madison	11-27-90
17	5N 4E 1ABBD	442545103343701	442544.4	1033437.5	LA-86C Whitewood Mnls	Minnelusa	07-17-86
18	5N 1E11DABA	442435103571101	442434.6	1035710.8	LA-95C Big Hill Trailhead	Madison	12-20-95
19	4N 2E20BBAC2	441757103544602	441757.5	1035445.5	LA-96A Cheyenne Xing Ddwd	Deadwood	05-21-97

Table 1. Observation wells and cave sites for which daily water-level records are presented–Continued

Map number from figure 7	USGS local number	Station identification number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Other identifier(s)	Aquifer	Beginning date of record
			Lawrence County—Continued				
20	4N 2E20BBAC	441757103544601	441757.5	1035445.5	LA-95B Cheyenne Xing Mdsn	Madison	09-28-95
21	3N 2E33DBDA	441034103524701	441034.0	1035247.0	LA-94B Black Fox	Deadwood	06-28-95
			Meade County				
22	6N 5E16CDCC	442828103312001	442827.8	1033123.2	MD-89A Bear Butte	Lakota (Inyan Kara)	09-08-89
23	5N 5E16CAAD	442335103311001	442336.7	1033111.2	MD-86A Sturgis	Madison	06-16-86
24	4N 6E19AABA3	441759103261203	441759.9	1032612.3	MD-95A Tilford Mnkt	Minnekahta	09-18-95
25	4N 6E19AABA2	441759103261202	441759.7	1032612.2	MD-90A Tilford Mdsn	Madison	07-10-91
26	4N 6E19AABA	441759103261201	441800.1	1032612.4	MD-84B Tilford Mnls	Minnelusa	07-17-84
27	3N 6E15ABB2	441337103225002	441335.5	1032250.5	MD-94A Piedmont Mdsn	Madison	11-30-94
28	3N 6E15ABB	441337103225001	441335.6	1032250.7	MD-84A Piedmont Mnls	Minnelusa	07-17-84
			Pennington County				
29	2N 7E34BCCA	440528103161001	440530.9	1031614.2	PE-64A Cement Plant	Minnelusa	06-30-64
30	2N 7E32ABBC2	440544103180002	440543.6	1031805.2	PE-89C City Quarry Mdsn	Madison	02-23-90
31	2N 7E32ABBC	440544103180001	440543.6	1031805.2	PE-89D City Quarry Mnls	Minnelusa	02-23-90
32	2N 7E17BAAD	440818103180801	440819.8	1031809.9	PE-84B Dog Track	Minnelusa	07-17-84
33	2N 7E13DDAA	440746103124201	440746.0	1031241.8	PE-95E West Nike Rd	Inyan Kara	11-29-95
34	2N 6E15ADAA2	440811103222202	440811.0	1032221.8	PE-96B Doty Ddwd	Deadwood	11-19-96
35	2N 6E15ADAA	440811103222201	440811.1	1032221.8	PE-95C Doty Mdsn	Madison	02-06-96
36	2N 1E27ADAC	440623103583701	440626.8	1035835.9	PE-91A Blind Park	Deadwood	08-16-92
37	1N 8E19AAAB	440216103114101	440215.6	1031141.4	PE-95B Scales	Inyan Kara	05-15-96
38	1N 7E29CADD	440052103181201	440053.6	1031810.4	PE-84A Countryside	Deadwood	07-17-84
39	1N 7E18AAAD	440308103184601	440308.5	1031847.5	PE-96A Cleghorn	Madison	11-07-96
40	1N 7E 8DDCD	440310103173801	440312.4	1031741.6	Chapel Lane 1	Minnelusa	08-21-91
41	1N 7E 8ADDD2	440338103173302	440337.7	1031734.9	PE-89A Canyon Lake Mdsn	Madison	11-02-89
42	1N 7E 8ADDD	440338103173301	440337.6	1031735.1	PE-89B Canyon Lake Mnls	Minnelusa	01-20-90
43	1N 7E 5DBCA	440423103180501	440422.6	1031806.8	W. Cp Rapid 3	Minnelusa	01-13-90
44	1N 7E 3CBAA2	440430103160202	440427.2	1031605.0	PE-65A Sioux Park Mdsn	Madison	07-15-65
45	1N 7E 3CBAA	440430103160201	440427.2	1031605.1	PE-64B Sioux Park Mnls	Minnelusa	07-01-64
46	1N 7E 3BBCC	440446103161701	440444.6	1031618.6	PE-89E Lime Creek	Madison	06-13-90

Table 1. Observation wells and cave sites for which daily water-level records are presented–Continued

Map number from figure 7	USGS local number	Station identification number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Other identifier(s)	Aquifer	Beginning date of record
			Pennington County—Continued				
47	1N 7E 1DBBB	440427103131701	440426.6	1031318.0	RC 7 Star Village	Madison	12-07-90
48	1N 6E35AADD	440023103211001	440022.9	1032110.2	PE-95D Countryside West	Precambrian	07-31-96
C1	1N 6E13DDD	440228103195701	440223	1031957	Private Cave	Madison	01-29-88
49	1S 2E35ADCA	435517103501801	435515.6	1035018.5	PE-96C Four Corners	Madison	09-20-96
50	1S 7E20CACD	435644103183801	435641.3	1031843.4	Kieffer	Deadwood	05-05-92
51	1S 7E 3CDBD	435916103161801	435915.1	1031620.6	PE-86A Reptile Gardens Mdsn	Madison	08-21-86
52	1S 7E 3CDBD2	435916103161802	435915.1	1031620.6	PE-94A Reptile Gardens Mnls	Minnelusa	10-25-94
53	2S 7E17CCAA	435227103185301	435227.3	1031852.7	PE-95A Hayward	Madison	09-20-95
			Custer County				
54	2S 7E34ABBA	435018103155801	435020.3	1031600.3	CU-83A Hermosa West Mnls	Minnelusa	10-20-83
55	2S 7E36CBCB	434946103140501	434948.7	1031417.3	CU-83B Hermosa West Lkot	Lakota (Inyan Kara)	10-02-83
56	3S 1E18DDDB	434700104021401	434701.7	1040215.5	CU-93C Boles Canyon Mdsn	Madison	09-09-93
57	3S 1E18DDDB2	434700104021402	434701.7	1040215.5	CU-93D Boles Canyon Mnls	Minnelusa	09-16-93
58	3S 4E24BCDD	434634103351801	434627.1	1033533.4	CU-86A Custer Test	Precambrian	11-14-86
59	3S 8E19BBBB	434652103130501	434653.7	1031307.2	CU-83C Hermosa South	Lakota (Inyan Kara)	09-27-83
60	4S 6E 1DAAA	434350103201901	434350.9	1032020.2	CU-93A CSP Airport Mdsn	Madison	08-06-93
61	4S 6E 1DAAA2	434350103201902	434350.9	1032020.2	CU-93B CSP Airport Mnls	Minnelusa	08-09-93
62	5S 2E28BCCB	433517103534201	433517.4	1035342.3	CU-95A Hell Canyon Mdsn	Madison	04-09-96
63	5S 2E28BCCB2	433517103534202	433517.4	1035342.3	CU-95B Hell Canyon Mnls	Minnelusa	04-09-96
C2	6S 5E12DBAB	433302103281501	433257	1032827	Windy City Lake	Madison	01-22-88
64	6S 6E21BBBB	433115103251401	433115.4	1032516.1	CU-91A 7-11 Ranch Mdsn	Madison	02-13-92
65	6S 6E21BBBB2	433115103251402	433115.4	1032516.1	CU-91B 7-11 Ranch Mnls	Minnelusa	02-13-92
66	6S 6E21BBBB3	433115103251403	433115.3	1032516.2	CU-96A 7-11 Ranch Mnkt	Minnekahta	02-27-97
			Fall River County				
67	7S 4E19BCCB	432548103414801	432545.8	1034151.2	FR-92A Mnkt Jnct Mdsn	Madison	09-16-92
68	7S 4E19BCCB2	432548103414802	432545.8	1034151.2	FR-94A Mnkt Jnct Mnls	Minnelusa	05-03-95
69	7S 5E14CCCC	432603103295901	432602.7	1032958.7	FR-95A Vets Home Mdsn	Madison	04-10-96
70	7S 5E14CCCC2	432603103295902	432602.7	1032958.7	FR-95B Vets Home Mnls	Minnelusa	07-31-96
71	9S 6E 3ACAD	431753103233601	431755.4	1032333.8	FR-95C Angostura	Fall River (Inyan Kara)	08-26-96

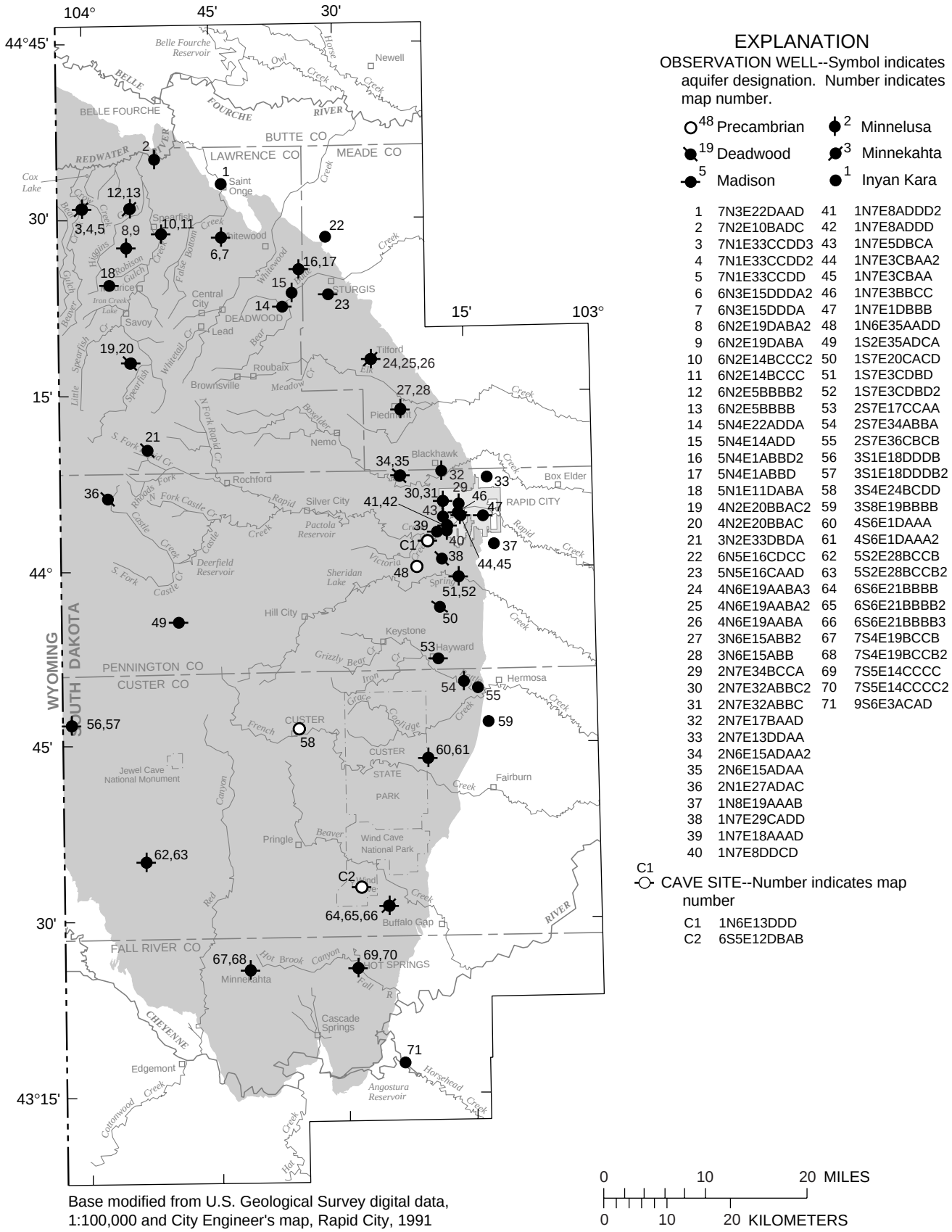


Figure 7. Location of observation wells and cave sites for which daily water-level records are presented.

Site descriptions, water-level hydrographs for the entire period of record that is available, and tabulations of daily water-level records for water years 1995-98 are presented in section A of the Supplemental Information section at the end of the report. Some data for periods prior to water year 1995 are included in tabulations for several sites. These data generally represent revisions or additions to records that have been published previously. A rating of the record for each site is provided in the REMARKS section of each site description. This rating is somewhat subjective, as no formal criteria exist for rating water-level records. The rating is based on the type and relative accuracy of recording equipment, the amount of missing record, and various other problems encountered for each site.

Data for sites 2, 29, 44, and 45 have been published previously by Bradford (1981) and Winter (1994). Data through water year 1992 for 32 of the observation wells and both cave sites were published by Driscoll and Bradford (1994). Data through water year 1994 for 39 of the observation wells and both cave sites were published by Driscoll and others (1996). Data for 32 of the sites have not been published previously.

Data presented in the following section are stored in one or both of two different USGS data bases. Most of the tabular water-level data for water years 1995-98 are presented in a daily format. These data generally were collected using a digital water-level recorder or a data logger, are either the lowest daily water levels or the noon values, and are stored in the Automated Data Processing System (ADAPS) data base. Values for more frequent intervals than daily usually are available for ADAPS data. Some of the data presented in hydrographs for periods prior to water year 1991 are stored in the Ground Water Site Inventory (GWSI) data base. These data generally were collected using circular-chart pressure recorders, are the noon value for every fifth day, and are available in a 5-day format.

Numerous days of missing record exist in the data. Periods of missing record of six or more days generally are shown as discontinuous, or as a dashed line, on the hydrographs. Dashes are used only where the discontinuous period is sufficiently long for dashes to be visible. There is no implication that the dashed lines are representative of the actual hydrograph.

Some of the daily values presented in the tabular format are noted as “estimated.” In many cases, these values were obtained from an instantaneous reading taken during a site visit on a day when the recording equipment at a site was inoperable. In such cases, the instantaneous reading was not necessarily the lowest daily water level (ADAPS) or the noon value (GWSI), and therefore was noted as an estimate.

Miscellaneous Wells

This section presents water-level data for a network of 18 miscellaneous wells at which annual measurements of water level were collected during water years 1995-98. These wells are part of a statewide network of wells completed in bedrock aquifers, that was operated through 1989, in cooperation with DENR. Previous records for these wells have been published by Bradford (1981) and Winter (1994). Annual measurements at selected wells were resumed during 1993 as part of the Black Hills Hydrology Study. Annual measurements for water years 1993-94 were published by Driscoll and others (1996). Many of the wells in this network are used as production wells; thus, water levels may be influenced by effects of pumping.

Locations of the miscellaneous wells are presented in figure 8. Site information and measured water levels during water years 1995-98 are presented in table 2. Brief descriptions and hydrographs for the entire period of record that is available for each site are presented in section B of the Supplemental Information section. Most of these wells generally have been measured annually during the period of record, with the exception of the period from 1990 through 1992. Periods of record without an annual measurement generally are shown as dashed in the hydrographs.

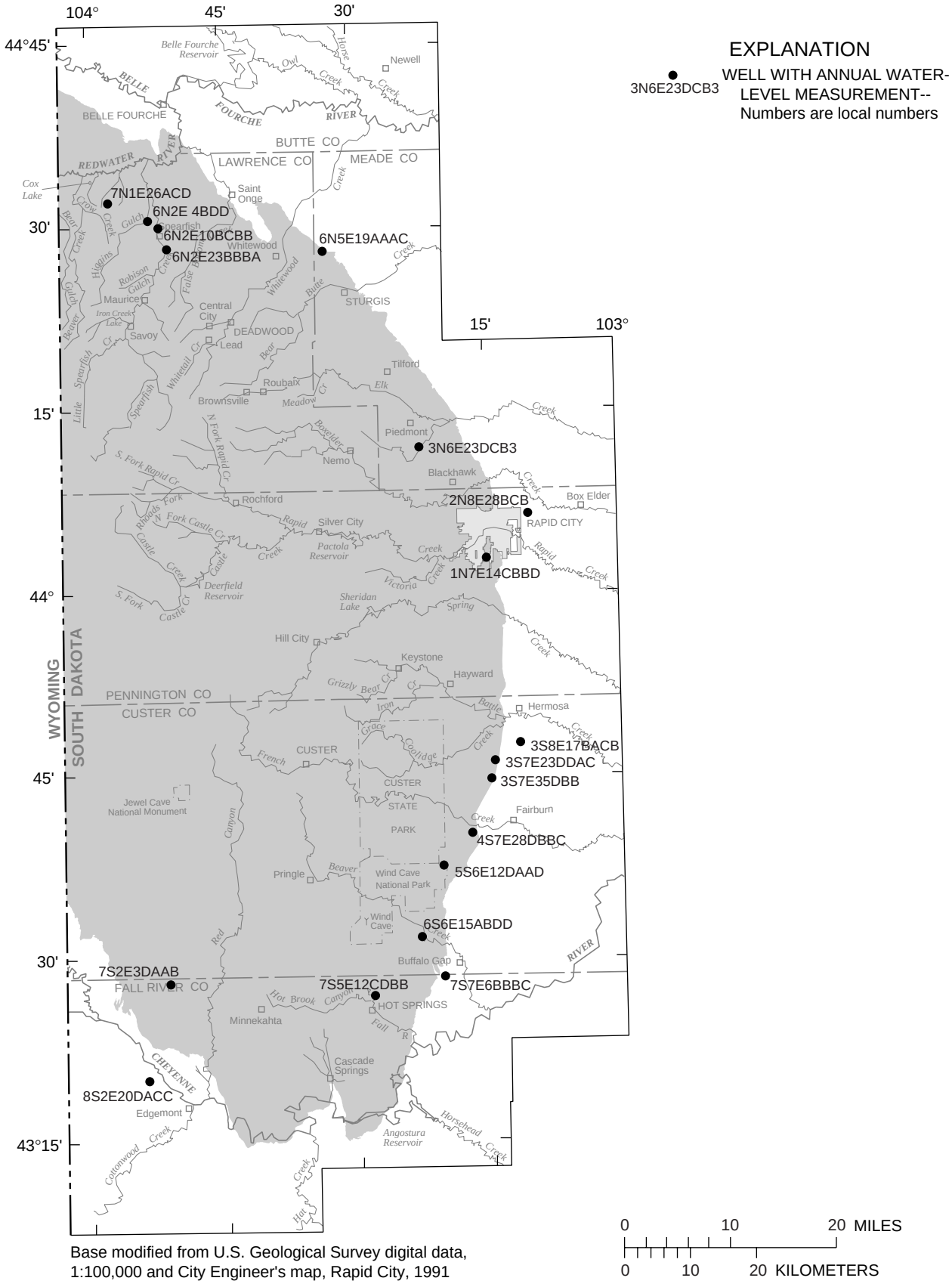


Figure 8. Location of miscellaneous wells for which annual water-level measurements are presented.

Table 2. Site information and measured water levels for miscellaneous wells

USGS local number	Station identification number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Aquifer	Measured water level: Date	Measured water level: Water level (feet below or above (+) land-surface datum)
			Lawrence County			
7N 1E26ACD	443215103573001	443215	1035730	Minnelusa	03-24-95	29.87
					04-11-96	29.35
					03-10-97	24.8
					03-21-98	26.09
6N 2E23BBBA	442820103503501	442820	1035035	Minnelusa	03-24-95	82.15
					04-11-96	82.35
					03-29-97	66.98
					03-21-98	67.31
6N 2E10BCBB	443008103514701	443000	1035210	Spearfish	03-24-95	57.07
					04-11-96	57.10
					03-10-97	56.15
6N 2E 4BDD	443044103525801	443045	1035300	Minnekahta	05-27-95	38.01
					04-11-96	37.56
			Meade County			
6N 5E19AAAC	442804103330401	442804	1033304	Fall River	05-23-95	6.30
					04-12-96	8.45
					03-11-97	4.48
					03-25-98	5.13
3N 6E23DCB3	441155103222501	441155	1032225	Spearfish	05-26-95	125.6
					04-12-96	125.31
			Pennington County			
2N 8E28BCB	440622103101101	440620	1031010	Lakota	03-12-97	138.67
					03-08-98	138.13
1N 7E14CBBD	440243103150001	440245	1031500	Sundance	05-19-95	152.2
					04-13-96	150.12
					03-12-97	87.68
					03-18-98	88.43
			Custer County			
3S 7E23DDAC	434611103142501	434610	1031425	Lakota	05-23-95	309
					04-14-96	310.43
					03-01-97	325
					03-25-98	324.39
3S 7E35DBB	434443103145601	434445	1031455	Lakota	05-27-95	194.32
					04-14-96	194.99
					03-18-97	196.72
					03-25-98	196.31

Table 2. Site information and measured water levels for miscellaneous wells–Continued

USGS local number	Station identification number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Aquifer	Measured water level: Date	Measured water level: Water level (feet below or above (+) land-surface datum)
			Custer County—Continued			
3S 8E17BACB	434737103113301	434737	1031133	Greenhorn	05-23-95	94.31
					04-14-96	93.68
					03-18-97	92.39
					03-25-98	92.43
4S 7E28DBBC	434016103171001	434020	1031720	Fall River	03-31-95	91.3
					04-14-96	91.64
					03-21-98	91.32
5S 6E12DAAD	433740103202801	433740	1032028	Lakota	05-26-95	58.05
					08-18-95	62.31
					04-15-96	60.72
					03-25-98	58.12
6S 6E15ABDD	433150103230501	433150	1032305	Madison	03-31-95	+78.6
					04-15-96	+77.85
					03-01-97	+90.
					03-25-98	+87.66
			Fall River County			
7S 2E 3DAAB	432813103512701	432813	1035127	Sundance	05-18-95	149.7
					04-18-96	150.11
					03-11-97	149.76
7S 5E12CDBB	432704103282801	432705	1032830	Spearfish	05-18-95	177.35
					04-18-96	176.69
7S 7E 6BBBC	432834103203301	432835	1032030	Fall River	05-18-95	366.02
					04-19-96	367.68
8S 2E20DACC	432015103535801	432015	1035358	Lakota	05-18-95	37.4
					04-19-96	38.24
					03-06-97	44.57

WATER-QUALITY DATA

Water-quality data are presented for 58 sites at which samples were collected during water years 1995-98. The sites include 9 surface-water sites, 19 ground-water sites, and 30 sites that have been classified as areas of surface- and ground-water interaction. Laboratory analysis for most constituents were performed by the USGS National Water Quality Laboratory. Analyses for suspended sediment and several selected isotopes were performed by other USGS laboratories.

Surface-Water Samples

Samples were collected at nine surface-water sites. Site information is presented in table 3, and locations of sampling sites are shown in figure 9. Station 06421500 is located on Rapid Creek about 10 mi east of the study-area boundary and therefore is not shown in figure 9.

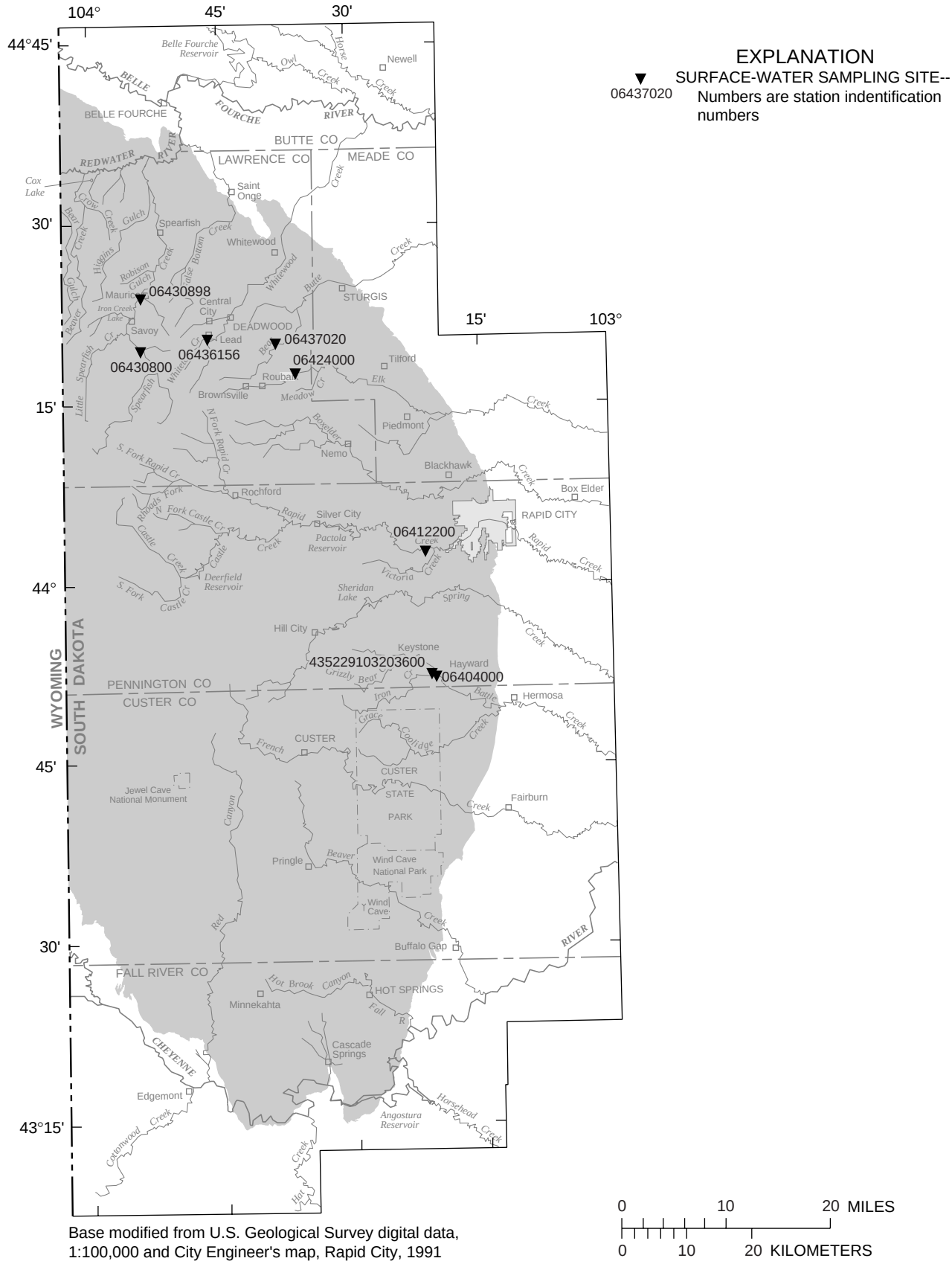
Chemical analyses of surface-water samples are presented in table 4. Additional water-quality data for samples collected prior to water year 1995 are available for many of the sites. Additional data have been published by Driscoll and Bradford (1994), Driscoll and others (1996), and Williamson (1999). The percent difference between measured anions and cations (in milliequivalents per liter) for five samples was greater than 5 percent (table 4); the results from these samples should be used with caution. Samples collected for quality assurance are footnoted in table 4. No problems were identified from quality-assurance sampling.

Ground-Water Samples

Samples were collected at 19 ground-water sites. Site information is presented in table 5, and locations of sampling sites are shown in figure 10. The sites in table 5 are numbered from north to south in descending order according to USGS local numbers. With the exception of two private wells (sites 1 and 16), all of the sampling sites are observation wells. Chemical analyses of ground-water samples are presented in table 6. Data for samples collected prior to water year 1995 are presented for supplemental purposes. The earlier data should be used with caution because sampling methods, analytical methods, or reporting limits may have been somewhat different than current methods. The percent difference between measured anions and cations (in milliequivalents per liter) for two samples was greater than 5 percent (table 6); the results from these samples should be used with caution. Samples collected for quality assurance are footnoted in table 6. No problems were identified from quality-assurance sampling.

Table 3. Site information for surface-water sites for which chemical analyses are presented

Station identification number	Stream name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Drainage area (square miles)
435229103203600	Battle Creek near Hayward, SD	435229	1032036	Undetermined
06404000	Battle Creek near Keystone, SD	435221	1032010	66
06412200	Rapid Creek at Victoria Creek, near Rapid City, SD	440248	1032106	355
06421500	Rapid Creek near Farmingdale, SD	435631	1025112	602
06424000	Elk Creek near Roubaix, SD	441741	1033547	21.5
06430800	Annie Creek near Lead, SD	441937	1035338	3.55
06430898	Squaw Creek near Spearfish, SD	442404	1035335	6.95
06436156	Whitetail Creek at Lead, SD	442036	1034557	6.15
06437020	Bear Butte Creek near Deadwood, SD	442008	1033806	16.6



Base modified from U.S. Geological Survey digital data, 1:100,000 and City Engineer's map, Rapid City, 1991

Figure 9. Location of surface-water sampling sites within the study area for which chemical analyses are presented.

Table 4. Chemical analyses of surface-water samples

[INST, instantaneous; DISS, dissolved; TIT, titration; US/CM, microsiemens per centimeter; MM, millimeters; MG/L, milligrams per liter; DEG C, degrees Celsius; AC-FT, acre-feet; UG/L, micrograms per liter; PCI/L, picocuries per liter; T/DAY, tons per day; --, no data available; <, less than]

STATION NUMBER	STREAM NAME	DATE	DIS-CHARGE, INST CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)
435229103203600	Battle Creek near Hayward, SD	07-11-95	16	320	8.2	34.0	23.1	652
		04-09-96	3.9	383	8.3	11.0	5.0	665
		08-13-96	2.6	405	9.0	30.5	20.5	673
		03-19-97	5.9	340	7.7	23.0	.5	670
06404000	Battle Creek near Keystone, SD	07-11-95	23	281	8.0	27.0	19.5	653
06412200	Rapid Creek at Victoria Creek near Rapid City, SD	[1]07-12-95	111	354	8.3	18.8	14.6	661
		04-08-96	87	353	8.0	10.0	7.0	673
		08-14-96	73	324	8.3	13.0	15.0	682
		03-20-97	82	355	8.2	9.5	4.8	675
06421500	Rapid Creek near Farmingdale, SD	07-12-95	--	640	8.1	29.0	24.6	679
		04-08-96	129	357	8.6	15.0	10.5	693
		08-14-96	43	919	8.7	24.0	23.5	702
		03-20-97	143	840	8.6	25.0	8.0	695
06424000	Elk Creek near Roubaix, SD	[1]10-26-94	5.4	311	7.8	16.5	2.2	623
		05-22-96	23	274	7.9	13.5	8.0	637
		08-28-96	4.0	349	7.8	28.5	18.8	646
		03-19-97	11	225	7.8	14.0	1.3	646
06430800	Annie Creek near Lead, SD	10-27-94	1.4	344	8.1	17.0	4.0	614
		[1]08-29-95	.67	524	8.1	27.0	14.3	620
		05-21-96	5.5	205	7.4	18.5	5.4	637
		[2]05-21-96	5.5	2	7.5	18.5	5.4	637
		08-29-96	.86	505	8.0	17.5	11.9	643
		03-24-97	4.1	277	7.8	1.5	1.4	634
06430898	Squaw Creek near Spearfish, SD	10-27-94	3.2	271	7.8	17.5	5.5	629
		08-29-95	1.5	346	7.8	32.5	18.5	636
		05-21-96	9.1	195	7.5	20.5	8.7	652
		09-03-96	1.4	371	8.0	24.0	12.4	653
		03-24-97	9.1	191	7.8	4.0	1.2	655
06436156	Whitetail Creek at Lead, SD	10-27-94	4.1	543	8.0	14.5	6.0	617
		05-22-96	11	305	7.8	22.0	10.7	633
		09-03-96	2.6	571	8.0	24.5	13.7	674
		03-24-97	8.6	572	7.9	1.0	2.6	630
06437020	Bear Butte Creek near Deadwood, SD	10-26-94	4.8	288	7.8	17.5	6.0	626
		05-23-96	21	291	7.4	8.0	8.1	642
		[3]05-23-96	21	291	7.4	8.0	8.1	642
		[1]08-28-96	2.0	397	7.6	28.0	21.7	649
		[1]03-19-97	12	516	8.1	15.0	.5	648

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.

[2]Field blank collected for quality assurance.

[3]Replicate sample collected for quality assurance.

OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	ANC UNFILTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
7.8	107	130	91	35	9.5	12	17	0.5	3.9	33	20	0.30
11.0	99	140	94	39	11	15	18	.5	4.1	47	26	1.1
11.9	150	160	117	43	13	17	18	.6	5.0	45	28	.50
10.0	79	120	79	33	9.4	14	20	.6	3.5	38	27	.37
7.7	98	110	78	30	8.7	9.9	16	.4	3.8	32	15	.30
8.9	101	--	--	--	--	--	--	--	--	--	--	--
10.4	97	--	--	--	--	--	--	--	--	--	--	--
8.9	99	--	--	--	--	--	--	--	--	--	--	--
12.0	106	--	--	--	--	--	--	--	--	--	--	--
7.5	102	--	--	--	--	--	--	--	--	--	--	--
9.4	93	--	--	--	--	--	--	--	--	--	--	--
11.4	146	--	--	--	--	--	--	--	--	--	--	--
14.9	138	--	--	--	--	--	--	--	--	--	--	--
11.5	102	160	157	40	15	2.9	4	.1	1.6	11	2.8	.20
9.9	100	140	140	33	13	2.3	4	.1	1.2	5.9	1.5	<.10
8.2	104	190	185	45	18	2.4	3	.1	1.8	9.2	1.5	.20
11.5	96	110	116	29	10	2.5	4	.1	2.3	7.6	3.4	.10
11.4	108	160	121	41	14	5.9	7	.2	1.1	26	3.9	.20
8.6	104	210	168	53	18	20	17	.6	2.2	32	8.6	.40
10.6	101	92	83	24	7.8	3.6	8	.2	.80	9.4	1.9	<.10
--	--	--	1.4	<.020	<.010	<.20	--	--	<.10	<.10	<.10	<.10
8.8	97	230	176	57	22	7.3	6	.2	1.6	33	5.3	.20
11.3	97	130	98	32	11	5.0	8	.2	1.0	17	3.0	.20
11.3	109	110	75	29	9.1	7.3	12	.3	1.9	46	4.2	.80
8.8	113	160	137	41	15	4.3	5	.1	2.0	38	2.5	1.0
9.6	97	84	73	22	7.0	3.1	7	.1	1.3	19	2.2	.40
9.2	101	170	149	42	16	7.0	8	.2	2.0	48	1.6	.90
12.0	99	83	58	22	6.8	3.8	9	.2	1.4	28	5.4	.70
10.0	100	250	145	72	17	9.7	8	.3	2.2	98	12	.50
8.7	95	130	104	38	8.8	6.2	9	.2	1.4	31	8.3	.30
9.7	106	260	151	74	18	8.5	7	.2	2.3	110	11	.50
11.0	98	250	128	70	17	16	12	.4	2.2	97	32	.40
10.2	100	110	62	32	8.4	7.1	12	.3	2.1	59	8.3	.30
9.9	100	86	64	24	6.4	27	40	1	1.8	69	6.6	.30
9.9	100	86	64	24	6.4	27	40	1	1.8	68	6.2	.30
7.3	98	130	119	37	9.1	30	33	1	2.8	72	6.2	.50
12.0	98	120	64	33	8.8	60	52	2	2.1	170	9.5	.40

Table 4. Chemical analyses of surface-water samples—Continued

[INST, instantaneous; DISS, dissolved; US/CM, microsiemens per centimeter; MM, millimeters; MG/L, milligrams per liter; DEG C, degrees Celsius; AC-FT, acre-feet; UG/L, micrograms per liter; PCI/L, picocuries per liter; T/DAY, tons per day; --, no data available; <, less than]

STREAM NAME	DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DISS (MG/L AS N) (00623)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
Battle Creek near Hayward, SD	07-11-95	13	181	0.25	8.04	2	8	<0.015	0.20	<0.010
	04-09-96	9.1	207	.28	2.18	4	<1	.030	<.20	<.010
	08-13-96	8.5	231	.31	1.60	4	4	.020	.20	.010
	03-19-97	9.8	178	.24	2.84	3	9	.020	<.20	<.010
Battle Creek near Keystone, SD	07-11-95	15	162	.22	10.1	3	8	<.015	.30	<.010
Rapid Creek at Victoria Creek near Rapid City, SD	[1]07-12-95	--	--	--	--	--	--	<.015	<.20	<.010
	04-08-96	--	--	--	--	--	--	<.015	<.20	<.010
	08-14-96	--	--	--	--	--	--	.020	<.20	.010
	03-20-97	--	--	--	--	--	--	<.015	<.20	<.010
Rapid Creek near Farmingdale, SD	07-12-95	--	--	--	--	--	--	.020	.30	.030
	04-08-96	--	--	--	--	--	--	<.015	.20	.030
	08-14-96	--	--	--	--	--	--	.020	.20	.020
	03-20-97	--	--	--	--	--	--	<.015	.30	.040
Elk Creek near Roubaix, SD	[1]10-26-94	11	166	.23	2.41	2	2	<.015	<.20	<.010
	05-22-96	11	143	.19	8.73	7	9	.030	<.20	<.010
	08-28-96	12	201	.27	2.19	6	7	.020	<.20	<.010
	03-19-97	9.7	127	.17	3.78	40	13	.060	.30	<.010
Annie Creek near Lead, SD	10-27-94	13	197	.27	.74	6	<1	<.015	<.20	<.010
	[1]08-29-95	14	292	.40	.53	<1	<1	.530	1.0	.930
	05-21-96	12	111	.15	1.65	2	7	.020	<.20	<.010
	[2]05-21-96	<.010	--	--	--	1	9	.030	<.20	<.010
	08-29-96	13	286	.39	.66	6	<1	<.015	<.20	<.010
	03-24-97	12	163	.22	1.81	<1	8	<.015	.20	<.010
Squaw Creek near Spearfish, SD	10-27-94	14	156	.21	1.35	<1	6	<.015	<.20	<.010
	08-29-95	13	201	.27	.83	2	<1	<.015	<.20	<.010
	05-21-96	14	108	.15	2.64	<1	5	.020	<.20	<.010
	09-03-96	12	207	.28	.78	1	<1	<.015	<.20	<.010
	03-24-97	14	116	.16	2.86	<1	10	<.015	<.20	<.010
Whitetail Creek at Lead, SD	10-27-94	15	326	.44	3.64	5	1	<.015	<.20	<.010
	05-22-96	13	164	.22	4.83	8	10	.020	<.20	<.010
	09-03-96	15	341	.46	2.43	<11	<1	<.015	<.20	.010
	03-24-97	12	338	.46	7.85	6	11	<.015	<.20	<.010
Bear Butte Creek near Deadwood, SD	10-26-94	11	161	.22	2.10	3	2	<.015	<.20	<.010
	05-23-96	13	182	.25	10.3	20	6	.020	<.20	.010
	[3]05-23-96	13	186	.25	10.6	20	5	.020	<.20	.010
	[1]08-28-96	12	225	.31	1.23	5	6	<.020	<.20	<.010
	[1]03-19-97	10	327	.45	10.4	164	34	<.015	<.20	<.010

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.

[2]Field blank collected for quality assurance.

[3]Replicate sample collected for quality assurance.

NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
<0.050	--	0.036	0.030	40	38	--	--	--	--	--	--	230
.070	--	.016	<.010	31	31	--	--	--	--	--	--	150
.060	0.050	.037	.030	54	56	--	--	--	--	--	--	100
.120	--	.021	.020	--	20	41	<0.50	2.8	<5.0	<3.0	<10	--
<.050	--	.029	.020	30	27	--	--	--	--	--	--	290
<.050	--	.002	<.010	--	--	--	--	--	--	--	--	--
<.050	--	.003	<.010	--	--	--	--	--	--	--	--	--
.100	.090	.004	<.010	--	--	--	--	--	--	--	--	--
.060	--	.001	<.010	--	--	--	--	--	--	--	--	--
1.20	1.17	.310	.210	--	--	--	--	--	--	--	--	--
.880	.850	.230	.180	--	--	--	--	--	--	--	--	--
.720	.700	.180	.160	--	--	--	--	--	--	--	--	--
.910	.870	.170	.160	--	--	--	--	--	--	--	--	--
.050	--	.012	<.010	19	15	42	<.50	<1.0	<5.0	<3.0	<10	280
.050	--	.018	.010	16	12	--	--	--	--	--	--	590
.050	--	.020	.030	40	35	--	--	--	--	--	--	260
.080	--	.016	.020	--	11	36	<.50	<1.0	<5.0	<3.0	<10	--
6.60	--	.026	.010	20	24	--	--	--	--	--	--	400
15.0	14.1	.030	.030	--	43	150	<.50	2.0	<5.0	12	<10	--
2.50	--	.037	.030	12	12	--	--	--	--	--	--	200
.050	--	<.001	<.010	<1	<1	--	--	--	--	--	--	<10
13.0	--	.032	.030	30	27	--	--	--	--	--	--	110
6.20	--	.030	.030	--	19	87	<.50	<1.0	<5.0	<3.0	<10	--
1.10	--	.007	<.010	4	3	60	<.50	<1.0	<5.0	<3.0	<10	120
.420	--	.010	<.010	--	5	71	<.50	<1.0	<5.0	<3.0	<10	--
.140	--	.022	.020	3	4	--	--	--	--	--	--	80
.260	--	.012	.020	5	5	--	--	--	--	--	--	<10
.690	--	.009	.010	--	4	50	<.50	<1.0	<5.0	<3.0	<10	--
5.20	--	.008	<.010	15	12	--	--	--	--	--	--	320
.900	--	.016	.010	12	9	--	--	--	--	--	--	260
4.40	4.39	.020	.020	14	13	--	--	--	--	--	--	210
5.10	--	.011	.010	--	7	110	<.50	<1.0	<5.0	<3.0	<10	--
.160	--	.003	<.010	5	<1	36	<.50	3.0	<5.0	3.0	30	1,100
.090	.080	.008	<.010	2	1	--	--	--	--	--	--	1,300
.090	.080	.007	<.010	2	1	--	--	--	--	--	--	1,300
<.050	--	.010	.010	2	2	--	--	--	--	--	--	100
.510	--	.004	<.010	--	<1	32	<.50	<1.0	<5.0	<3.0	<10	--

Table 4. Chemical analyses of surface-water samples—Continued

[INST, instantaneous; DISS, dissolved; US/CM, microsiemens per centimeter; MM, millimeters; MG/L, milligrams per liter; DEG C, degrees Celsius; AC-FT, acre-feet; UG/L, micrograms per liter; PCI/L, picocuries per liter; T/DAY, tons per day; --, no data available; <, less than]

STREAM NAME	DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)
Battle Creek near Hayward, SD	07-11-95	73	--	--	17	--	--	--	--	--
	04-09-96	28	--	--	14	--	--	--	--	--
	08-13-96	46	--	--	7.0	--	--	--	--	--
	03-19-97	29	<10	24	19	<10	<10	<1.0	109	<6
Battle Creek near Keystone, SD	07-11-95	130	--	--	18	--	--	--	--	--
Rapid Creek at Victoria Creek near Rapid City, SD	[1]07-12-95	--	--	--	--	--	--	--	--	--
	04-08-96	--	--	--	--	--	--	--	--	--
	08-14-96	--	--	--	--	--	--	--	--	--
	03-20-97	--	--	--	--	--	--	--	--	--
Rapid Creek near Farmingdale, SD	07-12-95	--	--	--	--	--	--	--	--	--
	04-08-96	--	--	--	--	--	--	--	--	--
	08-14-96	--	--	--	--	--	--	--	--	--
	03-20-97	--	--	--	--	--	--	--	--	--
Elk Creek near Roubaix, SD	[1]10-26-94	70	<10	5	13	<10	<10	1.0	78	<6
	05-22-96	39	--	--	22	--	--	--	--	--
	08-28-96	52	--	--	22	--	--	--	--	--
	03-19-97	33	<10	5	46	<10	<10	<1.0	65	<6
Annie Creek near Lead, SD	10-27-94	22	--	--	<1.0	--	--	--	--	--
	[1]08-29-95	5.0	20	5	1.0	<10	<10	3.0	170	<6
	05-21-96	39	--	--	<1.0	--	--	--	--	--
	[2]05-21-96	<3.0	--	--	<1.0	--	--	--	--	--
	08-29-96	<3.0	--	--	<1.0	--	--	--	--	--
	03-24-97	4.0	<10	<4	<1.0	<10	<10	<1.0	100	<6
Squaw Creek near Spearfish, SD	10-27-94	17	<10	7	1.0	<10	<10	2.0	210	<6
	08-29-95	6.0	20	6	<1.0	<10	<10	2.0	250	<6
	05-21-96	25	--	--	2.0	--	--	--	--	--
	09-03-96	<3.0	--	--	<1.0	--	--	--	--	--
	03-24-97	4.0	<10	<4	1.0	<10	<10	<1.0	140	<6
Whitetail Creek at Lead, SD	10-27-94	9.0	--	--	86	--	--	--	--	--
	05-22-96	8.0	--	--	7.0	--	--	--	--	--
	09-03-96	<3.0	--	--	6.0	--	--	--	--	--
	03-24-97	<3.0	<10	6	24	10	<10	<1.0	350	<6
Bear Butte Creek near Deadwood, SD	10-26-94	120	<10	6	150	<10	10	<1.0	120	<6
	05-23-96	38	--	--	46	--	--	--	--	--
	[3]05-23-96	33	--	--	46	--	--	--	--	--
	[1]08-28-96	23	--	--	13	--	--	--	--	--
	[1]03-19-97	<3.0	<10	11	90	<10	<10	<1.0	110	<6

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.

[2]Field blank collected for quality assurance.

[3]Replicate sample collected for quality assurance.

ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	ALPHA, COUNT, 2 SIGMA WATER DISS AS NAT U (UG/L) (75986)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WATER DISS AS TH-230 (PCI/L) (75987)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/Y-90) (80050)	BETA, 2 SIGMA WATER, DISS, AS SR90 /Y90 (PCI/L (75988)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
--	--	--	--	--	--	--	--	--	--	--	4	0.20
--	--	--	--	--	--	--	--	--	--	--	5	.06
--	--	--	--	--	--	--	--	--	--	--	3	.02
<3.0	--	--	--	--	--	--	--	--	--	--	2	.04
--	--	--	--	--	--	--	--	--	--	--	4	.25
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	8	1.9
--	--	--	--	--	--	--	--	--	--	--	3	.59
--	--	--	--	--	--	--	--	--	--	--	5	1.1
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	85	30
--	--	--	--	--	--	--	--	--	--	--	43	5.0
--	--	--	--	--	--	--	--	--	--	--	41	16
<3.0	2.6	2.9	1.8	2.1	4.3	2.1	3.4	1.7	0.70	0.0	12	.17
--	--	--	--	--	--	--	--	--	--	--	12	.74
--	--	--	--	--	--	--	--	--	--	--	5	.05
4.0	--	--	--	--	--	--	--	--	--	--	96	2.9
--	--	--	--	--	--	--	--	--	--	--	2	.01
6.0	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	6	.09
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	5	.01
<3.0	--	--	--	--	--	--	--	--	--	--	12	.13
6.0	3.6	2.5	2.5	1.8	4.6	1.6	3.6	1.3	3.9	.1	--	--
6.0	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	2	.05
--	--	--	--	--	--	--	--	--	--	--	2	.01
<3.0	--	--	--	--	--	--	--	--	--	--	4	.09
--	--	--	--	--	--	--	--	--	--	--	16	.18
--	--	--	--	--	--	--	--	--	--	--	10	.29
--	--	--	--	--	--	--	--	--	--	--	14	.10
7.0	--	--	--	--	--	--	--	--	--	--	15	.34
36	5.5	2.9	3.3	1.7	5.4	1.3	4.0	.96	1.5	.0	12	.16
--	--	--	--	--	--	--	--	--	--	--	30	1.7
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	4	.02
<3.0	--	--	--	--	--	--	--	--	--	--	211	6.7

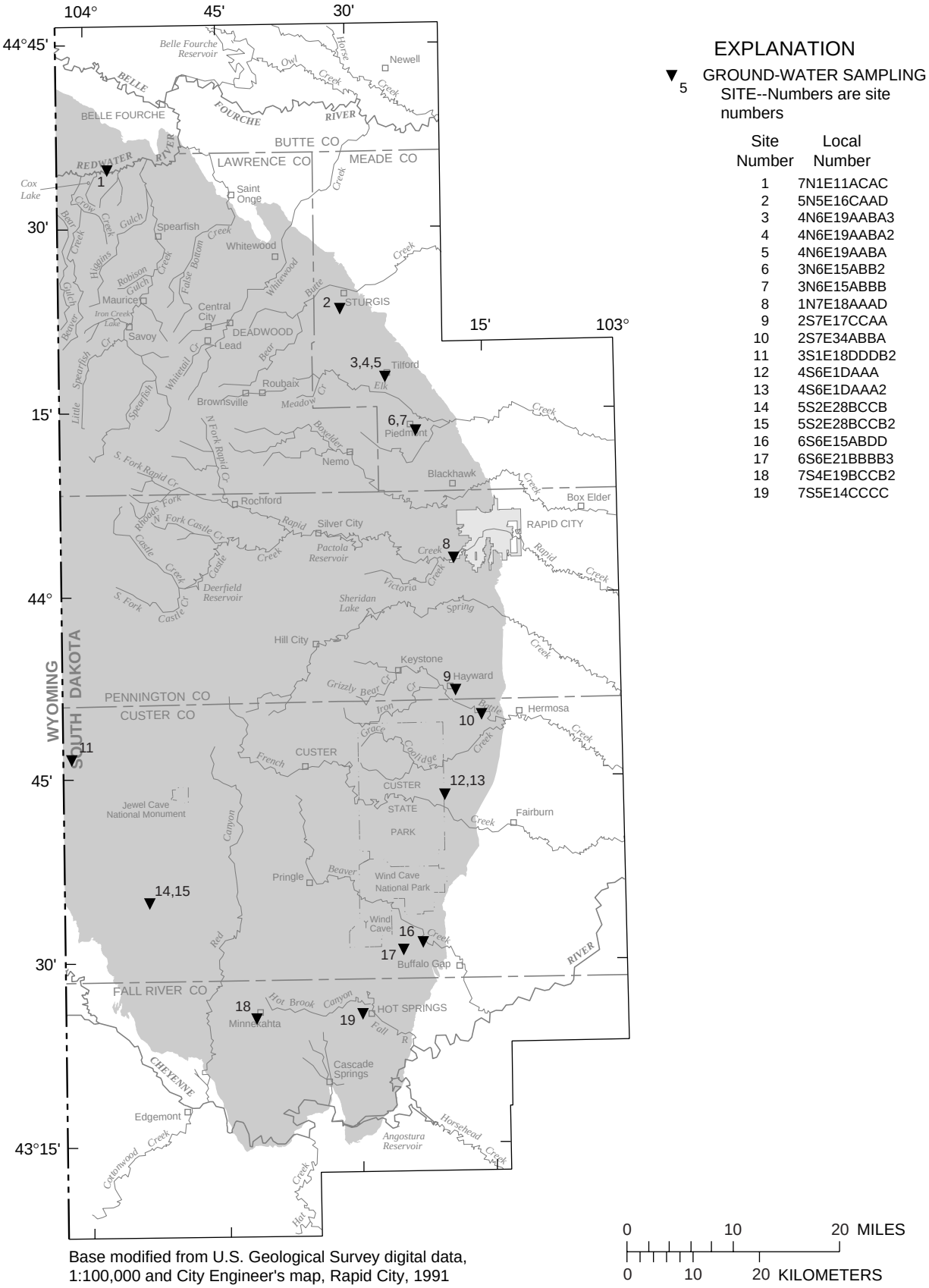
Table 5. Site information for ground-water sampling sites for which chemical analyses are presented

[DENR, South Dakota Department of Environment and Natural Resources; GF&P, South Dakota Department of Game, Fish and Parks; --, not applicable]

Site number	USGS local number	Station identification number	Other identifier(s)[1]	Site number[2] from figure 7 and table 1	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Well depth (feet)	Aquifer	Owner
1	7N 1E11ACAC	443515103572501	(Swanson Ranch)	--	443508	1035730	1,004	Minnelusa	Private
2	5N 5E16CAAD	442335103311001	(Sturgis) MD-86A	23	442336.7	1033111.2	839	Madison	DENR
3	4N 6E19AABA3	441759103261203	(Tilford Mnkt) MD-95A	24	441759.9	1032612.3	180	Minnekahta	DENR
4	4N 6E19AABA2	441759103261202	(Tilford Mdsn) MD-90A	25	441759.7	1032612.2	840	Madison	DENR
5	4N 6E19AABA	441759103261201	(Tilford Mnls) MD-84B	26	441800.1	1032612.4	302	Minnelusa	DENR
6	3N 6E15ABB2	441337103225002	(Piedmont Mdsn) MD-94A	27	441335.5	1032250.5	880	Madison	DENR
7	3N 6E15ABBB	441337103225001	(Piedmont Mnls) MD-84A	28	441335.6	1032250.7	440	Minnelusa	DENR
8	1N7E18AAAD	440308103184601	(Cleghorn) PE-96A	39	440308.5	1031847.5	200	Madison	DENR
9	2S 7E17CCAA	435227103185301	(Hayward) PE-95A	53	435227.3	1031852.7	540	Madison	DENR
10	2S 7E34ABBA	435018103155801	(Hermosa West Mnls) CU-83A	54	435020.3	1031600.3	510	Minnelusa	DENR
11	3S 1E18DDDB2	434700104021402	(Boles Canyon Mnls) CU-93D	57	434701.7	1040215.5	415	Minnelusa	DENR
12	4S 6E 1DAAA	434350103201901	(CSP Airport Mdsn) CU-93A	60	434350.8	1032020.2	680	Madison	DENR
13	4S 6E 1DAAA2	434350103201902	(CSP Airport Mnls) CU-93B	61	434350.9	1032020.2	270	Minnelusa	DENR
14	5S 2E28BCCB	433517103534201	(Hell Canyon Mdsn) CU-95A	62	433517.4	1035342.3	1,075	Madison	DENR
15	5S 2E28BCCB2	433517103534202	(Hell Canyon Mnls) CU-95B	63	433517.4	1035342.3	642	Minnelusa	DENR
16	6S 6E15ABDD	433150103230501	(Streeter Ranch)	--	433150	1032305	939	Madison	Private
17	6S 6E21BBBB3	433115103251403	(7-11 Ranch Mnkt) CU-96A	66	433115.4	1032516.1	281	Minnekahta	DENR
18	7S 4E19BCCB2	432548103414802	(Mnkt Jnct Mnls) FR-94A	68	432545.8	1034151.2	710	Minnelusa	DENR
19	7S 5E14CCCC	432603103295901	(Vets Home Mdsn) FR-95A	69	432602.7	1032958.7	915	Madison	DENR

[1]Identifier used for table 6 shown in parentheses.

[2]Applies only to wells for which daily water-level records are presented in previous section.



Base modified from U.S. Geological Survey digital data, 1:100,000 and City Engineer's map, Rapid City, 1991

Figure 10. Location of ground-water sampling sites for which chemical analyses are presented.

Table 6. Chemical analyses of ground-water samples

[UNFLTRD, unfiltered; FLTRD, filtered; FET, fixed end point titration; IT, incremental titration; NONCARB, noncarbonate; CARB, carbonate; G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; --, no data available; ND, not detected; <, less than]

STATION NUMBER	OTHER IDENTIFIER	DATE	FLOW RATE (G/M) (00059)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)
443515103572501	Swanson Ranch	[1] - -66	--	--	7.8	--	--	--	--
		04-27-67	--	2,470	7.7	--	17.0	--	--
		08-16-94	8.0	1,980	7.1	31.0	18.5	660	0.2
		08-30-96	--	2,580	6.9	26.0	17.5	680	.4
442335103311001	Sturgis	12-02-97	2.5	1,150	7.1	1.0	12.5	674	.5
441759103261203	Tilford Mnkt	09-19-96	.7	656	7.1	13.0	10.0	670	7.3
441759103261202	Tilford Mdsn	09-03-96	--	412	7.5	30.0	11.5	670	3.9
441759103261201	Tilford Mnls	08-27-96	5.8	362	7.5	34.0	11.0	671	7.8
		[2]08-27-96	5.8	360	7.5	34.0	11.2	671	7.4
441337103225002	Piedmont Mdsn	09-04-96	--	472	7.3	35.0	12.5	674	3.2
441337103225001	Piedmont Mnls	09-04-96	.4	495	7.4	33.0	--	674	5.5
440308103184601	Cleghorn	11-13-96	.3	341	7.6	-8.0	7.0	--	4.7
435227103185301	Hayward	11-20-97	11.0	325	7.7	5.0	14.5	660	2.7
435018103155801	Hermosa West Mnls	10-28-97	4.5	258	7.7	--	13.0	674	2.6
		[2]10-28-97	4.5	258	7.7	--	12.8	674	2.6
434700104021402	Boles Canyon Mnls	12-17-97	--	530	7.3	7.0	9.0	--	--
434350103201901	CSP Airport Mdsn	09-06-95	6.0	370	7.9	26.0	14.5	655	.0
434350103201902	CSP Airport Mnls	08-31-95	.5	417	7.7	18.0	--	656	5.6
433517103534201	Hell Canyon Mdsn	11-05-97	5.0	830	8.3	7.0	14.5	660	.4
433517103534202	Hell Canyon Mnls	11-03-97	7.3	1,200	7.4	--	13.5	655	1.4
433150103230501	Streeter Ranch	[1]05-10-51	--	--	--	--	--	--	--
		12-17-58	--	332	7.6	--	--	--	--
		05-16-67	--	335	7.6	--	11.0	--	--
		11-01-77	--	--	--	--	--	--	--
		03-11-97	--	391	7.3	52.0	12.0	--	2.1
433115103251403	7-11 Ranch Mnkt	11-13-97	10.0	575	7.2	-3.0	13.0	664	7.2
432548103414802	Mnkt Jnct Mnls	09-11-95	6.7	2,970	7.3	22.0	17.0	644	1.9
432603103295901	Vets Home Mdsn	11-18-97	37.0	885	7.2	10.0	30.5	670	3.2

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.
[2]Replicate sample collected for quality assurance.
[3]Sample reported by Busby and others (1983, 1991).
[4]One tritium unit equals 3.24 PCI/L.

OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB WHOLE WATER TOTAL FIELD MG/L AS CACO3 (00902)	HARD-NESS NONCARB DISS FIELD AS CACO3 (MG/L) (00904)	ALKA-LINITY WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ALKA-LINITY WATER DISS TOTAL IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
--	4.6	3,100	--	--	170	--	--	650	350	5.0	0	0.0	4.0
--	6.7	1,700	1,500	--	173	--	--	550	83	6.8	1	.1	4.1
2	30	1,800	--	1,600	--	170	173	570	88	7.6	1	.1	4.1
5	--	--	--	--	--	--	--	--	--	--	--	--	--
5	47	660	--	340	--	319	320	120	84	5.6	2	.1	5.7
73	50	350	--	57	--	292	299	96	26	2.4	1	.1	1.8
41	13	220	--	--	--	--	196	47	24	1.8	2	.1	1.5
81	12	200	--	1	--	198	204	48	19	1.8	2	.1	1.3
--	--	--	--	--	--	--	204	49	19	1.8	--	--	1.3
34	24	260	--	--	--	265	270	53	32	1.5	1	.0	1.3
--	22	270	--	--	--	273	280	48	36	1.5	1	.0	1.4
--	7.9	170	--	18	--	151	155	41	16	6.4	7	.2	3.0
31	5.4	150	--	19	--	127	131	38	12	8.7	11	.3	2.7
28	4.9	120	--	--	--	124	122	31	10	6.0	10	.2	2.5
--	--	--	--	--	--	123	121	31	10	5.9	--	--	2.5
--	24	270	--	11	--	259	261	61	28	7.2	5	.2	3.8
0	4.6	170	--	--	--	168	171	37	18	6.7	8	.2	3.4
8	6.6	170	--	--	--	174	159	44	15	14	15	.5	5.2
5	1.7	160	--	--	--	175	190	49	8.8	103	55	4	20
16	16	640	--	440	--	200	203	200	33	22	7	.4	7.6
--	--	170	0	--	177	--	--	41	16	--	88	--	--
--	7.8	150	0	--	158	--	--	40	13	9.6	12	.3	2.2
--	8.1	150	0	--	166	--	--	38	14	9.6	12	.3	2.1
--	--	160	0	--	160	--	--	40	15	9.2	11	.3	2.3
--	--	--	--	--	--	--	--	--	--	--	--	--	--
79	30	300	--	45	--	256	261	79	25	5.3	4	.1	3.1
24	11	1,800	--	1,600	--	122	124	520	110	57	7	.6	12
49	28	300	--	91	--	214	216	75	28	59	29	1	7.5

Table 6. Chemical analyses of ground-water samples—Continued

[UNFLTRD, unfiltered; FLTRD, filtered; FET, fixed end point titration; IT, incremental titration; NONCARB, noncarbonate; CARB, carbonate; G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; --, no data available; ND, not detected; <, less than]

OTHER IDENTIFIER	DATE	BICAR-BONATE WATER DISS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY UNFLTRD CARB FET FIELD MG/L AS CO3 (00445)	CAR-BONATE WATER DISS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
Swanson Ranch	[1] - -66	--	--	--	1,800	5.0	--	--	2,920	2,980	--
	04-27-67	--	0	--	1,500	.90	0.70	12	2,270	2,510	--
	08-16-94	208	--	--	1,600	1.2	.80	11	2,380	--	--
	08-30-96	--	--	--	--	--	--	--	--	--	--
Sturgis	12-02-97	389	--	0	350	1.5	1.1	7.8	778	--	<0.020
Tilford Mnkt	09-19-96	356	--	0	58	3.0	.20	9.3	389	--	.020
Tilford Mdsn	09-03-96	--	--	--	38	.50	.20	8.5	240	--	<.015
Tilford Mnls	08-27-96	241	--	0	8.4	.90	.10	9.7	209	--	<.015
	[2]08-27-96	--	--	--	8.5	.90	.20	9.8	--	--	<.015
Piedmont Mdsn	09-04-96	324	--	0	9.3	.70	.20	8.7	267	--	.020
Piedmont Mnls	09-04-96	333	--	0	4.2	1.0	.20	8.9	267	--	<.015
Cleghorn	11-13-96	184	--	0	24	5.6	.30	10	199	--	.020
Hayward	11-20-97	154	--	0	23	9.3	.28	13	185	--	<.020
Hermosa West Mnls	10-28-97	152	--	0	14	1.4	.31	11	153	--	.038
	[2]10-28-97	150	--	0	14	1.4	.37	11	--	--	<.015
Boles Canyon Mnls	12-17-97	316	--	0	26	5.9	.29	9.6	304	--	<.020
CSP Airport Mdsn	09-06-95	205	--	0	22	1.4	.40	9.8	201	--	<.015
CSP Airport Mnls	08-31-95	213	--	0	38	2.7	.50	8.4	237	--	<.015
Hell Canyon Mdsn	11-05-97	200	--	6	230	4.3	.81	9.0	535	--	1.21
Hell Canyon Mnls	11-03-97	244	--	0	470	4.0	.93	8.6	870	--	<.020
Streeter Ranch	[1]05-10-51	--	5	--	9.0	25	--	17	--	--	--
	12-17-58	--	0	--	12	2.0	.30	21	196	198	--
	05-16-67	--	0	--	12	2.0	.40	17	195	201	--
	11-01-77	--	--	--	9.4	2.5	.40	17	195	183	--
	03-11-97	--	--	--	--	--	--	--	--	--	--
7-11 Ranch Mnkt	11-13-97	313	--	0	54	3.2	.28	9.2	339	--	<.020
Mnkt Jnct Mnls	09-11-95	149	--	0	1,800	12	.60	11	2,620	--	.340
Vets Home Mdsn	11-18-97	261	--	0	120	81	.75	19	521	--	<.020

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.
[2]Replicate sample collected for quality assurance.
[3]Sample reported by Busby and others (1983, 1991).
[4]One tritium unit equals 3.24 PCI/L.

NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DISS (MG/L AS N) (00623)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE TOTAL (MG/L AS NO3) (71850)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)
--	--	--	--	<0.100	--	--	--	--	--	--	--	--	--
--	--	--	--	--	0.00	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	<0.10	<0.010	<0.050	--	--	--	<0.010	0.029	--	1.1	1	37	<1.0
--	<.20	.030	3.50	--	--	3.47	.010	.020	--	<1.0	1	340	<.50
--	<.20	<.010	.120	--	--	--	<.010	<.010	--	<1.0	<1	85	<.50
--	<.20	<.010	.240	--	--	--	<.010	.020	--	<1.0	2	210	<.50
--	<.20	<.010	.220	--	--	--	.010	.010	--	<1.0	2	210	<.50
--	<.20	.010	.180	--	--	.170	<.010	<.010	--	<1.0	1	140	<.50
--	<.20	<.010	.290	--	--	--	<.010	<.010	--	<1.0	<1	420	<.50
--	<.20	<.010	.300	--	--	--	.020	.020	--	<1.0	3	82	<.50
--	<.10	<.010	.236	--	--	--	<.010	.014	--	1.3	6	121	<.50
--	<.20	<.010	.179	--	--	--	<.010	<.010	--	2.7	15	111	<.50
--	<.20	<.010	.176	--	--	--	<.010	<.010	--	3.7	15	110	<.50
--	.11	<.010	1.30	--	--	--	.030	.015	--	<1.0	<1	60	<1.0
--	<.20	<.010	.160	--	--	--	<.010	<.010	--	<1.0	4	24	<.50
--	<.20	<.010	.800	--	--	--	<.010	<.010	--	<1.0	<1	36	<.50
--	1.4	.024	<.050	--	--	--	<.010	.015	--	<1.0	2	17	<.50
--	<.10	<.010	.740	--	--	--	.026	.013	--	<1.0	<1	40	<.50
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	1.0	--	--	--	--	--	--	--	--
--	--	--	--	--	--	.000	--	--	--	--	--	--	--
<0.10	--	--	--	--	--	--	<.010	--	10	--	11	<100	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	.13	.014	1.11	--	--	1.10	<.010	.027	--	1.7	5	206	<.50
--	.30	.050	1.70	--	--	1.65	<.010	<.010	--	<1.0	2	12	<1.5
--	<.10	<.010	.353	--	--	--	<.010	<.010	--	1.2	3	41	<.50

Table 6. Chemical analyses of ground-water samples—Continued

[UNFLTRD, unfiltered; FLTRD, filtered; FET, fixed end point titration; IT, incremental titration; NONCARB, noncarbonate; CARB, carbonate; G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; --, no data available; ND, not detected; <, less than]

OTHER IDENTIFIER	DATE	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON (UG/L AS FE) (71885)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
Swanson Ranch	[1] - -66	--	--	--	--	--	<0	--	--	--
	04-27-67	40	--	--	--	--	60	--	--	--
	08-16-94	--	--	--	--	--	--	--	--	--
	08-30-96	--	--	--	--	--	--	--	--	--
Sturgis	12-02-97	19	<1.0	<5.0	<3.0	<10	--	4,500	--	<100
Tilford Mnkt	09-19-96	17	<1.0	5.0	4.0	<10	--	<3.0	--	<10
Tilford Mdsn	09-03-96	21	<1.0	<5.0	<3.0	<10	--	39	--	<10
Tilford Mnls	08-27-96	20	<1.0	<5.0	<3.0	<10	--	38	--	<10
	[2]08-27-96	16	<1.0	<5.0	<3.0	<10	--	32	--	<10
Piedmont Mdsn	09-04-96	20	<1.0	<5.0	<3.0	<10	--	76	--	<10
Piedmont Mnls	09-04-96	20	<1.0	<5.0	<3.0	<10	--	61	--	<10
Cleghorn	11-13-96	27	<1.0	6.0	<3.0	<10	--	11	--	<10
Hayward	11-20-97	25	<1.0	<5.0	<3.0	<10	--	79	--	<10
Hermosa West Mnls	10-28-97	29	<1.0	<5.0	<3.0	<10	--	15	--	<10
	[2]10-28-97	30	<1.0	<5.0	<3.0	<10	--	12	--	<10
Boles Canyon Mnls	12-17-97	33	<1.0	<14	<12	<10	--	<10	--	<100
CSP Airport Mdsn	09-06-95	30	<1.0	<5.0	5.0	<10	--	760	--	<10
CSP Airport Mnls	08-31-95	40	<1.0	<5.0	<3.0	<10	--	21	--	<10
Hell Canyon Mdsn	11-05-97	588	<1.0	<5.0	<3.0	<10	--	370	--	<10
Hell Canyon Mnls	11-03-97	148	<1.0	5.8	<3.0	<10	--	770	--	<10
Streeter Ranch	[1]05-10-51	--	--	--	--	--	--	--	--	--
	12-17-58	--	--	--	--	--	30	--	--	--
	05-16-67	30	--	--	--	--	--	--	10	--
	11-01-77	30	ND	ND	--	ND	--	20	--	2.0
	03-11-97	--	--	--	--	--	--	--		--
7-11 Ranch Mnkt	11-13-97	28	<1.0	<5.0	<3.0	<10	--	220	--	<10
Mnkt Jnct Mnls	09-11-95	340	<3.0	<15	<9.0	<30	--	1,700	--	<30
Vets Home Mdsn	11-18-97	167	<1.0	<5.0	<3.0	<10	--	490	--	<10

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.
[2]Replicate sample collected for quality assurance.
[3]Sample reported by Busby and others (1983, 1991).
[4]One tritium unit equals 3.24 PCI/L.

LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE (UG/L AS MN) (71883)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)
--	ND	--	--	--	--	--	--	--	--	--	--	--	--
--	40	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	-8.40
--	--	--	--	--	--	--	--	--	--	--	--	--	--
27	--	196	--	<0.1	<60	<10	<1	<1.0	1,500	0.60	<6	8.8	-4.96
7	--	<1.0	--	<.1	<10	<10	1	<1.0	1,700	<.50	<6	8.0	-14.40
<4	--	83	--	<.1	<10	<10	2	<1.0	170	<.50	<6	<3.0	-9.60
5	--	10	--	<.1	<10	10	<1	<1.0	130	<.50	<6	13	-9.70
5	--	11	--	<.1	<10	<10	<1	<1.0	130	<.50	<6	18	--
<4	--	59	--	<.1	<10	<10	1	<1.0	140	<.50	<6	<3.0	-9.10
<4	--	76	--	<.1	<10	<10	<1	<1.0	130	<.50	<6	12	-10.00
11	--	23	--	<.1	<10	<10	7	<1.0	160	<.50	<6	17	-8.90
20	--	4.1	--	<.1	<10	<10	<1	<1.0	144	<.50	<6	5.2	-10.59
14	--	8.4	--	<.1	<10	<10	2	<1.0	239	<.50	7	3.9	-8.39
14	--	7.9	--	<.1	<10	<10	2	<1.0	235	<.50	6	<3.0	--
18	--	18	--	<.1	<60	<40	12	<4.0	199	<.50	<10	<20	-9.86
15	--	25	--	<.1	10	<10	14	<1.0	390	--	<6	4.0	-8.80
27	--	58	--	<.1	10	<10	2	<1.0	400	--	<6	25	-7.80
130	--	27	--	<.1	18	<10	18	<1.0	919	<.50	<6	<3.0	-8.08
57	--	19	--	<.1	102	<10	12	<1.0	2,330	<.50	<6	<3.0	-8.42
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	.00	--	--	--	--	--	--	--	--	--	--	--
--	--	--	30	--	--	--	--	--	--	--	--	--	--
<10	--	4.0	--	<.1	1.0	--	2	--	280	--	4	2.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	--	3.7	--	<.1	13	<10	3	<1.0	510	<.50	<6	3.0	-8.66
69	--	110	--	<.1	50	<30	5	<3.0	9,400	--	<18	29	-6.90
100	--	39	--	<.1	15	11	3	<1.0	1,330	<.50	<6	39	-7.57

Table 6. Chemical analyses of ground-water samples—Continued

[UNFLTRD, unfiltered; FLTRD, filtered; FET, fixed end point titration; IT, incremental titration; NONCARB, noncarbonate; CARB, carbonate; G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; --, no data available; ND, not detected; <, less than]

OTHER IDENTIFIER	DATE	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34/ S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SULFUR -34/-32 WATER FLTRD PER MIL (49932)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT) (01515)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	ALPHA, COUNT, 2 SIGMA WATER DISS AS NAT U (UG/L) (75986)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WATER DISS AS TH-230 (PCI/L) (75987)
Swanson Ranch	[1] - -66	--	--	--	--	--	--	--	--	--
	04-27-67	--	--	--	--	--	--	--	--	--
	08-16-94	-133.0	-17.45	12.80	--	--	--	--	--	--
	08-30-96	-132.0	-17.46	--	--	--	--	--	--	--
Sturgis	12-02-97	-111.7	-15.11	--	-7.10	--	--	--	21	7.0
Tilford Mnkt	09-19-96	-110.0	-14.63	--	10.60	--	--	--	<3.0	2.3
Tilford Mdsn	09-03-96	-118.0	-15.61	--	-10.00	--	--	--	3.6	2.5
Tilford Mnls	08-27-96	-117.0	-15.52	--	2.70	--	--	--	<3.0	1.8
	[2]08-27-96	-118.0	-15.56	--	--	--	--	--	<3.0	1.8
Piedmont Mdsn	09-04-96	-103.0	-13.68	--	-6.50	--	--	--	3.9	2.7
Piedmont Mnls	09-04-96	-100.0	-13.61	--	.900	--	--	--	<3.0	1.7
Cleghorn	11-13-96	-96.8	-12.44	--	5.90	--	--	--	5.5	2.6
Hayward	11-20-97	-87.9	-12.06	--	5.90	--	--	--	<3.0	2.1
Hermosa West Mnls	10-28-97	-87.3	-11.98	--	7.20	--	--	--	6.4	2.7
	[2]10-28-97	-87.3	-11.98	--	--	--	--	--	3.4	2.2
Boles Canyon Mnls	12-17-97	-123.6	-15.88	--	-13.10	--	--	--	7.9	3.3
CSP Airport Mdsn	09-06-95	-87.6	-11.75	--	-4.30	--	5.3	1.8	3.8	1.3
CSP Airport Mnls	08-31-95	-84.9	-11.50	--	-1.20	--	10	5.2	7.1	3.6
Hell Canyon Mdsn	11-05-97	-130.8	-17.23	--	4.70	--	--	--	5.4	3.2
Hell Canyon Mnls	11-03-97	-111.4	-14.21	--	12.00	--	--	--	22	6.8
Streeter Ranch	[1]05-10-51	--	--	--	--	--	--	--	--	--
	12-17-58	--	--	--	--	--	--	--	--	--
	05-16-67	--	--	--	--	--	--	--	--	--
	11-01-77	--	--	--	--	9.5	14	--	--	--
	03-11-97	-86.8	-11.87	--	--	--	--	--	--	--
7-11 Ranch Mnkt	11-13-97	-94.5	-12.44	--	10.20	--	--	--	6.7	3.2
Mnkt Jnct Mnls	09-11-95	-104.0	-13.87	--	--	--	140	27	100	19
Vets Home Mdsn	11-18-97	-121.9	-15.97	--	10.90	--	--	--	8.6	3.9

[1]Percent difference between cations and anions (in milliequivalents per liter) exceeds 5 percent; use data with caution.
[2]Replicate sample collected for quality assurance.
[3]Sample reported by Busby and others (1983, 1991).
[4]One tritium unit equals 3.24 PCI/L.

GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/Y-90) (80050)	BETA, 2 SIGMA WATER, DISS, AS SR90 /Y90 (PCI/L (75988)	RA-228/ RA-226 ACTIV-ITY RATIO (99911)	RA-228/ RA-226 1 SIGMA (99912)	RA-226 RADON EMAN-ATION (DPM/L) (99913)	RA-226 1 SIGMA (99914)	RA-228 ARITH-METIC (DPM/L) (99915)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS (UG/L) (75990)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	TRITIUM TOTAL (TRITIUM UNITS[4])
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	0.021	0.002	35.080	1.600	0.740	--	--	2.0	1.0	0.62
--	--	--	--	--	--	--	--	--	10	0.6	--	--	--
21	5.9	--	--	--	--	--	--	--	22	1.4	1.0	1.0	0.31
7.0	3.8	--	--	--	--	--	--	--	1.2	.0	140	8.0	43
<4.0	1.7	--	--	--	--	--	--	--	1.4	.0	4.0	1.0	1.2
4.0	2.0	--	--	--	--	--	--	--	.78	.0	100	6.0	31
4.7	2.2	--	--	--	--	--	--	--	.78	.0	96	6.0	30
4.5	2.4	--	--	--	--	--	--	--	4.0	.1	<1.0	1.0	<1.0
<4.0	2.2	--	--	--	--	--	--	--	.81	.0	3.0	1.0	.93
8.8	2.5	--	--	--	--	--	--	--	1.5	.0	82	5.0	25
5.1	3.9	--	--	--	--	--	--	--	1.7	.1	60	3.8	19
4.3	3.8	--	--	--	--	--	--	--	2.4	.1	<1.0	1.0	<1.0
<4.0	3.8	--	--	--	--	--	--	--	2.3	.1	<1.0	1.0	<1.0
4.1	3.9	--	--	--	--	--	--	--	5.7	.1	3.2	1.0	.99
5.2	1.4	4.3	.89	.100	.005	2.390	.310	.240	3.0	.2	<1.0	1.0	<1.0
6.1	4.3	4.5	3.1	.820	.046	.330	.030	.270	3.9	.2	3.0	1.0	.93
19	4.7	--	--	--	--	--	--	--	7.8	.5	1.9	1.0	.59
19	5.7	--	--	--	--	--	--	--	13	.9	<1.0	1.0	<1.0
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.6	--	4.2	--	--	--	--	--	--	--	--	34	--	[3]10.6
--	--	--	--	--	--	--	--	--	--	--	37	2.6	11
5.3	4.0	--	--	--	--	--	--	--	3.1	.1	79	4.5	24
20	6.2	15	4.6	.662	.033	1.660	.025	1.100	12	.8	<1.0	1.0	<1.0
13	4.4	--	--	--	--	--	--	--	3.5	.2	<1.0	1.0	<1.0

Surface- and Ground-Water Interaction Samples

Samples were collected at 30 surface- and ground-water interaction sites. Samples in this category are divided into three further subdivisions, including samples immediately upstream of loss zones, samples from headwater springs, and samples from springs downgradient of loss zones. Site information for these subdivisions is presented in tables 7, 8, and 9, respectively, and locations of the sampling sites are shown in figure 11. Loss zone samples were collected in areas where streamflow losses provide recharge to the Madison and Minnelusa aquifers. Samples from headwater springs were collected from three primary geohydrologic units from which headwater springs originate: the Deadwood Formation, the Madison Limestone, and the Minnelusa Formation. Additional information regarding these samples was presented by Wenker (1997). Downgradient spring samples were collected from streams with large springs that occur downgradient from outcrops of the Madison and/or Minnelusa Formations. Additional data collected prior to water year 1995 are available for some of these sites and can be obtained from the USGS upon request.

Chemical analyses of samples for the three subdivisions are presented in tables 10-12. The percent difference between measured anions and cations (in milliequivalents per liter) was greater than 5 percent for two samples from downgradient spring sampling sites (table 12); the results from these samples should be used with caution. Samples collected for quality assurance are footnoted in tables 10-12.

Table 7. Site information for sampling sites located immediately upstream of loss zones for which chemical analyses are presented

Site number	Station identification number	Station name	Latitude	Longitude
			(degrees, minutes, seconds)	
LZ1	06402430	Beaver Creek near Pringle	433453	1032834
LZ2	06403300	French Creek above Fairburn	434302	1032203
LZ3	06404000	Battle Creek near Keystone	435221	1032010
LZ4	06404998	Grace Coolidge Creek near Game Lodge	434540	1032149
LZ5	06407500	Spring Creek near Keystone	435845	1032025
LZ6	06422500	Boxelder Creek near Nemo	440838	1032716
LZ7	441742103333300	Elk Creek above Meadow Creek	441742	1033333
LZ8	441738103333400	Meadow Creek above Elk Creek	441738	1033334
LZ9	06429920	Bear Gulch near Maurice	442514	1040226
LZ10	06430520	Beaver Creek near Maurice	442257	1040013
LZ11	06437020	Bear Butte Creek near Deadwood	442008	1033806

Table 8. Site information for headwater spring sampling sites for which chemical analyses are presented

Site number	USGS local number	Station identification number	Spring name	Latitude	Longitude	Geohydrologic unit[1]
				(degrees, minutes, seconds)		
HW1	6N 1E30DAAD	442706104015401	Knight Spring	442706	1040154	Minnelusa
HW2	3N 5E13ACAA	441322103272801	Unnamed spring	441322	1032728	Deadwood
HW3	3N 3E14CBBB	441310103435901	JHD Spring	441310	1034359	Deadwood
HW4	3N 2E 6CCCD	441434103560001	Intake Gulch	441434	1035600	Madison
HW5	2N 2E15ADB	06408700	Rhoads Fork	440812	1035129	Madison
HW6	2S 1E34DBAC	434953103585201	Barrel Spring	434953	1035852	Minnelusa
HW7	4S 2E26AABC	434045103502301	Water Draw Spring	434045	1035023	Minnelusa
HW8	4S 2E34BCAB	433944103521801	McKenna Spring	433944	1035218	Minnelusa

[1]Refers to surficial geohydrologic unit and is not necessarily indicative of spring source.

Table 9. Site information for downgradient spring sampling sites for which chemical analyses are presented

Site number	USGS local number[1]	Station identification number	Name of spring or stream	Latitude	Longitude
				(degrees, minutes, seconds)	
DG1	7N 2E28BACD	443237103525801	Higgins Gulch	443237	1035258
DG2	7N 2E20DAAD	443309103532401	Old Spearfish Hatchery	443309	1035324
DG3	7N 1E16BDB	06430532	Crow Creek near Beulah, WY	443414	1040019
DG4	7N 1E16DADC	443356103593701	Cox Lake	443356	1035937
DG5	3N 8E 9AA	06425100	Elk Creek near Rapid City	441425	1030903
DG6	1S 8E21CCC	06408500	Spring Creek near Hermosa	435631	1030932
DG7	2S 7E34BBD	435013103162600	Battle Creek	435013	1031626
DG8	3S 7E17DCDD	434655103181701	Grace Coolidge Creek	434655	1031817
DG9	7S 5E24BB	06402000	Fall River at Hot Springs	432550	1032833
DG10	8S 5E20CDAB	432006103330501	Cascade Spring	432006	1033305
DG11	8S 5E20DBCB	432028103331601	Cool Spring	432028	1033316

[1]Refers to sampling location.

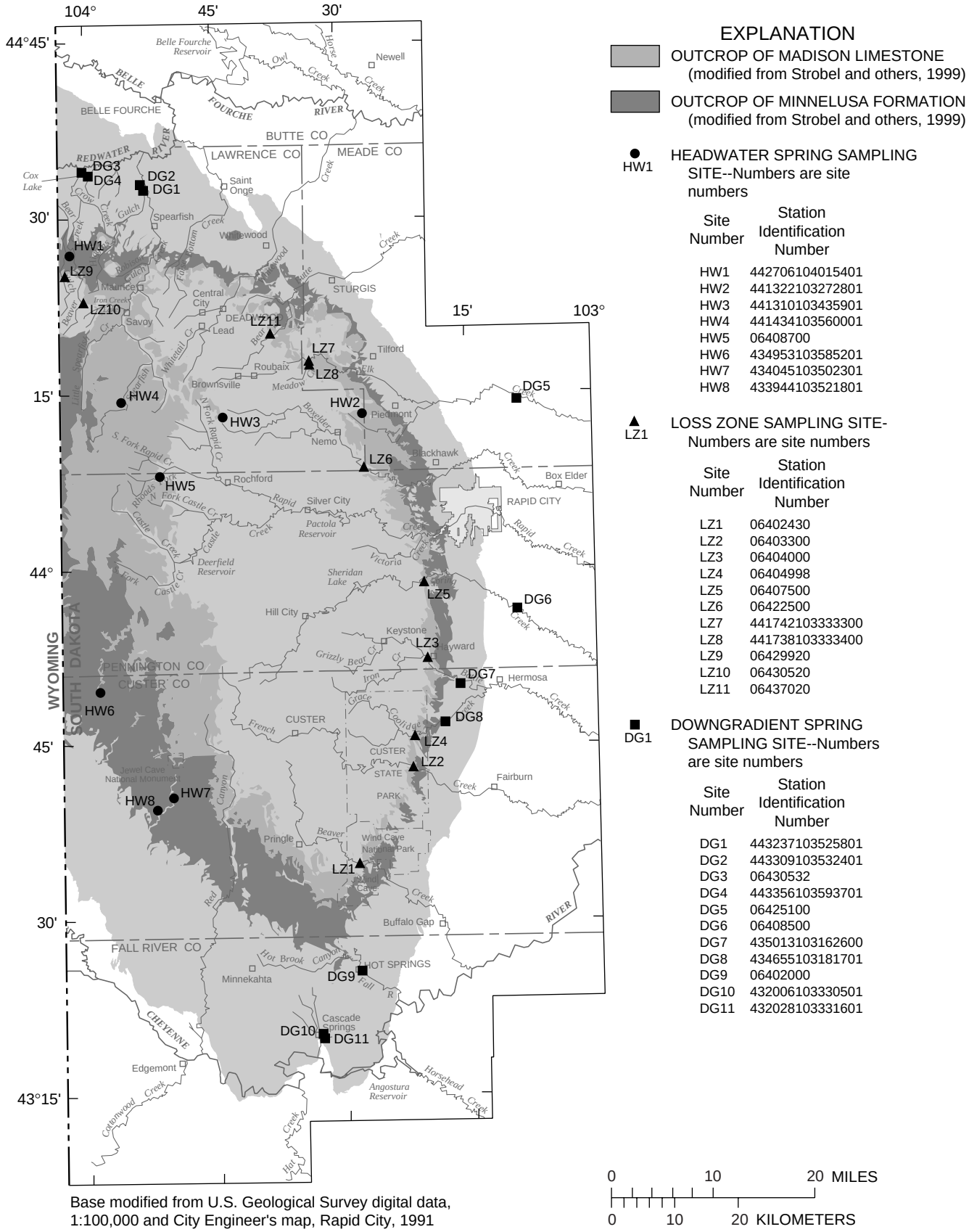


Figure 11. Location of surface- and ground-water interaction sites for which water-quality data are presented.

Table 10. Water-quality data for samples collected immediately upstream of loss zones

[INST, instantaneous; US/CM, microsiemens per centimeter; PCI/L, picocuries per liter; DEG C, degrees Celsius; E, estimated; --, no data available]

STREAM NAME	DATE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	TRITIUM TOTAL (TRITIUM UNITS[1])
Beaver Creek near Pringle	10-01-96	2.9	525	--	11.5	9.0	-92.4	-12.38	83	5.0	26
	09-10-97	4.9	496	--	26.0	13.0	-91.9	-12.18	73	4.5	23
French Creek	10-07-96	8.4	306	--	19.0	11.0	-89.8	-11.54	65	4.0	20
	09-11-97	17	290	--	28.0	18.0	-89.1	-11.62	58	3.8	18
Battle Creek	09-06-96	E11.8	300	8.2	16.0	17.0	-82.4	-11.09	61	4.0	19
	09-12-97	5.9	355	--	32.0	19.0	-87.2	-11.92	61	3.8	19
Grace Coolidge Creek	09-10-96	E4.7	201	8.3	30.0	18.0	-84.2	-11.33	51	3.0	16
	09-12-97	8.2	208	--	18.0	15.0	-87.4	-11.82	51	3.2	16
Spring Creek	09-09-96	E21.8	262	8.4	--	16.0	-98.9	-12.89	80	5.0	25
Boxelder Creek	10-08-97	28	366	--	8.5	10.0	-112.8	-14.76	85	5.1	26
Elk Creek	09-20-96	3.2	358	8.3	8.0	7.5	-123.0	-16.10	100	6.0	31
	10-09-97	--	399	--	10.0	3.5	-124.4	-16.37	81	4.5	25
Meadow Creek	09-20-96	1.4	474	8.1	8.0	7.5	-119.0	-15.69	120	7.0	37
	10-09-97	1.2	542	--	10.0	4.5	-117.4	-15.78	110	6.4	34
Bear Gulch near Maurice	10-10-96	.40	274	--	24.0	14.5	-127.0	-16.76	42	3.0	13
	09-11-97	.29	262	8.4	27.0	17.5	-130.6	-17.16	59	3.8	18
Beaver Creek near Maurice	10-09-96	.26	271	--	25.0	10.5	-126.0	-16.40	75	5.0	23
	09-11-97	.36	266	8.3	27.0	18.0	-128.8	-16.77	69	4.5	21
Bear Butte Creek	10-09-96	2.3	320	--	15.5	4.5	-122.0	-16.03	99	6.0	31
	10-10-97	3.7	1,640	--	3.5	4.0	-120.3	-15.98	82	5.1	25

[1]One tritium unit equals 3.24 PCI/L.

Table 11. Water-quality data for headwater spring samples

[G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; IT, incremental titration; FET, fixed end point titration; TIT, titration; LAB, laboratory; NAT U, natural uranium; <, less than; --, no data available]

SPRING NAME	DATE	FLOW RATE (G/M) (00059)	DIS-CHARGE, INST CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	ALKA-LINITY WAT DISS TOTAL IT FIELD MG/L AS CACO3 (39086)
Knight Spring	08-04-95	--	--	587	8.1	28.0	10.3	633	8.8	9	324
	08-28-96	8.0	--	568	7.9	--	8.8	665	9.2	91	--
	09-11-97	8.0	--	590	7.5	17.0	6.8	640	9.2	90	--
Unnamed Spring	08-08-95	39.5	--	600	7.7	26.0	7.8	631	9.5	10	329
	09-09-96	53.0	--	589	7.3	30.0	7.6	650	9.2	90	--
	09-09-97	75.0	--	590	7.3	14.0	7.3	--	9.6	--	--
JHD Spring	09-13-95	--	.04	540	7.7	26.0	7.0	606	--	--	295
	09-06-96	15.7	--	526	7.2	15.0	6.8	617	8.0	81	--
	09-09-97	40.0	--	508	7.3	19.0	6.5	698	7.9	70	--
Intake Gulch	08-03-95	--	--	464	8.0	25.0	9.4	610	9.1	100	256
	08-28-96	--	--	455	7.9	--	8.0	623	9.2	95	--
	09-09-97	--	8.0	467	8.0	21.0	8.0	704	9.9	91	--
Rhoads Fork	[2] - -79	--	--	--	--	--	--	--	--	--	--
	12-05-86	--	--	--	--	--	--	--	--	--	--
	04-14-87	--	--	--	--	--	--	--	--	--	--
	06-12-87	--	--	--	--	--	--	--	--	--	--
	07-06-87	--	--	--	--	--	--	--	--	--	--
	08-11-87	--	--	--	--	--	--	--	--	--	--
	09-05-91	--	3.9	466	7.9	18.0	7.5	617	9.8	101	--
	08-07-95	5.6	--	464	8.3	25.0	9.1	601	9.4	9	--
	08-28-96	--	7.4	460	8.1	28.0	8.8	619	9.3	99	--
	09-09-97	--	8.1	462	8.1	23.0	9.1	698	9.8	93	--
Barrel Spring	07-25-95	1.9	--	780	7.7	--	11.2	619	6.3	71	402
	09-13-96	2.0	--	780	7.3	18.0	10.5	628	7.0	76	--
	09-08-97	1.8	--	767	7.4	20.0	10.6	632	7.3	80	--
Water Draw Spring	09-14-95	4.7	--	533	7.7	20.0	8.6	635	8.0	83	272
	09-13-96	4.0	--	534	7.3	22.0	8.6	638	8.6	88	--
	09-08-97	4.0	--	521	7.4	20.0	8.7	644	8.7	89	--
McKenna Spring	09-14-95	.2	--	481	7.3	22.0	18.1	639	7.4	95	219
	09-13-96	.4	--	463	7.2	21.0	16.2	643	--	--	--
	09-08-97	2.0	--	454	7.3	21.0	12.5	649	7.2	80	--

[1]One tritium unit equals 3.24 PC/L.

[2]Sample reported by Busby and others (1983, 1991). Sample date unknown but probably collected between 1978 and 1980.

ALKA-LINITY UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALK-LINITY WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	BICAR-BONATE WATER DISS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DISS IT FIELD MG/L AS CO3 (00452)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
243	324	396	0	90	24	0.90	0.50	4.3	1.2	0.10	9.9	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
325	329	401	0	60	40	1.4	1.4	6.8	1.0	.10	9.2	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
298	--	360	0	56	37	.90	1.5	6.2	.60	<.10	9.3	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
256	256	314	0	67	21	.80	.80	1.4	.90	.10	13	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--		--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
219	--	--	--	66	23	1.0	.60	2.2	3.1	<.10	9.0	251	<0.010
233	257	314	0	65	24	.90	.60	2.4	.30	.10	9.6	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
419	402	491	0	56	68	7.6	3.0	19	6.8	.50	14	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
271	--	332	0	52	35	6.0	2.6	13	4.5	.50	13	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
230	--	267	0	75	12	5.5	2.9	14	6.5	.20	14	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 11. Water-quality data for headwater spring samples—Continued

[G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; IT, incremental titration; FET, fixed end point titration; TIT, titration; LAB, laboratory; NAT U, natural uranium; <, less than; --, no data available]

SPRING NAME	DATE	NITRO-GEN,AM-MONIA + ORGANIC DISS (MG/L AS N) (00623)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)
Knight Spring	08-04-95	--	--	--	--	--	<1.0	1	130	<0.50	20
	08-28-96	--	--	--	--	--	--	--	--	--	--
	09-11-97	--	--	--	--	--	--	--	--	--	--
Unnamed Spring	08-08-95	--	--	--	--	--	<1.0	1	69	<.50	20
	09-09-96	--	--	--	--	--	--	--	--	--	--
	09-09-97	--	--	--	--	--	--	--	--	--	--
JHD Spring	09-13-95	--	--	--	--	--	<1.0	<1	13	<.50	20
	09-06-96	--	--	--	--	--	--	--	--	--	--
	09-09-97	--	--	--	--	--	--	--	--	--	--
Intake Gulch	08-03-95	--	--	--	--	--	<1.0	<1	98	<.50	10
	08-28-96	--	--	--	--	--	--	--	--	--	--
	09-09-97	--	--	--	--	--	--	--	--	--	--
Rhoads Fork	[2] - -79	--	--	--	--	--	--	--	--	--	--
	12-05-86	--	--	--	--	--	--	--	--	--	--
	04-14-87	--	--	--	--	--	--	--	--	--	--
	06-12-87	--	--	--	--	--	--	--	--	--	--
	07-06-87	--	--	--	--	--	--	--	--	--	--
	08-11-87	--	--	--	--	--	--	--	--	--	--
	09-05-91	<0.20	<0.010	0.130	<0.010	<.010	<1.0	<1	64	--	<10
	08-07-95	--	--	--	--	--	--	--	--	--	--
	08-28-96	--	--	--	--	--	--	--	--	--	--
	09-09-97	--	--	--	--	--	--	--	--	--	--
Barrel Spring	07-25-95	--	--	--	--	--	1.0	7	210	<.50	40
	09-13-96	--	--	--	--	--	--	--	--	--	--
	09-08-97	--	--	--	--	--	--	--	--	--	--
Water Draw Spring	09-14-95	--	--	--	--	--	1.0	7	110	<.50	40
	09-13-96	--	--	--	--	--	--	--	--	--	--
	09-08-97	--	--	--	--	--	--	--	--	--	--
McKenna Spring	09-14-95	--	--	--	--	--	2.0	13	340	<.50	30
	09-13-96	--	--	--	--	--	--	--	--	--	--
	09-08-97	--	--	--	--	--	--	--	--	--	--

[1]One tritium unit equals 3.24 PC/L.

[2]Sample reported by Busby and others (1983, 1991). Sample date unknown but probably collected between 1978 and 1980.

CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
<1.0	<5.0	5.0	<10	3.0	<10	<4	<1.0	<0.1	<10	<10	<1	<1.0	86
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<1.0	<5.0	<3.0	<10	16	20	5	1.0	<.1	<10	<10	2	<1.0	110
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<1.0	<5.0	<3.0	<10	<3.0	<10	<4	<1.0	<.1	<10	10	<1	<1.0	74
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.0	<5.0	<3.0	<10	3.0	20	<4	<1.0	<.1	20	<10	<1	<1.0	57
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<10	<1.0	--	<1.0	5.0	<1.0	--	2.0	<.1	--	--	<1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<1.0	<5.0	<3.0	<10	4.0	<10	16	1.0	.1	20	<10	3	<1.0	270
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<1.0	<5.0	<3.0	<10	<3.0	<10	12	<1.0	<.1	30	<10	2	<1.0	260
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<1.0	<5.0	<3.0	<10	<3.0	<10	8	<1.0	<.1	10	<10	<1	<1.0	140
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 11. Water-quality data for headwater spring samples—Continued

[G/M, gallons per minute; US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; IT, incremental titration; FET, fixed end point titration; TIT, titration; LAB, laboratory; NAT U, natural uranium; <, less than; --, no data available]

SPRING NAME	DATE	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	SULFUR -34/-32 WATER FLTRD PER MIL (49932)	RA-288/ RA-226 ACTIV-ITY RATIO (99911)	RA-228/ RA-226 1 SIGMA (99912)	RA-226 RADON EMAN-ATION (DPM/L) (99913)	RA-226 1 SIGMA (99914)
Knight Spring	08-04-95	6	<3.0	-11.90	-125.0	-16.85	--	0.612	0.026	0.350	0.060
	08-28-96	--	--	--	-127.0	-16.90	--	--	--	--	--
	09-11-97	--	--	--	-127.8	-16.98	--	--	--	--	--
Unnamed Spring	08-08-95	<6	<3.0	-12.20	-103.0	-13.86	--	1.341	.093	.080	.010
	09-09-96	--	--	--	-106.0	-13.97	--	--	--	--	--
	09-09-97	--	--	--	-104.2	-14.04	--	--	--	--	--
JHD Spring	09-13-95	<6	4.0	-11.10	-128.0	-16.55	-4.30	2.136	.127	.030	.002
	09-06-96	--	--	--	-126.0	-16.61	--	--	--	--	--
	09-09-97	--	--	--	-126.4	-16.53	--	--	--	--	--
Intake Gulch	08-03-95	<6	<3.0	-11.20	-135.0	-17.55	--	2.763	.090	.052	.010
	08-28-96	--	--	--	-133.0	-17.67	--	--	--	--	--
	09-09-97	--	--	--	-133.0	-17.54	--	--	--	--	--
Rhoads Fork	[2] - -79	--	--	--	--	--	--	--	--	--	--
	12-05-86	--	--	--	-126.5	-16.95	--	--	--	--	--
	04-14-87	--	--	--	-127.5	-16.95	--	--	--	--	--
	06-12-87	--	--	--	-128.0	-17.05	--	--	--	--	--
	07-06-87	--	--	--	-127.5	-17.05	--	--	--	--	--
	08-11-87	--	--	--	-129.0	-17.00	--	--	--	--	--
	09-05-91	--	<3.0	--	--	--	--	--	--	--	--
	08-07-95	--	--	-10.10	-125.0	-16.89	--	1.694	.082	.050	.020
	08-28-96	--	--	--	-127.0	-16.79	--	--	--	--	--
	09-09-97	--	--	--	-128.5	-16.75	--	--	--	--	--
Barrel Spring	07-25-95	32	12	-12.10	-115.0	-14.67	--	1.770	.119	.290	.010
	09-13-96	--	--	--	-112.0	-14.44	--	--	--	--	--
	09-08-97	--	--	--	-113.8	-14.69	--	--	--	--	--
Water Draw Spring	09-14-95	19	<3.0	-9.20	-113.0	-14.34	--	.912	.064	.710	.060
	09-13-96	--	--	--	-113.0	-14.26	--	--	--	--	--
	09-08-97	--	--	--	-111.5	-14.22	--	--	--	--	--
McKenna Spring	09-14-95	9	7.0	-11.20	-103.0	-13.46	--	.429	.021	.720	.070
	09-13-96	--	--	--	-106.0	-13.53	--	--	--	--	--
	09-08-97	--	--	--	-101.8	-13.24	--	--	--	--	--

[1]One tritium unit equals 3.24 PC/L.

[2]Sample reported by Busby and others (1983, 1991). Sample date unknown but probably collected between 1978 and 1980.

RA-228 ARITH-METIC (DPM/L) (99915)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT) (80030)	ALPHA, COUNT, 2 SIGMA WAT DISS AS NAT U (UG/L) (75986)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/Y-90) (80050)	BETA, 2 SIGMA WATER, DISS, AS SR90 /Y90 (PCI/L (75988)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	TRITIUM TOTAL (TRITIUM UNITS[1])
0.210	<3.0	2.3	<3.0	3.8	<4.0	4.5	<4.0	3.0	0.37	0.0	130	7.0	40
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.110	4.7	3.5	8.6	6.5	10	5.5	6.3	3.3	1.0	.0	170	9.0	52
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.060	<3.0	.76	<3.0	1.1	<4.0	.91	<4.0	.69	.77	.0	170	9.0	52
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.140	--	--	--	--	--	--	--	--	.67	.0	100	6.0	31
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	[2]62.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.080	--	--	--	--	--	--	--	--	--	--	140	8.0	43
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.510	13	6.7	17	8.9	6.5	7.8	5.0	5.9	9.3	.6	59	4.0	18
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.650	8.1	2.4	11	3.2	7.4	1.6	5.6	1.2	7.0	.4	41	3.0	13
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
.310	<3.0	1.0	<3.0	1.4	4.9	1.2	<4.0	.90	1.5	.0	26	2.0	8.0
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 12. Water-quality data for downgradient spring samples

[US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; CARB, carbonate; TOT, total; TIT, titration; IT, incremental titration; FET, fixed end point titration; TOT, total; LAB, laboratory; <, less than; --, no data available]

NAME OF SPRING OR STREAM	DATE	DIS-CHARGE, INST CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	ALKA-LINITY WATER DISS TOT IT FIELD MG/L AS CACO3 (39086)
Higgins Gulch	[2]09-26-94	7.1	657	8.1	20.0	13.0	660	8.0	88	390	333
	10-10-97	7.2	735	--	22.5	11.5	--	--	--	--	--
Old Spearfish Hatchery	09-26-94	7.6	906	7.9	--	10.2	660	8.8	91	550	230
	08-21-97	3.6	1,660	7.3	28.0	15.0	--	--	--	--	--
Crow Creek near Beulah, WY	08-19-92	25	1,350	7.8	29.0	14.0	673	12.5	138	810	--
	08-30-96	41	1,370	7.8	25.0	--	681	11.1	--	810	201
Cox Lake	09-06-91	4.6	1,200	7.7	26.5	15.0	670	10.5	119	710	--
	09-27-94	4.1	1,110	7.8	22.0	11.0	662	8.2	86	710	202
	08-22-97	4.3	1,320	7.2	28.0	20.9	--	--	--	830	--
Elk Creek near Rapid City	09-05-96	11	1,150	7.9	37.0	21.0	680	6.7	85	580	211
Spring Creek near Hermosa	09-09-96	4.4	1,050	7.9	25.0	15.1	680	8.1	91	560	241
Battle Creek	09-06-96	7.0	341	7.9	--	--	677	8.6	--	160	154
Grace Coolidge Creek	09-10-96	13	295	8.4	30.0	13.0	675	9.0	8	140	135
Fall River at Hot Springs	[3]09-04-59	15	1,300	7.6	--	--	--	--	--	560	--
	06-09-60	23	1,340	7.7	--	--	--	--	--	580	--
	06-14-61	24	1,310	7.8	--	--	--	--	--	590	--
	09-11-96	24	1,280	7.9	20.0	25.3	683	8.5	116	530	198
	[4]09-11-96	--	1	7.7	20.0	25.3	--	--	--	1	1
Cascade Spring	11-01-57	--	2,700	7.0	--	22.0	--	--	--	1,800	--
	07-19-73	--	2,500	7.4	--	20.0	--	--	--	1,700	--
	10-12-94	18	2,380	6.9	17.0	20.0	--	--	--	--	--
	10-19-95	21	2,720	7.1	10.0	20.2	--	--	--	--	--
	09-12-96	--	2,680	7.0	22.0	20.5	678	5.7	72	--	--
Cool Spring	09-12-96	--	1,830	7.0	19.0	18.0	679	5.7	68	1,000	200

[1]One tritium unit equals 3.24 PC/L.

[2]Percent difference between anions and cations (in milliequivalents per liter) exceeds 5 percent; data should be used with caution.

[3]Percent difference between anions and cations (in milliequivalents per liter) exceeds 10 percent; data should be used with extreme caution.

[4]Field blank collected for quality assurance.

ALKA-LINITY UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	ALKA-LINITY WATER UNFLTRD FET FIELD MG/L AS HCO3 (00440)	BICAR-BONATE WATER DISS IT FIELD MG/L AS HCO3 (00453)	ALKA-LINITY UNFLTRD CARB FET FIELD MG/L AS CO3 (00445)	CAR-BONATE WATER DISS IT FIELD MG/L AS CO3 (00452)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
302	--	--	406	--	0	100	34	6.7	4	.1	2.2	110	12
--	--	--	--	--	--	--	--	--	--	--	--	--	--
233	--	--	281	--	0	160	36	3.3	1	.1	1.2	340	2.3
--	--	--	--	--	--	--	--	--	--	--	--	--	--
192	--	--	--	--	--	260	39	4.4	1	.1	1.7	580	10
142	--	--	245	--	0	260	38	4.8	1	.1	2.1	600	2.5
200	--	--	--	--	--	230	34	2.8	1	.0	1.4	--	--
206	--	--	247	--	0	230	34	2.5	1	.0	1.4	520	.70
182	--	--	--	--	--	270	35	2.7	1	.0	1.4	570	.67
208	--	--	257	--	0	140	56	15	5	.3	4.6	420	15
201	--	--	294	--	0	160	39	12	4	.2	5.7	320	14
154	--	--	187	--	0	43	12	7.1	9	.2	2.9	19	5.4
137	--	--	160	--	2	38	9.9	7.0	10	.3	2.5	11	5.3
--	--	530	--	0	--	160	38	74	22	1	8.1	380	92
--	--	240	--	0	--	160	45	72	21	1	8.0	400	94
--	--	220	--	0	--	180	33	64	19	1	8.1	390	85
158	--	--	242	--	0	150	37	65	21	1	7.4	350	84
1.2	--	1	--	--	0	.17	.020	<.20	--	--	<.10	<.10	<.10
--	193	240	--	0	--	570	92	54	6	.6	6.2	1,500	62
--	200	240	--	0	--	540	83	27	3	.3	5.2	1,400	31
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
206	--	--	244	--	0	290	67	32	6	.4	4.4	830	38

Table 12. Water-quality data for downgradient spring samples—Continued

[US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; CARB, carbonate; TOT, total; TIT, titration; IT, incremental titration; FET, fixed end point titration; TOT, total; LAB, laboratory; <, less than; --, no data available]

NAME OF SPRING OR STREAM	DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DISS (MG/L AS N) (00623)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
Higgins Gulch	09-26-94	0.20	13	478	--	--	--	--	--	--	--
	10-10-97	--	--	--	--	--	--	--	--	--	--
Old Spearfish Hatchery	09-26-94	.20	10	691	--	--	--	--	--	--	--
	08-21-97	--	--	--	--	--	--	--	--	--	--
Crow Creek near Beulah, WY	08-19-92	.30	11	1,020	1,090	0.020	--	<0.010	0.230	--	--
	08-30-96	.30	13	1,040	--	--	--	--	--	--	--
Cox Lake	09-06-91	.30	12	--	920	<.010	<0.20	<.010	.150	--	<0.010
	09-27-94	.30	11	921	--	--	--	--	--	--	--
	08-22-97	.32	15	1,010	--	--	--	--	--	--	--
Elk Creek near Rapid City	09-05-96	.20	8.2	792	816	.070	.30	.020	.800	3.5	<.010
Spring Creek near Hermosa	09-09-96	.30	12	711	696	.030	.20	.010	.480	2.1	.020
Battle Creek	09-06-96	.30	15	197	--	--	--	--	--	--	--
Grace Coolidge Creek	09-10-96	.30	15	170	--	--	--	--	--	--	--
Fall River at Hot Springs	[3]09-04-59	.70	23	1,040	947	--	--	--	--	1.0	--
	06-09-60	.60	23	923	1,010	--	--	--	--	.50	--
	06-14-61	.70	21	894	969	--	--	--	--	1.5	--
	09-11-96	.70	21	834	--	--	--	--	--	--	--
	[4]09-11-96	<.10	<.10	--	--	--	--	--	--	--	--
Cascade Spring	11-01-57	.90	22	2,460	2,530	--	--	--	--	--	--
	07-19-73	1.6	15	2,270	--	--	--	--	--	--	--
	10-12-94	--	--	--	--	--	--	--	--	--	--
	10-19-95	--	--	--	--	--	--	--	--	--	--
	09-12-96	--	--	--	--	--	--	--	--	--	--
Cool Spring	09-12-96	.90	16	1,400	--	--	--	--	--	--	--

[1]One tritium unit equals 3.24 PC/L.

[2]Percent difference between anions and cations (in milliequivalents per liter) exceeds 5 percent; data should be used with caution.

[3]Percent difference between anions and cations (in milliequivalents per liter) exceeds 10 percent; data should be used with extreme caution.

[4]Field blank collected for quality assurance.

PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<0.010	2	1	34	--	60	<10	<1.0	--	<1.0	--	28	<1.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<.010	<1	<1	18	--	30	<10	<1.0	--	<1.0	--	5.0	<1.0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
<.010	--	4	56	<0.50	73	<1.0	5.0	<3.0	<10	--	7.0	<10	21
<.010	--	<1	52	<.50	54	<1.0	<5.0	<3.0	<10	--	15	30	32
--	--	15	--	--	--	--	--	--	--	--	6.0	--	--
--	--	7	--	--	--	--	--	--	--	--	7.0	--	--
--	--	--	--	--	210	--	--	--	--	10	--	--	--
--	--	--	--	--	190	--	--	--	--	10	--	--	--
--	--	--	--	--	150	--	--	--	--	0	--	--	--
--	--	4	--	--	--	--	--	--	--	--	<3.0	--	--
--	--	<1	--	--	--	--	--	--	--	--	13	--	--
--	--	--	--	--	190	--	--	--	--	--	--	--	0
--	--	--	--	--	--	--	--	--	--	<10	--	--	60
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	2	--	--	--	--	--	--	--	--	<3.0	--	--

Table 12. Water-quality data for downgradient spring samples—Continued

[US/CM, microsiemens per centimeter; DEG C, degrees Celsius; MM, millimeters; MG/L, milligrams per liter; UG/L, micrograms per liter; PCI/L, picocuries per liter; DPM/L, decays per minute per liter; INST, instantaneous; UNFLTRD, unfiltered; FLTRD, filtered; DISS, dissolved; CARB, carbonate; TOT, total; TIT, titration; IT, incremental titration; FET, fixed end point titration; TOT, total; LAB, laboratory; <, less than; --, no data available]

NAME OF SPRING OR STREAM	DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
Higgins Gulch	09-26-94	--	--	--	--	--	--	--	--	--	--
	10-10-97	--	--	--	--	--	--	--	--	--	--
Old Spearfish Hatchery	09-26-94	--	--	--	--	--	--	--	--	--	--
	08-21-97	--	--	--	--	--	--	--	--	--	--
Crow Creek near Beulah, WY	08-19-92	--	11	<0.1	--	--	2	--	--	--	7.0
	08-30-96	--	--	--	--	--	--	--	--	--	--
Cox Lake	09-06-91	--	<1.0	<.1	--	--	2	--	--	--	7.0
	09-27-94	--	--	--	--	--	--	--	--	--	--
	08-22-97	--	--	--	--	--	--	--	--	--	--
Elk Creek near Rapid City	09-05-96	--	21	<.1	10	<10	--	<1.0	2,400	<6	<3.0
Spring Creek near Hermosa	09-09-96	--	21	<.1	<10	<10	--	2.0	1,400	<6	<3.0
Battle Creek	09-06-96	--	8.0	--	--	--	1	--	--	--	--
Grace Coolidge Creek	09-10-96	--	2.0	--	--	--	<1	--	--	--	--
Fall River at Hot Springs	[3]09-04-59	--	--	--	--	--	--	--	--	--	--
	06-09-60	0	--	--	--	--	--	--	--	--	--
	06-14-61	--	--	--	--	--	--	--	--	--	--
	09-11-96	--	2.0	--	--	--	3	--	--	--	--
	[4]09-11-96	--	1.0	--	--	--	<1	--	--	--	--
Cascade Spring	11-01-57	0	--	--	--	--	--	--	--	--	--
	07-19-73	<10	--	--	--	--	--	--	6,200	--	--
	10-12-94	--	--	--	--	--	--	--	--	--	--
	10-19-95	--	--	--	--	--	--	--	--	--	--
	09-12-96	--	--	--	--	--	--	--	--	--	--
Cool Spring	09-12-96	--	1.0	--	--	--	3	--	--	--	--

[1]One tritium unit equals 3.24 PC/L.

[2]Percent difference between anions and cations (in milliequivalents per liter) exceeds 5 percent; data should be used with caution.

[3]Percent difference between anions and cations (in milliequivalents per liter) exceeds 10 percent; data should be used with extreme caution.

[4]Field blank collected for quality assurance.

C-13/ C-12 STABLE ISOTOPE RATIO PER MIL (82081)	H-2/ H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18/ O-16 STABLE ISOTOPE RATIO PER MIL (82085)	S-34/ S-32 STABLE ISOTOPE RATIO PER MIL (82086)	SULFUR -34/-32 WATER FLTRD PER MIL (49932)	RA-288/ RA-226 ACTIV- ITY RATIO (99911)	RA-228/ RA-226 1 SIGMA (99912)	RA-226 RADON EMAN- ATION (DPM/L) (99913)	RA-226 1 SIGMA (99914)	RA-228 ARITH- METIC (DPM/L) (99915)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	TRITIUM TOTAL (PCI/L) (07000)	TRITIUM 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	TRITIUM TOTAL (TRI- TIUM UNITS[1])
-11.40	-126.0	-16.47	10.30	--	1.277	0.060	0.280	0.010	0.358	--	--	100	6.0	31
--	-121.6	-16.25	--	--	--	--	--	--	--	--	--	90	5.1	28
-9.60	-128.0	-16.71	12.60	--	.869	.042	.150	.020	.130	--	--	83	5.0	26
--	--	--	--	--	--	--	--	--	--	--	--	43	2.6	13
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-8.70	-128.0	-16.67	--	12.50	--	--	--	--	--	2.8	0.2	61	4.0	19
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-8.70	-129.0	-16.95	12.70	--	.225	.013	.280	.010	.060	--	--	67	4.0	21
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-9.50	-106.0	-13.79	--	7.70	--	--	--	--	--	3.8	.1	96	6.0	30
-13.59	-96.8	-12.59	--	5.80	--	--	--	--	--	3.5	.1	59	4.0	18
-11.13	-85.9	-11.62	--	8.10	--	--	--	--	--	1.4	.1	65	4.0	20
-10.20	-88.5	-11.68	--	10.10	--	--	--	--	--	1.3	.0	55	3.0	17
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
-7.67	-119.0	-15.43	--	12.40	--	--	--	--	--	3.4	.2	8.0	1.0	2.5
--	--	--	--	--	--	--	--	--	--	<.01	.0	--	--	--
--	--	--	--	--	--	--	--	--	--	5.7	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	.284	.017	1.610	.170	.460	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	7.0	1.0	2.2
--	-119.0	-15.32	--	--	--	--	--	--	--	--	--	7.0	1.0	2.2
-7.01	-116.0	-15.23	--	12.50	--	--	--	--	--	3.4	.1	8.0	1.0	2.5

SELECTED REFERENCES

Bradford, W.L., 1981, Water levels in bedrock aquifers in South Dakota: U.S. Geological Survey Open-File Report 81-627, 152 p.

Busby, J.F., Lee, R.W., and Hanshaw, B.B., 1983, Major geochemical processes related to the hydrology of the Madison aquifer system and associated rocks in parts of Montana, South Dakota, and Wyoming: U.S. Geological Survey Water-Resources Investigations Report 83-4093, 171 p.

Busby, J.F., Plummer, L.N., Lee, R.W., and Hanshaw, B.B., 1991, Geochemical evolution of water in the Madison aquifer in parts of Montana, South Dakota, and Wyoming: U.S. Geological Survey Professional Paper 1273-F, 89 p.

DeWitt, Ed, Redden, J.A., Buscher, David., and Wilson, A.B., 1989, Geologic map of the Black Hills area, South Dakota and Wyoming: U.S. Geological Survey Map I-1910, scale 1:250,000, 1 sheet.

Driscoll, D.G., 1992, Plan of study for the Black Hills Hydrology Study, South Dakota: U.S. Geological Survey Open-File Report 92-84, 10 p.

———1994, Black Hills Hydrology Study: U.S. Geological Survey Open-File Report 94-344, 4 p.

Driscoll, D.G., and Bradford, W.L., 1994, Compilation of selected hydrologic data, through water year 1992, Black Hills Hydrology Study, western South Dakota: U.S. Geological Survey Open-File Report 94-319, 158 p.

Driscoll, D.G., Bradford, W.L., and Neitzert, K.M., 1996, Selected hydrologic data through water year 1994, Black Hills Hydrology Study, South Dakota: U.S. Geological Survey Open-File Report 96-399, 162 p.

Feldman, R.M., and Heimlich, R.A., 1980, The Black Hills: K/H Geology Field Guide Series, Kendall/Hunt Publishing Company, Kent State University, Kent, Ohio, 190 p.

Greene, E.A., 1993, Hydraulic properties of the Madison aquifer system in the western Rapid City area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 93-4008, 56 p.

Hortness, J.E., and Driscoll, D.G., 1998, Streamflow losses in the Black Hills of western South Dakota: U.S. Geological Survey Water-Resources Investigations Report 98-4116, 99 p.

Johnson, B.N., 1933, A climatological review of the Black Hills: The Black Hills Engineer, Rapid City, South Dakota School of Mines and Technology, 71 p.

Kyllonen, D.P., and Peter, K.D., 1987, Geohydrology and water quality of the Inyan Kara, Minnelusa, and Madison aquifers of the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming: U.S. Geological Survey Water-Resources Investigations Report 86-4158, 61 p.

Meyer, Michael, 1984, Evaluation of the groundwater resources of western South Dakota: Task 5: Water quality suitability by aquifer for drinking, irrigation, livestock watering and industrial use: Vol. 1: Text: Office of Water Quality, South Dakota Department of Water and Natural Resources, 179 p.

Peter, K.D., 1985, Availability and quality of water from the bedrock aquifers in the Rapid City area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 85-4022, 34 p.

Rahn, P.H., and Gries, J.P., 1973, Large springs in the Black Hills, South Dakota and Wyoming: South Dakota Geological Survey Report of Investigations 107, 46 p.

Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., and Fahrenbach, M.D., 1999, Distribution of hydrogeologic units in the Black Hills area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-743, 3 sheets, scale 1:100,000.

U.S. Department of Commerce, 1998, Climatological data for South Dakota, annual summary: Asheville, North Carolina (issued annually).

U.S. Geological Survey, 1975, Mineral and water resources of South Dakota: U.S. 94th Congress, 1st Session, Interior and Insular Affairs Committee Print, 313 p.

———1991-99, Water resources data for South Dakota, water years 1990-98: U.S. Geological Survey Water Data Reports SD-90-1 to SD-98-1 (published annually).

Wenker, G.A., 1997, Geological setting and water quality of headwater springs in the Black Hills of South Dakota: Rapid City, South Dakota School of Mines and Technology, unpublished M.S. thesis, 101 p.

Whalen, P.J., 1994, Source aquifers for Cascade Springs, Hot Springs, and Beaver Creek Springs in the southern Black Hills of South Dakota: Rapid City, South Dakota School of Mines and Technology, unpublished M.S. thesis, 299 p.

Williamson, J.E., 1999, Water-quality characteristics during low-flow conditions for selected streams in Lawrence County, South Dakota: Rapid City, South Dakota School of Mines and Technology, unpublished M.S. thesis, 156 p.

Winter, D.R., 1994, Water levels through 1989 in bedrock aquifers in South Dakota: U.S. Geological Survey Open-File Report 94-320, 279 p.

SUPPLEMENTAL INFORMATION

Section A - Site descriptions, hydrographs, and tabulations of daily water-level records for observation wells and cave sites

SITE NUMBER FROM LOCATION MAP.—1.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—7N3E22DAAD (formerly 23CBCB).

SITE ID (STATION NUMBER).—443306103434001.

OTHER IDENTIFIER.—LA-90B and Saint Onge.

LOCATION.—Lat 44°33′10.8″, long 103°43′47.2″, in SE1/4NE1/4NE1/4SE1/4 sec. 22, T. 7 N., R. 3 E., Hydrologic Unit 10120203, 0.5 mi northwest of St. Onge. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Inyan Kara.

WELL CHARACTERISTICS.—Drilled observation well, 390 ft deep with 290 ft of 5-in. steel casing. Below 290 ft, 3-in. PVC casing, screened from 290 to 310 ft and from 370 to 390 ft.

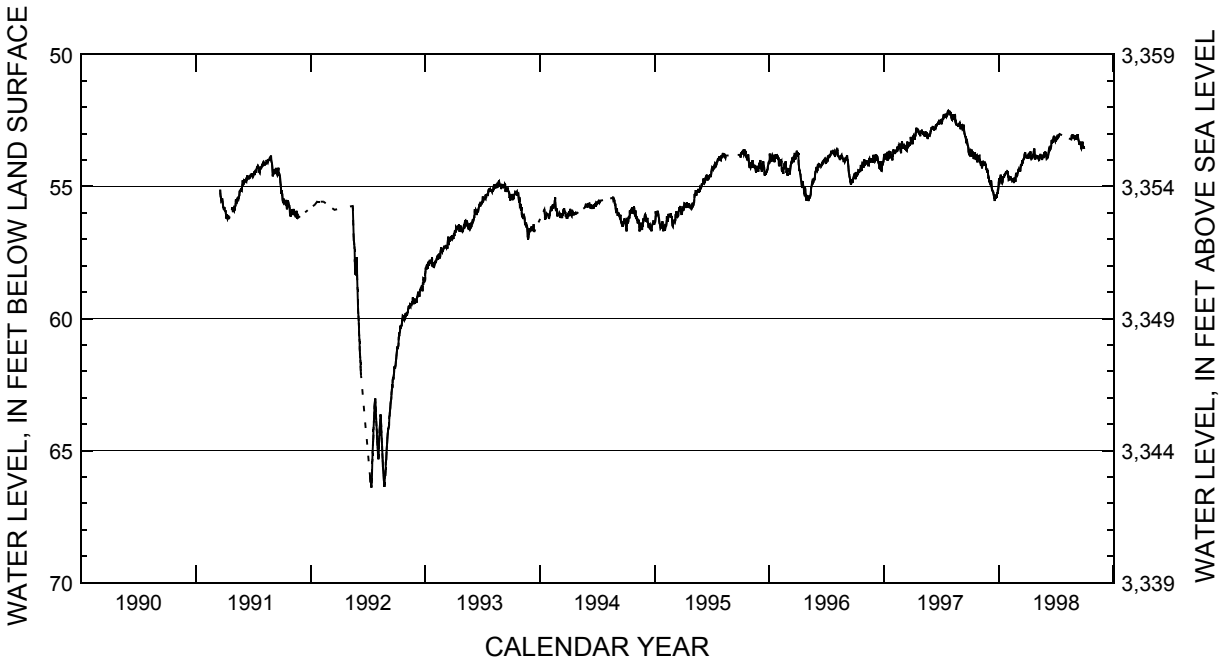
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,409.0 ft above sea level. Measuring point: Top of steel casing, 1.0 ft above land-surface datum.

REMARKS.—Records fair.

PERIOD OF RECORD.—March 1991 to September 1998.

EXTREMES.—Highest daily water level, 52.13 ft below land-surface datum, July 25, 1997; lowest daily water level, 66.40 ft below land-surface datum, July 13, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56.45	55.91	56.08	56.32	56.50	56.45	55.81	55.76	54.93	54.45	53.90	---
2	56.46	56.16	56.06	56.37	56.56	56.33	55.83	55.62	54.92	54.32	53.82	---
3	56.67	56.23	56.11	56.31	56.67	56.27	55.91	55.71	54.90	54.30	53.90	---
4	56.67	56.12	56.33	56.21	56.57	56.32	55.80	55.73	54.88	54.32	53.87	---
5	56.42	56.20	56.29	55.94	56.50	56.26	55.70	55.68	54.79	54.36	53.82	---
6	56.19	56.26	56.22	56.12	56.45	56.32	55.64	55.60	54.70	54.37	53.77	---
7	56.34	56.26	56.26	56.02	56.50	56.34	55.66	55.59	54.88	54.30	53.77	---
8	56.39	56.39	56.24	56.09	56.37	56.27	55.67	55.33	54.89	54.31	53.82	---
9	56.31	56.33	56.19	56.04	56.12	56.07	55.71	55.28	54.81	54.25	53.84	---
10	56.21	56.29	56.38	55.95	56.24	56.06	55.81	55.36	54.82	54.23	53.80	---
11	56.14	56.33	56.35	55.92	56.31	55.95	55.71	55.23	54.77	54.18	53.79	---
12	56.19	56.26	56.51	56.00	56.31	56.00	55.72	55.14	54.72	54.14	53.86	---
13	56.18	56.47	56.50	56.09	56.27	56.12	55.66	55.20	54.65	54.17	53.88	---
14	55.91	56.70	56.51	56.16	56.04	56.17	55.59	55.34	54.61	54.21	53.91	---
15	55.95	56.64	56.45	56.22	56.08	56.05	55.71	55.18	54.58	54.18	53.83	---
16	56.00	56.43	56.44	56.32	56.14	56.13	55.80	55.21	54.58	54.20	53.83	---
17	55.98	56.38	56.61	56.41	56.07	56.10	55.74	55.19	54.66	54.16	---	---
18	55.92	56.61	56.53	56.45	56.15	55.96	55.75	55.17	54.73	54.06	---	---
19	55.94	56.52	56.63	56.48	56.09	55.92	55.68	55.24	54.72	54.10	---	---
20	55.88	56.38	56.64	56.58	56.17	55.89	55.63	55.17	54.74	54.03	---	---
21	55.79	56.58	56.64	56.55	56.02	55.78	55.78	55.10	54.73	53.98	---	---
22	55.90	56.65	56.69	56.53	56.06	55.81	55.79	55.23	54.64	53.98	---	---
23	55.94	56.48	56.55	56.47	56.19	55.83	55.80	55.17	54.66	53.95	---	---
24	56.02	56.49	56.46	56.47	56.13	55.74	55.73	55.21	54.65	53.96	---	---
25	55.96	56.39	56.44	56.40	56.16	55.84	55.75	55.14	54.61	53.93	---	---
26	55.82	56.21	56.40	56.32	56.30	55.97	55.80	55.03	54.57	53.86	---	---
27	55.76	56.26	56.39	56.44	56.49	56.02	55.75	55.05	54.54	53.92	---	---
28	55.83	56.23	56.32	56.65	56.51	56.07	55.77	55.08	54.61	54.00	---	---
29	56.01	56.27	56.33	56.69	---	56.01	55.82	55.04	54.61	53.90	---	---
30	56.07	56.15	56.38	56.60	---	55.95	55.78	54.99	54.57	53.99	---	---
31	56.13	---	56.44	56.53	---	55.88	---	54.93	---	54.01	---	---
LOW	56.67	56.70	56.69	56.69	56.67	56.45	55.91	55.76	54.93	54.45	53.91	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.80	54.26	54.12	54.13	54.18	54.34	53.70	55.38	54.34	54.09	53.68	53.95
2	53.90	54.29	54.23	54.09	54.18	54.36	53.78	55.38	54.39	54.07	53.61	53.96
3	53.76	54.26	54.33	53.76	54.23	54.34	53.78	55.40	54.36	54.00	53.59	53.92
4	53.72	54.18	54.01	54.07	54.12	54.34	54.09	55.51	54.18	53.97	53.63	53.86
5	53.79	54.07	54.29	54.03	54.13	54.34	54.30	55.55	54.17	53.92	53.62	53.81
6	53.70	54.12	54.28	54.03	54.04	54.41	54.40	55.49	54.23	53.96	53.73	53.97
7	53.66	54.28	54.14	53.89	53.98	54.54	54.37	55.38	54.24	53.90	53.84	54.00
8	53.70	54.10	54.44	53.82	54.06	54.39	54.48	55.39	54.17	53.91	53.87	54.10
9	53.73	54.00	54.34	53.87	54.03	54.23	54.54	55.45	54.17	53.90	53.86	54.23
10	53.67	54.25	54.34	53.81	54.38	54.17	54.55	55.42	54.22	53.80	53.86	54.39
11	53.65	54.15	54.22	53.83	54.45	54.11	54.76	55.37	54.15	53.84	53.90	54.52
12	53.59	54.19	54.18	53.82	54.39	54.04	54.79	55.29	54.26	53.85	53.91	54.56
13	53.80	54.30	54.05	53.80	54.33	54.03	54.86	55.17	54.20	53.82	53.99	54.62
14	53.77	54.25	54.19	54.05	54.40	54.04	55.03	55.01	54.16	53.81	53.98	54.70
15	53.75	54.27	54.23	53.90	54.52	53.90	55.05	55.00	54.21	53.77	53.94	54.81
16	53.61	54.25	54.30	53.84	54.27	53.96	54.94	54.90	54.19	53.69	53.91	54.81
17	53.75	54.31	54.54	54.05	54.34	53.93	54.81	54.86	54.14	53.65	53.85	54.93
18	53.66	54.21	54.58	54.07	54.17	54.04	54.93	54.79	54.08	53.72	53.82	54.89
19	53.89	54.35	54.52	53.95	54.10	54.08	55.03	54.82	54.12	53.71	53.94	54.85
20	53.87	54.48	54.49	53.91	54.20	53.91	55.09	54.85	54.03	53.71	53.84	54.80
21	53.83	54.30	54.56	53.79	54.22	53.92	55.22	54.82	54.07	53.71	53.90	54.75
22	53.97	54.37	54.53	53.94	54.05	53.77	55.27	54.72	54.02	53.73	53.93	54.74
23	54.01	54.38	54.44	53.82	54.25	53.77	55.22	54.73	54.01	53.69	53.96	54.85
24	53.95	54.28	54.44	53.78	54.29	53.97	55.03	54.74	54.00	53.71	53.96	54.74
25	53.93	54.22	54.38	53.85	54.48	53.92	55.11	54.70	53.97	53.68	54.04	54.69
26	53.79	54.28	54.37	53.83	54.43	53.78	55.27	54.55	53.98	53.72	54.04	54.61
27	53.94	54.44	54.33	53.88	54.53	53.82	55.34	54.45	53.95	53.79	53.98	54.61
28	54.05	54.26	54.22	53.87	54.59	53.74	55.53	54.43	53.96	53.85	54.00	54.57
29	54.20	54.23	54.16	53.98	54.36	53.65	55.46	54.39	54.11	53.85	54.06	54.59
30	54.18	54.14	54.08	53.95	---	53.71	55.37	54.29	54.10	53.79	54.01	54.52
31	54.17	---	54.07	53.94	---	53.76	---	54.26	---	53.74	53.94	---
LOW	54.20	54.48	54.58	54.13	54.59	54.54	55.53	55.55	54.39	54.09	54.06	54.93

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.49	54.15	53.87	53.82	53.66	53.46	53.27	52.85	52.76	52.44	52.21	52.80
2	54.72	54.15	53.95	53.82	53.69	53.42	53.40	52.95	52.79	52.61	52.29	52.83
3	54.56	54.04	54.03	53.77	53.65	53.43	53.15	53.00	52.83	52.61	52.39	52.74
4	54.50	54.05	54.02	53.85	53.75	53.57	53.08	52.92	52.78	52.56	52.46	52.69
5	54.45	54.04	53.79	53.95	53.70	53.55	53.06	53.04	52.71	52.53	52.46	52.68
6	54.61	54.05	53.83	53.97	53.64	53.53	53.11	52.94	52.77	52.44	52.47	52.67
7	54.57	54.02	53.99	53.79	53.67	53.46	53.17	52.96	52.76	52.43	52.40	52.72
8	54.51	54.13	53.99	53.77	53.64	53.48	53.23	53.09	52.78	52.43	52.26	52.82
9	54.57	54.15	53.87	53.82	53.62	53.60	53.10	53.04	52.85	52.34	52.40	52.80
10	54.45	54.13	53.86	53.91	53.67	53.52	53.09	52.99	52.84	52.28	52.46	52.72
11	54.39	54.22	53.89	53.96	53.63	53.51	53.07	53.11	52.76	52.33	52.39	52.66
12	54.41	54.18	53.97	54.02	53.49	53.56	52.98	53.01	52.78	52.31	52.42	52.74
13	54.45	54.19	54.05	53.91	53.55	53.63	52.86	52.92	52.79	52.33	52.37	52.92
14	54.43	53.96	54.12	53.71	53.59	53.65	52.78	53.00	52.72	52.35	52.26	53.00
15	54.40	53.95	54.15	53.70	53.56	53.54	52.92	52.99	52.68	52.32	52.29	53.04
16	54.42	54.08	54.15	53.96	53.55	53.30	52.91	52.99	52.67	52.28	52.52	53.09
17	54.45	54.07	54.31	53.94	53.40	53.42	52.85	52.98	52.70	52.27	52.59	53.12
18	54.29	54.05	54.32	53.84	53.49	53.55	52.86	53.15	52.68	52.30	52.57	53.10
19	54.18	53.99	54.19	53.85	53.44	53.41	52.85	53.17	52.63	52.34	52.60	53.31
20	54.28	53.94	54.04	53.76	53.48	53.32	52.92	53.17	52.63	52.31	52.66	53.36
21	54.40	54.04	54.21	53.67	53.55	53.43	52.94	53.10	52.60	52.25	52.66	53.32
22	54.29	53.95	54.30	53.87	53.58	53.43	53.01	53.11	52.57	52.20	52.68	53.29
23	54.25	54.07	54.40	53.77	53.70	53.36	52.99	53.10	52.61	52.15	52.69	53.39
24	54.10	54.05	54.41	53.91	53.74	53.43	53.02	53.04	52.62	52.14	52.65	53.43
25	54.11	54.06	54.28	53.95	53.45	53.42	53.04	53.01	52.65	52.13	52.72	53.48
26	54.15	54.10	54.17	53.81	53.48	53.34	53.09	53.01	52.56	52.15	52.67	53.54
27	54.29	53.98	54.05	54.01	53.28	53.12	52.95	53.04	52.50	52.22	52.66	53.67
28	54.12	53.80	54.09	53.82	53.39	53.30	52.91	53.00	52.54	52.27	52.63	53.76
29	53.98	53.86	54.10	53.86	---	53.39	52.91	52.90	52.54	52.26	52.60	53.78
30	54.22	53.93	54.03	53.63	---	53.32	52.91	52.90	52.55	52.20	52.65	53.80
31	54.18	---	53.89	53.60	---	53.18	---	52.83	---	52.19	52.64	---
LOW	54.72	54.22	54.41	54.02	53.75	53.65	53.40	53.17	52.85	52.61	52.72	53.80

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.73	54.00	54.71	54.86	54.62	54.57	53.86	53.87	53.76	53.24	---	53.19
2	53.58	54.11	54.84	54.69	54.75	54.51	53.89	53.92	53.91	53.20	---	53.06
3	53.64	54.06	54.78	54.92	54.73	54.45	53.95	53.83	53.90	53.22	---	53.09
4	53.73	54.07	54.89	54.72	54.68	54.39	53.83	53.89	53.85	53.16	---	53.12
5	53.82	54.20	54.92	54.69	54.71	54.40	53.79	53.83	53.88	53.13	---	53.16
6	53.86	54.12	54.86	54.68	54.69	54.34	53.80	53.90	53.89	53.16	---	53.23
7	53.61	54.04	54.80	54.56	54.62	54.36	53.86	53.93	53.86	53.18	---	53.17
8	53.67	54.23	54.80	54.60	54.66	54.37	53.92	53.98	53.74	53.15	---	53.07
9	53.77	54.31	54.94	54.72	54.74	54.44	53.83	54.01	53.70	53.12	---	53.02
10	53.77	54.19	55.10	54.81	54.75	54.39	53.86	53.99	53.56	53.08	---	53.05
11	53.68	54.22	55.15	54.85	54.71	54.39	53.74	53.93	53.55	53.02	---	53.21
12	53.85	54.03	55.15	54.87	54.72	54.19	53.67	53.87	53.59	53.07	---	53.25
13	53.92	54.07	55.19	54.82	54.76	54.18	53.86	53.80	53.55	53.04	---	53.29
14	53.92	54.20	55.20	54.76	54.75	54.20	53.89	53.80	53.61	53.01	---	53.39
15	53.96	54.18	55.23	54.65	54.73	54.18	53.92	53.84	53.58	---	---	53.42
16	53.84	54.12	55.34	54.65	54.80	54.09	53.90	53.92	53.48	---	---	53.38
17	53.74	54.10	55.31	54.61	54.82	54.01	53.87	53.86	53.51	---	---	53.35
18	53.74	54.15	55.36	54.66	54.84	54.10	53.84	53.93	53.28	---	---	53.30
19	53.90	54.14	55.55	54.56	54.83	54.08	53.88	53.99	53.23	---	---	53.39
20	53.99	54.17	55.41	54.53	54.80	53.98	53.85	53.91	53.27	---	53.22	53.55
21	53.96	54.18	55.32	54.59	54.70	53.97	53.85	53.83	53.33	---	53.07	53.56
22	53.84	54.35	55.46	54.49	54.69	53.94	53.73	53.82	53.32	---	53.06	53.52
23	53.82	54.35	55.32	54.53	54.82	53.93	53.67	53.84	53.21	---	53.07	53.44
24	53.98	54.38	55.41	54.43	54.68	53.78	53.56	53.92	53.15	---	53.11	53.35
25	54.08	54.37	55.40	54.48	54.49	53.74	53.71	53.84	53.12	---	53.09	53.30
26	53.92	54.47	55.42	54.49	54.52	53.70	53.92	53.73	53.11	---	53.04	53.44
27	53.85	54.39	55.23	54.46	54.56	53.80	53.98	53.72	53.12	---	53.10	53.54
28	53.94	54.58	55.29	54.49	54.59	53.85	53.95	53.79	53.22	---	53.15	53.49
29	53.85	54.69	55.14	54.44	---	53.89	53.84	53.77	53.25	---	53.16	53.48
30	53.84	54.67	55.15	54.45	---	53.89	53.84	53.69	53.29	---	53.12	53.58
31	53.83	---	54.98	54.62	---	53.87	---	53.87	---	---	53.20	---
LOW	54.08	54.69	55.55	54.92	54.84	54.57	53.98	54.01	53.91	53.24	53.22	53.58

SITE NUMBER FROM LOCATION MAP.—2.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—7N2E10BADC.

SITE ID (STATION NUMBER).—443515103513901.

OTHER IDENTIFIERS.—LA-62A and Redwater.

LOCATION.—Lat 44°35′13.1″, long 103°51′43.4″, in SW1/4SE1/4NE1/4NW1/4 sec. 10, T. 7 N., R. 2 E., Hydrologic Unit 10120203, 6 mi north of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 1,306 ft deep with 1,266 ft of 2-in. steel casing, perforated from 1,226 to 1,266 ft; open hole from 1,266 to 1,306 ft.

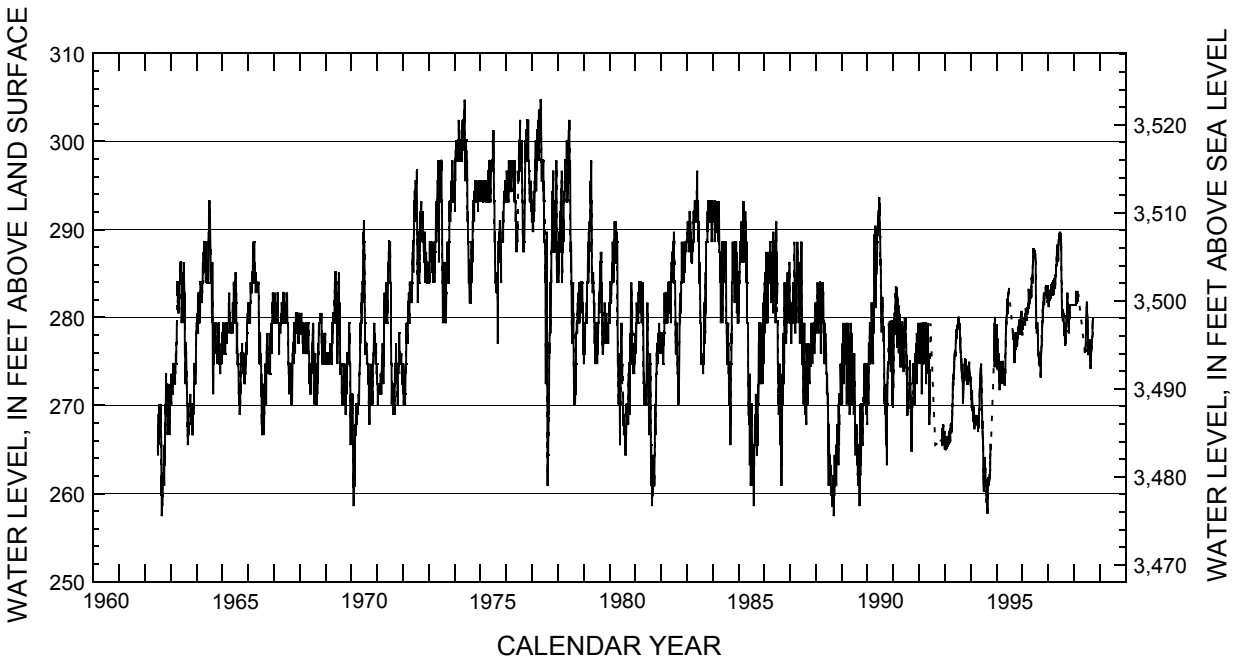
INSTRUMENTATION.—Electronic data logger with pressure transducer. Prior to November 1990, circular-chart pressure recorder.

DATUM.—Elevation of land-surface datum is 3,218.1 ft above sea level. Measuring point: Base of gage, 2.5 ft above land-surface datum.

REMARKS.—Records fair. Water level affected by pumping of nearby wells. Note: Data not corrected for antifreeze density difference.

PERIOD OF RECORD.—June 1962 to September 1998.

EXTREMES.—Highest daily water level, 304.72 ft above land-surface datum, May 24, 1974, Apr. 30, 1977, and May 3, 1977; lowest daily water level, 256.27 ft above land-surface datum, Aug. 30, 1962, Sept. 3, 1962, July 30, 1985, and Sept. 20, 1988.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+261.46	---	+275.72	+274.68	+275.88	+273.30	+275.19	+273.46	+281.25	---	---	+277.79
2	+261.65	---	+275.03	+277.61	+274.33	+273.99	+274.50	+273.99	+281.07	---	---	+277.79
3	+261.99	---	+275.03	+274.68	+274.33	+274.15	+273.64	+273.99	+281.25	---	---	+277.96
4	+262.50	---	+278.65	+274.68	+273.99	+274.68	+273.64	+274.15	+281.60	---	---	+277.79
5	+263.72	---	+279.34	+275.03	+274.84	+272.77	+275.03	+274.15	+282.11	---	---	+277.45
6	+263.38	---	+279.52	+279.18	+274.84	+273.30	+275.03	+273.64	+282.11	---	---	+276.23
7	+264.07	---	+274.33	+275.37	+273.99	+273.64	+275.03	+274.68	+281.42	---	---	+275.53
8	+264.23	---	+275.03	+274.50	+273.30	+273.99	+273.46	+273.80	+280.72	---	---	+275.53
9	+265.11	---	+275.03	+275.53	+273.99	+275.03	+273.30	+274.33	+280.38	---	---	+275.19
10	+265.61	---	+274.84	+275.88	+272.07	+274.50	+272.42	+275.72	+281.07	---	---	+275.53
11	+265.80	---	+280.03	+275.19	+272.60	+274.84	+272.77	+276.23	+281.95	---	---	+275.72
12	+264.92	---	+275.03	+275.72	+272.26	+274.33	+273.99	+276.92	+282.29	---	---	+275.37
13	---	---	+274.84	+275.37	+274.68	+274.50	+274.15	+276.06	+282.45	---	---	+274.84
14	---	---	+276.92	+274.15	+275.53	+275.03	+273.46	+277.10	+282.64	---	---	+274.68
15	---	---	+274.84	+275.03	+271.73	+274.33	+273.80	+277.96	+282.45	---	---	+275.72
16	---	---	+275.19	+277.61	+272.26	+273.46	+273.30	+278.30	+282.45	---	---	+275.03
17	---	---	+275.37	+278.14	+272.95	+272.77	+272.77	+278.30	+282.45	---	+278.65	+275.03
18	---	---	+275.88	+274.84	+272.42	+274.84	+272.60	+278.99	+282.64	---	+278.49	+275.37
19	---	---	+274.68	+274.68	+273.30	+274.50	+273.46	+278.99	+282.80	---	+278.30	+274.84
20	---	---	+275.37	+273.99	+273.11	+275.03	+273.30	+279.52	+282.80	---	+278.49	+275.37
21	---	---	+275.19	+274.68	+274.15	+274.84	+272.77	+279.87	+282.64	---	+278.30	+275.72
22	---	---	+275.88	+274.84	+273.80	+274.33	+273.99	+279.18	+282.80	---	+278.14	+276.41
23	---	---	+276.06	+275.37	+273.99	+275.03	+273.46	+280.03	+282.80	---	+278.14	+276.92
24	---	---	+275.19	+275.37	+274.33	+274.33	+273.64	+279.69	+282.64	---	+278.30	+276.92
25	---	---	+276.23	+275.19	+274.33	+274.50	+273.30	+279.69	+282.99	---	+278.14	+277.45
26	---	---	+275.88	+275.72	+273.46	+272.95	+273.11	+280.03	+283.33	---	+277.96	+277.45
27	---	---	+275.72	+274.84	+272.42	+273.46	+273.99	+279.52	+283.33	---	+277.96	+277.96
28	---	---	+275.03	+274.68	+272.77	+273.64	+273.11	+280.38	+282.80	---	+277.96	+277.79
29	---	---	+274.68	+274.84	---	+273.30	+272.42	+280.72	+282.99	---	+277.96	+278.30
30	---	+275.53	+274.33	+275.53	---	+273.80	+272.26	+280.91	+283.15	---	+277.45	+278.14
31	---	---	+275.03	+275.19	---	+274.50	---	+280.91	---	---	+277.61	---
LOW	+261.46	+275.53	+274.33	+273.99	+271.73	+272.77	+272.26	+273.46	+280.38	---	+277.45	+274.68

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+276.34	+277.56	+279.92	+277.96	---	+279.64	+281.14	+283.33	+286.21	+287.07	+279.22	+274.91
2	+276.18	+277.91	+278.37	+278.49	+279.99	+279.80	+281.14	+283.15	+286.21	+287.41	+279.41	+274.56
3	+276.53	+278.42	+278.53	+278.30	+280.15	+280.15	+280.95	+282.64	+286.21	+287.25	+279.41	+274.91
4	+276.53	+278.76	+279.41	---	+279.64	---	+280.95	+282.29	+286.91	+287.07	+279.06	+275.26
5	+276.69	+278.60	+278.37	---	+280.15	+279.64	+281.49	+283.49	+287.07	+287.07	+279.06	+275.26
6	+276.69	+278.76	+278.72	---	+279.80	+280.33	+281.49	+283.49	+286.03	+286.91	+278.72	+274.91
7	+276.69	+278.42	+278.88	+279.52	+280.15	---	+281.83	+283.15	+286.91	+286.72	+278.88	+274.38
8	+277.03	+278.37	---	+278.99	+279.80	+279.80	+281.99	+283.15	+287.41	+286.72	+278.19	+274.91
9	+277.22	+279.06	+279.76	+279.18	+280.15	+280.79	+281.83	+282.29	+287.60	+286.21	+277.84	+274.91
10	+277.03	+278.03	+280.10	+278.83	+279.11	+281.14	+282.52	+282.29	+287.60	+285.45	+277.49	+275.07
11	+277.73	e+278.00	+279.06	+278.65	+279.80	+281.14	+281.30	+282.80	+287.76	+284.60	+277.49	+274.73
12	+277.73	+278.72	+278.72	+279.34	+279.80	+280.79	+281.49	+283.33	+287.60	+283.38	+277.15	+274.91
13	+276.87	+278.88	+279.22	+279.34	+279.80	+280.26	+281.65	+283.68	+287.76	+282.18	+276.29	+275.07
14	+277.22	+279.06	+278.72	+278.83	+279.64	+280.95	+281.83	+284.53	+287.95	+281.83	+276.11	+275.42
15	+277.91	+279.57	+278.72	+279.34	+279.11	+281.14	+281.99	+284.53	+287.76	+281.49	+275.60	+274.91
16	+277.38	+278.03	+280.10	+279.69	+280.33	+280.45	+281.99	+284.37	+287.60	+280.95	+275.60	+273.69
17	+277.73	+279.06	+278.19	---	+279.99	+280.61	+282.87	+284.18	+287.76	+280.45	+275.76	+273.53
18	+277.38	+278.72	+278.03	---	+280.49	+280.10	+282.69	+284.72	+287.76	+279.41	+276.11	+273.00
19	+276.69	+279.06	+279.52	---	+280.49	+280.61	+282.11	+284.18	+287.07	+279.22	+275.76	+273.18
20	+277.03	+278.53	+278.14	---	+279.99	+280.95	+282.11	+284.37	+287.41	+278.72	+275.95	+272.83
21	+276.69	+278.88	+277.96	---	+280.33	+281.14	+281.95	+284.53	+287.60	+278.72	+275.95	+273.53
22	+276.53	+278.72	+280.72	---	+281.02	+280.61	+282.29	+284.53	+287.25	+279.06	+275.76	+273.00
23	+276.87	+279.22	+278.30	---	+279.99	+280.79	+282.64	+284.02	+287.25	+278.88	+275.42	+275.76
24	+277.03	+279.76	e+279.00	---	+280.15	---	+282.80	+283.84	+287.41	+278.72	+275.26	+275.42
25	+277.73	+279.22	+278.83	---	+280.84	+281.65	+282.99	+283.84	+287.60	+278.37	+274.91	+275.60
26	+277.73	+278.88	+279.18	---	---	+281.65	+282.29	+284.18	+287.41	+278.19	+274.56	+275.95
27	+278.07	e+279.10	+278.83	---	---	+281.14	+282.45	+284.18	+287.41	+278.19	+274.73	+275.95
28	+278.26	e+279.00	+278.83	---	---	---	+282.11	+284.72	+287.41	+278.19	+274.73	+277.15
29	+277.56	+278.88	+279.34	---	+279.46	---	+282.80	+285.57	+286.72	+278.72	+274.38	+276.64
30	+277.73	+279.41	+278.65	---	---	+281.49	+282.99	+285.87	+287.25	+279.06	+275.26	+277.33
31	+278.26	---	+278.14	---	---	+283.22	---	+286.21	---	+279.22	+275.26	---
LOW	+276.18	+277.56	+277.96	+277.96	+279.11	+279.64	+280.95	+282.29	+286.03	+278.19	+274.38	+272.83

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+276.80	+281.42	+283.26	+282.57	+282.11	+283.72	+283.72	+286.03	+288.57	+289.26	+280.26	+276.80
2	+276.80	+282.34	+282.80	+282.57	+282.80	+283.95	+283.49	+285.80	+288.80	+288.34	+280.49	+276.80
3	+276.80	+282.80	+283.26	+282.11	+281.88	+283.03	+284.42	+286.72	+288.80	+288.80	+280.72	+277.03
4	+277.49	+282.80	+283.49	+281.88	+282.11	+283.72	+284.18	+287.18	+288.80	+288.80	+280.49	+277.26
5	+277.96	+282.11	---	+281.65	+282.57	+283.72	+283.26	+286.95	+289.03	+288.34	+280.49	+277.49
6	+277.26	+282.57	+283.49	+282.11	+282.57	+283.49	+283.26	+287.41	+288.80	+288.11	+280.49	+277.49
7	+277.49	+282.11	+282.57	+282.80	+281.88	+283.95	+283.72	+287.65	+289.26	+288.34	+280.26	+277.26
8	+277.73	+281.88	+283.26	+282.11	+282.57	+283.95	+286.03	+287.18	+289.49	+287.88	+281.19	+277.03
9	+277.26	+282.11	+283.26	+281.65	+282.57	+283.26	+283.26	+288.11	+289.49	+286.49	+280.49	+277.03
10	+277.73	+281.42	+282.57	+282.57	+282.57	+283.26	+283.95	+288.11	+289.03	+285.57	+279.80	+277.73
11	+278.88	+281.42	+282.57	+281.19	---	+283.72	+283.49	+287.18	+289.26	+284.65	+280.26	+278.19
12	+279.57	---	+283.26	+280.72	+283.03	+282.57	+283.26	+287.65	+289.49	+283.95	+279.57	+278.42
13	+279.57	---	+283.03	+282.57	+282.80	+283.26	+283.72	+288.11	+289.03	+283.26	+279.11	+278.42
14	+279.57	+282.57	+282.11	+281.88	+283.26	+282.80	+284.18	+288.34	+289.49	+283.03	+279.11	+278.42
15	+279.57	+282.11	+282.80	---	+282.57	+283.03	+283.95	+288.11	+289.03	+282.34	+278.65	+278.88
16	+279.57	---	+282.34	+281.42	+283.72	+284.18	+283.95	+288.34	+289.49	+281.65	+277.73	+279.11
17	+279.34	+283.03	+282.11	+282.11	+283.95	+282.57	+284.65	+288.34	+289.49	+281.19	+277.96	+279.34
18	+280.26	+282.57	+282.11	+282.34	+283.26	+283.03	+284.65	+286.72	+289.72	+280.72	+278.42	+280.26
19	+280.95	---	---	+282.80	+283.49	+283.95	+284.88	+286.72	+289.26	+280.49	+278.42	+279.57
20	+279.80	---	+282.80	+282.80	+283.49	+284.18	+284.88	+286.72	+289.26	+280.03	+277.73	+279.80
21	+279.80	---	+282.34	+282.57	+283.26	+283.03	+284.65	+286.72	+289.49	+280.03	+277.96	+280.03
22	+280.95	---	+281.65	+282.11	+282.57	+283.72	+284.42	+286.72	+289.49	+280.26	+277.73	+280.26
23	+281.42	---	---	+282.11	+283.26	+283.26	+285.34	+286.95	+289.49	+280.72	+277.96	+280.49
24	+280.72	+282.57	+281.88	+281.65	+283.26	+282.57	+284.88	+286.72	+289.03	+280.95	+277.73	+281.19
25	+280.95	+282.80	+281.88	+281.88	+283.95	+283.26	+285.57	+286.49	+289.03	+280.72	+277.73	+281.42
26	+280.72	---	+283.49	+282.34	+282.57	+284.42	+284.88	+286.26	+289.49	+280.49	+277.73	+281.19
27	+281.65	+283.26	+281.88	+282.11	---	+284.65	+286.03	+286.49	+289.49	+280.03	+277.73	+281.19
28	+282.57	+283.49	+283.49	+283.49	+282.57	+283.95	+286.03	+286.72	+289.49	+279.80	+277.73	+281.88
29	+281.65	+282.57	+283.03	+283.03	---	+283.03	+285.80	+288.11	+289.49	+279.57	+277.49	+282.11
30	+281.65	+282.57	+282.57	+282.80	---	+284.18	+286.03	+288.34	+289.03	+279.57	+277.03	+282.34
31	+281.88	---	+282.80	+283.03	---	+284.42	---	+288.80	---	+279.80	+277.26	---
LOW	+276.80	+281.42	+281.65	+280.72	+281.88	+282.57	+283.26	+285.80	+288.57	+279.57	+277.03	+276.80

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+282.57	+280.03	---	---	+282.80	+282.64	---	---	---	+281.14	+276.18	+275.65
2	+282.80	+279.34	---	---	+281.25	+282.45	---	---	---	+281.25	+276.18	+276.18
3	+281.88	+280.49	---	---	+281.60	+282.29	---	---	+276.29	+281.25	+276.34	+276.18
4	+281.42	+280.26	---	---	+281.25	---	---	---	+275.72	+281.42	+276.53	+276.34
5	+280.95	+279.80	---	---	+281.60	+282.64	---	---	+276.06	+281.76	+277.03	+276.34
6	+280.72	+281.42	---	---	+282.45	+282.80	---	---	+276.06	+281.72	+277.38	+275.99
7	+280.72	+281.42	---	---	+282.99	---	---	---	+276.06	+281.37	+277.38	+276.53
8	+280.26	---	---	---	+282.45	---	---	---	+275.65	+280.84	+277.33	+276.69
9	+280.26	---	---	---	+281.60	---	---	---	+275.99	+280.49	+277.49	+276.80
10	+280.95	---	---	---	+282.45	---	---	---	+276.18	+280.33	+277.49	+276.80
11	+280.95	---	---	---	+282.64	---	---	---	+276.18	+280.10	+277.33	+276.46
12	+279.34	---	---	---	+281.95	---	---	---	+276.53	+279.76	+277.33	+276.80
13	+279.34	---	---	---	+281.76	---	---	---	+276.11	+279.57	+276.99	+277.33
14	+280.26	---	---	---	+281.76	---	---	---	+276.11	+279.92	+277.15	+277.49
15	+280.03	---	---	---	+281.95	---	---	---	+276.29	+279.41	+277.15	+277.49
16	+280.03	---	---	---	+281.76	---	---	---	+276.80	+279.06	+276.99	+277.49
17	+280.26	---	---	---	+281.76	---	---	---	+276.11	+278.83	+276.46	+277.68
18	+280.49	---	---	---	+281.42	---	---	---	+275.72	+278.49	+276.11	+277.84
19	+279.34	---	---	---	+282.99	---	---	---	+276.92	+278.30	+275.72	+277.84
20	+278.88	---	---	---	+282.80	---	---	---	+277.61	+277.79	+275.19	+277.26
21	+279.34	---	---	---	+282.64	---	---	---	+278.30	+277.45	+275.53	+277.96
22	+279.57	---	---	---	+283.15	---	---	---	+278.60	+276.76	+275.19	+278.30
23	+279.57	---	---	---	+281.95	---	---	---	+278.42	+275.72	+275.03	+278.99
24	+278.19	---	---	---	+282.11	---	---	---	+278.76	+276.41	+274.50	+279.18
25	+277.49	---	---	---	+281.95	---	---	---	+279.64	+276.41	+274.50	+279.34
26	+279.80	---	---	---	+282.29	---	---	---	+280.15	+276.92	+274.15	+279.34
27	+280.03	---	---	---	+281.76	---	---	---	+280.10	+276.76	+273.80	+279.69
28	+280.72	---	---	+281.42	+282.29	---	---	---	+280.61	+276.18	+274.50	+279.87
29	+280.95	---	---	+282.64	---	---	---	---	+280.61	+275.83	+275.19	+279.87
30	+280.26	---	---	+282.64	---	---	---	---	+280.79	+275.99	+275.14	+278.99
31	+280.95	---	---	+281.60	---	---	---	---	---	+275.83	+275.30	---
LOW	+277.49	+279.34	---	+281.42	+281.25	+282.29	---	---	+275.65	+275.72	+273.80	+275.65

SITE NUMBER FROM LOCATION MAP.—3.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—7N1E33CCDD3.

SITE ID (STATION NUMBER).—443100104002003.

OTHER IDENTIFIER.—LA-94A and State Line Mnkt.

LOCATION.—Lat 44°31′04.2″, long 104°00′25.3″, in SE1/4SE1/4SW1/4SW1/4 sec. 33, T. 7 N., R. 1 E., Hydrologic Unit 10120203, 7 mi west of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnekahta.

WELL CHARACTERISTICS.—Drilled observation well, 333 ft deep with 298 ft of 5-in. steel casing; open hole from 298 to 333 ft.

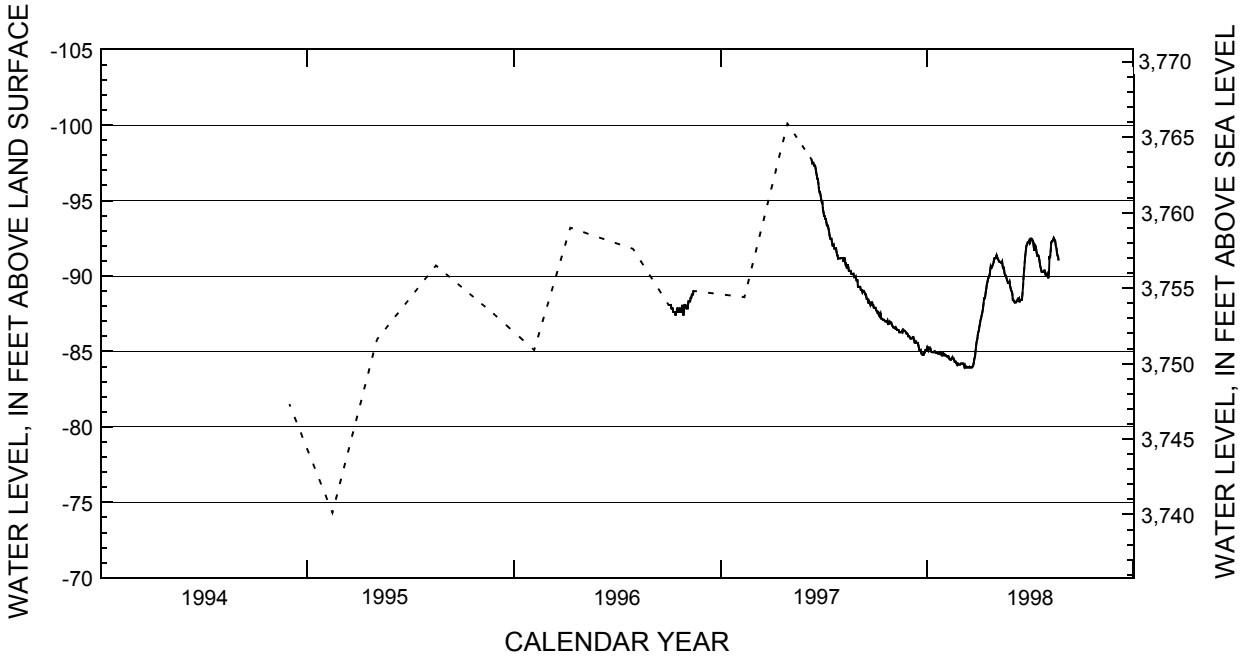
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,665.8 ft above sea level. Measuring point: Base of gage, 2.65 ft above land-surface datum.

REMARKS.— Records poor.

PERIOD OF RECORD.—November 1994 to September 1998.

EXTREMES.—Highest daily water level, 100.1 ft above land-surface datum, Apr. 29, 1997; lowest daily water level, 74.3 ft above land-surface datum, Feb. 14, 1995.



SITE NUMBER 3—Continued

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	e+85.8	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	e+74.3	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	e+90.7	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	e+81.5	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+81.50	---	---	+74.30	---	---	+85.80	---	---	+90.70	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	e+85.1	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	e+93.2	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	e+87.4	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e+91.8	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+87.40	---	---	+85.10	---	+93.20	---	---	+91.80	---	---

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+88.08	+88.08	---	---	---	---	---	---	---	+94.42	+91.17	+89.28
2	+88.08	+87.85	---	---	---	---	---	---	---	+94.21	+91.19	+89.28
3	+88.08	+87.85	---	---	---	---	---	---	---	+93.98	+91.19	+89.28
4	+88.08	+87.85	---	---	---	---	---	---	---	+93.98	+91.19	+89.28
5	+88.08	+88.31	---	---	---	---	---	---	---	+93.78	+91.19	+89.28
6	+87.85	+88.31	---	---	---	---	---	---	---	+93.78	+90.99	+89.07
7	+87.85	+88.31	---	---	---	---	---	---	---	+93.55	+90.99	+89.07
8	+87.85	+88.31	---	---	---	---	---	---	---	+93.34	+91.22	+89.07
9	+87.62	+88.54	---	---	---	---	---	---	---	+93.34	+90.99	+88.93
10	+87.62	+88.54	---	---	---	---	---	---	---	+93.34	+90.75	+89.02
11	+87.62	+88.77	---	---	---	---	---	---	+97.72	+93.13	+90.78	+89.02
12	+87.62	+88.77	---	---	e+88.6	---	---	---	+97.49	+92.90	+90.55	+88.95
13	+87.39	+88.77	---	---	---	---	---	---	+97.51	+92.67	+90.55	+88.89
14	+87.62	+89.00	---	---	---	---	---	---	+97.51	+92.46	+90.78	+88.77
15	+87.62	+89.00	---	---	---	---	---	---	+97.31	+92.46	+90.57	+88.77
16	+87.85	---	---	---	---	---	---	---	+97.31	+92.48	+90.34	+88.49
17	+87.85	---	---	---	---	---	---	---	+97.31	+92.25	+90.34	+88.49
18	+87.62	---	---	---	---	---	---	---	+97.10	+92.02	+90.34	+88.47
19	+87.62	---	---	---	---	---	---	---	+96.87	+92.02	+90.34	+88.33
20	+87.85	---	---	---	---	---	---	---	+96.64	+92.05	+90.13	+88.17
21	+87.85	---	---	---	---	---	---	---	+96.43	+91.82	+90.13	+88.33
22	+87.62	---	---	---	---	---	---	---	+96.43	+91.82	+90.13	+88.24
23	+87.62	---	---	---	---	---	---	---	+96.20	+91.82	+90.13	+88.08
24	+87.85	---	---	---	---	---	---	---	+95.76	+91.84	+90.15	+88.15
25	+88.08	---	---	---	---	---	---	---	+95.53	+91.61	+89.92	+88.12
26	+87.85	---	---	---	---	---	---	---	+95.53	+91.38	+89.92	+88.29
27	+87.39	---	---	---	---	---	---	---	+95.32	+91.38	+89.92	+88.06
28	+87.62	---	---	---	---	---	---	---	+95.09	+91.15	+89.95	+88.06
29	+88.08	---	---	---	---	---	e+100.1	---	+94.88	+91.17	+89.72	+87.89
30	+88.08	---	---	---	---	---	---	---	+94.88	+91.17	+89.72	+87.89
31	+87.85	---	---	---	---	---	---	---	---	+91.17	+89.72	---
LOW	+87.39	+87.85	---	---	+88.60	---	+100.10	---	+94.88	+91.15	+89.72	+87.89

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+87.89	+86.69	+86.00	+85.24	+84.80	+84.13	+86.19	+91.17	+88.82	+92.35	+90.13	---
2	+87.89	+86.60	+85.91	+85.15	+84.73	+84.20	+86.26	+91.17	+88.40	+92.18	+89.97	---
3	+87.73	+86.60	+85.84	+85.08	+84.73	+84.20	+86.42	+91.24	+88.40	+92.25	+89.92	---
4	+87.66	+86.60	+85.84	+85.31	+84.73	+84.20	+86.65	+91.38	+88.33	+92.48	+89.85	---
5	+87.66	+86.53	+85.84	+85.13	+84.66	+84.20	+86.86	+91.24	+88.24	+92.48	+90.22	---
6	+87.50	+86.51	+85.89	+85.13	+84.66	+84.20	+87.09	+91.17	+88.24	+92.42	+91.24	---
7	+87.64	+86.58	+85.96	+85.19	+84.69	+84.09	+87.22	+91.10	+88.24	+92.35	+91.24	---
8	+87.41	+86.51	+85.96	+85.06	+84.69	+83.99	+87.43	+91.01	+88.33	+92.25	+91.72	---
9	+87.34	+86.42	+85.79	+84.96	+84.53	+84.09	+87.57	+90.94	+88.33	+91.91	+92.23	---
10	+87.48	+86.42	+85.59	+84.96	+84.53	+83.93	+87.80	+90.94	+88.40	+91.68	+92.30	---
11	+87.55	+86.42	+85.59	+84.96	+84.46	+83.93	+88.08	+90.94	+88.54	+92.05	+92.30	---
12	+87.18	+86.42	+85.66	+84.94	+84.46	+83.99	+88.52	+90.87	+88.42	+91.98	+92.39	---
13	+87.18	+86.26	+85.56	+84.94	+84.46	+83.93	+88.52	+90.87	+88.49	+91.84	+92.53	---
14	+87.16	+86.26	+85.56	+85.01	+84.53	+83.93	+88.65	+90.96	+88.26	+91.54	+92.46	---
15	+87.09	+86.26	+85.56	+85.01	+84.62	+83.93	+88.95	+90.62	+88.36	+91.33	+92.39	---
16	+87.09	+86.26	+85.56	+84.92	+84.53	+83.93	+89.16	+90.45	+88.42	+91.33	+92.30	---
17	+87.09	+86.26	+85.40	+84.92	+84.53	+83.99	+89.49	+90.62	+88.42	+91.35	+91.95	---
18	+87.06	+86.37	+85.24	+84.92	+84.46	+83.93	+89.62	+90.25	+88.42	+91.28	+91.82	---
19	+86.99	+86.30	+85.03	+84.92	+84.32	+83.93	+89.83	+90.04	+88.77	+91.05	+91.52	---
20	+86.99	+86.44	+85.03	+84.85	+84.32	+83.93	+89.90	+90.04	+89.35	+90.85	+91.33	---
21	+86.99	+86.42	+85.08	+84.85	+84.32	+83.95	+89.99	+89.95	+89.92	+90.55	+91.26	---
22	+86.97	+86.35	+84.87	+84.85	+84.20	+83.95	+90.06	+89.81	+90.43	+90.41	+91.03	---
23	+87.04	+86.35	+84.87	+84.85	+84.13	+84.02	+90.34	+89.67	+91.01	+90.27	---	---
24	+86.81	+86.32	+84.78	+84.92	+84.20	+84.11	+90.64	+89.53	+91.38	+90.27	---	---
25	+86.81	+86.19	+84.78	+84.80	+84.20	+84.25	+90.57	+89.53	+91.75	+90.27	---	---
26	+86.88	+86.19	+84.78	+84.80	+84.13	+84.53	+90.57	+89.53	+92.02	+90.27	---	---
27	+86.95	+86.19	+84.92	+84.87	+84.13	+84.69	+90.71	+89.62	+92.09	+90.27	---	---
28	+86.88	+86.09	+84.92	+84.73	+84.13	+85.03	+90.78	+89.39	+92.23	+90.41	---	---
29	+86.92	+86.00	+85.10	+84.73	---	+85.40	+90.92	+89.19	+92.25	+90.13	---	---
30	+86.92	+86.00	+85.10	+84.87	---	+85.68	+91.17	+89.05	+92.25	+90.04	---	---
31	+86.76	---	+85.10	+84.80	---	+85.82	---	+88.98	---	+90.04	---	---
LOW	+86.76	+86.00	+84.78	+84.73	+84.13	+83.93	+86.19	+88.98	+88.24	+90.04	+89.85	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—4.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—7N1E33CCDD2.

SITE ID (STATION NUMBER).—443100104002002.

OTHER IDENTIFIER.—LA-87B and State Line Mnls.

LOCATION.—Lat 44°31′04.2″, long 104°00′25.3″, in SE1/4SE1/4SW1/4SW1/4 sec. 33, T. 7 N., R. 1 E., Hydrologic Unit 10120203, 7 mi west of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 458 ft deep with 434 ft of 5-in. steel casing; open hole from 434 to 458 ft.

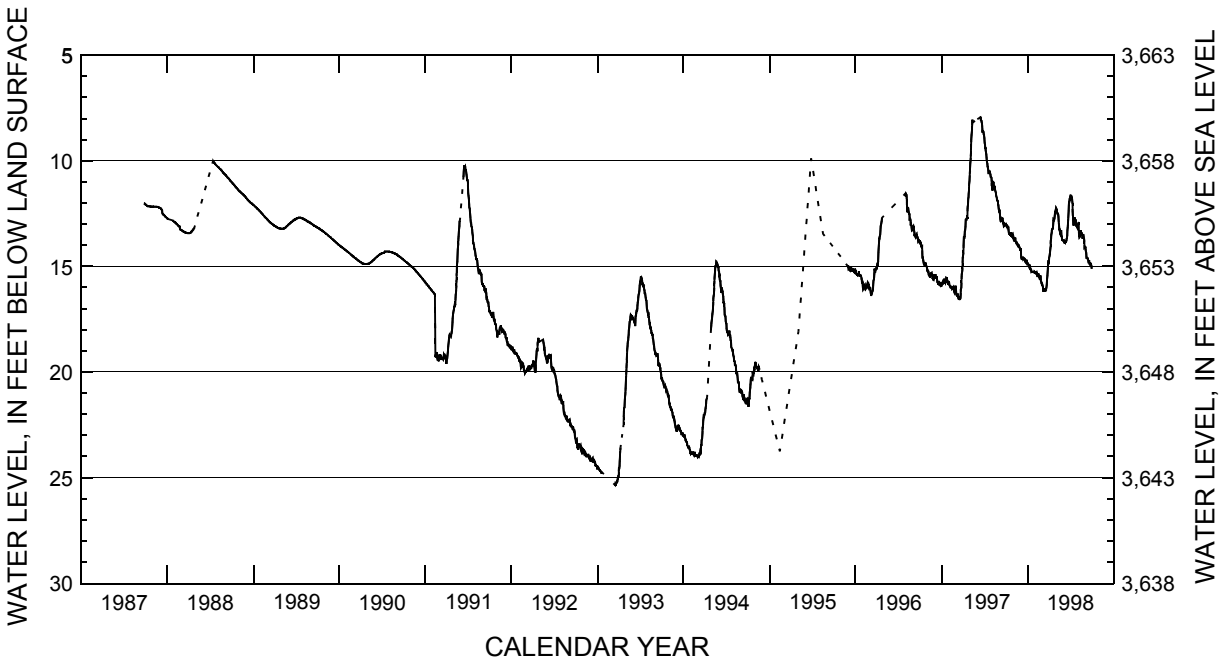
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,668.0 ft above sea level. Measuring point: Top of steel casing, 2.30 ft above land-surface datum.

REMARKS.—Recent records fair. Air pumping during February 1991 may have changed well characteristics, improving sensitivity to water-level changes. Records prior to February 1991 considered poor.

PERIOD OF RECORD.—September 1987 to September 1998.

EXTREMES.—Highest daily water level, 7.96 ft below land-surface datum, June 12, 13, 15, 1997; lowest daily water level, 25.37 ft below land-surface datum, Mar. 17, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.27	19.54	---	---	---	---	---	---	---	---	---	---
2	21.32	19.58	---	---	---	---	---	---	---	---	---	---
3	21.60	19.58	---	---	---	---	---	---	---	---	---	---
4	21.65	19.59	---	---	---	---	---	e18.10	---	---	---	---
5	21.56	19.71	---	---	---	---	---	---	---	---	---	---
6	21.24	19.74	---	---	---	---	---	---	---	---	---	---
7	21.28	19.79	---	---	---	---	---	---	---	---	---	---
8	21.26	19.83	---	---	---	---	---	---	---	---	---	---
9	21.11	19.84	---	---	---	---	---	---	---	---	---	---
10	20.96	19.80	---	---	---	---	---	---	---	---	---	---
11	20.75	19.79	---	---	---	---	---	---	---	---	---	---
12	20.61	19.73	---	---	---	---	---	---	---	---	---	---
13	20.56	19.84	---	---	---	---	---	---	---	---	---	---
14	20.38	19.94	---	---	e23.76	---	---	---	---	---	---	---
15	20.24	19.93	---	---	---	---	---	---	---	---	---	---
16	20.33	19.76	---	---	---	---	---	---	---	---	e13.46	---
17	20.33	19.77	---	---	---	---	---	---	---	---	---	---
18	20.36	---	---	---	---	---	---	---	---	---	---	---
19	20.37	---	---	---	---	---	---	---	---	---	---	---
20	20.38	---	---	---	---	---	---	---	---	---	---	---
21	20.27	---	---	---	---	---	---	---	---	---	---	---
22	19.96	---	---	---	---	---	---	---	---	---	---	---
23	20.04	---	---	---	---	---	---	---	---	---	---	---
24	20.08	---	---	---	---	---	---	---	---	---	---	---
25	20.09	---	---	---	---	---	---	---	---	---	---	---
26	20.04	---	---	---	---	---	---	---	---	---	---	---
27	19.94	---	---	---	---	---	---	---	e9.89	---	---	---
28	19.90	---	---	---	---	---	---	---	---	---	---	---
29	19.94	---	---	---	---	---	---	---	---	---	---	---
30	19.81	e20.37	---	---	---	---	---	---	---	---	---	---
31	19.70	---	---	---	---	---	---	---	---	---	---	---
LOW	21.65	20.37	---	---	23.76	---	---	18.10	9.89	---	13.46	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	15.00	15.30	15.89	16.01	15.11	---	---	---	11.62	13.16
2	---	---	15.04	15.31	16.02	16.03	14.97	---	---	---	11.69	13.17
3	---	---	15.10	15.18	16.07	16.02	14.99	---	---	---	11.59	13.12
4	---	---	15.06	15.34	16.02	16.03	14.99	---	---	---	11.61	13.15
5	---	---	15.08	15.37	15.99	16.13	14.95	---	---	---	11.65	13.16
6	---	---	15.09	15.38	15.91	16.26	14.78	---	---	---	11.81	13.27
7	---	---	15.09	15.38	15.90	16.36	14.57	---	---	---	12.08	13.42
8	---	---	15.19	15.41	15.91	16.36	14.33	---	---	---	12.36	13.57
9	---	---	15.22	15.42	15.89	16.34	14.09	---	---	---	12.45	13.48
10	---	---	15.19	15.41	16.05	16.31	13.84	---	---	---	12.23	13.52
11	---	---	15.15	15.44	16.06	16.27	13.70	---	---	---	12.23	13.58
12	---	---	15.12	15.43	16.04	16.20	13.70	---	---	---	12.25	13.63
13	---	---	15.01	15.34	15.97	16.18	13.60	---	---	---	12.39	13.64
14	---	---	15.11	15.40	15.97	16.17	13.56	---	---	---	12.45	13.63
15	---	---	15.12	15.36	16.04	16.11	13.50	---	---	---	12.48	13.50
16	---	---	15.14	15.23	16.00	15.90	13.38	---	---	---	12.53	13.48
17	---	---	15.22	15.44	16.01	15.78	13.13	---	---	---	12.54	13.58
18	---	---	15.22	15.44	15.91	15.67	13.06	---	---	---	12.76	13.58
19	---	---	15.16	15.41	15.84	15.60	13.00	---	---	---	12.85	13.60
20	---	---	15.09	15.41	15.88	15.52	12.95	---	---	---	12.72	13.60
21	---	---	15.19	15.46	15.89	15.37	12.87	---	---	---	12.80	13.63
22	---	---	15.19	15.46	15.79	15.32	12.84	---	---	---	12.85	13.68
23	---	---	15.19	15.45	15.81	15.12	12.71	---	---	---	13.07	13.79
24	---	---	15.21	15.45	15.80	15.29	---	---	---	---	13.02	13.77
25	---	---	15.22	15.48	15.88	15.26	---	---	---	---	13.07	13.76
26	---	---	15.27	15.55	15.88	15.17	---	---	---	---	13.14	13.77
27	---	---	15.29	15.59	16.04	15.16	---	---	---	---	13.21	13.78
28	---	---	15.24	15.63	16.08	15.15	---	---	---	---	13.27	13.79
29	---	14.98	15.18	15.76	16.07	15.06	---	---	---	---	13.31	13.82
30	---	15.00	15.12	15.77	---	15.11	---	---	---	11.56	13.28	13.77
31	---	---	15.16	15.76	---	15.12	---	---	---	11.58	13.23	---
LOW	---	15.00	15.29	15.77	16.08	16.36	15.11	---	---	11.58	13.31	13.82

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.89	15.22	15.46	15.89	15.76	16.01	14.56	10.49	---	8.93	10.85	12.34
2	13.95	15.23	15.40	15.82	15.80	16.00	14.55	10.27	---	9.04	11.19	12.32
3	13.90	15.21	15.43	15.81	15.89	16.13	14.36	10.11	---	9.16	11.23	12.32
4	13.89	15.24	15.46	15.78	15.94	16.28	14.01	9.99	---	9.24	11.35	12.35
5	13.99	15.25	15.38	15.80	15.95	16.35	13.77	9.66	---	9.44	11.41	12.50
6	14.04	15.25	15.42	15.81	15.97	16.35	13.62	9.36	---	9.37	11.18	12.60
7	14.03	15.39	15.55	15.75	15.99	16.30	13.60	9.00	---	9.49	11.08	12.75
8	14.03	15.39	15.55	15.72	16.00	16.41	13.61	8.78	---	9.55	11.01	12.78
9	14.08	15.40	15.54	15.65	15.99	16.42	13.51	8.63	---	9.70	11.03	12.89
10	14.07	15.43	15.47	15.64	16.02	16.41	13.34	8.50	---	9.79	11.05	12.85
11	14.38	15.49	15.51	15.71	15.99	16.41	13.28	8.20	7.97	9.86	11.29	12.79
12	14.59	15.50	15.58	15.78	15.99	16.39	13.13	8.06	7.96	9.98	11.26	12.85
13	14.59	15.50	15.62	15.77	15.98	16.53	12.95	8.19	7.96	10.14	11.23	12.83
14	14.71	15.44	15.74	15.65	15.98	16.53	12.76	---	7.98	10.16	11.19	12.83
15	14.71	15.31	15.77	15.76	16.07	16.51	12.81	---	7.96	10.27	11.32	12.74
16	14.77	15.34	15.73	15.77	16.06	16.41	12.81	---	7.99	10.28	11.39	12.75
17	14.89	15.35	15.84	15.72	16.02	16.55	12.73	---	8.06	10.34	11.41	12.75
18	14.89	15.34	15.84	15.74	16.04	16.57	12.72	---	8.09	10.47	11.49	12.86
19	14.80	15.32	15.84	15.74	16.04	16.59	12.72	---	8.11	10.59	11.53	12.93
20	14.89	15.42	15.77	15.65	16.01	16.54	12.72	---	8.17	10.59	11.59	12.92
21	14.97	15.42	15.70	15.55	16.06	16.53	12.27	---	8.23	10.57	11.67	12.99
22	14.96	15.39	15.77	15.57	16.15	16.48	12.18	---	8.32	10.56	11.73	13.11
23	14.94	15.55	15.89	15.53	16.21	16.37	12.05	---	8.58	10.54	11.77	13.10
24	14.94	15.55	15.89	15.64	16.23	16.08	11.82	---	8.67	10.53	11.86	13.04
25	14.83	15.60	15.90	15.67	16.16	16.02	11.74	---	8.61	10.55	11.86	12.98
26	14.99	15.64	15.91	15.69	16.06	15.78	11.57	---	8.62	10.59	11.91	12.99
27	14.99	15.65	15.77	15.83	15.96	15.47	11.40	---	8.63	10.67	11.92	13.02
28	14.99	15.55	15.87	15.81	15.93	15.38	11.09	---	8.68	10.73	11.96	13.03
29	15.00	15.49	15.89	15.86	---	15.22	10.98	---	8.74	10.77	12.10	13.06
30	15.07	15.51	15.93	15.79	---	15.11	10.82	---	8.79	10.77	12.08	13.06
31	15.11	---	15.93	15.70	---	14.84	---	---	---	10.80	12.29	---
LOW	15.11	15.65	15.93	15.89	16.23	16.59	14.56	10.49	8.79	10.80	12.29	13.11

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.04	13.66	14.23	14.86	15.27	15.77	14.83	12.30	---	11.81	13.11	14.10
2	13.02	13.65	14.20	14.86	15.32	15.80	14.75	12.25	13.82	11.77	13.09	14.09
3	13.05	13.70	14.15	14.88	15.32	15.86	14.57	12.27	13.81	11.80	13.04	14.07
4	13.08	13.69	14.39	14.89	15.26	15.86	14.50	12.31	13.79	11.69	13.00	14.12
5	13.15	13.69	14.56	14.97	15.34	15.91	14.41	12.33	13.86	11.66	12.95	14.23
6	13.09	13.80	14.64	14.98	15.33	15.95	14.41	12.46	13.89	11.68	12.91	14.35
7	13.12	13.80	14.66	15.00	15.29	15.98	14.27	12.51	13.89	11.80	13.44	14.41
8	13.17	13.78	14.66	14.99	15.28	16.17	14.07	12.50	13.87	11.77	13.53	14.55
9	13.16	13.65	14.65	14.96	15.34	16.17	13.81	12.50	13.89	11.78	13.62	14.64
10	13.09	13.74	14.63	14.96	15.37	16.10	13.76	12.52	13.83	12.04	13.59	14.56
11	13.17	13.83	14.63	15.13	15.41	16.12	13.69	12.57	13.83	12.41	13.48	14.63
12	13.27	13.84	14.55	15.13	15.48	16.13	13.52	12.66	13.85	12.58	13.42	14.63
13	13.34	13.87	14.63	15.11	15.50	16.14	13.41	12.79	13.85	12.64	13.40	14.63
14	13.46	13.92	14.66	15.14	15.39	16.13	13.30	13.08	13.79	12.82	13.35	14.68
15	13.48	13.92	14.63	15.19	15.37	16.05	13.25	13.23	13.77	13.07	13.30	14.74
16	13.43	13.88	14.59	15.15	15.35	16.15	13.24	13.23	13.67	12.87	13.48	14.76
17	13.45	13.88	14.65	15.26	15.43	16.16	13.23	13.31	13.69	12.72	13.47	14.79
18	13.49	13.95	14.61	15.25	15.48	16.16	13.20	13.31	13.53	12.72	13.44	14.78
19	13.52	13.97	14.69	15.25	15.50	16.14	13.15	13.36	13.30	12.72	13.44	14.72
20	13.53	13.97	14.74	15.25	15.50	16.13	13.03	13.49	13.17	12.72	13.52	14.85
21	13.48	14.05	14.76	---	15.55	16.08	12.80	13.49	13.06	12.80	13.49	14.89
22	13.38	14.05	14.77	---	15.59	16.00	12.82	13.44	12.88	12.85	13.66	14.92
23	13.57	13.97	14.74	---	15.59	15.88	12.86	13.29	12.61	12.83	13.66	14.92
24	13.58	14.02	14.78	---	15.44	15.75	12.81	13.43	12.37	12.79	13.53	14.90
25	13.50	14.06	14.79	---	15.54	15.60	12.73	13.59	12.13	12.85	13.52	14.86
26	13.49	14.06	14.73	---	15.63	15.45	12.62	13.56	11.97	13.07	13.52	14.87
27	13.53	14.09	14.70	---	15.73	15.24	12.51	13.74	11.95	13.09	13.59	14.95
28	13.47	14.13	14.82	15.30	15.77	15.11	12.45	13.77	11.82	13.05	13.69	14.95
29	13.46	14.15	14.80	15.30	---	14.90	12.43	13.73	11.79	13.10	13.75	14.99
30	13.54	14.23	14.82	15.25	---	14.80	12.34	13.78	11.76	13.13	13.84	15.12
31	13.63	---	14.88	15.26	---	14.82	---	---	---	13.17	14.13	---
LOW	13.63	14.23	14.88	15.30	15.77	16.17	14.83	13.78	13.89	13.17	14.13	15.12

SITE NUMBER FROM LOCATION MAP.—5.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—7N1E33CCDD.

SITE ID (STATION NUMBER).—443100104002001.

OTHER IDENTIFIER.—LA-87A and State Line Mdsn.

LOCATION.—Lat 44°31′04.2″, long 104°00′25.3″, in SE1/4SE1/4SW1/4SW1/4 sec. 33, T. 7 N., R. 1 E., Hydrologic Unit 10120203, 7 mi west of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,100 ft deep with 1,026 ft of 5-in. steel casing; open hole from 1,026 to 1,100 ft.

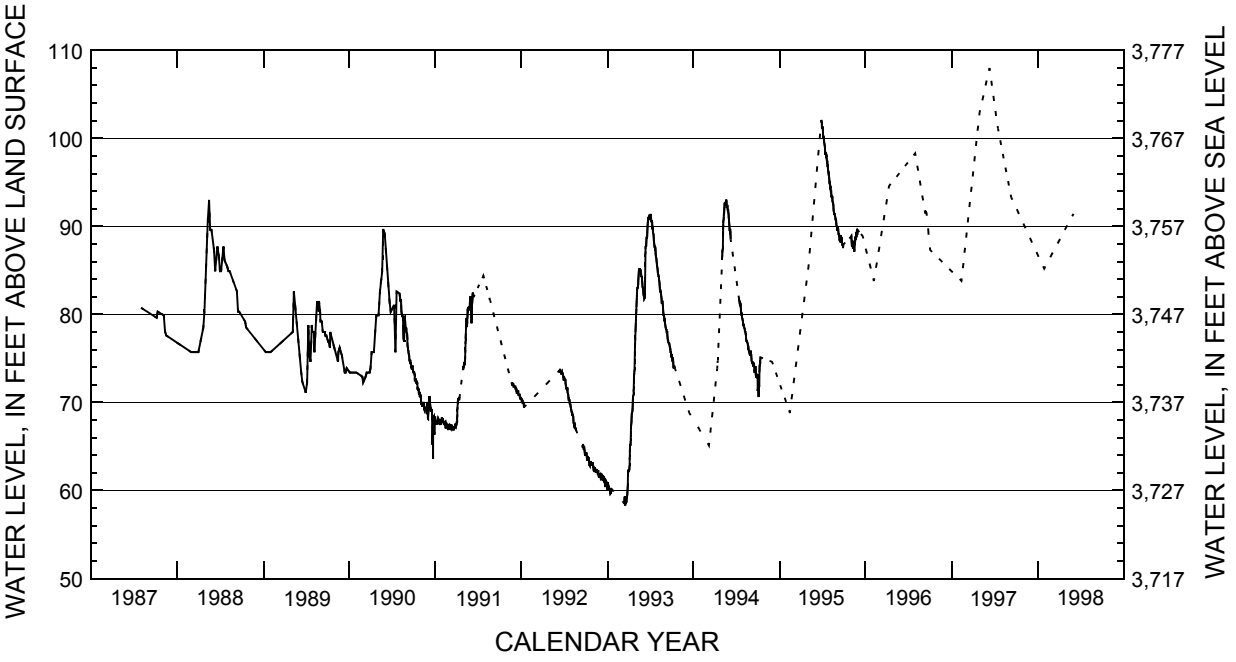
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval. Prior to August 1990, circular-chart pressure recorder.

DATUM.—Elevation of land-surface datum is 3,667.0 ft above sea level. Measuring point: Base of gage, 4.2 ft above land-surface datum.

REMARKS.—Recent records poor.

PERIOD OF RECORD.—October 1987 to September 1998.

EXTREMES.—Highest daily water level, 108.0 ft (estimated) above land-surface datum, June 11, 1997; lowest daily water level, 58.30 ft above land-surface datum, Mar. 17, 1993.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+71.29	---	---	---	---	---	---	---	---	+101.21	+94.98	+90.04
2	+71.68	---	---	---	---	---	---	---	---	+101.26	+95.00	+89.93
3	+71.40	---	---	---	---	---	---	---	---	+101.28	+95.03	+89.63
4	+70.90	---	---	---	---	---	---	e+85.4	---	+101.07	+94.59	+89.51
5	+70.62	---	---	---	---	---	---	---	---	+100.63	+94.38	+89.70
6	+71.52	---	---	---	---	---	---	---	---	+100.17	+94.40	+89.86
7	+71.93	---	---	---	---	---	---	---	---	+100.19	+93.97	+89.67
8	+73.71	---	---	---	---	---	---	---	---	+99.99	+93.99	+89.37
9	+74.13	---	---	---	---	---	---	---	---	+100.01	+93.55	+89.10
10	+74.31	---	---	---	---	---	---	---	---	+99.57	+93.34	+89.03
11	+74.49	---	---	---	---	---	---	---	---	+99.36	+93.37	+89.21
12	+75.14	---	---	---	---	---	---	---	---	+99.16	+93.16	+88.91
13	---	---	---	---	---	---	---	---	---	+98.95	+93.41	+88.45
14	---	---	---	---	e+68.8	---	---	---	---	+98.28	+92.97	+88.45
15	---	---	---	---	---	---	---	---	---	+98.30	+92.77	+88.57
16	---	---	---	---	---	---	---	---	---	+98.33	+92.67	+88.27
17	---	---	---	---	---	---	---	---	---	+98.12	+92.51	+88.27
18	---	---	---	---	---	---	---	---	---	+98.37	+92.40	+88.50
19	---	---	---	---	---	---	---	---	---	+97.93	+91.87	+89.01
20	---	---	---	---	---	---	---	---	---	+97.96	+91.75	+88.66
21	---	---	---	---	---	---	---	---	---	+97.52	+91.50	+88.20
22	---	---	---	---	---	---	---	---	---	+97.31	+91.38	+88.66
23	---	---	---	---	---	---	---	---	---	+97.33	+91.38	+88.73
24	---	---	---	---	---	---	---	---	---	+96.90	+91.27	+88.15
25	---	---	---	---	---	---	---	---	---	+96.92	+91.10	+87.90
26	---	---	---	---	---	---	---	---	---	+96.48	+90.99	+87.78
27	---	---	---	---	---	---	---	---	---	+96.27	+90.80	+87.94
28	---	---	---	---	---	---	---	---	+102.09	+96.04	+90.80	+87.55
29	---	---	---	---	---	---	---	---	+101.88	+95.83	+90.67	+87.94
30	---	+74.60	---	---	---	---	---	---	+101.21	+95.86	+90.32	---
31	---	---	---	---	---	---	---	---	---	+95.42	+90.09	---
LOW	+70.62	+74.60	---	---	+68.80	---	---	+85.40	+101.21	+95.42	+90.09	+87.55

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	+88.84	---	---	---	---	---	---	---	---	---	---
2	---	+88.89	---	---	---	---	---	---	---	---	---	---
3	---	+88.54	---	---	---	---	---	---	---	---	---	---
4	---	+87.97	---	---	---	---	---	---	---	---	---	---
5	---	+87.69	---	---	---	---	---	---	---	---	---	---
6	---	+88.43	---	---	e+83.8	---	---	---	---	---	---	---
7	---	+88.06	---	---	---	---	---	---	---	---	---	---
8	---	+87.90	---	---	---	---	---	---	---	---	---	---
9	---	+87.48	---	---	---	---	---	---	---	---	---	---
10	---	+88.24	---	---	---	---	e+94.6	---	---	---	---	---
11	---	+88.17	---	---	---	---	---	---	---	---	---	+91.52
12	---	+88.24	---	---	---	---	---	---	---	---	---	+91.52
13	---	+87.90	---	---	---	---	---	---	---	---	---	+91.59
14	---	+88.06	---	---	---	---	---	---	---	---	---	+91.64
15	---	+87.14	---	---	---	---	---	---	---	---	---	+91.59
16	---	+88.04	---	---	---	---	---	---	---	---	---	+91.52
17	---	+87.92	---	---	---	---	---	---	---	---	---	---
18	---	+88.38	---	---	---	---	---	---	---	---	---	---
19	---	+88.73	---	---	---	---	---	---	---	---	---	---
20	---	+88.84	e+88.9	---	---	---	---	---	---	---	---	---
21	---	+88.45	---	---	---	---	---	---	---	---	---	---
22	---	+89.31	---	---	---	---	---	---	---	---	---	---
23	---	+88.84	---	---	---	---	---	---	---	---	---	---
24	---	+88.84	---	---	---	---	---	---	---	---	---	---
25	---	+89.17	---	---	---	---	---	---	---	---	---	---
26	---	+89.70	---	---	---	---	---	---	---	---	---	---
27	---	+89.05	---	---	---	---	---	---	---	---	---	---
28	---	+89.40	---	---	---	---	---	---	---	---	---	---
29	---	+89.58	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e+98.3	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+87.14	+88.90	---	+83.80	---	+94.60	---	---	+98.30	---	+91.52

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	e+87.3	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	e+108.0	---	---	e+93.3
12	---	---	---	---	e+83.8	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	e+101.1	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	e+102.9	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	+87.30	---	---	---	+83.80	---	+102.90	---	+108.00	+101.10	---	+93.30

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	e+91.4	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	e+85.2	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	+85.20	---	---	---	---	+91.40	---	---	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—6.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N3E15DDDA2.

SITE ID (STATION NUMBER).—442833103434602.

OTHER IDENTIFIER.—LA-95A and Frawley Ranch Mdsn.

LOCATION.—Lat 44°28′34.0″, long 103°43′46.2″, in NE1/4SE1/4SE1/4SE1/4 sec. 15, T. 6 N., R. 3 E., Hydrologic Unit 10120203, 6 mi east of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 780 ft deep with 751 ft of 5-in. steel casing; open hole from 751 to 780 ft.

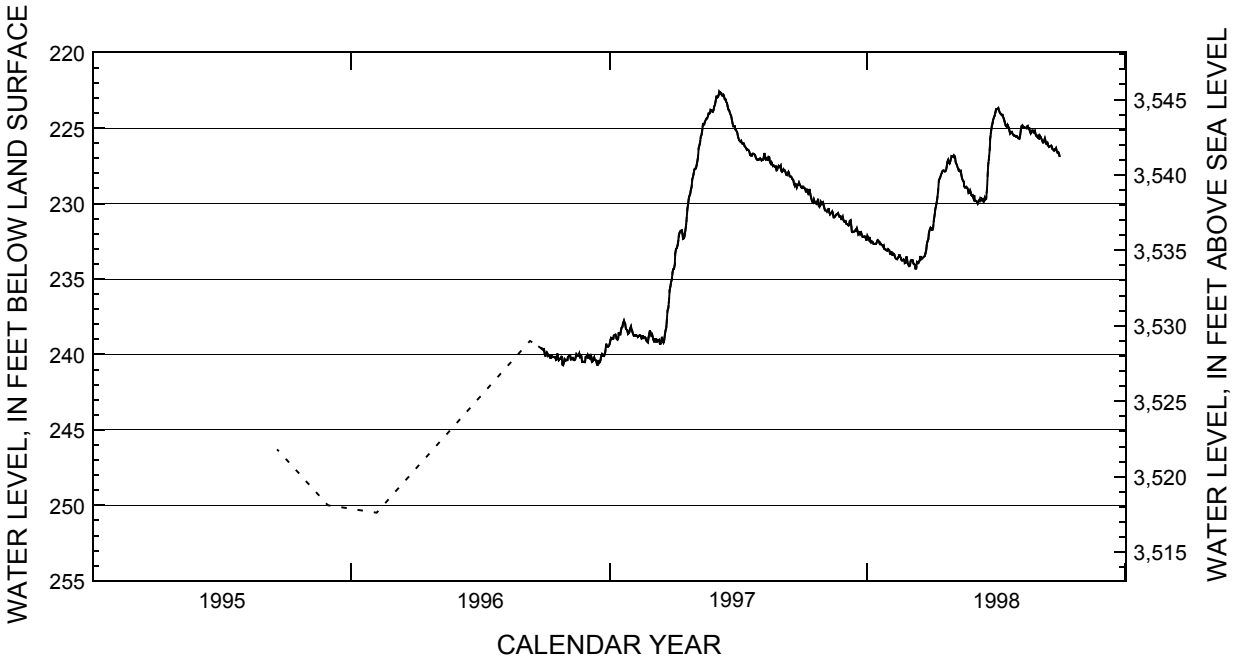
INSTRUMENTATION.—Electronic data logger -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,768.1 ft above sea level. Measuring point: Top of steel casing, 1.70 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1995 to September 1998.

EXTREMES.—Highest daily water level, 222.61 ft below land-surface datum, June 5, 1997; lowest daily water level, 250.5 ft below land-surface datum, Feb. 6, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	e246.3
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	---	246.30

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	e250.5	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	e239.1
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	239.56
26	---	---	---	---	---	---	---	---	---	---	---	239.59
27	---	---	---	---	---	---	---	---	---	---	---	239.60
28	---	---	---	---	---	---	---	---	---	---	---	239.66
29	---	e250.0	---	---	---	---	---	---	---	---	---	239.72
30	---	---	---	---	---	---	---	---	---	---	---	239.60
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	250.00	---	---	250.50	---	---	---	---	---	---	239.72

e Estimated

SITE NUMBER 6—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239.95	240.36	240.04	239.31	238.36	238.72	234.35	227.72	222.92	225.37	227.07	227.84
2	240.13	240.38	240.21	239.07	238.44	238.66	234.34	227.68	222.92	225.65	227.00	227.89
3	239.92	240.18	240.24	238.90	238.64	238.86	234.05	227.68	222.95	225.80	227.05	227.83
4	239.85	240.11	240.27	238.92	238.76	239.03	233.31	227.49	222.86	225.82	227.14	227.72
5	239.95	240.07	239.97	238.97	238.75	239.16	233.01	227.22	222.61	225.90	227.10	227.81
6	240.10	240.05	240.19	238.97	238.74	239.14	232.94	226.95	222.70	225.84	227.10	227.81
7	240.06	240.34	240.49	238.75	238.76	238.93	232.75	226.28	222.63	225.96	227.02	227.92
8	240.07	240.33	240.47	238.70	238.74	239.14	232.56	226.15	222.67	226.03	226.65	228.09
9	240.23	240.22	240.28	238.68	238.79	239.16	232.09	225.97	222.84	226.01	226.96	228.12
10	240.23	240.23	240.18	238.78	238.85	239.05	231.89	225.54	222.86	226.02	227.06	228.02
11	239.99	240.38	240.35	238.98	238.80	239.08	231.82	225.41	222.80	226.20	227.00	227.90
12	240.17	240.39	240.36	239.03	238.74	239.04	231.78	225.20	222.91	226.25	227.12	228.04
13	240.18	240.35	240.41	238.95	238.73	239.29	231.76	224.76	223.09	226.31	227.10	228.19
14	240.16	240.12	240.68	238.53	238.80	239.30	231.99	224.78	223.11	226.44	226.91	228.23
15	240.18	239.98	240.69	238.69	238.95	239.10	232.33	224.76	223.25	226.42	226.94	228.22
16	240.16	240.05	240.37	238.69	238.90	238.84	232.31	224.55	223.34	226.43	227.28	228.36
17	240.35	240.10	240.57	238.39	238.74	239.13	232.15	224.44	223.56	226.49	227.37	228.37
18	240.33	240.09	240.50	238.21	238.93	239.22	231.81	224.37	223.76	226.64	227.27	228.45
19	239.94	239.94	240.36	238.18	238.92	239.05	231.49	224.36	223.78	226.80	227.41	228.73
20	240.20	240.18	240.11	237.91	238.86	238.80	231.06	224.21	223.99	226.82	227.51	228.83
21	240.37	240.16	239.96	237.76	238.90	238.43	230.36	224.04	224.10	226.83	227.47	228.71
22	240.31	240.13	240.00	237.90	239.11	238.23	230.02	224.05	224.17	226.72	227.53	228.75
23	240.26	240.50	240.11	237.96	239.15	237.83	229.71	224.00	224.44	226.68	227.57	228.91
24	240.26	240.50	240.11	238.32	239.20	237.05	229.47	223.78	224.67	226.73	227.54	228.76
25	240.09	240.48	239.94	238.36	238.89	236.92	229.34	223.80	224.89	226.74	227.80	228.73
26	240.68	240.51	239.82	238.39	238.65	236.43	229.13	223.91	224.89	226.80	227.79	228.60
27	240.72	240.51	239.30	238.65	238.41	235.75	228.91	223.93	224.88	226.97	227.62	228.75
28	240.57	240.16	239.46	238.59	238.60	235.49	228.35	223.83	225.10	227.07	227.50	228.83
29	240.31	240.14	239.49	238.52	---	235.20	228.21	223.55	225.15	227.11	227.51	228.91
30	240.38	240.19	239.49	238.28	---	235.02	228.02	223.41	225.23	227.08	227.58	228.97
31	240.42	---	239.41	238.14	---	234.57	---	223.24	---	227.09	227.49	---
LOW	240.72	240.51	240.69	239.31	239.20	239.30	234.35	227.72	225.23	227.11	227.80	228.97

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228.97	230.33	231.18	232.15	233.10	234.15	231.63	226.87	229.46	223.96	225.55	225.70
2	228.89	230.45	231.34	232.27	233.33	234.12	231.74	226.88	229.82	223.75	225.67	225.50
3	228.93	230.45	231.35	232.39	233.30	233.81	231.73	226.81	229.82	223.77	225.68	225.59
4	228.97	230.48	231.42	232.22	233.17	233.74	231.56	226.95	229.82	223.72	225.70	225.68
5	229.05	230.54	231.46	232.45	233.40	233.79	231.05	226.93	229.90	223.66	225.52	225.81
6	229.25	230.45	231.39	232.57	233.39	233.77	230.78	227.28	230.01	223.79	225.14	225.96
7	229.02	230.31	231.13	232.51	233.32	233.96	230.41	227.40	229.88	223.94	224.88	225.96
8	229.21	230.62	231.10	232.54	233.36	234.04	230.13	227.52	229.79	224.04	224.83	225.81
9	229.35	230.73	231.54	232.65	233.57	234.07	229.88	227.69	229.82	224.06	224.95	225.66
10	229.30	230.66	231.87	232.65	233.65	234.31	229.65	227.80	229.62	224.14	224.90	225.84
11	229.04	230.60	231.89	232.67	233.68	234.31	229.17	227.76	229.65	224.12	224.92	226.04
12	229.36	230.53	231.88	232.67	233.70	233.87	228.44	227.88	229.78	224.29	224.99	226.07
13	229.60	230.63	231.85	232.67	233.59	233.91	228.38	227.84	229.73	224.35	224.99	225.99
14	229.79	230.92	231.83	232.58	233.56	233.93	228.26	228.08	229.88	224.53	225.01	226.17
15	229.91	230.92	231.74	232.42	233.36	233.84	228.08	228.36	229.86	224.77	224.88	226.25
16	229.95	230.86	231.79	232.45	233.53	233.77	227.98	228.49	229.62	224.87	224.85	226.24
17	229.74	230.76	231.64	232.51	233.57	233.48	227.86	228.53	229.72	224.90	225.03	226.18
18	229.85	230.71	231.83	232.65	233.74	233.70	227.81	228.86	229.68	224.77	225.02	226.16
19	229.95	230.71	232.04	232.60	233.79	233.66	227.81	228.93	229.13	224.88	225.24	226.21
20	230.00	230.64	231.98	232.67	233.76	233.61	227.88	228.95	228.05	224.96	225.34	226.40
21	230.03	230.71	231.82	232.75	233.70	233.55	227.88	228.90	227.42	225.18	225.25	226.45
22	229.85	230.87	232.01	232.77	233.74	233.53	227.82	228.95	226.99	225.36	225.16	226.49
23	229.68	230.84	231.94	232.86	233.95	233.48	227.61	229.06	226.32	225.29	225.16	226.41
24	230.13	230.84	232.12	232.79	233.92	233.30	227.22	229.29	225.66	225.26	225.28	226.40
25	230.21	231.03	232.20	233.02	233.50	233.06	227.12	229.27	225.22	225.33	225.31	226.32
26	230.07	231.02	232.21	233.04	233.70	232.74	227.29	229.13	224.84	225.43	225.19	226.54
27	229.90	230.90	232.18	233.04	233.97	232.47	227.35	229.24	224.70	225.50	225.45	226.63
28	230.02	231.10	232.19	233.11	234.10	232.35	227.20	229.46	224.44	225.47	225.53	226.59
29	229.95	231.20	232.19	233.12	---	231.97	227.07	229.50	224.26	225.51	225.57	226.67
30	229.91	231.20	232.40	233.02	---	231.75	226.86	229.46	224.19	225.57	225.51	226.91
31	230.13	---	232.40	233.07	---	231.60	---	229.63	---	225.54	225.66	---
LOW	230.21	231.20	232.40	233.12	234.10	234.31	231.74	229.63	230.01	225.57	225.70	226.91

SITE NUMBER FROM LOCATION MAP.—7.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N3E15DDDA.

SITE ID (STATION NUMBER).—442833103434601.

OTHER IDENTIFIER.—LA-88A and Frawley Ranch Mnls.

LOCATION.—Lat 44°28′34.5″, long 103°43′46.2″, in NE1/4SE1/4SE1/4SE1/4 sec. 15, T. 6 N., R. 3 E., Hydrologic Unit 10120203, 6 mi east of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 320 ft deep with 273 ft of 5-in. steel casing; open hole from 273 to 320 ft.

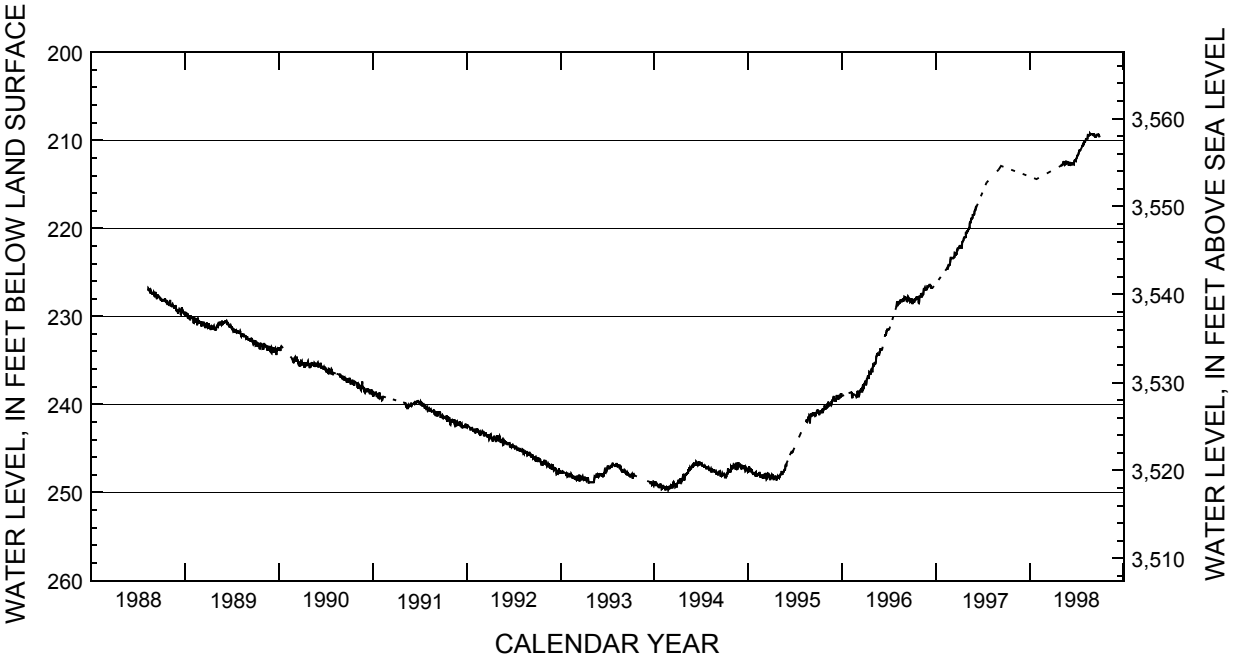
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,767.5 ft above sea level. Measuring point: Top of steel casing, 2.10 ft above land-surface datum.

REMARKS.—Records fair.

PERIOD OF RECORD.—August 1988 to September 1998.

EXTREMES.—Highest daily water level, 209.18 ft below land-surface datum, Sept. 3, 1998; lowest daily water level, 249.67 ft below land-surface datum, Feb. 12-13, 1994.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247.97	246.94	246.88	247.59	247.67	248.36	248.08	248.33	---	---	---	241.38
2	248.00	246.99	246.87	247.63	248.05	248.36	248.09	248.15	---	---	---	241.15
3	248.28	247.11	246.97	247.63	248.22	248.10	248.30	248.15	---	---	---	241.15
4	248.28	247.11	247.27	247.56	247.97	247.97	248.30	248.23	---	---	---	241.15
5	248.10	246.99	247.27	247.06	247.96	247.97	247.99	248.19	---	---	---	241.08
6	247.89	247.08	247.20	247.17	247.95	248.25	248.06	247.96	---	---	---	241.28
7	248.17	247.02	247.19	247.29	248.09	248.29	248.07	247.93	---	---	---	241.29
8	248.21	247.09	247.25	247.36	248.05	248.26	247.98	---	---	---	---	241.18
9	248.15	247.09	247.20	247.37	247.89	248.04	248.37	---	---	---	---	241.07
10	247.91	246.93	247.32	247.35	247.87	247.89	248.50	---	---	---	---	241.06
11	247.77	246.85	247.06	247.29	247.94	247.89	248.50	247.96	---	---	---	240.90
12	247.86	246.83	247.13	247.47	247.95	247.97	248.39	247.56	---	---	---	240.97
13	247.87	247.04	247.11	247.62	247.95	248.26	248.39	247.87	---	---	---	241.14
14	247.65	247.33	246.99	247.62	247.69	248.49	248.10	247.92	---	---	---	241.18
15	247.25	247.33	246.99	247.45	247.78	248.42	248.24	247.92	---	---	---	240.93
16	247.49	246.73	247.10	247.46	248.07	248.28	248.36	247.72	245.50	---	---	241.08
17	247.56	246.74	247.36	247.59	248.04	248.28	248.36	247.70	245.53	---	241.71	241.03
18	247.60	247.09	247.31	247.77	248.26	248.20	248.25	247.67	245.53	---	242.01	241.05
19	247.65	247.00	247.20	247.90	248.26	247.87	248.25	247.66	245.53	---	242.03	241.15
20	247.65	247.34	247.27	247.94	248.26	247.90	248.13	247.66	245.46	---	241.92	241.25
21	247.40	247.32	247.38	247.94	248.18	247.80	248.56	247.49	245.42	---	241.78	241.27
22	247.54	246.94	247.54	247.88	248.00	248.04	248.57	247.43	245.37	---	241.72	241.13
23	247.55	246.94	247.48	247.85	248.22	248.15	248.53	247.43	245.39	---	241.67	240.97
24	247.63	246.59	247.19	247.81	248.22	247.94	248.43	247.43	245.39	---	241.38	240.98
25	247.63	246.68	247.24	247.81	248.07	248.28	248.30	247.42	245.28	---	241.45	240.87
26	247.46	247.13	247.26	247.71	248.07	248.40	248.35	247.07	245.21	---	241.49	240.72
27	247.07	247.01	247.33	247.77	248.36	248.50	248.33	246.94	---	---	241.35	240.69
28	247.15	---	247.33	248.07	248.36	248.51	248.22	246.94	---	---	241.38	240.71
29	247.30	---	247.37	248.07	---	248.51	248.28	246.95	---	---	241.34	240.68
30	247.29	246.93	247.55	247.91	---	248.35	248.30	246.95	---	---	242.15	240.92
31	247.26	---	247.63	247.70	---	248.25	---	246.66	---	---	241.53	---
LOW	248.28	247.34	247.63	248.07	248.36	248.51	248.57	248.33	245.53	---	242.15	241.38

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240.95	240.38	239.15	---	---	238.57	237.66	235.72	233.75	231.49	228.79	227.80
2	240.98	240.40	239.47	---	---	238.56	237.31	235.53	233.80	231.48	228.68	227.85
3	240.97	240.40	239.65	---	---	238.56	237.62	235.54	233.79	231.48	228.39	227.85
4	240.82	240.37	239.42	---	---	238.56	237.74	235.62	233.77	231.47	228.36	227.85
5	241.12	239.91	239.49	---	---	238.72	237.75	235.62	233.77	---	228.36	227.82
6	241.12	240.10	239.48	---	238.61	238.87	237.62	235.55	233.76	---	228.36	---
7	240.88	240.26	239.41	---	238.61	239.10	237.12	235.45	---	---	228.36	---
8	240.83	240.26	239.63	---	238.68	239.10	237.10	235.21	---	---	228.36	---
9	240.79	239.71	239.63	---	238.64	238.87	237.07	235.40	---	---	228.59	---
10	240.77	240.16	239.47	---	239.20	238.63	237.03	235.41	---	---	228.53	228.27
11	240.70	240.16	239.14	---	239.20	238.53	236.80	235.40	---	---	228.44	228.29
12	240.77	239.99	239.04	---	239.17	238.45	236.80	235.21	---	---	228.34	228.24
13	240.92	240.08	239.04	---	238.89	238.54	236.80	235.08	---	---	228.48	227.97
14	240.90	240.05	239.28	---	238.89	238.54	237.02	234.57	---	---	228.48	227.77
15	240.69	239.99	239.28	---	238.97	238.47	237.02	234.53	---	---	228.39	227.80
16	240.63	239.94	239.27	---	238.86	238.26	236.79	234.49	---	---	228.30	227.82
17	240.59	239.94	239.39	---	238.81	238.27	236.31	234.33	---	---	228.27	228.17
18	240.56	239.87	239.39	---	---	238.50	236.34	234.33	232.02	---	228.10	228.18
19	240.88	239.94	239.22	---	---	238.55	236.40	234.21	232.13	---	228.26	228.14
20	240.88	240.08	239.13	---	---	238.55	236.41	---	232.12	---	228.25	228.00
21	240.48	240.03	239.32	---	---	238.16	236.50	---	231.97	---	228.27	228.00
22	240.54	239.63	239.32	---	---	238.16	236.53	---	231.97	---	228.30	228.02
23	240.56	239.69	239.14	---	---	237.74	236.53	234.30	231.69	---	228.28	228.36
24	240.52	239.56	239.18	---	---	238.17	236.24	234.38	231.69	---	228.26	228.34
25	240.42	239.52	239.18	---	---	238.22	236.03	234.38	231.50	---	228.11	228.13
26	240.13	239.46	239.21	---	---	238.09	236.03	234.25	231.50	---	228.11	228.10
27	240.36	239.63	239.21	---	239.06	237.83	236.03	234.08	231.50	---	228.04	228.10
28	240.42	239.54	239.14	---	239.17	237.83	236.26	234.07	231.50	---	228.07	228.13
29	240.52	239.27	238.94	---	239.11	237.57	236.26	233.96	231.51	---	228.21	228.17
30	240.52	239.15	238.75	---	---	237.68	235.85	233.75	231.51	---	228.19	227.99
31	240.31	---	239.05	---	---	237.69	---	233.62	---	228.97	228.00	---
LOW	241.12	240.40	239.65	---	239.20	239.10	237.75	235.72	233.80	231.49	228.79	228.36

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228.44	227.76	226.63	---	---	223.35	222.19	220.50	218.05	---	---	---
2	228.61	227.76	226.59	---	---	223.35	222.19	220.36	217.95	---	---	---
3	228.40	227.75	226.59	---	---	223.41	222.19	220.36	217.93	---	---	e213.3
4	228.18	227.46	226.59	---	---	223.41	221.90	220.36	217.93	---	---	---
5	228.19	227.46	226.53	---	---	223.41	221.98	220.32	217.80	---	---	---
6	228.33	227.45	226.42	---	---	223.41	222.06	220.32	217.62	---	---	---
7	228.32	227.45	226.42	---	---	223.41	222.18	220.10	217.62	---	---	---
8	228.18	227.81	226.42	---	---	223.41	222.18	220.10	217.50	---	---	---
9	228.34	227.64	226.42	---	---	223.41	222.19	220.10	217.47	---	---	---
10	228.34	227.61	226.42	---	---	223.34	222.20	220.10	---	---	---	---
11	227.97	227.46	226.58	---	---	223.34	222.20	219.94	---	---	---	---
12	228.10	227.46	226.58	---	---	223.31	222.21	219.94	---	---	---	e212.9
13	228.11	227.46	226.58	---	224.56	223.23	221.94	219.49	---	---	---	---
14	228.10	227.30	226.63	---	224.60	223.23	221.54	219.34	---	---	---	---
15	228.10	226.88	226.85	---	224.62	223.23	221.47	219.34	---	---	---	---
16	227.94	226.88	226.78	---	224.62	222.79	221.47	219.34	---	---	---	---
17	227.94	226.89	226.79	---	224.35	222.85	221.47	219.34	---	e214.82	---	---
18	227.94	226.89	226.80	---	224.32	222.85	221.35	218.99	---	---	---	---
19	227.73	226.81	---	---	224.32	223.01	221.28	218.99	---	---	---	---
20	228.01	226.76	---	---	224.16	223.01	221.15	218.87	---	---	---	---
21	228.01	226.99	---	---	224.16	222.86	220.97	218.87	---	---	---	---
22	228.01	226.99	---	---	224.16	222.92	221.05	218.85	---	---	---	---
23	228.00	226.91	---	---	224.16	222.92	221.05	218.85	---	---	---	---
24	228.00	226.92	---	---	224.16	222.50	221.00	218.80	---	---	---	---
25	227.69	226.92	---	---	224.16	222.50	221.00	218.48	---	---	---	---
26	228.47	226.92	---	---	223.82	222.50	221.00	218.48	---	---	---	---
27	228.50	226.92	---	---	223.55	222.28	221.00	218.48	---	---	---	---
28	228.38	226.77	---	---	223.35	222.26	220.41	218.48	---	---	---	---
29	227.76	226.63	---	---	---	222.26	---	218.48	---	---	---	---
30	227.76	226.69	---	---	---	222.26	220.56	218.44	---	---	---	---
31	227.76	---	---	---	---	222.26	---	218.33	---	---	---	---
LOW	228.61	227.81	226.85	---	224.62	223.41	222.21	220.50	218.05	214.82	---	213.30

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	212.53	212.15	210.21	209.27
2	---	---	---	---	---	---	---	---	212.76	212.06	210.22	209.27
3	---	---	---	---	---	---	---	---	212.76	212.01	210.22	209.18
4	---	---	---	---	---	---	---	212.87	212.70	211.95	210.22	209.40
5	---	---	---	---	---	---	---	212.85	212.76	211.77	210.22	209.40
6	---	---	---	---	---	---	---	212.79	212.76	211.72	---	209.40
7	---	---	---	---	---	---	---	212.79	212.75	211.72	---	209.40
8	---	---	---	---	---	---	---	212.77	212.62	211.72	209.85	209.35
9	---	---	---	---	---	---	---	212.75	212.65	211.63	209.83	209.23
10	---	---	---	---	---	---	---	212.75	212.57	211.54	---	209.52
11	---	---	---	---	---	---	---	212.67	212.49	211.43	---	209.54
12	---	---	---	---	---	---	---	212.50	212.64	211.31	---	209.53
13	---	---	---	---	---	---	---	212.47	212.64	211.15	---	209.61
14	---	---	---	---	---	---	---	212.38	212.75	211.12	209.83	209.61
15	---	---	---	---	---	---	---	212.64	212.75	211.15	209.64	209.61
16	---	---	---	---	---	---	---	212.69	212.53	211.24	209.44	209.61
17	---	---	---	---	---	---	---	212.54	212.62	211.15	209.47	209.56
18	---	---	---	---	---	---	---	212.70	212.63	211.04	209.47	209.38
19	---	---	---	---	---	---	---	212.77	212.64	---	209.43	209.37
20	---	---	---	---	---	---	---	212.71	212.63	---	209.45	209.37
21	---	---	---	---	---	---	---	212.56	212.71	---	209.45	209.37
22	---	---	---	---	---	---	---	212.41	212.74	---	209.45	209.42
23	---	---	---	---	---	---	---	212.41	212.60	---	209.41	209.43
24	---	---	---	---	---	---	---	212.41	212.36	210.72	209.23	209.43
25	---	---	---	---	---	---	---	212.54	212.29	210.63	209.28	209.35
26	---	---	---	---	---	---	---	212.50	212.23	210.63	209.32	209.34
27	---	---	---	---	---	---	---	212.40	212.25	210.63	209.27	209.35
28	---	---	---	e214.39	---	---	---	212.49	212.32	210.42	209.27	209.42
29	---	---	---	---	---	---	---	212.56	212.31	210.39	209.27	209.46
30	---	---	---	---	---	---	---	212.55	212.35	210.45	209.27	209.64
31	---	---	---	---	---	---	---	212.55	---	210.43	209.27	---
LOW	---	---	---	214.39	---	---	---	212.87	212.76	212.15	210.22	209.64

e Estimated

SITE NUMBER FROM LOCATION MAP.—8.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E19DABA2.

SITE ID (STATION NUMBER).—442802103544602.

OTHER IDENTIFIER.—LA-96C and Tinton Road Mnls.

LOCATION.—Lat 44°27′59.6″, long 103°54′49.2″, in NE1/4NW1/4NE1/4SE1/4 sec. 19, T. 6N., R. 2 E., Hydrologic Unit 10120203, 2 mi south of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 320 ft deep with 249 ft of 5-in. steel casing; open hole from 249 to 320 ft.

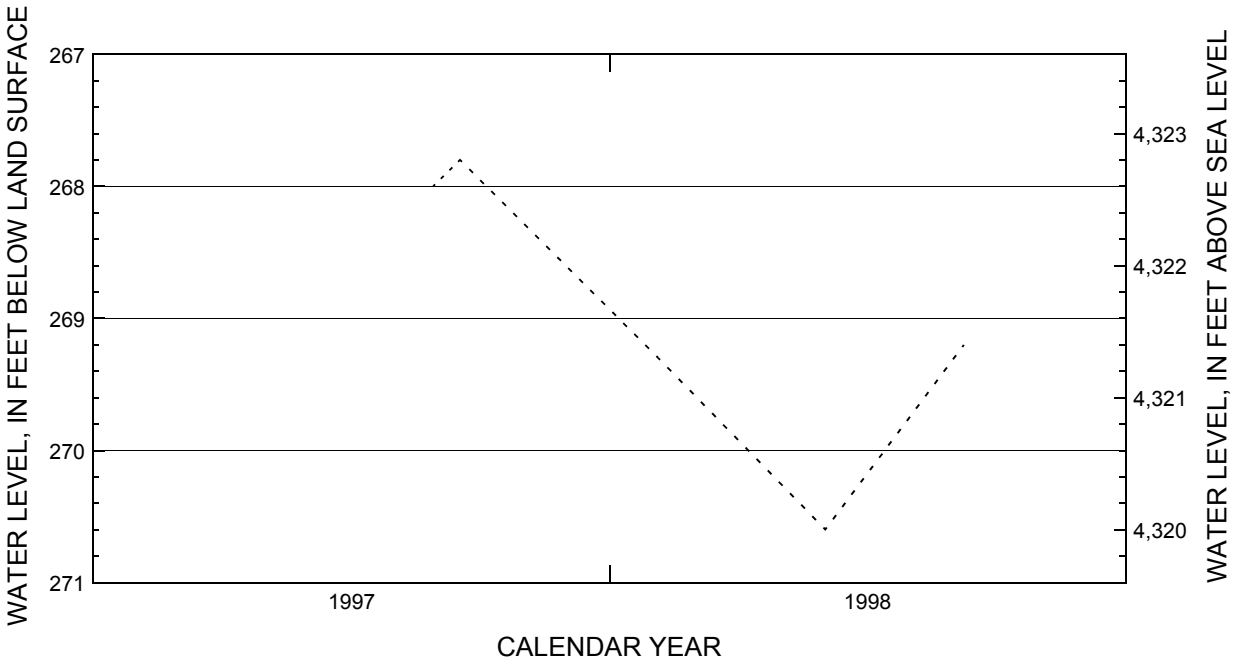
INSTRUMENTATION.—None.

DATUM.—Elevation of land-surface datum is 4,590.6 ft above sea level. Measuring point: Top of steel casing, 1.7 ft above land-surface datum.

REMARKS.—No recorder.

PERIOD OF RECORD.—August 1997 to September 1998.

EXTREMES.—Highest instantaneous water level, 267.8 ft below land-surface datum, Sept. 17, 1997; lowest water level, 270.6 ft below land-surface datum, June 2, 1998.



SITE NUMBER 8—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	e267.8
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	e268.0	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	268.00	267.80

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	e270.6	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	e269.3	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	e269.2
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	269.30	---	---	---	270.60	---	---	269.20

e Estimated

SITE NUMBER FROM LOCATION MAP.—9.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E19DABA.

SITE ID (STATION NUMBER).—442802103544601.

OTHER IDENTIFIER.—LA-96B and Tinton Road Mdsn.

LOCATION.—Lat 44°27′59.6″, long 103°54′49.2″, in NE1/4NW1/4NE1/4SE1/4 sec. 19, T. 6N., R. 2 E., Hydrologic Unit 10120203, 2 mi south of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,100 ft deep with 580 ft of 5-in. steel casing; open hole from 580 to 1,100 ft.

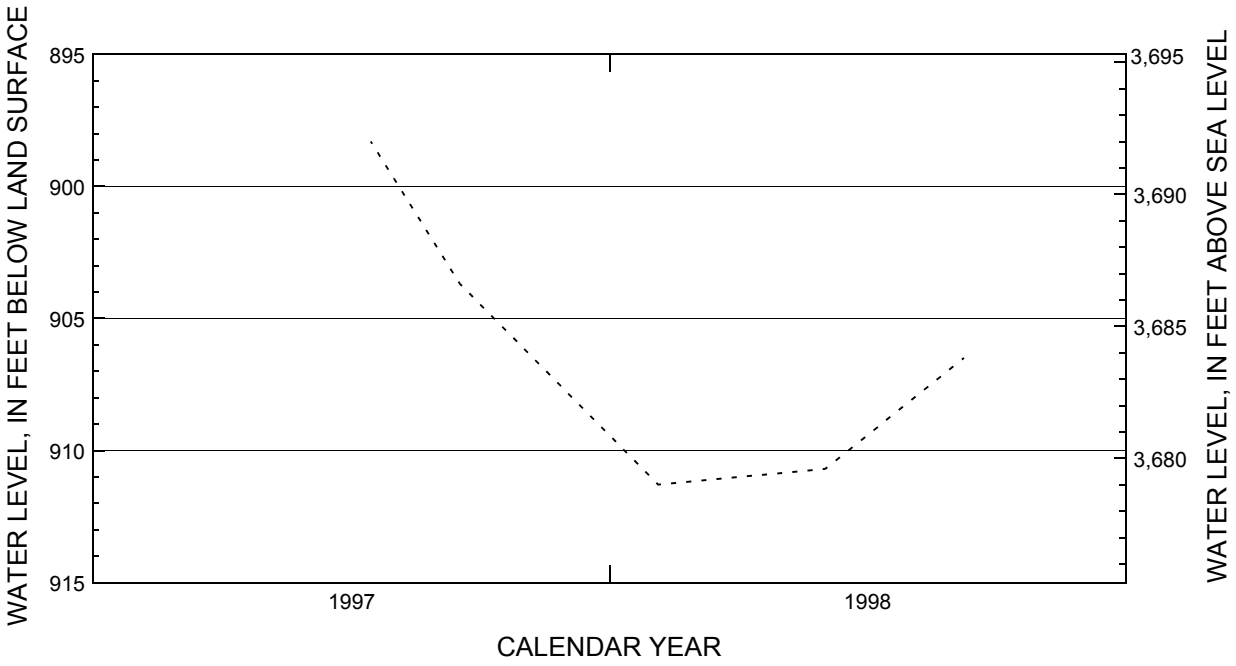
INSTRUMENTATION.—None.

DATUM.—Elevation of land-surface datum is 4,590.3 ft above sea level. Measuring point: Top of steel casing, 1.8 ft above land-surface datum.

REMARKS.—No recorder.

PERIOD OF RECORD.—May 1997 to September 1998.

EXTREMES.—Highest instantaneous water level, 898.3 ft below land-surface datum, July 16, 1997; lowest water level, 911.3 ft below land-surface datum, Feb. 4, 1998.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	e898.3	---	---
17	---	---	---	---	---	---	---	---	---	---	---	e903.7
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	898.30	---	903.70

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	e910.7	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	e911.3	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	e906.5
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	911.30	---	---	---	910.70	---	---	906.50

e Estimated

SITE NUMBER FROM LOCATION MAP.—10.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E14BCCC2.

SITE ID (STATION NUMBER).—442854103505602.

OTHER IDENTIFIER.—LA-88C and Spearfish GC Mdsn.

LOCATION.—Lat 44°28′54.4″, long 103°50′53.6″, in SW1/4SW1/4SW1/4NW1/4 sec. 14, T. 6 N., R. 2 E., Hydrologic Unit 10120203, at Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 680 ft deep with 570 ft of 5-in. steel casing; open hole from 570 to 680 ft.

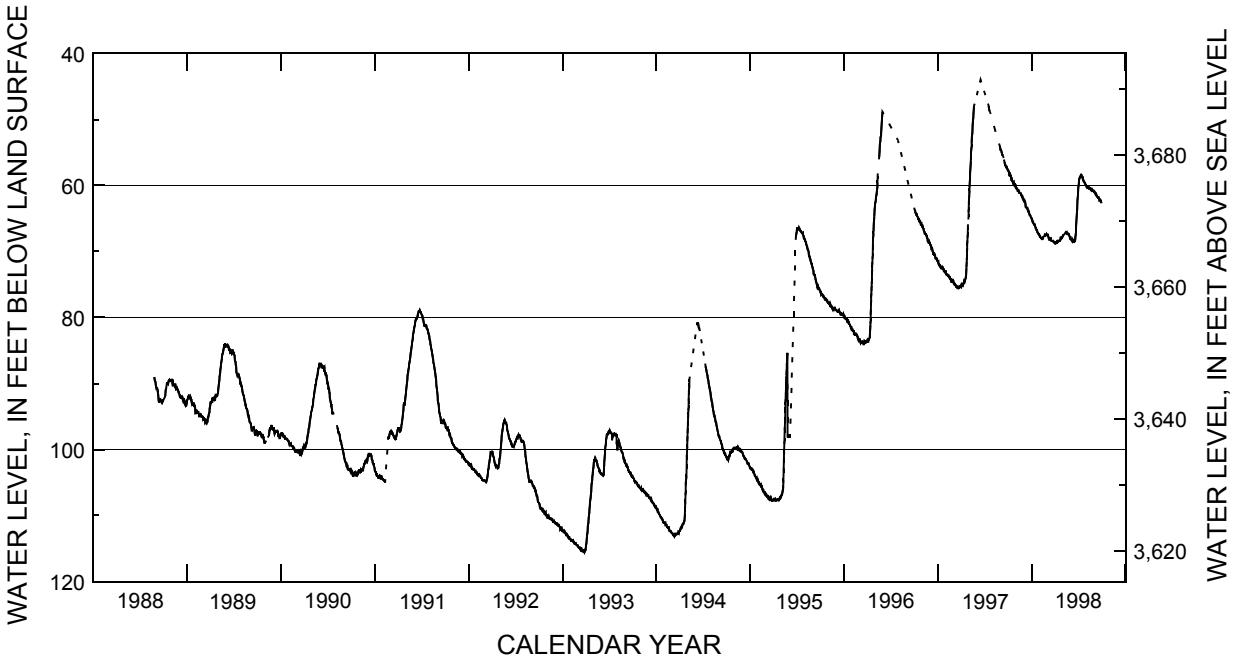
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,735.4 ft above sea level. Measuring point: Top of steel casing, 1.75 ft above land-surface datum.

REMARKS.—Records prior to February 1991 fair. Air pumping in February 1991 may have caused change in water level of about 7 ft. Records since pumping are good. Highest water level was estimated. The ADR was not operating properly at the peak, and no gage readings were recorded.

PERIOD OF RECORD.—August 1988 to September 1998.

EXTREMES.—Highest daily water level, 44 ft (estimated) below land-surface datum, June 16, 1997; lowest daily water level, 115.48 ft below land-surface datum, Mar. 28, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101.17	99.60	100.40	102.74	104.66	106.84	107.57	107.28	98.07	67.13	68.10	72.40
2	101.19	99.84	100.46	102.88	104.91	106.78	107.60	107.01	98.07	66.81	68.19	72.56
3	101.51	99.81	100.58	102.92	105.08	106.68	107.73	107.01	98.07	66.51	68.39	72.76
4	101.57	99.77	100.75	102.98	105.05	106.76	107.71	106.98	98.07	66.49	68.44	72.91
5	101.48	99.85	100.88	102.71	105.11	106.79	107.49	106.91	98.07	66.55	68.53	73.09
6	101.22	99.85	100.93	102.81	105.18	107.04	107.51	106.65	98.07	66.60	68.56	73.43
7	101.50	99.83	101.03	102.95	105.31	107.16	107.51	106.52	---	66.61	68.69	73.45
8	101.58	99.84	101.10	103.04	105.30	107.13	107.48	106.34	---	66.64	69.00	73.52
9	101.35	99.83	101.21	103.07	105.30	107.03	107.72	106.13	---	66.56	69.15	73.63
10	101.14	99.69	101.30	103.07	105.40	107.05	107.79	105.78	---	66.58	69.22	73.63
11	100.97	99.65	101.25	103.15	105.52	107.05	107.78	104.70	---	66.43	69.33	73.83
12	100.98	99.62	101.35	103.34	105.63	107.21	107.72	103.19	---	66.51	69.53	73.97
13	101.01	99.87	101.35	103.47	105.64	107.46	107.72	101.65	---	66.65	69.66	74.25
14	100.82	100.05	101.43	103.47	105.48	107.55	107.50	100.44	---	66.77	69.76	74.42
15	100.48	100.04	101.48	103.39	105.60	107.55	107.63	98.75	---	66.84	69.80	74.55
16	100.57	99.74	101.55	103.52	105.80	107.59	107.76	97.06	---	66.95	69.98	74.72
17	100.52	99.81	101.71	103.65	105.82	107.61	107.66	95.56	---	66.96	70.12	74.82
18	100.51	100.01	101.72	103.80	106.06	107.52	107.63	94.09	---	66.95	70.55	75.04
19	100.46	100.01	101.77	103.92	106.08	107.41	107.58	92.84	---	67.01	70.70	75.15
20	100.38	99.96	101.86	104.03	106.22	107.44	107.44	91.63	---	67.07	70.73	75.37
21	100.27	100.21	102.00	104.04	106.16	107.35	107.72	90.31	---	67.11	70.85	75.47
22	100.33	100.26	102.11	104.10	106.25	107.51	107.72	89.33	---	67.18	71.04	75.32
23	100.35	100.27	102.07	104.13	106.44	107.54	107.67	88.33	---	67.19	71.14	75.49
24	100.35	100.16	101.99	104.29	106.44	107.46	107.60	87.31	---	67.31	71.23	75.52
25	100.28	100.17	102.16	104.29	106.36	107.69	107.47	86.39	---	67.36	71.52	75.53
26	100.07	100.00	102.18	104.27	106.54	107.76	107.55	85.37	---	67.33	71.62	75.57
27	99.89	100.09	102.36	104.49	106.76	107.83	107.47	98.07	---	67.56	71.77	75.70
28	99.91	100.33	102.36	104.72	106.82	107.83	107.36	98.07	67.85	67.76	71.85	75.71
29	99.99	100.39	102.52	104.74	---	107.82	107.40	98.07	67.61	67.76	71.89	75.90
30	99.99	100.38	102.66	104.67	---	107.70	107.31	98.07	67.41	68.03	72.18	76.02
31	99.93	---	102.73	104.60	---	107.60	---	98.07	---	68.12	72.30	---
LOW	101.58	100.39	102.73	104.74	106.82	107.83	107.79	107.28	98.07	68.12	72.30	76.02

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76.14	77.83	78.83	79.96	81.89	83.26	83.50	63.19	---	---	---	---
2	76.20	77.79	78.92	79.96	81.98	83.32	83.57	62.80	---	---	---	---
3	76.13	77.69	---	79.71	82.00	83.33	83.69	62.55	---	---	---	---
4	76.22	77.90	---	80.07	82.00	83.39	83.70	62.36	---	---	---	---
5	76.41	78.02	---	80.16	82.00	83.62	83.69	62.01	---	---	---	---
6	76.36	77.91	78.97	80.17	81.99	83.80	83.44	61.71	---	---	---	---
7	76.44	77.85	78.97	80.17	82.06	83.90	83.37	61.40	---	---	---	---
8	76.56	78.12	79.15	80.17	82.07	83.84	83.32	61.25	---	---	---	---
9	76.59	78.04	79.17	80.18	82.25	83.73	83.27	60.96	---	---	---	---
10	76.59	78.22	79.17	80.27	82.55	83.69	83.03	60.33	---	---	---	---
11	76.74	78.22	79.02	80.32	82.63	83.67	82.99	59.60	---	---	---	---
12	76.86	78.34	78.95	80.33	82.59	83.64	82.39	58.60	---	---	---	---
13	76.86	78.33	78.90	80.28	82.47	83.84	81.61	---	---	---	---	---
14	76.84	78.43	79.12	80.51	82.61	83.86	80.54	---	---	---	---	---
15	76.83	78.43	79.13	80.43	82.76	83.79	79.19	---	---	---	---	---
16	76.92	78.51	79.21	80.29	82.66	83.76	77.77	---	---	---	---	---
17	77.03	78.69	79.39	80.76	82.63	83.93	76.72	---	---	---	---	---
18	77.26	78.74	79.37	80.76	82.51	84.06	75.64	55.66	---	---	---	---
19	77.25	78.52	79.36	80.67	82.54	84.06	74.54	54.90	---	---	---	---
20	77.04	78.64	79.36	80.71	82.73	83.95	73.20	54.31	---	---	---	---
21	77.23	78.62	79.55	80.99	82.75	83.88	72.03	53.75	---	---	---	---
22	77.26	78.65	79.55	80.99	82.76	83.67	70.73	53.29	---	---	---	---
23	77.29	78.50	79.51	81.06	82.87	83.77	69.38	52.83	---	---	---	---
24	77.20	78.69	79.56	81.08	82.95	83.86	68.11	52.61	---	---	---	---
25	77.27	78.55	79.58	81.20	83.16	83.84	67.38	52.36	---	---	---	---
26	77.42	78.52	79.63	81.32	83.16	83.69	66.48	51.55	---	---	---	---
27	77.58	78.58	79.65	81.36	83.46	83.71	65.71	51.07	---	---	---	---
28	77.60	78.63	79.58	81.44	83.56	83.61	65.16	50.30	---	---	---	---
29	77.55	78.85	79.56	81.65	83.42	83.62	64.23	49.64	---	---	---	---
30	77.70	78.82	79.51	81.70	---	83.65	63.71	48.84	---	e53.17	---	---
31	77.79	---	79.71	81.65	---	83.65	---	---	---	---	---	---
LOW	77.79	78.85	79.71	81.70	83.56	84.06	83.70	63.19	---	53.17	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	66.26	68.70	71.45	73.18	74.54	75.39	63.66	---	---	---	54.49
2	---	66.32	68.96	71.55	73.30	74.49	75.43	62.59	---	---	---	54.64
3	63.78	66.28	69.05	71.53	73.43	74.68	75.18	61.78	---	---	---	54.64
4	63.81	66.37	69.11	71.88	73.54	74.84	74.87	60.86	---	---	---	54.69
5	63.94	66.47	69.00	72.06	73.54	74.97	74.89	59.90	---	---	---	54.81
6	64.13	66.56	69.25	72.04	73.60	74.91	75.00	59.09	---	---	---	54.89
7	64.19	66.84	69.55	72.05	73.62	74.88	75.14	58.07	---	---	---	55.06
8	64.28	66.88	69.53	72.06	73.61	75.04	75.17	57.36	---	---	---	55.27
9	64.47	67.02	69.49	72.15	73.74	75.07	74.98	56.68	---	---	---	55.39
10	64.49	67.07	69.54	72.24	73.74	75.06	74.97	55.72	---	---	---	55.43
11	64.43	67.28	69.84	72.42	73.76	75.08	74.92	54.90	---	---	---	55.47
12	64.62	67.34	70.01	72.45	73.73	75.14	74.77	54.18	---	---	---	---
13	64.68	67.41	70.04	72.45	73.79	75.38	74.58	53.25	---	---	---	---
14	64.80	67.35	70.39	72.25	73.87	75.38	74.46	52.65	---	---	---	---
15	64.84	67.36	70.40	72.55	74.00	75.31	74.59	52.09	---	---	---	---
16	64.92	67.50	70.36	72.55	73.96	75.18	74.54	51.37	e44	---	---	---
17	65.14	67.58	70.56	72.50	73.83	75.50	74.36	50.80	---	---	---	---
18	65.16	67.65	70.58	72.56	74.14	75.55	74.22	50.11	---	47.99	---	56.48
19	64.96	67.65	70.53	72.50	74.07	75.51	74.06	49.78	---	48.31	---	56.80
20	65.24	67.92	70.46	72.43	74.23	75.45	73.98	49.11	---	48.51	---	56.92
21	65.46	68.02	70.63	72.50	74.32	75.56	73.54	48.50	---	48.68	---	56.93
22	65.46	68.06	70.80	72.56	74.53	75.58	72.95	48.01	---	48.80	---	57.01
23	65.51	68.41	71.03	72.65	74.63	75.50	71.96	---	---	---	---	57.18
24	65.52	68.42	71.05	72.90	74.63	75.58	70.94	---	---	---	---	57.16
25	65.47	68.57	71.10	72.90	74.41	75.57	69.90	---	---	---	---	57.20
26	65.84	68.69	71.09	73.02	74.34	75.48	68.78	---	---	---	---	57.18
27	65.95	68.71	70.95	73.10	74.19	75.31	67.53	---	---	---	---	57.33
28	65.97	68.57	71.27	73.10	74.41	75.37	66.30	---	---	---	---	57.45
29	65.88	68.65	71.27	73.14	---	75.48	---	---	---	---	---	57.55
30	66.07	68.72	71.44	73.02	---	75.44	64.77	---	---	---	54.06	57.66
31	66.17	---	71.45	73.00	---	75.26	---	---	---	---	54.12	---
LOW	66.17	68.72	71.45	73.14	74.63	75.58	75.43	63.66	44.00	48.80	54.12	57.66

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57.72	60.24	62.27	64.94	67.57	67.53	68.71	67.74	67.91	60.93	59.96	61.03
2	57.72	60.37	62.32	65.14	67.78	67.55	68.81	67.73	68.15	60.31	60.05	61.03
3	57.84	60.40	62.46	65.12	67.78	67.55	68.83	67.72	68.15	59.92	60.17	60.97
4	57.92	60.54	62.53	65.37	67.78	67.50	68.82	67.54	68.20	59.58	60.31	61.08
5	58.07	60.55	62.51	65.50	67.91	67.59	68.64	67.54	68.29	59.19	60.36	61.17
6	58.26	60.54	62.42	65.50	67.94	67.59	68.64	67.52	68.32	58.93	60.35	61.26
7	58.18	60.65	62.54	65.61	67.93	67.79	68.71	---	68.33	58.84	60.30	61.37
8	58.33	60.84	62.89	65.74	67.95	67.89	68.75	---	68.29	58.73	60.28	61.36
9	58.49	60.84	63.21	65.79	68.11	67.97	68.75	---	68.37	58.67	60.43	61.29
10	58.54	60.78	63.30	65.87	68.16	68.21	68.75	---	68.24	58.61	60.44	61.39
11	58.43	60.78	63.33	65.98	68.16	68.21	68.66	---	68.25	58.48	60.44	61.60
12	58.65	60.85	63.36	66.01	68.15	67.97	68.29	---	68.42	58.39	60.46	61.68
13	58.86	61.08	63.38	66.07	68.04	68.06	68.49	---	68.38	58.38	60.49	61.68
14	59.04	61.11	63.40	66.05	67.97	68.08	68.50	67.07	68.52	58.40	60.49	61.73
15	59.19	61.12	63.48	66.21	67.78	68.13	68.50	67.12	68.52	58.62	60.48	61.84
16	59.23	61.09	63.48	66.33	---	68.11	68.50	67.18	68.43	58.70	60.40	61.86
17	59.18	61.14	63.68	66.50	---	68.08	68.44	67.12	68.50	58.75	60.49	61.87
18	59.35	61.18	63.91	66.50	---	68.34	68.44	67.25	68.50	58.72	60.50	61.88
19	59.47	61.18	63.91	66.63	---	68.42	68.40	67.37	68.40	58.86	60.62	61.86
20	59.58	61.25	63.87	66.75	67.73	68.42	68.42	67.38	68.17	58.96	60.75	62.05
21	59.63	61.41	64.08	66.83	67.69	68.42	68.42	67.29	67.78	59.16	60.76	62.18
22	59.52	61.42	64.08	66.93	67.50	68.44	68.40	67.26	67.31	59.38	60.68	62.25
23	59.45	61.51	64.32	66.91	67.54	68.44	68.23	67.31	66.64	59.40	60.64	62.24
24	59.81	61.66	64.44	67.17	67.54	68.44	67.91	67.47	65.83	59.44	60.61	62.23
25	59.92	61.67	64.49	67.25	67.59	68.39	67.89	67.48	65.14	59.50	60.68	62.17
26	59.85	61.66	64.51	67.25	67.48	68.41	68.08	67.48	64.36	59.61	60.68	62.19
27	59.77	61.88	64.59	67.29	67.39	68.51	68.09	67.46	63.65	59.65	60.71	62.46
28	59.88	62.03	64.65	67.37	67.49	68.52	68.04	67.67	62.95	59.73	60.83	62.46
29	59.88	62.05	64.87	67.43	---	68.59	67.90	67.75	62.19	59.75	60.86	62.56
30	59.87	62.09	64.91	67.43	---	68.65	67.78	67.81	61.50	59.88	60.86	62.70
31	60.04	---	---	67.52	---	68.67	---	67.96	---	59.94	60.95	---
LOW	60.04	62.09	64.91	67.52	68.16	68.67	68.83	67.96	68.52	60.93	60.95	62.70

e Estimated

SITE NUMBER FROM LOCATION MAP.—11.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E14BCCC.

SITE ID (STATION NUMBER).—442854103505601.

OTHER IDENTIFIER.—LA-88B and Spearfish GC Mnls.

LOCATION.—Lat 44°28′54.4″, long 103°50′53.6″, in SW1/4SW1/4SW1/4NW1/4 sec. 14, T. 6 N., R. 2 E., Hydrologic Unit 10120203, at Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 222 ft deep with 5-in. steel casing to 189 ft. Originally drilled to 497 ft but lost drill stem and was plugged back to 222 ft with cement grout. Open hole from 189 to 222 ft.

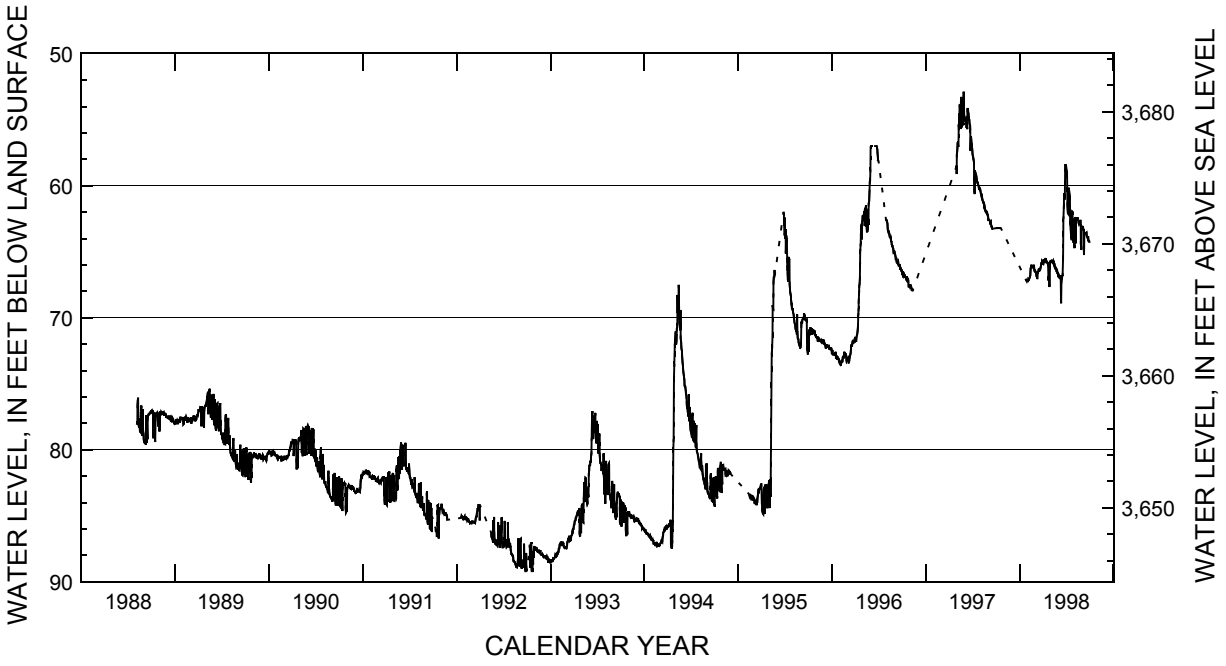
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,734.4 ft above sea level. Measuring point: Top of steel casing, 1.07 ft above land-surface datum.

REMARKS.—Records good. Water levels affected by pumping of nearby well.

PERIOD OF RECORD.—August 1988 to September 1998.

EXTREMES.—Highest daily water level, 52.90 ft below land-surface datum, May 29, 1997; lowest daily water level, 89.20 ft below land-surface datum, Sept. 25-27, 30 and Oct. 21-23, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84.27	81.11	81.72	---	---	83.79	82.61	82.62	---	63.77	69.33	72.27
2	84.30	81.27	81.75	---	---	83.71	82.61	82.32	---	62.44	69.33	72.17
3	82.67	81.27	81.83	---	---	83.67	84.08	84.19	---	64.02	69.57	72.04
4	82.57	81.25	81.87	---	---	83.79	84.08	84.41	---	63.86	69.70	70.58
5	82.31	81.40	---	---	---	83.79	84.63	82.91	---	63.33	69.76	70.29
6	82.10	81.42	---	---	---	84.04	84.74	82.25	---	65.13	69.87	70.39
7	82.10	81.52	---	---	---	84.07	84.81	83.51	---	63.73	70.01	70.39
8	83.36	81.54	---	---	---	84.02	84.82	83.54	---	63.84	70.33	70.20
9	83.44	81.53	---	---	---	83.87	84.87	81.11	---	63.93	70.42	70.15
10	82.96	81.45	---	---	---	83.95	83.31	77.80	---	64.09	70.46	70.05
11	83.42	81.47	---	---	---	83.91	83.00	75.08	---	65.63	70.58	69.96
12	83.68	81.46	---	---	---	83.99	82.81	72.77	---	66.25	70.72	69.99
13	82.20	81.81	---	---	---	84.14	84.35	72.60	---	66.77	70.89	70.08
14	81.58	81.93	---	---	83.39	84.19	84.69	72.18	---	67.10	70.94	70.08
15	81.39	81.90	---	---	83.48	84.09	84.83	71.30	---	67.26	70.92	69.68
16	81.52	81.55	---	---	83.62	84.00	83.10	69.04	---	65.89	70.95	69.86
17	81.52	81.77	---	---	83.55	83.95	82.83	69.35	---	65.45	70.96	69.84
18	81.42	81.92	---	---	83.69	83.69	82.62	69.36	---	65.40	71.26	69.97
19	83.08	81.88	---	---	83.69	83.39	84.25	67.29	---	65.55	69.75	70.01
20	83.11	81.75	---	---	83.66	83.35	84.34	66.95	---	65.61	71.21	70.15
21	82.87	81.95	---	---	83.49	83.17	82.84	66.95	---	67.45	71.40	70.20
22	83.00	81.96	---	---	83.48	83.22	82.83	66.92	---	67.79	71.58	70.07
23	81.39	81.90	---	---	83.63	83.20	82.65	66.41	---	68.02	71.61	70.21
24	81.23	81.74	---	---	83.56	82.90	84.02	66.79	---	68.16	71.65	70.21
25	81.12	81.73	---	---	83.48	83.03	84.43	---	---	68.30	71.89	70.17
26	80.93	81.57	---	---	83.63	83.01	83.00	---	---	68.37	71.92	71.75
27	82.49	81.61	---	---	83.79	82.96	84.19	---	e61.99	68.68	72.01	72.35
28	83.13	81.80	---	---	83.79	82.94	84.34	---	62.10	68.95	72.05	72.46
29	83.27	81.86	---	---	---	82.89	82.76	---	63.01	68.93	72.03	72.60
30	81.58	81.74	---	---	---	82.74	82.62	---	62.38	69.29	72.28	72.78
31	82.62	---	---	---	---	82.62	---	---	---	69.38	72.30	---
LOW	84.30	81.96	81.87	---	83.79	84.19	84.87	84.41	63.01	69.38	72.30	72.78

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71.08	71.46	71.74	72.69	73.47	73.01	71.69	62.33	---	58.11	62.64	65.05
2	72.27	71.50	71.86	72.69	73.53	73.13	71.45	62.35	---	---	62.64	65.13
3	72.58	71.53	72.04	72.45	73.55	73.09	71.68	62.27	---	---	62.74	65.23
4	70.92	71.53	71.95	72.78	73.51	73.04	71.74	62.30	---	---	62.85	65.26
5	70.99	71.39	72.02	72.79	73.54	73.16	71.74	62.30	---	---	62.99	65.36
6	71.35	71.55	72.04	72.79	73.44	73.28	71.54	62.03	---	---	63.28	65.52
7	71.12	71.70	72.10	72.79	73.33	73.39	71.36	61.93	---	---	63.46	65.49
8	70.98	71.69	72.27	72.76	73.33	73.38	71.30	63.04	---	---	63.53	65.51
9	70.79	71.45	72.29	72.77	73.18	73.23	71.27	61.82	---	---	63.51	65.66
10	70.79	71.75	72.29	72.79	73.38	73.07	71.01	61.78	---	---	63.48	65.80
11	70.78	71.75	72.19	72.79	73.33	73.01	70.83	61.68	---	---	63.53	65.84
12	70.86	71.69	72.12	72.78	73.20	72.87	70.65	61.73	---	---	63.63	65.79
13	70.95	71.75	72.03	72.65	72.98	72.79	69.82	61.49	---	---	63.83	65.69
14	71.30	71.73	72.19	72.86	72.96	72.71	69.31	63.11	---	---	63.88	65.67
15	70.90	71.73	72.19	72.80	73.10	72.44	68.73	61.75	---	---	63.89	65.74
16	70.80	71.73	72.13	72.59	72.90	72.13	68.13	63.24	---	---	63.94	65.84
17	70.90	71.73	72.25	73.03	72.85	72.03	67.56	63.47	---	---	63.91	66.05
18	70.97	71.61	72.20	73.03	72.65	72.14	67.49	63.47	---	---	64.07	66.05
19	71.20	71.74	72.12	72.86	72.65	72.14	67.03	63.44	---	---	64.24	66.03
20	71.19	71.82	72.13	72.91	72.77	72.05	66.01	63.23	---	---	64.20	65.94
21	70.91	71.77	72.34	73.13	72.79	71.92	64.98	63.30	---	---	64.43	66.03
22	71.14	71.67	72.34	73.13	72.73	71.84	64.38	62.53	---	---	64.49	66.16
23	71.14	71.70	72.30	73.00	72.76	71.69	63.78	62.95	---	---	64.56	66.35
24	71.08	71.69	72.35	72.99	72.77	71.92	63.29	61.36	57.00	---	64.56	66.30
25	71.09	71.69	72.35	73.03	72.93	71.92	62.95	61.19	57.12	---	64.66	66.24
26	70.98	71.69	72.39	73.06	72.93	71.80	62.94	60.89	57.25	---	64.72	66.32
27	71.21	71.81	72.39	73.13	73.20	71.79	64.07	60.50	57.47	---	64.79	66.34
28	71.26	71.77	72.31	73.14	73.28	71.78	62.73	59.70	57.81	---	64.98	66.45
29	71.35	71.66	72.32	73.30	73.22	71.69	62.65	59.60	58.09	---	65.09	66.46
30	71.35	71.74	72.28	73.35	---	71.77	62.33	58.77	58.10	62.55	65.05	66.36
31	71.26	---	72.50	73.30	---	71.79	---	57.01	---	62.59	64.93	---
LOW	72.58	71.82	72.50	73.35	73.55	73.39	71.74	63.47	58.10	62.59	65.09	66.46

e Estimated

SITE NUMBER 11—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.69	67.65	---	---	---	---	---	59.11	54.85	57.37	60.33	62.63
2	66.74	67.58	---	---	---	---	---	57.65	54.95	57.59	60.42	62.66
3	66.59	67.55	---	---	---	---	---	57.42	55.04	57.77	60.57	62.60
4	66.50	67.56	---	---	---	---	---	57.05	55.01	57.82	60.67	62.58
5	66.62	67.64	---	---	---	---	---	56.73	54.94	57.95	60.74	62.62
6	66.73	67.77	---	---	---	---	---	56.67	55.05	57.99	60.84	62.64
7	66.69	67.93	---	---	---	---	---	56.93	55.17	58.22	60.82	62.74
8	66.75	67.88	---	---	---	---	---	57.05	55.40	59.47	60.79	62.87
9	66.88	67.88	---	---	---	---	---	55.37	55.61	60.42	61.08	62.88
10	66.87	67.99	---	---	---	---	---	55.79	54.75	60.63	61.11	62.81
11	66.73	---	---	---	---	---	---	54.54	55.72	58.92	61.18	62.77
12	66.89	---	---	---	---	---	---	55.59	54.25	58.92	61.28	62.94
13	66.89	---	---	---	---	---	---	53.85	54.13	59.03	61.28	63.06
14	66.97	---	---	---	---	---	---	55.45	54.23	59.11	61.21	63.12
15	66.97	---	---	---	---	---	---	55.54	54.44	59.14	61.35	63.12
16	67.01	---	---	---	---	---	---	55.69	54.55	59.22	61.65	63.26
17	67.12	---	---	---	---	---	---	54.01	54.74	59.30	61.69	63.27
18	67.12	---	---	---	---	---	---	53.51	54.90	59.49	61.64	---
19	66.86	---	---	---	---	---	---	53.51	55.03	59.63	61.79	---
20	67.12	---	---	---	---	---	---	53.27	55.20	59.70	61.87	---
21	67.24	---	---	---	---	---	---	55.13	55.37	59.77	61.87	---
22	67.23	---	---	---	---	---	---	55.34	55.47	59.78	61.95	---
23	67.21	---	---	---	---	---	---	55.39	55.79	59.85	61.96	---
24	67.21	---	---	---	---	---	---	55.26	57.34	59.93	61.97	---
25	67.18	---	---	---	---	---	---	55.27	56.28	60.00	62.08	---
26	67.65	---	---	---	---	---	---	55.37	56.31	60.09	62.09	---
27	67.65	---	---	---	---	---	---	55.37	56.52	60.23	62.04	---
28	67.57	---	---	---	---	---	---	53.32	56.78	60.27	62.09	---
29	67.50	---	---	---	---	---	58.59	52.90	56.86	60.22	62.20	---
30	67.59	---	---	---	---	---	58.50	54.70	57.09	60.18	62.26	---
31	67.58	---	---	---	---	---	---	54.81	---	60.24	62.28	---
LOW	67.65	67.99	---	---	---	---	58.59	59.11	57.34	60.63	62.28	63.27

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	67.19	66.50	65.79	65.78	66.66	58.53	64.23	63.14
2	---	---	---	---	67.24	66.50	65.92	65.76	66.85	58.73	64.65	63.04
3	63.22	---	---	---	67.24	66.46	65.94	65.70	66.85	58.91	64.73	63.09
4	63.22	---	---	---	67.09	66.49	65.84	65.70	66.87	59.01	62.89	63.13
5	63.22	---	---	---	67.14	66.56	65.63	65.68	66.97	59.19	62.69	63.21
6	63.22	---	---	---	67.14	66.59	65.64	65.76	66.99	61.45	62.40	63.33
7	63.22	---	---	---	67.07	66.78	65.72	65.76	66.91	61.85	64.04	63.32
8	63.22	---	---	---	66.99	66.87	65.78	65.79	66.85	62.07	64.36	64.72
9	63.22	---	---	---	66.94	66.89	65.79	65.84	66.88	62.11	62.70	65.25
10	63.22	---	---	---	66.92	67.00	65.79	65.85	66.78	60.26	62.50	63.61
11	63.22	---	---	---	66.80	67.00	65.64	65.78	68.76	60.24	62.39	63.59
12	63.22	---	---	---	66.55	66.63	65.48	65.77	68.90	60.33	62.46	63.59
13	63.22	---	---	---	66.31	66.55	65.64	65.72	67.20	60.38	62.46	63.53
14	63.22	---	---	---	66.19	66.55	65.64	65.79	67.02	60.58	62.47	63.58
15	63.22	---	---	---	65.99	66.44	65.69	65.98	67.02	60.79	62.41	63.58
16	63.22	---	---	---	66.08	66.39	65.73	66.05	66.77	60.85	62.54	63.58
17	63.22	---	---	---	66.08	66.27	65.75	66.01	66.82	62.86	62.62	63.58
18	63.22	---	---	---	66.15	66.43	65.77	66.17	66.80	63.02	62.65	63.56
19	63.22	---	---	---	66.17	66.44	65.86	66.22	65.49	63.26	62.85	63.69
20	63.22	---	---	---	66.17	66.41	65.91	66.19	63.68	63.58	62.91	63.85
21	---	---	---	---	66.07	66.34	65.94	66.14	62.52	63.92	62.86	63.89
22	---	---	---	---	66.11	66.33	65.93	66.22	61.55	64.07	62.74	63.93
23	---	---	---	---	66.22	66.28	67.18	66.29	60.58	64.07	62.62	63.89
24	---	---	---	---	66.22	66.21	66.87	66.40	60.93	62.11	62.65	63.89
25	---	---	---	---	65.99	66.08	67.05	66.39	61.06	61.95	62.65	63.89
26	---	---	---	---	66.18	65.93	65.98	66.31	60.88	61.99	62.66	64.17
27	---	---	---	---	66.36	65.86	67.66	66.46	58.75	63.36	62.89	64.18
28	---	---	---	67.24	66.45	65.84	66.28	66.59	58.38	62.51	64.38	64.17
29	---	---	---	67.17	---	65.75	65.93	66.60	58.42	64.08	64.84	64.18
30	---	---	---	67.19	---	65.77	65.77	66.65	58.49	64.33	63.10	64.32
31	---	---	---	67.19	---	65.74	---	66.74	---	62.68	63.14	---
LOW	63.22	---	---	67.24	67.24	67.00	67.66	66.74	68.90	64.33	64.84	65.25

SITE NUMBER FROM LOCATION MAP.—12.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E5BBBB2.

SITE ID (STATION NUMBER).—443100103543002.

OTHER IDENTIFIER.—LA-86B and Spearfish W Mnkt.

LOCATION.—Lat 44°31′04.3″, long 103°54′37.7″, in NW1/4NW1/4NW1/4NW1/4 sec. 5, T. 6 N., R. 2 E., Hydrologic Unit 10120203, 1 mi west of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnekahta.

WELL CHARACTERISTICS.—Drilled observation well, 290 ft deep with 263 ft of 5-in. steel casing; open hole from 263 to 290 ft.

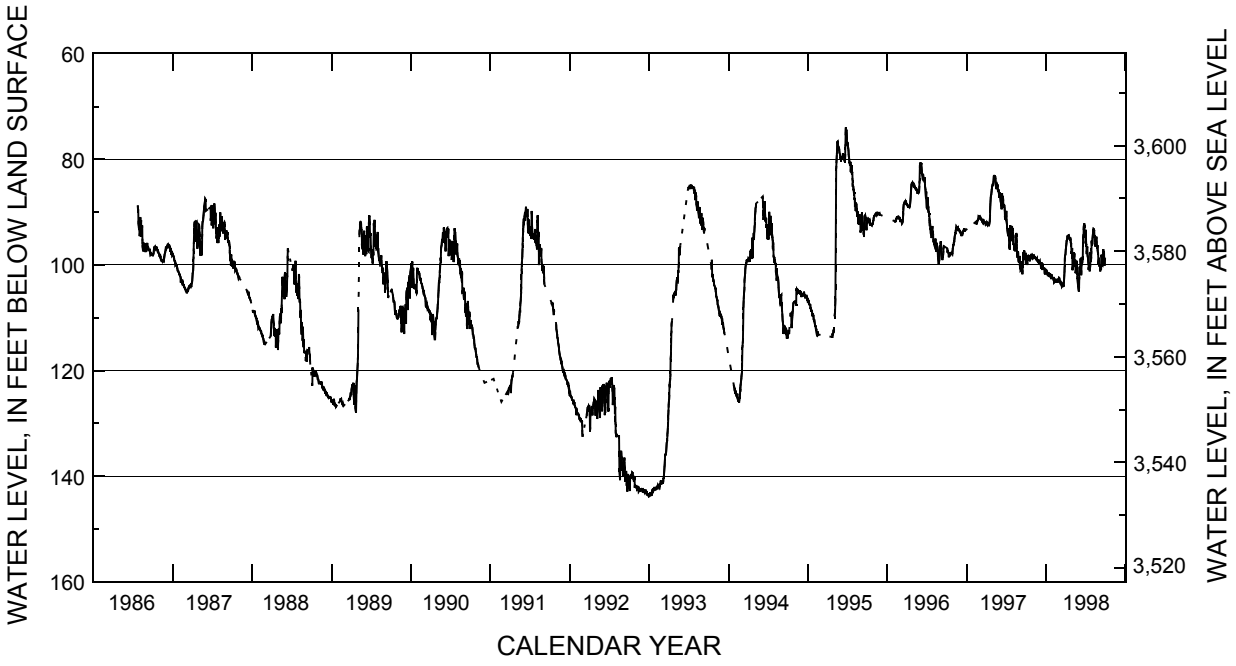
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,677.4 ft above sea level. Measuring point: Top of steel casing, 0.97 ft above land-surface datum.

REMARKS.—Records good. Water levels affected by pumping of nearby well.

PERIOD OF RECORD.—July 1986 to September 1998.

EXTREMES.—Highest daily water level, 73.96 ft below land-surface datum, June 25, 1995; lowest daily water level, 143.90 ft below land-surface datum, Dec. 31, 1992.



SITE NUMBER 12—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113.79	106.97	105.62	106.38	110.62	---	---	112.40	79.79	77.33	85.92	93.84
2	113.06	106.97	105.16	107.06	110.84	---	---	112.28	79.57	76.76	86.44	93.57
3	113.06	106.93	106.07	107.06	111.28	---	---	---	80.43	76.88	86.44	93.46
4	113.06	106.96	105.84	106.74	111.68	---	---	---	79.81	76.94	87.62	92.78
5	112.77	107.03	105.98	106.85	111.55	---	---	109.72	80.06	77.84	87.41	92.65
6	112.92	107.11	105.63	107.09	111.56	---	---	108.79	79.87	77.84	88.43	92.53
7	112.92	107.16	105.68	107.58	112.07	---	---	107.31	79.64	78.31	88.37	90.04
8	112.25	107.55	105.62	107.32	112.22	---	---	106.41	79.56	79.05	88.06	90.92
9	---	107.55	105.75	107.61	112.17	---	---	104.14	79.51	79.41	88.94	91.75
10	---	104.46	105.92	107.48	112.08	---	---	97.28	79.63	79.54	89.80	93.44
11	---	104.86	105.74	107.60	112.65	---	---	86.18	79.58	79.89	88.70	93.34
12	---	104.61	105.52	107.61	113.39	---	---	81.73	78.88	80.75	88.39	92.84
13	109.28	104.76	105.53	108.09	113.41	---	---	80.20	79.50	80.56	88.75	93.15
14	109.28	104.87	105.81	108.32	113.33	---	---	79.67	79.34	81.23	89.64	92.89
15	109.32	104.82	105.09	108.11	112.57	---	---	78.56	79.03	80.85	89.60	94.16
16	109.24	104.73	105.64	108.82	113.39	---	---	77.58	79.25	80.47	90.85	94.27
17	109.38	105.08	105.84	108.47	113.15	---	---	76.81	79.27	81.04	90.15	94.64
18	111.64	105.01	105.84	108.76	---	---	---	76.65	79.77	82.40	89.88	92.39
19	111.93	105.20	105.94	108.61	---	---	---	76.60	80.27	80.93	89.86	90.76
20	111.67	105.28	105.86	108.78	---	---	---	77.15	80.52	82.48	91.78	90.68
21	110.02	105.17	105.99	109.42	---	---	---	77.66	80.52	81.88	91.64	90.68
22	109.54	105.04	106.18	109.59	---	---	---	77.58	79.51	81.16	92.27	90.61
23	109.16	105.23	106.07	109.59	---	---	113.69	77.88	77.62	82.79	91.74	90.97
24	108.69	105.26	106.11	109.20	---	---	113.78	77.93	74.94	82.46	91.84	91.42
25	108.07	104.81	106.00	109.55	---	---	112.99	78.19	73.96	82.51	92.33	91.46
26	107.71	105.22	105.87	109.48	---	---	113.18	78.18	74.03	83.99	91.80	91.22
27	107.40	105.30	106.37	109.56	---	---	113.18	78.63	74.47	85.01	90.39	90.91
28	107.15	104.96	106.14	110.37	---	---	112.78	78.88	74.56	85.01	91.23	93.42
29	107.07	105.69	106.31	110.46	---	---	112.54	79.18	75.29	85.19	91.12	91.28
30	107.07	105.38	106.43	110.26	---	---	112.58	79.27	75.87	85.87	92.25	91.66
31	106.99	---	106.82	110.49	---	---	---	79.80	---	85.60	91.98	---
LOW	113.79	107.55	106.82	110.49	113.41	---	113.78	112.40	80.52	85.87	92.33	94.64

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92.00	90.96	---	---	---	91.25	88.51	84.56	80.87	88.31	95.61	97.18
2	91.72	90.83	---	---	---	91.58	88.56	84.72	80.75	89.20	95.68	97.18
3	91.81	90.71	---	---	---	91.53	88.74	84.78	80.78	89.36	95.57	95.55
4	91.63	90.63	---	---	---	91.52	88.74	84.95	81.24	88.73	96.12	97.24
5	91.60	90.58	---	---	---	91.61	88.81	85.12	81.24	87.82	95.76	97.27
6	91.43	90.51	---	---	91.76	91.72	89.02	85.09	80.98	87.79	95.67	97.19
7	91.30	90.51	---	---	91.93	91.79	89.18	85.39	80.68	87.25	96.33	96.72
8	91.38	90.39	---	---	91.84	91.86	88.96	85.20	81.85	89.13	96.53	98.27
9	91.57	90.44	---	---	91.64	91.95	88.96	85.39	82.06	89.13	96.43	98.27
10	91.68	90.54	---	---	91.77	92.18	89.03	85.36	82.83	89.98	95.03	98.27
11	91.79	90.61	---	---	91.51	92.04	88.99	85.40	82.83	89.98	95.70	99.10
12	91.61	90.48	---	---	91.35	91.97	88.78	85.49	83.23	90.44	96.61	98.51
13	91.81	90.30	---	---	91.23	91.81	88.96	85.40	83.77	90.44	97.34	98.17
14	91.78	90.31	---	---	91.08	91.22	88.98	85.52	83.84	91.61	97.34	98.57
15	92.56	90.21	---	---	90.98	90.25	88.81	85.74	82.80	92.00	96.71	98.23
16	92.23	90.11	---	---	90.81	89.19	88.52	85.74	83.48	91.93	95.87	97.85
17	92.03	90.11	---	---	91.04	88.84	88.13	85.62	83.69	92.25	96.09	96.44
18	92.21	90.11	---	---	90.95	88.50	87.40	85.87	84.04	93.07	97.04	---
19	92.35	90.32	---	---	90.90	88.27	86.37	86.39	83.93	93.03	97.00	---
20	92.13	90.25	---	---	90.86	88.18	85.88	86.41	83.92	93.96	97.42	---
21	92.50	90.19	---	---	90.93	88.09	85.32	86.34	84.07	94.35	97.46	---
22	92.53	90.06	---	---	90.91	88.11	84.86	86.34	83.41	93.89	98.42	---
23	92.36	90.25	---	---	90.91	88.09	84.74	86.36	84.04	93.80	98.84	---
24	92.37	90.09	---	---	91.18	88.28	84.50	86.15	85.10	94.92	99.01	---
25	92.32	90.24	---	---	91.21	88.08	84.48	86.29	85.71	94.64	99.93	---
26	92.29	90.23	---	---	91.28	88.01	84.46	86.26	86.25	93.21	99.67	---
27	92.11	90.47	---	---	91.27	88.17	84.39	86.20	86.84	92.63	99.35	---
28	92.10	90.47	---	---	91.34	88.12	84.51	85.54	87.37	93.92	99.13	---
29	91.68	90.46	---	---	91.29	88.39	84.61	84.09	86.12	93.81	98.90	---
30	91.60	---	---	---	---	88.44	84.53	82.27	87.58	93.94	96.55	---
31	91.15	---	---	---	---	88.67	---	81.16	---	94.31	96.55	---
LOW	92.56	90.96	---	---	91.93	92.18	89.18	86.41	87.58	94.92	99.93	99.10

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	96.08	93.69	---	---	90.97	92.27	84.81	86.63	91.54	93.02	98.30
2	96.79	96.25	93.81	---	---	91.12	92.19	84.82	86.24	89.79	94.17	98.87
3	96.87	95.81	93.89	---	---	91.01	92.02	84.62	86.86	90.50	95.28	100.09
4	97.02	95.51	93.80	---	---	90.93	92.24	84.25	86.92	91.73	96.10	100.60
5	97.68	95.53	93.96	---	---	90.99	92.10	83.70	87.26	92.27	96.17	100.54
6	97.51	95.08	94.09	---	---	91.10	92.31	83.30	87.71	93.03	95.99	99.34
7	97.27	94.91	94.24	---	---	91.25	92.40	83.31	87.91	93.07	96.10	100.92
8	97.59	94.49	94.40	---	---	91.29	92.09	83.27	88.17	93.47	97.29	100.80
9	97.72	94.21	94.40	---	---	91.56	92.20	83.00	88.84	94.08	97.08	99.43
10	97.78	93.97	94.40	---	---	91.38	92.25	83.51	88.74	94.44	96.88	100.39
11	98.56	93.97	94.33	---	---	91.40	92.36	83.40	89.45	94.51	96.38	100.24
12	98.24	93.56	94.34	---	91.87	91.44	92.61	83.64	87.24	93.07	97.27	101.15
13	98.25	93.17	94.06	---	91.99	91.59	92.49	83.55	86.46	93.15	97.27	101.45
14	98.03	93.07	94.00	---	91.97	91.56	92.38	84.17	87.93	94.19	94.41	101.75
15	97.81	92.81	93.64	---	92.22	91.89	92.40	84.72	86.90	95.02	94.36	101.48
16	97.77	92.95	93.58	---	92.21	91.98	92.18	85.06	87.65	96.51	94.17	100.06
17	97.93	93.06	93.47	---	91.97	91.77	91.71	85.62	87.38	96.45	94.00	99.35
18	97.68	92.75	93.41	---	91.91	91.93	91.03	85.54	87.84	97.09	94.19	98.34
19	97.93	92.92	93.41	---	91.70	91.86	89.63	84.62	88.94	96.61	95.32	97.77
20	97.99	92.88	93.05	---	91.61	91.98	88.75	84.84	88.94	92.63	96.49	97.57
21	97.99	92.84	93.39	---	91.48	91.84	87.76	84.78	88.49	92.49	97.73	98.95
22	97.84	92.79	93.42	---	91.63	92.04	87.26	84.96	88.94	93.49	98.39	98.00
23	97.84	93.24	93.35	---	91.27	91.88	86.93	85.14	88.61	94.27	98.36	97.30
24	97.53	93.18	93.67	---	91.18	92.03	86.65	85.10	89.08	94.51	98.31	98.51
25	97.73	93.19	93.49	---	90.84	91.97	86.14	85.99	89.31	93.93	97.47	99.09
26	97.78	93.34	---	---	90.89	92.02	85.83	85.99	91.25	95.36	97.56	98.28
27	97.87	93.34	---	---	90.70	92.03	85.62	85.99	91.35	95.36	99.05	98.43
28	97.42	93.55	---	---	90.89	92.03	85.23	85.70	90.45	93.48	99.38	98.86
29	97.16	93.37	---	---	---	92.19	85.09	86.24	90.54	92.61	99.47	97.71
30	96.90	93.62	---	---	---	92.08	84.81	86.24	91.38	93.31	99.47	99.35
31	96.51	---	---	---	---	92.02	---	87.28	---	93.31	98.89	---
LOW	98.56	96.25	94.40	---	92.22	92.19	92.61	87.28	91.38	97.09	99.47	101.75

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99.29	98.54	99.55	101.23	102.65	102.67	97.49	96.85	104.90	94.45	96.03	98.89
2	99.75	98.48	99.35	101.19	102.47	102.42	97.02	98.37	104.34	95.91	95.95	98.96
3	98.90	98.18	99.30	101.35	102.37	102.49	96.91	100.99	102.75	95.63	94.99	99.32
4	99.75	98.30	99.60	101.45	102.53	102.61	96.42	100.57	101.54	93.40	94.61	100.30
5	99.90	98.48	99.34	101.33	102.72	102.91	96.01	99.88	100.37	96.10	94.26	100.03
6	99.27	98.15	99.71	101.29	102.61	103.08	95.47	99.68	101.33	96.16	93.66	100.13
7	100.01	98.43	99.70	101.50	103.11	103.35	95.43	99.63	101.33	97.80	93.15	101.19
8	98.20	98.40	99.99	101.68	103.04	103.53	95.18	97.83	98.90	97.80	93.20	100.91
9	98.70	98.50	100.69	101.47	102.72	103.50	94.72	97.81	98.84	96.63	93.90	100.70
10	98.47	98.51	99.86	101.98	103.00	103.38	94.76	98.55	99.98	96.51	93.37	100.70
11	99.29	98.55	99.80	101.97	102.87	103.48	94.70	98.17	101.03	98.19	93.51	100.68
12	98.61	98.41	99.53	101.69	102.83	103.49	94.54	97.82	101.91	98.39	94.80	100.69
13	98.67	98.85	99.86	101.80	102.93	103.70	94.54	100.39	101.52	98.54	94.42	98.08
14	98.26	98.59	100.94	101.69	103.03	103.82	94.41	100.14	99.73	98.97	94.71	98.30
15	98.29	98.98	99.91	101.65	103.18	104.03	94.38	99.01	99.90	99.91	95.06	99.03
16	98.53	99.09	99.73	101.71	103.37	103.88	94.53	99.40	99.67	100.94	96.52	99.20
17	98.78	98.84	100.37	102.12	102.90	103.58	94.63	101.57	99.53	100.45	96.15	100.09
18	98.72	98.86	100.49	102.16	103.00	103.69	94.90	101.36	98.82	100.57	95.71	100.11
19	99.30	98.91	100.55	102.07	102.99	103.73	94.87	101.38	98.82	100.92	95.79	99.09
20	98.52	98.80	100.84	101.60	102.92	103.60	94.88	101.54	96.15	100.67	95.85	97.99
21	98.31	98.77	100.66	101.91	103.19	103.86	95.16	99.56	94.70	101.07	94.65	97.01
22	98.24	99.21	100.63	101.91	103.37	104.03	95.23	100.96	94.19	101.05	95.89	97.34
23	98.49	99.31	100.61	101.96	103.03	103.99	95.20	99.25	92.92	100.07	96.80	98.09
24	98.49	99.06	100.66	102.41	103.10	103.23	95.16	101.38	92.56	97.53	96.80	98.12
25	98.92	99.23	100.82	102.48	103.05	102.91	95.75	102.64	92.49	97.99	96.56	97.47
26	98.64	99.02	101.53	102.69	103.26	102.24	95.99	102.58	92.16	99.32	96.24	98.55
27	98.75	99.33	101.69	101.83	102.93	101.16	95.89	103.25	92.52	99.32	97.21	100.19
28	98.16	99.08	101.66	102.17	102.77	100.28	97.91	103.79	94.42	98.59	97.76	99.39
29	98.07	99.39	100.99	102.29	---	98.89	97.49	103.73	94.54	97.42	97.69	98.75
30	98.16	99.74	100.94	102.37	---	98.27	97.31	104.28	94.49	95.42	99.97	98.61
31	98.01	---	100.98	102.48	---	98.00	---	104.92	---	96.32	99.43	---
LOW	100.01	99.74	101.69	102.69	103.37	104.03	97.91	104.92	104.90	101.07	99.97	101.19

SITE NUMBER FROM LOCATION MAP.—13.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—6N2E5BBBB.

SITE ID (STATION NUMBER).—443100103543001.

OTHER IDENTIFIER.—LA-86A and Spearfish W Mnls.

LOCATION.—Lat 44°31′04.3″, long 103°54′37.7″, in NW1/4NW1/4NW1/4NW1/4 sec. 5, T. 6 N., R. 2 E., Hydrologic Unit 10120203, 1 mi west of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 430 ft deep with 404 ft of 5-in. steel casing. Prior to May 24, 1994, open hole from 404 to 430 ft; after May 24, 1994, 3-in. PVC with 18-slot screen from 404 to 430 ft.

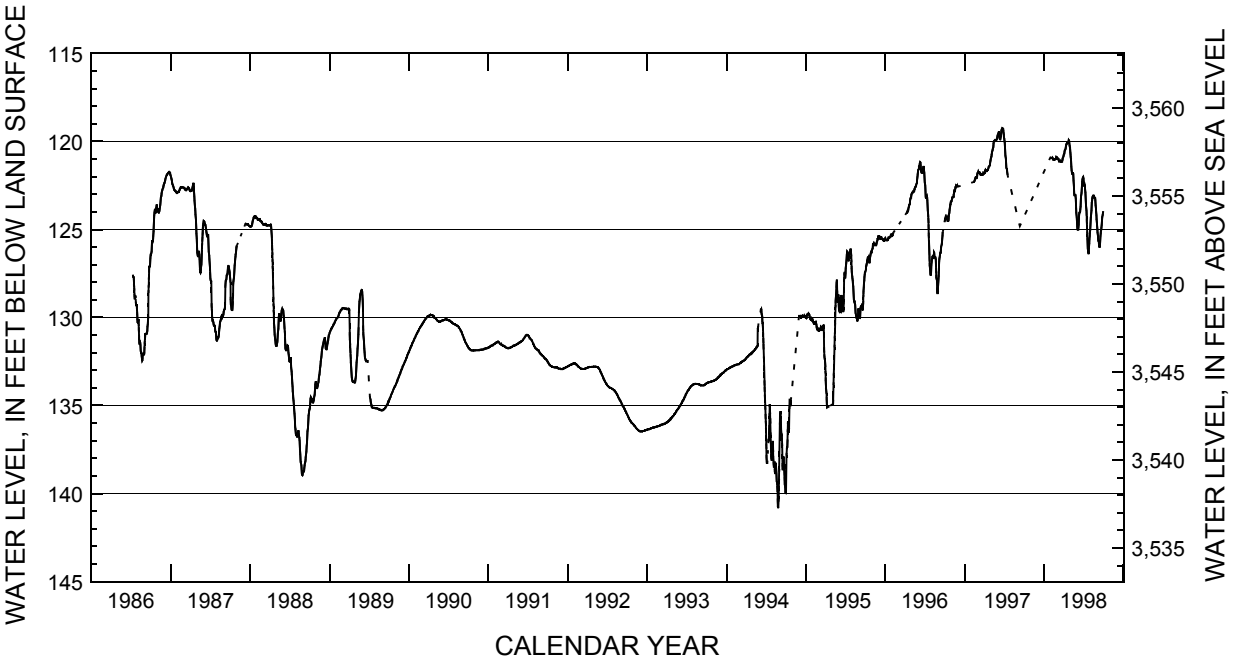
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,678.1 ft above sea level. Measuring point: Top of steel casing, 1.06 ft above land-surface datum.

REMARKS.—Records fair. Air pumping in July 1989 may have changed well characteristics. Cleaning and screening on May 24, 1994, has improved sensitivity to water-level changes.

PERIOD OF RECORD.—July 1986 to September 1998.

EXTREMES.—Highest daily water level, 119.24 ft below land-surface datum, June 23, 1997; lowest daily water level, 140.83 ft below land-surface datum, Aug. 27, 1994.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139.97	---	129.99	130.00	130.16	130.77	132.81	---	129.00	127.78	127.42	129.50
2	139.87	---	129.94	130.03	130.14	130.77	133.19	---	129.36	127.75	127.54	129.57
3	139.24	---	129.88	130.04	130.22	130.76	133.57	---	129.62	127.49	127.69	129.65
4	138.48	---	129.92	130.05	130.25	130.70	133.78	134.94	129.63	127.20	127.80	129.73
5	137.84	---	129.95	130.02	130.29	130.67	134.04	134.95	129.55	127.03	127.91	129.85
6	137.34	---	129.96	129.89	130.32	130.65	134.33	134.92	129.10	126.91	128.06	130.01
7	137.39	---	129.95	129.84	130.37	130.71	134.66	134.69	128.87	126.75	128.24	130.02
8	137.38	---	129.99	129.83	130.38	130.72	134.88	134.35	129.16	126.60	128.45	130.00
9	137.08	---	130.00	129.84	130.38	130.72	135.13	133.84	129.45	126.44	128.67	129.74
10	136.50	---	130.03	129.84	130.30	130.65	---	133.29	129.68	126.33	128.85	129.55
11	135.90	---	130.03	129.80	130.29	130.60	---	132.82	129.69	126.26	128.99	129.42
12	136.03	---	129.96	129.78	130.32	130.52	---	132.28	129.57	126.29	129.09	129.38
13	136.41	---	129.96	129.83	130.34	130.53	---	131.70	129.08	126.44	129.09	129.37
14	136.52	---	129.94	129.83	130.34	130.63	---	131.19	128.73	126.63	129.16	129.34
15	136.50	---	129.92	129.83	130.25	130.67	---	130.79	128.93	126.74	129.19	129.32
16	136.31	---	129.90	129.82	130.24	130.69	---	130.33	129.29	126.77	129.29	129.39
17	135.84	---	129.92	129.84	130.26	130.72	---	129.86	129.54	126.77	129.43	129.47
18	135.20	---	129.93	129.89	130.34	130.72	---	129.43	129.56	126.69	129.62	129.53
19	134.68	---	129.91	129.97	130.41	130.67	---	129.06	129.53	126.54	129.79	129.56
20	134.68	---	129.91	130.05	130.62	130.60	---	128.83	129.29	126.41	129.89	129.55
21	134.74	---	129.93	130.07	130.65	130.56	---	128.55	129.42	126.34	129.98	129.40
22	135.00	---	129.98	130.09	130.66	130.47	---	128.22	129.65	126.34	130.03	129.20
23	135.00	---	129.98	130.09	130.70	130.45	---	128.02	129.65	126.33	130.06	128.84
24	134.78	---	129.96	130.13	130.71	130.45	---	127.86	129.56	126.28	130.07	128.52
25	134.68	---	129.90	130.15	130.68	130.52	---	128.19	129.10	126.22	130.12	128.29
26	---	---	129.92	130.15	130.62	131.00	---	128.63	128.43	126.17	130.19	128.08
27	---	---	129.95	130.10	130.66	131.84	---	129.01	127.85	126.10	130.19	127.90
28	---	---	129.96	130.12	130.74	132.25	---	129.11	127.47	126.30	130.11	127.71
29	---	---	129.95	130.19	---	132.37	---	129.10	127.47	126.52	129.93	127.56
30	---	130.01	129.96	130.20	---	132.37	---	128.85	127.73	126.87	129.68	127.46
31	---	---	129.99	130.20	---	132.54	---	128.70	---	127.22	129.53	---
LOW	139.97	130.01	130.03	130.20	130.74	132.54	135.13	134.95	129.69	127.78	130.19	130.02

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127.43	126.22	125.39	125.57	125.39	---	---	123.06	121.70	122.13	127.03	128.25
2	127.40	126.18	125.35	125.57	125.37	---	---	123.00	121.62	122.32	126.85	127.94
3	127.38	126.15	125.40	125.55	125.33	---	---	122.95	121.60	122.51	126.73	127.65
4	127.28	126.11	125.40	125.61	125.33	---	---	122.92	121.57	122.76	126.68	127.37
5	127.14	126.03	125.40	125.61	125.28	---	---	122.92	121.47	122.99	126.61	127.06
6	127.09	125.90	125.45	125.61	125.24	---	---	122.92	121.40	123.15	126.53	126.83
7	127.05	125.85	125.46	125.60	125.21	---	---	122.89	121.38	123.20	126.52	126.70
8	126.97	125.85	125.52	125.60	125.19	---	---	122.85	121.35	123.20	126.59	126.60
9	126.93	125.80	125.55	125.62	---	---	---	122.85	121.25	123.20	126.62	126.45
10	126.86	125.78	125.55	125.62	---	---	124.06	122.85	121.18	123.14	126.62	126.36
11	126.74	125.82	125.55	125.62	---	---	124.05	122.85	121.20	123.11	126.60	126.34
12	126.67	125.83	125.53	125.60	---	---	124.02	122.85	121.31	123.21	126.44	126.33
13	126.61	125.88	125.43	125.60	---	---	123.99	122.85	121.42	123.35	126.31	126.28
14	126.61	125.89	125.43	125.55	---	---	123.95	122.82	121.55	123.53	126.34	126.16
15	126.61	125.91	125.44	125.54	---	---	123.95	122.73	121.69	123.71	126.46	126.03
16	126.60	125.91	125.48	125.53	---	---	123.95	122.70	121.76	123.90	126.57	125.94
17	126.56	125.88	125.53	125.47	---	---	123.86	122.64	121.76	124.15	126.59	125.86
18	126.60	125.86	125.55	125.47	---	---	123.77	122.60	121.76	124.49	126.58	125.79
19	126.78	125.80	125.56	125.47	---	---	123.70	122.57	121.77	124.86	126.59	125.69
20	126.88	125.85	125.56	125.46	---	---	123.62	122.56	121.78	125.34	126.62	125.54
21	126.88	125.86	125.58	125.45	---	---	123.60	122.56	121.78	125.77	126.69	125.36
22	126.81	125.82	125.58	125.45	---	---	123.59	122.56	121.77	126.05	126.98	125.19
23	126.70	125.78	125.58	125.46	---	---	123.59	122.49	121.67	126.35	127.34	125.14
24	126.62	125.75	125.61	125.45	---	---	123.54	122.43	121.57	126.67	127.73	---
25	126.54	125.70	125.64	125.44	---	---	123.37	122.39	121.45	127.06	127.84	---
26	126.44	125.63	125.66	125.37	---	---	123.28	122.35	121.40	127.36	127.84	---
27	126.32	125.55	125.66	125.31	---	---	123.23	122.19	121.45	127.53	128.45	---
28	126.30	125.55	125.65	125.29	---	---	123.19	122.10	121.60	127.58	128.53	---
29	126.32	125.51	125.62	125.29	---	---	123.18	121.98	121.79	127.58	128.62	---
30	126.32	125.45	125.56	125.37	---	---	123.15	121.86	121.96	127.58	128.62	---
31	126.30	---	125.53	125.39	---	---	---	121.79	---	127.28	128.52	---
LOW	127.43	126.22	125.66	125.62	125.39	---	124.06	123.06	121.96	127.58	128.62	128.25

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	123.40	122.57	---	---	121.81	121.80	121.03	119.69	119.77	---	---
2	124.45	123.37	---	---	---	121.78	121.81	120.94	119.64	119.87	---	---
3	124.46	123.31	---	---	---	121.75	121.81	120.89	119.61	119.95	---	---
4	124.41	123.26	---	---	---	121.72	121.80	120.85	119.60	120.06	---	---
5	124.34	123.22	---	---	---	121.75	121.71	120.77	119.56	120.21	---	---
6	124.30	123.20	---	---	---	121.77	121.63	120.72	119.50	120.39	---	---
7	124.32	123.16	---	---	---	121.77	121.61	120.62	119.47	120.59	---	---
8	124.33	123.16	---	---	---	121.77	121.65	120.54	119.47	120.82	---	---
9	124.36	123.16	---	---	---	121.77	121.67	120.50	119.58	120.97	---	---
10	124.36	123.14	---	---	---	121.76	121.68	120.45	119.73	121.14	---	---
11	124.36	123.14	---	---	---	121.76	121.69	120.38	119.84	121.34	---	---
12	124.33	123.03	---	---	122.31	121.78	121.70	120.35	119.88	121.52	---	e124.81
13	124.38	122.93	---	---	122.31	121.84	121.70	120.26	119.89	121.57	---	---
14	124.49	122.83	---	---	122.28	121.88	121.69	120.13	119.89	121.58	---	---
15	124.52	122.84	---	---	122.25	121.90	121.64	120.06	119.81	121.58	---	---
16	124.52	122.84	---	---	122.22	121.90	121.63	120.00	119.71	121.74	---	---
17	124.52	122.78	---	---	122.19	121.85	121.63	119.96	119.60	121.92	---	---
18	124.51	122.72	---	---	122.14	121.85	121.62	119.95	119.51	---	---	---
19	124.40	122.67	---	---	122.10	121.88	121.58	119.99	119.41	---	---	---
20	124.25	122.62	---	---	122.06	121.88	121.53	119.99	119.35	---	---	---
21	124.14	122.61	---	---	122.04	121.88	121.48	119.99	119.29	---	---	---
22	124.09	122.55	---	---	122.04	121.89	121.44	119.97	119.27	---	---	---
23	124.01	122.51	---	---	122.06	121.89	121.43	119.95	119.24	---	---	---
24	123.91	122.53	---	---	122.09	121.89	121.40	119.95	119.25	---	---	---
25	123.78	122.54	---	---	122.09	121.88	121.39	119.94	119.27	---	---	---
26	123.67	122.53	---	---	122.06	121.88	121.37	119.92	119.28	---	---	---
27	123.59	122.52	---	---	122.00	121.86	121.34	119.90	119.30	---	---	---
28	123.58	122.49	---	---	121.88	121.80	121.26	119.89	119.37	---	---	---
29	123.50	122.54	---	---	---	121.81	121.12	119.87	119.49	---	---	---
30	123.43	122.56	---	---	---	121.83	121.09	119.82	119.59	---	---	---
31	123.43	---	---	---	---	121.83	---	119.77	---	---	---	---
LOW	124.52	123.40	122.57	---	122.31	121.90	121.81	121.03	119.89	121.92	---	124.81

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	120.92	120.92	120.80	120.51	124.52	122.11	125.03	124.63
2	---	---	---	---	120.93	120.96	120.75	120.63	124.69	122.27	124.84	124.78
3	---	---	---	---	120.95	120.97	120.72	120.73	124.84	122.44	124.68	124.89
4	---	---	---	---	120.95	120.97	120.71	120.88	124.95	122.52	124.51	125.02
5	---	---	---	---	120.95	120.97	120.64	121.01	125.01	122.52	124.33	125.18
6	---	---	---	---	120.96	120.97	120.57	121.19	125.01	122.50	124.12	125.40
7	---	---	---	---	120.96	120.97	120.51	121.42	125.01	122.47	123.92	125.59
8	---	---	---	---	120.96	121.00	120.48	121.64	124.91	122.55	123.70	125.66
9	---	---	---	---	120.95	121.05	120.45	121.78	124.73	122.73	123.50	125.68
10	---	---	---	---	120.99	121.09	120.42	121.85	124.52	122.90	123.36	125.74
11	---	---	---	---	121.01	121.14	120.38	121.86	124.30	123.09	123.25	125.86
12	---	---	---	---	121.04	121.14	120.30	121.86	124.14	123.29	123.20	125.98
13	---	---	---	---	121.04	121.14	120.19	121.82	124.05	123.47	123.14	126.00
14	---	---	---	---	121.04	121.14	120.15	121.76	124.02	123.67	123.12	126.00
15	---	---	---	---	121.04	121.14	120.12	121.85	124.02	123.95	123.10	125.91
16	---	---	---	---	121.03	121.14	120.12	122.05	124.00	124.23	123.07	125.74
17	---	---	---	---	121.02	121.14	120.11	122.23	123.86	124.55	123.04	125.55
18	---	---	---	---	121.02	121.12	120.09	122.49	123.71	124.88	123.08	125.38
19	---	---	---	---	121.02	121.14	120.06	122.77	123.47	125.26	123.14	125.22
20	---	---	---	---	121.03	121.15	120.05	122.97	123.25	125.59	123.20	125.08
21	---	---	---	---	121.03	121.16	120.05	123.06	123.10	125.86	123.21	125.01
22	---	---	---	---	121.02	121.16	120.05	123.06	122.93	126.09	123.21	124.90
23	---	---	---	---	120.99	121.16	120.05	123.06	122.78	126.29	123.20	124.75
24	---	---	---	---	120.99	121.16	120.00	123.00	122.61	126.36	123.21	124.58
25	---	---	---	---	120.99	121.14	119.93	123.04	122.44	126.36	123.33	124.44
26	---	---	---	---	120.93	121.09	119.96	123.09	122.29	126.29	123.49	124.32
27	---	---	---	---	120.88	121.04	120.05	123.25	122.16	126.06	123.63	124.24
28	---	---	---	---	120.89	120.98	120.14	123.51	122.08	125.80	123.80	124.18
29	---	---	---	120.92	---	120.93	120.24	123.82	122.05	125.56	124.00	124.08
30	---	---	---	120.92	---	120.90	120.37	124.06	122.02	125.38	124.19	123.97
31	---	---	---	120.92	---	120.85	---	124.31	---	125.22	124.42	---
LOW	---	---	---	120.92	121.04	121.16	120.80	124.31	125.01	126.36	125.03	126.00

e Estimated

SITE NUMBER FROM LOCATION MAP.—14.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—5N4E22ADDA.

SITE ID (STATION NUMBER).—442301103365501.

OTHER IDENTIFIER.—LA-96D and Boulder Canyon Mdsn.

LOCATION.—Lat 43°23′01″, long 103°36′55″, in NE1/4SE1/4SE1/4NE1/4 sec. 22, T. 5 N., R. 4 E., Hydrologic Unit 10120203, 7 mi west of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 560 ft deep with 485 ft of 5-in. steel casing; open hole from 485 to 560 ft.

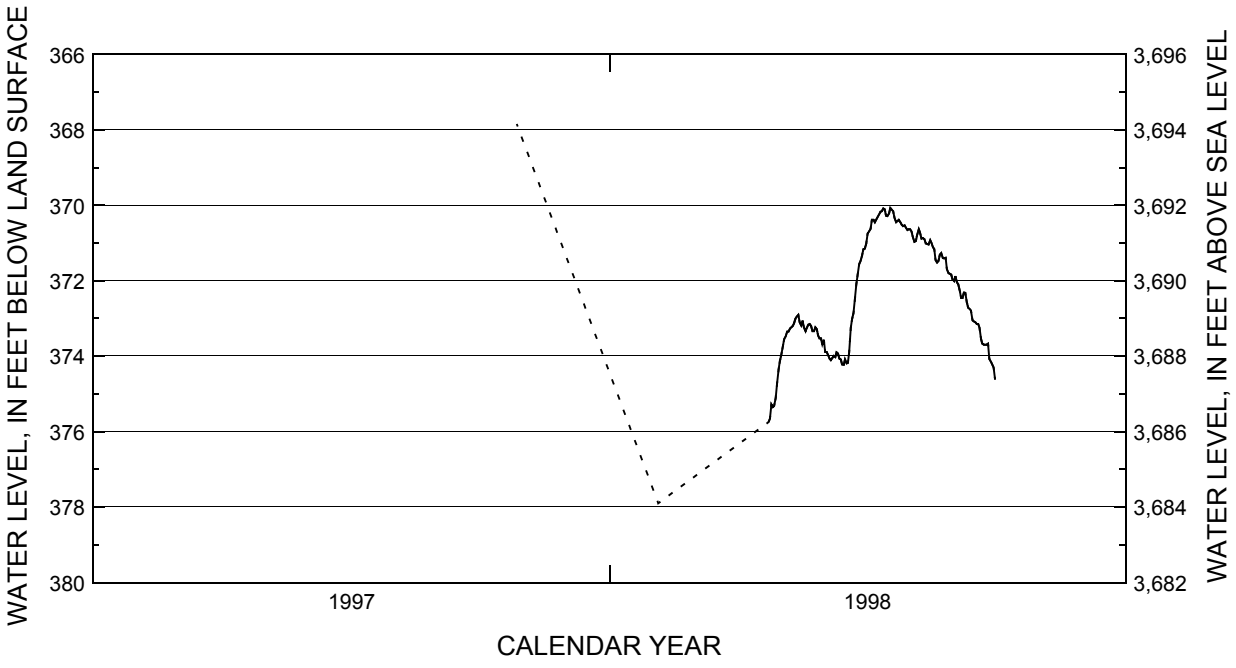
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 4,062 ft above sea level. Measuring point: Top of casing 1.6 ft above land surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—October 1997 to September 1998.

EXTREMES.—Highest daily water level, 367.85 ft (estimated) below land-surface datum, Oct. 27, 1997; lowest daily water level, 377.90 ft below land-surface datum, Feb. 4, 1998.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	374.13	373.57	371.01	370.64	372.01
2	---	---	---	---	---	---	---	373.96	373.89	370.74	370.70	371.88
3	---	---	---	---	---	---	---	373.76	373.89	370.70	370.86	372.05
4	---	---	---	---	e377.90	---	---	373.55	373.97	370.63	370.97	372.10
5	---	---	---	---	---	---	---	373.49	374.07	370.39	370.95	372.24
6	---	---	---	---	---	---	---	373.35	374.11	370.39	370.78	372.46
7	---	---	---	---	---	---	---	373.35	374.05	370.45	370.64	372.46
8	---	---	---	---	---	---	---	373.27	374.00	370.39	370.73	372.32
9	---	---	---	---	---	---	---	373.24	374.03	370.31	370.88	372.33
10	---	---	---	---	---	---	---	373.21	373.90	370.25	370.87	372.56
11	---	---	---	---	---	---	---	373.12	373.93	370.17	370.90	372.72
12	---	---	---	---	---	---	---	373.01	374.07	370.16	371.01	372.75
13	---	---	---	---	---	---	---	372.95	374.09	370.09	371.03	372.79
14	---	---	---	---	---	---	---	372.91	374.22	370.11	371.04	373.05
15	---	---	---	---	---	---	---	373.11	374.23	370.28	370.93	373.08
16	---	---	---	---	---	---	---	373.19	374.09	370.29	371.00	373.10
17	---	---	---	---	---	---	---	373.06	374.19	370.22	371.10	373.15
18	---	---	---	---	---	---	---	373.24	374.18	370.08	371.16	373.15
19	---	---	---	---	---	---	---	373.34	373.90	370.12	371.46	373.26
20	---	---	---	---	---	---	---	373.25	373.26	370.16	371.52	373.54
21	---	---	---	---	---	---	---	373.17	373.02	370.35	371.48	373.67
22	---	---	---	---	---	---	---	373.15	372.86	370.45	371.31	373.70
23	---	---	---	---	---	---	375.75	373.20	372.49	370.42	371.27	373.70
24	---	---	---	---	---	---	375.65	373.34	372.09	370.39	371.40	373.70
25	---	---	---	---	---	---	375.28	373.34	371.84	370.45	371.41	373.67
26	---	---	---	---	---	---	375.35	373.24	371.55	370.52	371.39	374.08
27	e367.85	---	---	---	---	---	375.32	373.29	371.48	370.55	371.70	374.15
28	---	---	---	---	---	---	375.11	373.46	371.33	370.53	371.80	374.22
29	---	---	---	---	---	---	374.74	373.53	371.16	370.59	371.82	374.31
30	---	---	---	---	---	---	374.36	373.53	371.15	370.66	371.84	374.62
31	---	---	---	---	---	---	---	373.69	---	370.64	371.97	---
LOW	367.85	---	---	---	377.90	---	375.75	374.13	374.23	371.01	371.97	374.62

e Estimated

SITE NUMBER FROM LOCATION MAP.—15.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—5N4E14ADD.

SITE ID (STATION NUMBER).—442344103253401.

OTHER IDENTIFIER.—LA-63A and Boulder Canyon Mnls.

LOCATION.—Lat 43°23′43.6″, long 103°35′25.9″, in SE1/4SE1/4NE1/4 sec. 14, T. 5 N., R. 4 E., Hydrologic Unit 10120203, 6 mi west of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 507 ft deep with 388 ft of 3.5-in. steel casing; open hole from 388 to 507 ft.

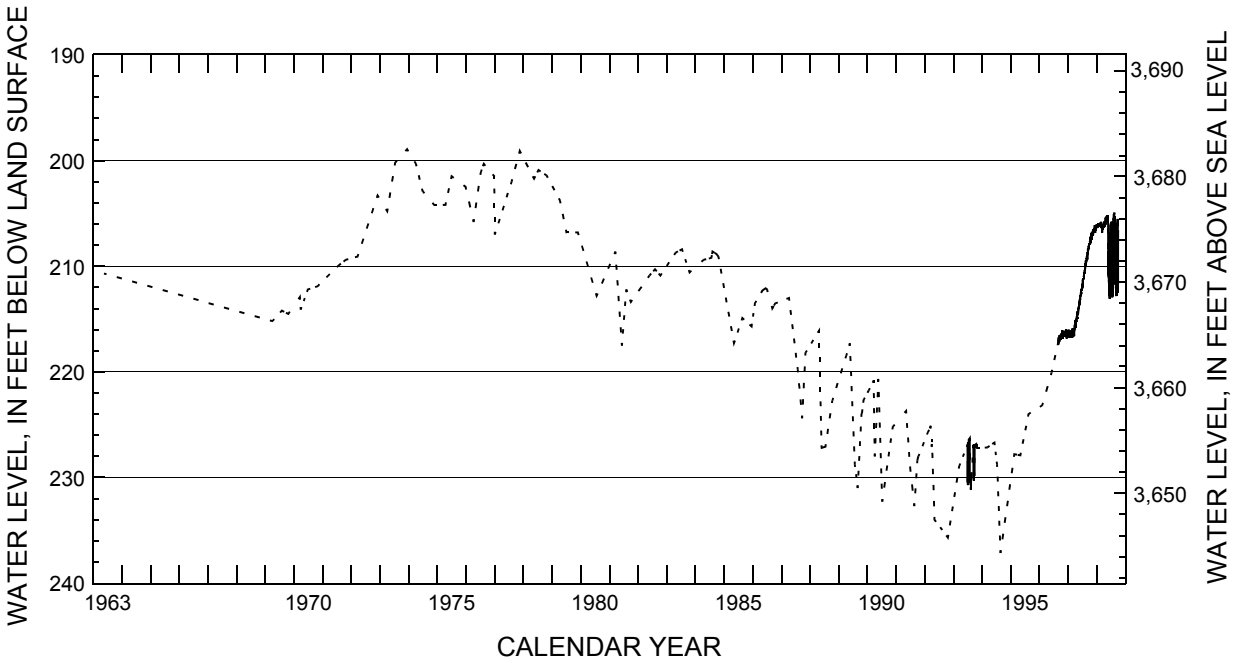
INSTRUMENTATION.—Electronic data logger with pressure transducer. Prior to July 1, 1993, intermittent taped measurements.

DATUM.—Elevation of land-surface datum is 3,881.5 ft above sea level. Measuring point: Prior to June 30, 1993, top of steel casing, 0.7 ft above land-surface datum. After June 30, 1999, top of PVC liner, 1.49 ft above land-surface datum.

REMARKS.—Available records good. Water levels affected by pumping of nearby well.

PERIOD OF RECORD.—May 1963, April 1969 to September 1998.

EXTREMES.—Highest daily water level, 198.9 ft (estimated) below land-surface datum, Dec. 10, 1973; lowest daily water level, 237.15 ft (estimated) below land-surface datum, Aug. 24, 1994.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	e227.9	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	e227.8	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	e224.0	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	227.80	---	---	227.90	---	---	224.00	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	217.02
2	---	---	---	---	---	---	---	---	---	---	---	217.06
3	---	---	---	---	---	---	---	---	---	---	---	217.05
4	---	---	---	---	---	---	---	---	e220.05	---	---	217.05
5	---	---	---	---	---	---	---	---	---	---	---	216.95
6	---	---	---	---	e223.19	---	---	---	---	---	---	217.17
7	---	---	---	---	---	---	---	---	---	---	---	217.14
8	---	---	---	---	---	---	---	---	---	---	---	216.95
9	---	---	---	---	---	---	---	---	---	---	---	217.00
10	---	---	---	---	---	---	---	---	---	---	---	217.13
11	---	---	---	---	---	---	---	---	---	---	---	217.14
12	---	---	---	---	---	---	---	---	---	---	---	217.02
13	---	---	---	---	---	---	---	---	---	---	---	216.74
14	---	---	---	---	---	---	---	---	---	---	---	216.55
15	---	---	---	---	---	---	---	---	---	---	---	216.64
16	---	---	---	---	---	---	---	---	---	---	---	216.64
17	---	---	---	---	---	---	---	---	---	---	---	216.88
18	---	---	---	---	---	---	---	---	---	---	---	216.89
19	---	---	---	---	---	---	---	---	---	---	---	216.83
20	---	---	---	---	---	---	---	---	---	---	---	216.61
21	---	---	---	---	---	---	---	---	---	---	---	216.66
22	---	---	---	---	---	---	---	---	---	---	---	216.74
23	---	---	---	---	---	---	---	---	---	---	---	216.91
24	---	---	---	---	---	---	---	---	---	---	---	216.83
25	---	---	---	---	---	---	---	---	---	---	---	216.61
26	---	---	---	---	---	---	---	---	---	---	---	216.60
27	---	---	---	---	---	---	---	---	---	---	217.24	216.60
28	---	---	---	---	---	---	---	---	---	---	217.33	216.64
29	---	---	---	---	---	---	---	---	---	---	217.41	216.66
30	---	---	---	---	---	---	---	---	---	---	217.34	216.46
31	---	---	---	---	---	---	---	---	---	---	217.09	---
LOW	---	---	---	---	223.19	---	---	---	220.05	---	217.41	217.17

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216.85	216.58	216.12	216.27	216.36	216.22	215.76	214.29	213.10	211.74	210.40	209.29
2	216.98	216.58	216.36	216.18	216.37	216.20	215.85	214.59	213.10	211.87	210.36	209.36
3	216.68	216.37	216.41	216.14	216.51	216.32	215.62	214.64	213.19	211.91	210.34	209.15
4	216.49	216.34	216.34	216.47	216.61	216.46	215.09	214.54	213.19	211.89	210.41	208.82
5	216.59	216.32	215.99	216.60	216.58	216.52	215.22	214.51	212.89	211.70	210.30	208.80
6	216.68	216.31	216.21	216.61	216.46	216.50	215.39	214.40	212.86	211.57	210.23	208.68
7	216.60	216.61	216.50	216.35	216.50	216.30	215.73	214.29	212.81	211.48	210.15	208.73
8	216.49	216.62	216.46	216.33	216.41	216.42	215.73	214.47	212.77	211.50	209.70	208.81
9	216.64	216.53	216.17	216.34	216.50	216.55	215.49	214.47	212.82	211.39	210.03	208.80
10	216.59	216.44	216.07	216.43	216.56	216.34	215.43	214.22	212.82	211.17	210.05	208.57
11	216.33	216.60	216.39	216.65	216.42	216.34	215.43	214.22	212.57	211.20	209.88	208.35
12	216.46	216.58	216.45	216.72	216.39	216.30	215.30	214.09	212.57	211.19	209.88	208.43
13	216.46	216.55	216.57	216.64	216.33	216.61	215.11	213.94	212.59	211.22	209.82	208.51
14	216.43	216.27	216.83	216.24	216.38	216.59	215.01	213.98	212.54	211.26	209.52	208.44
15	216.40	216.24	216.83	216.68	216.44	216.36	215.30	213.98	212.44	211.18	209.48	208.41
16	216.33	216.28	216.40	216.72	216.39	216.11	215.29	213.84	212.60	211.01	209.78	208.35
17	216.57	216.31	216.62	216.52	216.16	216.47	215.03	213.79	212.43	211.01	209.77	208.40
18	216.53	216.29	216.53	216.38	216.43	216.62	214.88	213.92	212.46	210.99	209.57	208.06
19	216.06	216.16	216.40	216.38	216.42	216.38	214.79	213.92	212.32	211.01	209.61	---
20	216.47	216.43	216.11	216.20	216.40	216.10	214.79	213.77	212.24	210.97	209.61	---
21	216.59	216.42	216.19	216.12	216.42	216.06	214.75	213.63	212.24	210.92	209.50	208.23
22	216.52	216.29	216.33	216.35	216.65	215.96	214.85	213.59	212.20	210.80	209.45	208.25
23	216.38	216.64	216.57	216.21	216.72	215.93	214.84	213.59	212.13	210.68	209.41	208.31
24	216.38	216.64	216.52	216.51	216.74	215.92	214.88	213.45	212.16	210.61	209.26	208.16
25	216.15	216.56	216.38	216.53	216.33	215.93	214.88	213.37	212.20	210.59	209.33	208.00
26	216.87	216.64	216.35	216.49	216.08	215.71	214.80	213.54	212.15	210.56	209.23	207.83
27	216.87	216.59	216.03	216.79	215.89	215.52	214.69	213.56	211.83	210.67	209.10	207.84
28	216.67	216.19	216.30	216.60	216.14	215.63	214.41	213.54	211.86	210.71	209.06	207.89
29	216.48	216.25	216.32	216.56	---	215.77	214.43	213.32	211.83	210.63	209.05	207.89
30	216.62	216.27	216.46	216.23	---	215.75	214.47	213.35	211.72	210.51	209.07	207.93
31	216.62	---	216.39	216.11	---	215.50	---	213.21	---	210.37	208.96	---
LOW	216.98	216.64	216.83	216.79	216.74	216.62	215.85	214.64	213.19	211.91	210.41	209.36

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207.86	207.06	206.45	206.04	206.08	206.33	206.12	205.55	210.85	206.40	205.53	211.33
2	207.68	207.14	206.56	206.28	206.23	206.36	206.29	205.62	211.05	206.10	205.52	211.91
3	207.65	207.07	206.54	206.36	206.21	206.21	206.32	205.66	210.97	206.03	205.51	212.09
4	207.65	207.08	206.56	206.13	205.97	206.20	206.15	205.52	211.37	205.94	205.57	211.88
5	207.70	207.11	206.58	206.25	206.16	206.28	205.84	205.58	211.81	205.94	205.52	212.52
6	207.76	206.98	206.49	206.33	206.17	206.29	205.94	205.47	212.39	205.78	205.25	212.82
7	207.54	206.84	206.15	206.20	206.04	206.40	206.04	205.47	212.23	205.81	205.08	207.44
8	207.61	207.05	206.13	206.07	205.97	206.49	206.14	205.45	212.53	211.48	205.03	211.92
9	207.64	207.06	206.53	206.16	206.16	206.59	206.19	205.39	209.38	211.98	205.12	212.30
10	207.52	206.95	206.78	206.19	206.25	206.84	206.17	205.40	212.80	211.93	205.03	211.75
11	207.21	206.79	206.83	206.10	206.19	206.72	205.91	205.28	212.82	212.14	204.94	212.70
12	207.45	206.65	206.66	206.16	206.19	206.28	205.71	205.20	212.30	206.76	210.83	212.77
13	207.61	206.67	206.51	206.11	206.09	206.39	205.94	205.49	212.81	211.18	211.56	207.20
14	207.71	206.98	206.45	206.17	206.04	206.37	205.95	205.28	213.05	211.50	211.70	206.68
15	207.81	206.93	206.37	205.95	205.88	206.31	205.93	205.39	207.82	212.27	206.13	211.98
16	207.71	206.84	206.41	206.11	206.02	206.23	205.98	205.76	212.52	212.77	206.35	212.22
17	207.41	206.66	206.25	206.13	206.02	206.18	205.92	205.36	208.00	212.94	205.45	211.61
18	207.47	206.63	206.36	206.29	206.20	206.45	205.95	205.59	207.09	212.64	205.29	206.89
19	207.50	206.62	206.60	206.16	206.24	206.46	205.94	205.61	206.93	211.44	211.11	206.10
20	207.46	206.50	206.45	206.15	206.15	206.43	206.04	205.60	206.88	210.19	211.47	206.12
21	207.45	206.49	206.20	206.19	206.00	206.30	206.04	205.61	206.88	212.45	206.12	206.04
22	207.13	206.62	206.41	206.18	206.09	206.33	205.97	205.40	206.88	212.77	205.50	205.96
23	206.92	206.60	206.21	206.28	206.25	206.28	205.80	205.33	206.53	207.32	210.83	205.65
24	207.36	206.53	206.30	206.04	206.16	206.10	205.40	205.28	206.28	206.87	211.27	205.55
25	207.38	206.62	206.30	206.20	205.80	206.02	205.71	205.40	206.22	206.54	205.97	210.86
26	207.19	206.63	206.36	206.21	206.00	205.99	205.91	205.20	206.14	206.46	211.07	212.04
27	206.91	206.38	206.17	206.15	206.24	206.04	205.98	209.54	206.17	206.29	211.49	212.17
28	207.07	206.57	206.24	206.20	206.27	206.04	205.91	209.91	206.13	205.97	206.35	206.62
29	206.87	206.66	206.12	206.20	---	206.11	205.73	210.87	211.56	205.90	211.46	211.70
30	206.82	206.57	206.37	206.06	---	206.15	205.90	209.48	211.15	205.84	211.61	212.56
31	206.92	---	206.32	206.11	---	206.12	---	208.62	---	205.74	206.29	---
LOW	207.86	207.14	206.83	206.36	206.27	206.84	206.32	210.87	213.05	212.94	211.70	212.82

SITE NUMBER FROM LOCATION MAP.—16.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—5N4E1ABBD2.

SITE ID (STATION NUMBER).—442545103343702.

OTHER IDENTIFIER.—LA-90A and Whitewood Mdsn.

LOCATION.—Lat 44°25′44.3″, long 103°34′37.1″, in SE1/4NW1/4NW1/4NE1/4 sec. 1, T. 5 N., R. 4 E., Hydrologic Unit 10120202, 2 mi west of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 822 ft deep with 794 ft of 5-in. steel casing; open hole from 794 to 822 ft.

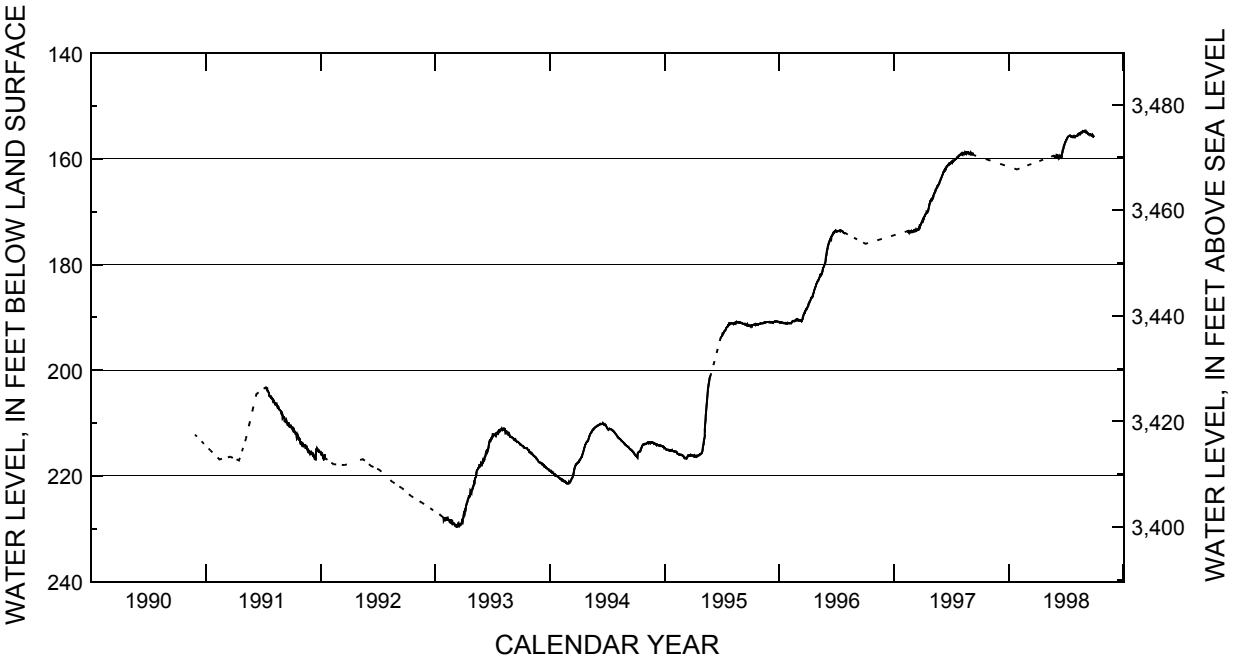
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- one reading per day from July 1991 to January 1992. Monthly tape down from Nov. 27, 1990, to June 11, 1991, and Jan. 16 to Sept. 25, 1992.

DATUM.—Elevation of land-surface datum is 3,629.7 ft above sea level. Measuring point: Top of steel casing, 2.1 ft above land-surface datum.

REMARKS.—Electronic data logger records poor; tape down records good.

PERIOD OF RECORD.—November 1990 to September 1998.

EXTREMES.—Highest daily water level, 154.69 ft below land-surface datum, Aug. 27, 28, 31, 1998; lowest daily water level, 229.75 ft below land-surface datum, Mar. 12, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216.23	213.99	213.91	214.70	215.42	216.23	216.18	215.41	---	193.67	191.13	191.05
2	216.23	213.96	213.97	214.74	215.43	216.33	216.20	215.10	---	193.58	191.10	191.05
3	216.28	213.91	214.00	214.82	215.39	216.37	216.18	214.70	---	193.45	191.11	191.07
4	216.33	213.91	214.03	214.91	215.37	216.50	216.29	214.29	---	193.35	191.11	191.12
5	216.41	213.84	214.08	214.98	215.41	216.64	216.23	213.91	---	193.10	191.15	191.14
6	216.51	213.85	214.14	215.05	215.42	216.63	216.29	213.56	---	193.12	191.16	191.11
7	216.04	213.77	214.05	215.00	215.42	216.59	216.26	213.14	---	193.01	191.18	191.19
8	215.71	213.72	214.09	215.01	215.49	216.65	216.33	212.72	---	192.87	191.13	191.23
9	215.56	213.71	214.10	215.00	215.64	216.65	216.32	211.46	---	192.69	191.26	191.20
10	215.49	213.65	214.14	215.06	215.73	216.70	216.32	210.38	---	192.62	191.24	191.24
11	215.47	213.65	214.22	215.12	215.75	216.77	216.35	209.45	---	192.59	191.24	191.21
12	215.44	213.74	214.19	215.12	215.81	216.65	216.22	208.65	---	192.53	191.10	191.21
13	215.43	213.66	214.27	215.09	215.90	216.53	216.30	207.85	---	192.42	191.07	191.21
14	215.41	213.63	214.28	215.17	215.93	216.42	216.33	206.98	---	192.33	191.14	191.40
15	215.41	213.68	214.29	215.23	215.96	216.35	216.31	206.17	---	192.21	191.18	191.37
16	215.28	213.73	214.32	215.28	215.94	216.19	216.22	205.46	---	192.06	190.86	191.38
17	215.13	213.82	214.24	215.26	216.00	216.18	216.27	204.82	---	191.95	190.88	191.40
18	214.90	213.71	214.30	215.19	215.96	216.14	216.20	204.23	---	191.83	190.85	191.43
19	214.68	213.73	214.29	215.19	216.02	216.16	216.19	203.65	---	191.77	190.97	191.44
20	214.50	213.76	214.28	215.18	215.99	216.17	216.15	203.20	---	191.73	190.92	191.40
21	214.42	213.65	214.29	215.22	216.03	216.20	216.04	202.76	---	191.57	190.90	191.55
22	214.27	213.63	214.29	215.21	216.03	216.21	216.01	202.35	---	191.59	190.89	191.56
23	214.17	213.65	214.33	215.22	216.01	216.19	215.99	201.99	---	191.48	190.99	191.40
24	214.09	213.66	214.42	215.17	216.04	216.16	215.97	201.63	---	191.39	190.97	191.50
25	214.03	213.73	214.40	215.24	216.07	216.09	215.89	201.38	---	191.25	190.96	191.54
26	214.02	213.79	214.45	215.30	216.11	216.14	215.89	201.12	---	191.35	190.99	191.54
27	214.01	213.89	214.45	215.30	216.13	216.10	215.82	201.07	---	191.25	190.93	191.54
28	214.03	213.85	214.55	215.30	216.19	216.10	215.76	---	193.98	191.18	190.95	191.57
29	213.95	213.91	214.56	215.31	---	216.14	215.71	---	193.83	191.21	190.99	191.58
30	213.93	213.90	214.62	215.35	---	216.15	215.59	---	193.75	191.11	190.97	191.56
31	213.95	---	214.71	215.40	---	216.16	---	---	---	191.12	191.00	---
LOW	216.51	213.99	214.71	215.40	216.19	216.77	216.35	215.41	193.98	193.67	191.26	191.58

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191.62	191.18	190.96	190.91	191.11	190.47	187.97	183.36	177.47	173.48	---	---
2	191.58	191.18	190.94	190.99	191.13	190.49	187.86	183.21	177.13	173.70	---	---
3	191.72	191.13	190.90	191.01	191.09	190.59	187.60	183.10	176.88	173.66	---	---
4	191.63	191.16	190.95	190.96	191.10	190.54	187.42	183.06	176.62	173.71	---	---
5	191.56	191.18	190.91	190.97	191.11	190.60	187.31	182.89	176.30	173.69	---	---
6	191.63	191.18	190.90	190.97	191.06	190.60	187.22	182.78	176.05	173.68	---	---
7	191.50	191.15	190.94	190.99	191.07	190.58	187.01	182.71	175.91	173.68	---	---
8	191.44	191.18	190.99	190.96	191.08	190.56	186.88	182.46	175.75	173.66	---	---
9	191.44	191.15	190.93	190.97	190.97	190.60	186.84	182.27	175.71	173.65	---	---
10	191.41	191.17	190.96	190.98	190.82	190.57	e186.66	182.17	175.43	173.59	---	---
11	191.38	191.13	190.99	190.99	190.79	190.60	186.34	181.94	175.35	173.57	---	---
12	191.38	191.06	191.03	191.01	190.75	190.69	186.31	181.84	175.10	173.56	---	---
13	191.37	191.02	190.94	191.05	190.75	190.60	186.25	181.82	175.00	173.63	---	---
14	191.36	190.99	190.90	191.04	190.64	190.48	186.21	181.91	175.15	173.51	---	---
15	191.33	190.99	190.86	191.09	190.66	190.40	186.12	181.72	174.71	173.51	---	---
16	191.37	190.97	190.86	191.06	190.71	190.13	186.10	181.64	174.60	173.65	---	---
17	191.32	190.92	190.81	191.13	190.72	189.90	185.92	181.45	174.57	173.67	---	---
18	191.37	190.94	190.80	191.11	190.70	189.64	185.69	181.22	174.41	173.66	---	---
19	191.32	190.88	190.78	191.13	190.71	189.45	185.40	180.89	174.26	173.66	---	---
20	191.32	190.86	190.79	191.10	190.66	189.39	185.20	180.61	174.25	173.66	---	---
21	191.37	190.91	190.79	191.06	190.60	189.15	184.92	180.54	174.07	173.74	---	---
22	191.37	190.87	190.80	191.11	190.63	189.17	184.75	180.35	174.06	173.87	---	---
23	191.34	190.86	190.79	191.08	190.50	188.88	184.61	180.19	173.93	173.90	---	---
24	191.32	190.86	190.79	191.17	190.44	188.70	184.56	180.05	173.93	173.95	---	---
25	191.33	190.87	190.78	191.11	190.37	188.68	184.25	179.91	173.76	173.99	---	---
26	191.37	190.89	190.79	191.06	190.44	188.59	184.14	179.83	173.73	174.03	---	---
27	191.34	190.86	190.81	191.15	190.37	188.49	183.97	179.53	173.69	174.07	---	---
28	191.26	190.88	190.84	191.09	190.38	188.46	183.69	179.08	173.67	174.02	---	---
29	191.23	190.85	190.86	191.04	190.50	188.27	183.64	178.62	173.53	174.02	---	---
30	191.22	190.95	190.89	191.12	---	188.13	183.48	178.21	173.59	e174.06	---	---
31	191.21	---	190.87	191.11	---	188.02	---	177.84	---	---	---	---
LOW	191.72	191.18	191.03	191.17	191.13	190.69	187.97	183.36	177.47	174.07	---	---

e Estimated

SITE NUMBER 16—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	173.65	171.66	167.81	163.47	160.78	159.12	158.83
2	e176.08	---	---	---	---	173.74	171.53	167.50	163.27	160.62	159.09	158.96
3	---	---	---	---	---	173.63	171.68	167.41	163.12	160.55	159.01	159.05
4	---	---	---	---	---	173.57	171.50	167.44	163.02	160.58	159.01	159.01
5	---	---	---	---	---	173.54	171.40	167.13	162.93	160.48	159.04	159.02
6	---	---	---	---	---	173.66	171.14	167.12	162.63	160.53	158.92	159.10
7	---	---	---	---	---	173.55	170.92	166.83	162.56	160.38	159.03	159.03
8	---	---	---	---	---	173.56	170.79	166.57	162.46	160.35	159.07	158.99
9	---	---	---	---	---	173.53	170.76	166.55	162.26	160.42	158.88	159.12
10	---	---	---	---	---	173.49	170.51	166.40	162.29	160.38	158.97	159.19
11	---	---	---	---	---	173.61	170.43	166.16	162.19	160.29	158.97	159.24
12	---	---	---	---	173.68	173.53	170.41	166.16	161.95	160.25	158.97	---
13	---	---	---	---	173.75	173.40	170.34	165.91	161.86	160.12	159.08	---
14	---	---	---	---	173.78	173.50	170.23	165.77	161.91	160.09	159.05	---
15	---	---	---	---	173.72	173.51	170.04	165.69	161.67	160.08	158.88	---
16	---	---	---	---	173.79	173.53	170.12	165.54	161.61	160.07	158.74	---
17	---	---	---	---	173.91	173.42	170.07	165.52	161.50	160.01	158.82	---
18	---	---	---	---	173.68	173.33	169.92	165.21	161.42	159.94	158.92	---
19	---	---	---	---	173.92	173.38	169.81	165.15	161.37	159.84	158.71	---
20	---	---	---	---	173.69	173.39	169.58	165.06	161.25	159.79	158.72	---
21	---	---	---	---	173.71	173.05	169.29	165.08	161.21	159.67	158.84	---
22	---	---	---	---	173.71	172.93	169.00	164.86	161.17	159.66	158.76	---
23	---	---	---	---	173.73	173.00	168.85	164.77	161.04	159.58	158.75	---
24	---	---	---	---	173.66	172.59	168.46	164.77	160.92	159.50	158.85	---
25	---	---	---	---	173.84	172.58	168.31	164.57	160.86	159.50	158.80	---
26	---	---	---	---	173.79	172.46	168.05	164.38	160.98	159.50	158.92	---
27	---	---	---	---	173.91	172.48	168.02	164.16	160.81	159.40	158.79	---
28	---	---	---	---	173.66	172.21	167.71	164.07	160.76	159.26	158.82	---
29	---	---	---	---	---	171.99	167.58	163.92	160.71	159.26	158.92	---
30	---	---	---	---	---	171.96	167.88	163.72	160.70	159.25	158.92	---
31	---	---	---	---	---	171.97	---	163.60	---	159.16	159.03	---
LOW	176.08	---	---	---	173.92	173.74	171.68	167.81	163.47	160.78	159.12	159.24

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	159.94	156.71	155.72	154.78
2	---	---	---	---	---	---	---	---	159.32	156.54	155.72	154.89
3	---	---	---	---	---	---	---	---	159.33	156.36	155.68	154.81
4	---	---	---	---	---	---	---	---	159.34	156.32	155.64	154.88
5	---	---	---	---	---	---	---	---	159.31	156.18	155.63	154.89
6	---	---	---	---	---	---	---	---	159.68	156.04	155.63	154.89
7	---	---	---	---	---	---	---	---	159.78	155.93	155.58	155.07
8	---	---	---	---	---	---	---	---	159.76	155.85	155.46	155.10
9	---	---	---	---	---	---	---	---	159.61	155.75	155.38	155.14
10	---	---	---	---	---	---	---	---	159.61	---	155.40	155.15
11	---	---	---	---	---	---	---	---	159.83	---	155.35	155.21
12	---	---	---	---	---	---	---	---	159.66	---	155.25	155.36
13	---	---	---	---	---	---	---	---	159.62	---	155.26	155.38
14	---	---	---	---	---	---	---	---	159.50	155.58	155.20	155.26
15	---	---	---	---	---	---	---	---	159.62	155.57	155.27	155.26
16	---	---	---	---	---	---	---	---	159.72	155.69	155.18	155.27
17	---	---	---	---	---	---	---	---	159.58	155.70	155.16	155.27
18	---	---	---	---	---	---	---	---	159.64	155.77	155.15	155.43
19	---	---	---	---	---	---	---	---	159.40	155.74	154.98	155.38
20	---	---	---	---	---	---	---	---	159.00	155.74	154.96	155.40
21	---	---	---	---	---	---	---	---	158.67	155.76	155.02	155.48
22	---	---	---	---	---	---	---	---	158.42	155.85	154.94	155.52
23	---	---	---	---	---	---	---	---	158.21	155.88	154.91	155.54
24	---	---	---	---	---	---	---	159.38	157.97	155.89	154.78	155.62
25	---	---	---	---	---	---	---	159.44	157.73	155.78	154.85	155.72
26	---	---	---	---	---	---	---	159.52	157.54	155.73	154.85	155.52
27	---	---	---	e161.95	---	---	---	159.52	157.37	155.78	154.69	155.66
28	---	---	---	---	---	---	---	159.60	157.13	155.76	154.69	155.72
29	---	---	---	---	---	---	---	159.73	156.93	155.87	154.73	155.78
30	---	---	---	---	---	---	---	159.71	156.77	155.78	154.76	155.77
31	---	---	---	---	---	---	---	159.75	---	155.81	154.69	---
LOW	---	---	---	161.95	---	---	---	159.75	159.94	156.71	155.72	155.78

e Estimated

SITE NUMBER FROM LOCATION MAP.—17.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—5N4E1ABBD.

SITE ID (STATION NUMBER).—442545103343701.

OTHER IDENTIFIER.—LA-86C and Whitewood Mnls.

LOCATION.—Lat 44°25′44.4″, long 103°34′37.5″, in SE1/4NW1/4NW1/4NE1/4 sec. 1, T. 5 N., R. 4 E., Hydrologic Unit 10120202, 2 mi west of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 300 ft deep with 281 ft of 5-in. steel casing; open hole from 281 to 300 ft.

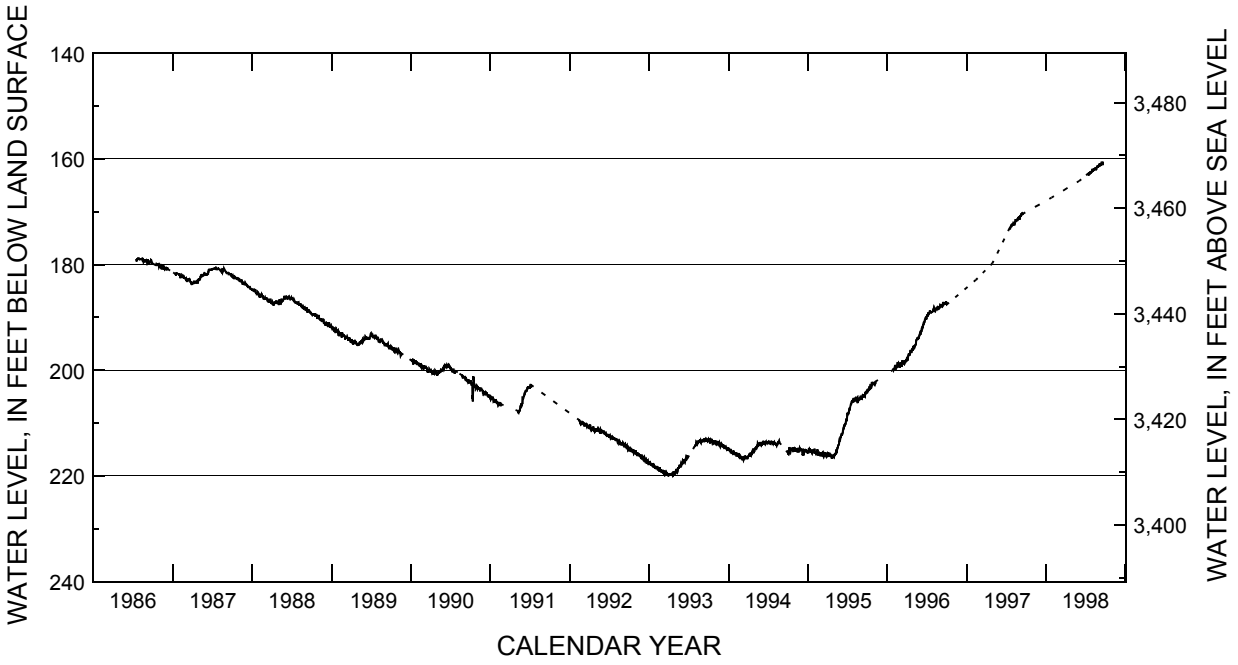
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- 60-minute interval. Digital water-level recorder with 60-minute interval prior to Feb. 14, 1992.

DATUM.—Elevation of land-surface datum is 3,629.3 ft above sea level. Measuring point: Top of steel casing, 1.50 ft above land-surface datum.

REMARKS.—Records good except for 1997-98. Unusual fluctuations in water level during October 1991 probably caused by drilling adjacent observation well (LA-90A).

PERIOD OF RECORD.—July 1986 to September 1998.

EXTREMES.—Highest daily water level, 160.69 ft below land-surface datum, Sept. 18, 1998; lowest daily water level, 220.06 ft below land-surface datum, Apr. 20, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215.63	214.67	---	215.41	214.98	216.13	215.69	216.50	212.65	208.94	205.51	205.30
2	215.48	215.14	---	215.58	215.44	216.00	215.74	215.84	212.61	208.52	205.54	205.19
3	215.84	215.23	---	215.61	215.74	215.65	216.07	216.04	212.45	208.06	205.72	205.15
4	215.89	215.09	---	215.60	215.54	215.81	216.12	216.27	212.36	208.22	205.69	205.18
5	215.47	215.23	---	215.00	215.57	215.80	215.76	216.16	212.13	208.26	205.60	205.10
6	215.50	215.23	215.10	215.03	215.67	216.14	215.70	215.90	211.97	208.29	205.39	205.39
7	215.62	215.22	215.51	214.90	215.83	216.15	215.83	215.82	212.22	208.18	205.38	205.40
8	215.88	215.28	216.08	214.98	215.71	216.06	215.87	215.69	212.22	208.02	205.68	205.03
9	214.58	215.26	215.95	214.98	215.41	215.73	216.11	215.88	212.06	207.90	205.70	204.96
10	215.63	214.98	216.12	214.93	215.61	215.58	216.40	215.86	211.97	207.71	205.56	204.78
11	214.88	214.96	214.92	214.96	215.73	215.52	216.28	215.56	211.81	207.36	205.38	204.71
12	215.46	214.81	216.06	215.20	215.73	215.76	216.23	215.07	211.56	207.21	205.48	204.76
13	215.49	215.16	215.91	215.38	215.72	216.16	216.21	215.60	211.26	207.15	205.54	205.03
14	214.99	215.40	215.93	215.35	215.12	216.36	216.00	215.59	211.05	207.23	205.55	205.03
15	215.11	215.40	215.06	215.18	215.01	216.23	216.21	215.27	210.83	207.10	205.30	204.58
16	215.28	214.72	215.18	215.21	215.91	216.27	216.39	214.97	210.73	---	205.15	204.84
17	215.05	214.94	215.45	215.35	215.91	216.24	216.29	214.82	210.75	---	205.12	204.71
18	215.07	215.33	215.30	215.51	216.00	216.04	216.16	214.64	210.69	206.46	206.08	204.85
19	214.97	215.29	215.28	215.58	215.97	215.77	216.26	214.61	210.64	206.47	206.09	204.89
20	214.84	215.08	215.35	215.74	215.95	215.80	216.13	214.59	210.43	206.39	205.89	204.98
21	214.82	215.44	215.38	215.63	215.75	215.56	216.61	214.19	210.40	206.14	205.66	205.01
22	215.06	215.52	215.39	215.60	215.72	215.89	216.60	214.24	210.26	205.92	205.64	204.42
23	215.12	215.33	215.02	215.57	215.90	215.86	216.45	214.10	210.26	205.88	205.59	204.49
24	215.22	215.26	215.17	215.49	215.80	215.74	216.40	213.95	210.11	205.91	205.31	204.49
25	215.17	215.21	215.36	215.48	215.54	216.12	216.42	213.86	209.86	205.86	205.52	204.28
26	214.94	214.79	215.36	215.03	215.81	216.17	216.45	213.53	209.64	205.74	205.52	204.08
27	214.69	214.86	215.46	215.23	216.13	216.26	216.24	213.35	209.46	205.66	205.42	204.05
28	215.00	215.03	215.46	215.56	216.16	216.39	216.34	213.42	209.48	206.04	205.46	204.07
29	215.42	215.13	215.52	215.56	---	216.31	216.37	213.30	209.41	205.76	205.26	203.98
30	215.25	214.95	215.59	215.23	---	216.07	216.46	213.10	209.39	206.01	205.39	204.16
31	215.24	---	215.57	214.92	---	215.76	---	212.81	---	206.03	205.39	---
LOW	215.89	215.52	216.12	215.74	216.16	216.39	216.61	216.50	212.65	208.94	206.09	205.40

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204.20	202.46	---	---	199.86	198.77	197.88	195.60	193.17	189.98	188.52	187.67
2	204.20	---	---	---	199.85	198.77	197.49	195.52	193.17	189.83	188.39	187.78
3	204.09	---	---	---	199.82	198.72	197.90	195.64	193.11	189.66	188.19	187.75
4	203.71	e202.73	---	---	199.62	198.72	198.04	195.76	192.74	189.52	188.24	187.75
5	203.96	202.49	---	---	199.49	198.97	198.02	195.79	192.41	189.44	188.27	187.64
6	203.93	202.45	---	---	199.19	199.15	197.64	195.56	192.63	189.60	188.56	187.92
7	203.68	202.60	---	---	199.16	199.33	197.31	195.44	192.63	189.47	188.77	187.88
8	203.59	202.52	---	---	199.21	199.22	197.23	195.19	192.33	189.51	188.83	187.74
9	203.48	202.04	---	---	199.29	198.87	197.21	195.34	192.05	189.46	188.64	187.75
10	203.45	e202.16	---	---	199.72	198.44	196.94	195.33	191.95	189.26	188.45	187.91
11	203.30	---	---	---	199.72	198.29	196.99	195.20	191.82	189.27	188.40	187.96
12	203.43	---	---	---	199.63	198.16	197.00	195.02	191.88	189.28	188.26	187.81
13	203.59	---	---	---	199.27	198.61	196.88	194.80	191.77	189.19	188.49	187.53
14	203.56	---	---	---	199.18	198.61	197.07	194.35	191.55	189.13	188.42	187.27
15	203.24	---	---	---	199.54	198.55	197.07	194.31	191.55	189.04	188.35	187.29
16	203.06	---	---	---	199.22	198.37	196.60	194.26	191.38	188.74	188.29	187.27
17	203.12	---	---	---	199.04	198.49	196.37	194.07	191.29	188.87	188.16	187.54
18	203.09	---	---	---	198.65	198.78	196.37	194.01	190.88	188.99	188.10	187.56
19	203.41	---	---	---	198.47	198.86	196.41	193.94	191.05	189.00	188.29	187.52
20	203.35	---	---	---	198.76	198.75	196.41	194.02	190.93	189.00	188.20	187.27
21	202.84	---	---	---	198.83	198.49	196.60	194.05	190.85	189.03	188.23	187.29
22	202.91	---	---	---	198.70	198.40	196.60	193.86	190.73	189.07	188.30	187.38
23	202.89	---	---	---	198.78	198.11	196.46	193.96	190.48	189.03	188.31	187.59
24	202.75	---	---	---	198.87	198.51	196.06	194.03	190.48	189.06	188.17	187.47
25	202.62	---	---	---	199.21	198.52	196.02	194.01	190.17	189.00	188.15	187.29
26	202.20	---	---	---	199.20	198.22	196.02	193.73	190.18	188.96	188.10	187.21
27	202.50	---	---	---	199.41	198.16	195.96	193.55	190.05	188.92	187.93	187.22
28	202.54	---	---	---	199.53	198.12	196.16	193.49	190.05	188.87	188.02	187.21
29	202.66	---	---	e199.93	199.38	197.96	196.15	193.38	190.25	188.89	188.18	187.27
30	202.61	---	---	199.99	---	198.09	195.60	193.12	190.26	188.80	188.08	187.06
31	202.36	---	---	199.68	---	198.12	---	193.07	---	188.63	187.79	---
LOW	204.20	202.73	---	199.99	199.86	199.33	198.04	195.79	193.17	189.98	188.83	187.96

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	172.39	171.33
2	e187.54	---	---	---	---	---	---	---	---	---	172.34	171.36
3	---	---	---	---	---	---	---	---	---	---	172.41	171.23
4	---	---	---	---	---	---	---	---	---	---	172.50	170.91
5	---	---	---	---	---	---	---	---	---	---	172.50	170.89
6	---	---	---	---	---	---	---	---	---	---	172.47	170.75
7	---	---	---	---	---	---	---	---	---	---	172.40	170.68
8	---	---	---	---	---	---	---	---	---	---	171.92	170.77
9	---	---	---	---	---	---	---	---	---	---	172.23	170.72
10	---	---	---	---	---	---	---	---	---	---	172.26	170.56
11	---	---	---	---	---	---	---	---	---	---	172.13	170.36
12	---	---	---	---	e182.91	---	---	---	---	---	172.02	170.34
13	---	---	---	---	---	---	---	---	---	---	171.93	170.45
14	---	---	---	---	---	---	---	---	---	---	171.59	170.45
15	---	---	---	---	---	---	---	---	---	---	171.42	170.44
16	---	---	---	---	---	---	---	---	---	173.20	171.75	170.35
17	---	---	---	---	---	---	---	---	---	173.20	171.75	170.36
18	---	---	---	---	---	---	---	---	---	173.21	171.55	---
19	---	---	---	---	---	---	---	---	---	173.20	171.57	---
20	---	---	---	---	---	---	---	---	---	173.14	171.57	---
21	---	---	---	---	---	---	---	---	---	173.07	171.48	---
22	---	---	---	---	---	---	---	---	---	172.91	171.46	---
23	---	---	---	---	---	---	---	---	---	172.72	171.41	---
24	---	---	---	---	---	---	---	---	---	172.61	171.31	---
25	---	---	---	---	---	---	---	---	---	172.54	171.42	---
26	---	---	---	---	---	---	---	---	---	172.46	171.33	---
27	---	---	---	---	---	---	---	---	---	172.55	171.14	---
28	---	---	---	---	---	---	---	---	---	172.59	171.08	---
29	---	---	---	---	---	---	e179.77	---	---	172.54	171.06	---
30	---	---	---	---	---	---	---	---	---	172.49	171.07	---
31	---	---	---	---	---	---	---	---	---	172.39	170.96	---
LOW	187.54	---	---	---	182.91	---	179.77	---	---	173.21	172.50	171.36

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	162.03	161.34
2	---	---	---	---	---	---	---	---	e164.19	---	162.03	161.05
3	---	---	---	---	---	---	---	---	---	---	162.13	161.02
4	---	---	---	---	---	---	---	---	---	---	162.26	161.04
5	---	---	---	---	---	---	---	---	---	---	162.25	161.09
6	---	---	---	---	---	---	---	---	---	---	162.08	161.23
7	---	---	---	---	---	---	---	---	---	---	161.95	161.23
8	---	---	---	---	---	---	---	---	---	---	161.99	160.93
9	---	---	---	---	---	---	---	---	---	---	162.12	160.80
10	---	---	---	---	---	---	---	---	---	---	162.09	161.09
11	---	---	---	---	---	---	---	---	---	---	162.06	161.08
12	---	---	---	---	---	---	---	---	---	---	162.09	160.99
13	---	---	---	---	---	---	---	---	---	---	162.07	160.86
14	---	---	---	---	---	---	---	---	---	162.77	161.99	161.02
15	---	---	---	---	---	---	---	---	---	162.98	161.83	161.02
16	---	---	---	---	---	---	---	---	---	162.98	161.65	160.92
17	---	---	---	---	---	---	---	---	---	162.85	161.75	160.79
18	---	---	---	---	---	---	---	---	---	162.68	161.73	160.69
19	---	---	---	---	---	---	---	---	---	162.65	161.90	160.70
20	---	---	---	---	---	---	---	---	---	162.63	161.93	160.96
21	---	---	---	---	---	---	---	---	---	162.74	161.84	160.98
22	---	---	---	---	---	---	---	---	---	162.81	161.61	160.93
23	---	---	---	---	---	---	---	---	---	162.73	161.53	---
24	---	---	---	---	---	---	---	---	---	162.58	161.48	---
25	---	---	---	---	---	---	---	---	---	162.59	161.49	---
26	---	---	---	---	---	---	---	---	---	162.59	161.28	---
27	---	---	---	e167.30	---	---	---	---	---	162.58	161.50	---
28	---	---	---	---	---	---	---	---	---	162.48	161.50	---
29	---	---	---	---	---	---	---	---	---	162.41	161.50	---
30	---	---	---	---	---	---	---	---	---	162.40	161.30	---
31	---	---	---	---	---	---	---	---	---	162.30	161.35	---
LOW	---	---	---	167.30	---	---	---	---	164.19	162.98	162.26	161.34

e Estimated

SITE NUMBER FROM LOCATION MAP.—18.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—5N1E11DABA.

SITE ID (STATION NUMBER).—442435103571101.

OTHER IDENTIFIER.—LA-95C and Big Hill Trailhead.

LOCATION.—Lat 44°24′34.6″, long 103°57′10.8″, in NE1/4NW1/4NE1/4SE1/4 sec. 11, T. 5N., R. 1 E., Hydrologic Unit 10120203, 7 mi southwest of Spearfish. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 780 ft deep with 628 ft of 5-in. steel casing; open hole from 628 to 780 ft.

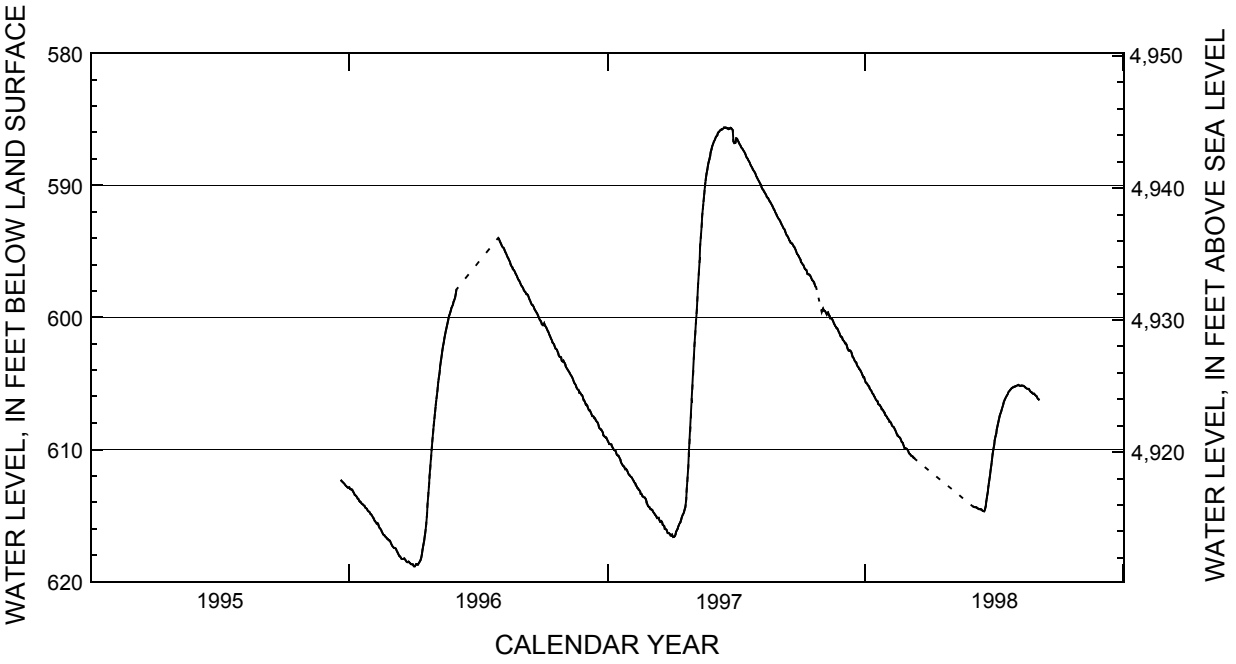
INSTRUMENTATION.—Electronic data logger.

DATUM.—Elevation of land-surface datum is 5,530.2 ft above sea level. Measuring point: Top of steel casing, 1.3 ft above land-surface datum.

REMARKS.—Records fair.

PERIOD OF RECORD.—December 1995 to September 1998.

EXTREMES.—Highest daily water level, 585.62 ft below land-surface datum, June 15, 17, 1997; lowest water level, 618.86 ft below land-surface datum, Apr. 2-3, 1996.



SITE NUMBER 18—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	612.87	614.93	617.22	618.80	607.51	597.88	---	594.18	597.60
2	---	---	---	612.99	615.00	617.29	618.86	606.98	---	---	594.32	597.68
3	---	---	---	613.03	615.09	617.38	618.86	606.49	---	---	594.45	597.78
4	---	---	---	613.02	615.19	617.45	618.77	605.98	---	---	594.54	597.93
5	---	---	---	613.05	615.29	617.49	618.69	605.47	---	---	594.66	598.01
6	---	---	---	613.14	615.40	617.49	618.71	605.03	---	---	594.72	598.05
7	---	---	---	613.24	615.47	617.52	618.73	604.57	---	---	594.80	598.17
8	---	---	---	613.36	615.54	617.64	618.68	604.17	---	---	594.90	598.24
9	---	---	---	613.45	615.62	617.76	618.59	603.71	---	---	595.04	598.26
10	---	---	---	613.48	615.60	617.86	618.50	603.28	---	---	595.17	598.33
11	---	---	---	613.54	615.66	617.97	618.42	602.88	---	---	595.29	598.45
12	---	---	---	613.63	615.81	618.08	618.21	602.52	---	---	595.41	598.60
13	---	---	---	613.72	615.96	618.11	617.97	602.19	---	---	595.49	598.74
14	---	---	---	613.76	616.02	618.17	617.62	601.89	---	---	595.63	598.87
15	---	---	---	613.89	616.08	618.28	617.26	601.57	---	---	595.74	598.97
16	---	---	---	613.97	616.21	618.30	616.95	601.27	---	---	595.87	599.07
17	---	---	---	613.97	616.32	618.30	616.67	601.00	---	---	596.04	599.09
18	---	---	---	614.04	616.43	618.28	616.24	600.73	---	---	596.14	599.19
19	---	---	---	614.13	616.50	618.25	615.68	600.49	---	---	596.21	599.33
20	---	---	612.31	614.16	616.51	618.34	614.97	600.24	---	---	596.36	599.43
21	---	---	612.35	614.19	616.60	618.39	614.22	599.99	---	---	596.41	599.52
22	---	---	612.43	614.26	616.67	618.50	613.43	599.81	---	---	596.49	599.62
23	---	---	612.50	614.33	616.70	618.54	612.68	599.63	---	---	596.60	599.68
24	---	---	612.54	614.41	616.78	618.51	612.01	599.44	---	---	596.73	599.83
25	---	---	612.60	614.46	616.80	618.50	611.35	599.26	---	---	596.83	599.96
26	---	---	612.65	614.50	616.89	618.57	610.60	599.12	---	---	596.96	600.07
27	---	---	612.74	614.62	616.90	618.60	609.92	598.99	---	---	597.07	600.17
28	---	---	612.79	614.67	616.95	618.67	609.27	598.81	---	---	597.16	600.26
29	---	---	612.85	614.70	617.11	618.71	608.61	598.66	---	---	597.24	600.40
30	---	---	612.90	614.76	---	618.70	608.06	598.47	---	593.98	597.38	600.53
31	---	---	612.90	614.89	---	618.70	---	598.22	---	594.07	597.52	---
LOW	---	---	612.90	614.89	617.11	618.71	618.86	607.51	597.88	594.07	597.52	600.53

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600.59	603.46	606.60	609.36	611.95	614.36	616.54	605.28	586.62	586.77	589.48	592.60
2	600.59	603.59	606.61	609.45	612.03	614.50	616.47	604.20	586.48	586.45	589.59	592.69
3	600.47	603.75	606.69	609.60	612.09	614.55	616.60	603.00	586.35	586.46	589.68	592.83
4	600.60	603.84	606.83	609.60	612.12	614.55	616.64	602.04	586.27	586.59	589.77	592.93
5	600.69	603.94	607.00	609.58	612.23	614.58	616.63	601.18	586.23	586.68	589.89	593.05
6	600.77	604.04	607.07	609.62	612.32	614.71	616.55	600.34	586.04	586.82	589.98	593.16
7	600.92	604.09	607.06	609.75	612.41	614.80	616.41	599.54	585.97	586.88	590.15	593.25
8	601.02	604.20	607.18	609.86	612.52	614.84	616.24	598.60	585.93	586.98	590.29	593.31
9	601.09	604.29	607.34	609.98	612.57	614.95	616.10	597.57	585.85	587.12	590.33	593.44
10	601.28	604.41	607.48	610.03	612.70	615.01	616.01	596.63	585.79	587.18	590.43	593.58
11	601.41	604.46	607.48	610.06	612.78	615.10	615.84	595.68	585.76	587.24	590.52	593.74
12	601.50	604.57	607.52	610.11	612.93	615.21	615.70	594.61	585.77	587.36	590.63	593.80
13	601.64	604.72	607.64	610.27	612.97	615.21	615.60	593.83	585.72	587.42	590.68	593.88
14	601.75	604.91	607.65	610.42	613.06	615.19	615.52	593.01	585.66	587.54	590.83	593.99
15	601.89	604.98	607.78	610.46	613.10	615.36	615.35	592.27	585.62	587.65	590.92	594.17
16	601.98	605.06	607.86	610.48	613.21	615.47	615.12	591.63	585.65	587.79	590.96	594.21
17	602.03	605.16	607.90	610.58	613.38	615.50	614.98	591.05	585.62	587.91	591.08	594.34
18	602.23	605.31	608.03	610.66	613.39	615.45	614.88	590.54	585.65	587.99	591.19	594.39
19	602.36	605.42	608.17	610.79	613.56	615.54	614.73	589.97	585.68	588.07	591.26	594.40
20	602.39	605.48	608.35	610.99	613.57	615.71	614.57	589.47	585.67	588.17	591.36	594.48
21	602.44	605.56	608.44	611.10	613.62	615.75	614.35	589.13	585.73	588.27	591.46	594.61
22	602.61	605.72	608.49	611.17	613.65	615.83	613.81	588.81	585.70	588.41	591.55	594.66
23	602.71	605.70	608.50	611.26	613.69	616.01	613.07	588.50	585.70	588.53	591.67	594.76
24	602.90	605.80	608.61	611.28	613.78	616.03	612.26	588.25	585.64	588.63	591.80	594.89
25	603.00	605.87	608.73	611.43	613.97	616.08	611.33	588.03	585.67	588.75	591.88	595.04
26	603.00	605.92	608.92	611.50	614.14	616.22	610.38	587.76	585.74	588.85	592.00	595.18
27	603.03	606.10	609.01	611.47	614.30	616.34	609.39	587.48	585.80	588.91	592.11	595.24
28	603.28	606.27	609.04	611.56	614.34	616.35	608.46	587.27	586.67	589.00	592.24	595.35
29	603.34	606.34	609.10	611.65	---	616.35	607.45	587.01	586.81	589.11	592.34	595.43
30	603.28	606.46	609.11	611.81	---	616.41	606.31	586.85	e586.80	589.26	592.44	595.53
31	603.39	---	609.23	611.92	---	616.53	---	586.73	---	589.36	592.55	---
LOW	603.39	606.46	609.23	611.92	614.34	616.53	616.64	605.28	586.81	589.36	592.55	595.53

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	595.65	599.40	601.77	604.88	607.64	609.99	---	---	---	609.99	605.23	606.06
2	595.83	599.33	601.84	604.97	607.68	610.08	---	---	614.31	609.68	605.21	606.16
3	595.90	599.49	601.96	605.01	607.81	610.23	---	---	614.34	609.33	605.19	606.21
4	595.99	599.50	601.96	605.14	607.92	610.31	---	---	614.37	609.02	605.15	606.28
5	596.05	599.54	602.06	605.19	607.90	610.35	---	---	614.37	608.78	605.12	---
6	596.17	599.63	602.24	605.22	607.99	610.46	---	---	614.38	608.48	605.15	---
7	596.33	599.76	602.41	605.39	608.15	610.48	---	---	614.39	608.21	605.18	---
8	596.36	599.67	602.52	605.50	608.24	610.51	---	---	614.45	607.93	605.19	---
9	596.39	599.62	602.53	605.54	608.28	610.55	---	---	614.46	607.70	605.16	---
10	596.54	599.79	602.50	605.67	608.32	610.62	---	---	614.51	607.48	605.17	---
11	596.72	599.88	602.54	605.78	608.43	610.65	---	---	614.53	607.28	605.18	---
12	596.74	600.08	602.66	605.85	608.54	610.73	---	---	614.52	607.11	605.18	---
13	596.75	600.08	602.81	605.97	608.65	---	---	---	614.54	606.92	605.19	---
14	596.79	600.08	603.02	606.04	608.82	---	---	---	614.55	606.76	605.23	---
15	596.86	600.16	603.09	606.20	608.93	---	---	---	614.62	606.58	605.31	---
16	597.00	600.29	603.22	606.24	608.95	---	---	---	614.66	606.37	605.36	---
17	597.16	600.43	603.33	606.32	609.04	---	---	---	614.67	606.23	605.38	---
18	597.21	600.51	603.39	606.35	609.07	---	---	---	614.69	606.12	605.42	---
19	597.28	600.65	603.42	606.57	609.12	---	---	---	614.55	606.04	605.43	---
20	597.34	600.72	603.63	606.61	609.25	---	---	---	614.32	605.93	605.43	---
21	597.49	600.82	603.72	606.63	609.43	---	---	---	613.99	605.84	605.50	---
22	597.66	600.85	603.76	606.73	609.49	---	---	---	613.59	605.72	605.57	---
23	597.71	600.98	603.91	606.80	609.51	---	---	---	613.24	605.62	605.66	---
24	---	601.08	603.96	606.95	609.73	---	---	---	612.87	605.56	605.67	---
25	---	601.18	604.04	606.98	609.90	---	---	---	612.44	605.50	605.73	---
26	---	601.37	604.14	607.05	609.92	---	---	---	612.04	605.42	605.79	---
27	---	601.46	604.30	607.19	609.92	---	---	---	611.64	605.35	605.79	---
28	---	601.47	604.39	607.23	609.94	---	---	---	611.21	605.34	605.79	---
29	---	601.54	604.52	607.39	---	---	---	---	610.79	605.30	605.87	---
30	---	601.71	604.54	607.46	---	---	---	---	610.37	605.27	605.93	---
31	599.59	---	604.73	607.54	---	---	---	---	---	605.23	605.97	---
LOW	599.59	601.71	604.73	607.54	609.94	610.73	---	---	614.69	609.99	605.97	606.28

SITE NUMBER FROM LOCATION MAP.—19.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—4N2E20BBAC2.

SITE ID (STATION NUMBER).—441757103544602.

OTHER IDENTIFIER.—LA-96A and Cheyenne Xing Ddwd.

LOCATION.—Lat 44°17′57.5″, long 103°54′45.5″, in SW1/4NE1/4NW1/4NW1/4 sec. 20, T. 4N., R. 2 E., Hydrologic Unit 10120203, 8 mi southwest of Lead. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled observation well, 780 ft deep with 590 ft of 5-in. steel casing; open hole from 590 to 780 ft.

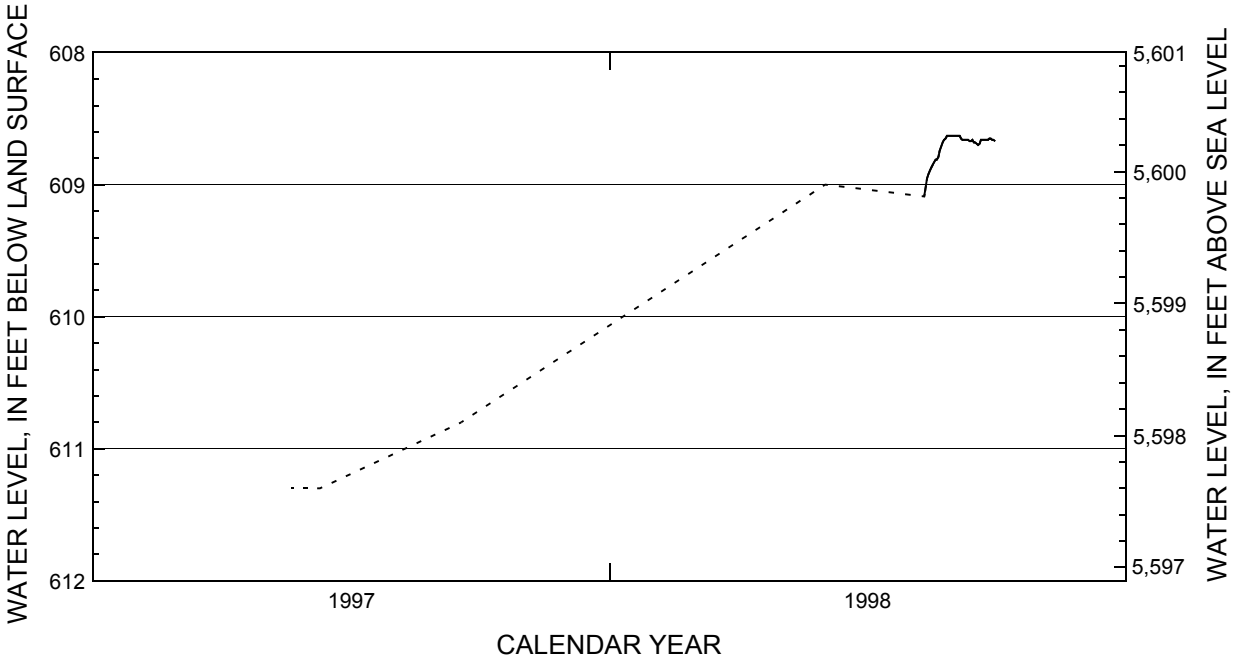
INSTRUMENTATION.—Electronic data logger -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 6,208.9 ft above sea level. Measuring point: Top of steel casing, 2.0 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—May 1997 to September 1998.

EXTREMES.—Highest daily water level, 608.63 ft below land-surface datum, Aug. 27 to Sept. 5, 1998; lowest daily water level, 611.3 ft (estimated) below land-surface datum, May 21 and June 10, 1997.



SITE NUMBER 19—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	e611.3	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	e610.8
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	e611.3	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	611.30	611.30	---	---	610.80

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	608.63
2	---	---	---	---	---	---	---	---	e609.0	---	---	608.63
3	---	---	---	---	---	---	---	---	---	---	---	608.63
4	---	---	---	---	---	---	---	---	---	---	---	608.63
5	---	---	---	---	---	---	---	---	---	---	---	608.63
6	---	---	---	---	---	---	---	---	---	---	---	608.65
7	---	---	---	---	---	---	---	---	---	---	---	608.66
8	---	---	---	---	---	---	---	---	---	---	---	608.66
9	---	---	---	---	---	---	---	---	---	---	---	608.66
10	---	---	---	---	---	---	---	---	---	---	---	608.66
11	---	---	---	---	---	---	---	---	---	---	609.09	608.66
12	---	---	---	---	---	---	---	---	---	---	609.03	608.67
13	---	---	---	---	---	---	---	---	---	---	608.95	608.67
14	---	---	---	---	---	---	---	---	---	---	608.92	608.66
15	---	---	---	---	---	---	---	---	---	---	608.89	608.68
16	---	---	---	---	---	---	---	---	---	---	608.87	608.68
17	---	---	---	---	---	---	---	---	---	---	608.85	608.69
18	---	---	---	---	---	---	---	---	---	---	608.83	608.70
19	---	---	---	---	---	---	---	---	---	---	608.81	608.69
20	---	---	---	---	---	---	---	---	---	---	608.81	608.66
21	---	---	---	---	---	---	---	---	---	---	608.79	608.66
22	---	---	---	---	---	---	---	---	---	---	608.74	608.66
23	---	---	---	---	---	---	---	---	---	---	608.71	608.66
24	---	---	---	---	---	---	---	---	---	---	608.68	608.66
25	---	---	---	---	---	---	---	---	---	---	608.66	608.66
26	---	---	---	---	---	---	---	---	---	---	608.65	608.65
27	---	---	---	---	---	---	---	---	---	---	608.63	608.65
28	---	---	---	---	---	---	---	---	---	---	608.63	608.66
29	---	---	---	---	---	---	---	---	---	---	608.63	608.66
30	---	---	---	---	---	---	---	---	---	---	608.63	608.67
31	---	---	---	---	---	---	---	---	---	---	608.63	---
LOW	---	---	---	---	---	---	---	---	609.00	---	609.09	608.70

e Estimated

SITE NUMBER FROM LOCATION MAP.—20.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—4N2E20BBAC.

SITE ID (STATION NUMBER).—441757103544601.

OTHER IDENTIFIER.—LA-95B and Cheyenne Xing Mdsn.

LOCATION.—Lat 44°17′57.5″, long 103°54′45.5″, in SW1/4NE1/4NW1/4NW1/4 sec. 20, T. 4N., R. 2 E., Hydrologic Unit 10120203, 8 mi southwest of Lead. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 460 ft deep with 413 ft of 5-in. steel casing; open hole from 413 to 460 ft.

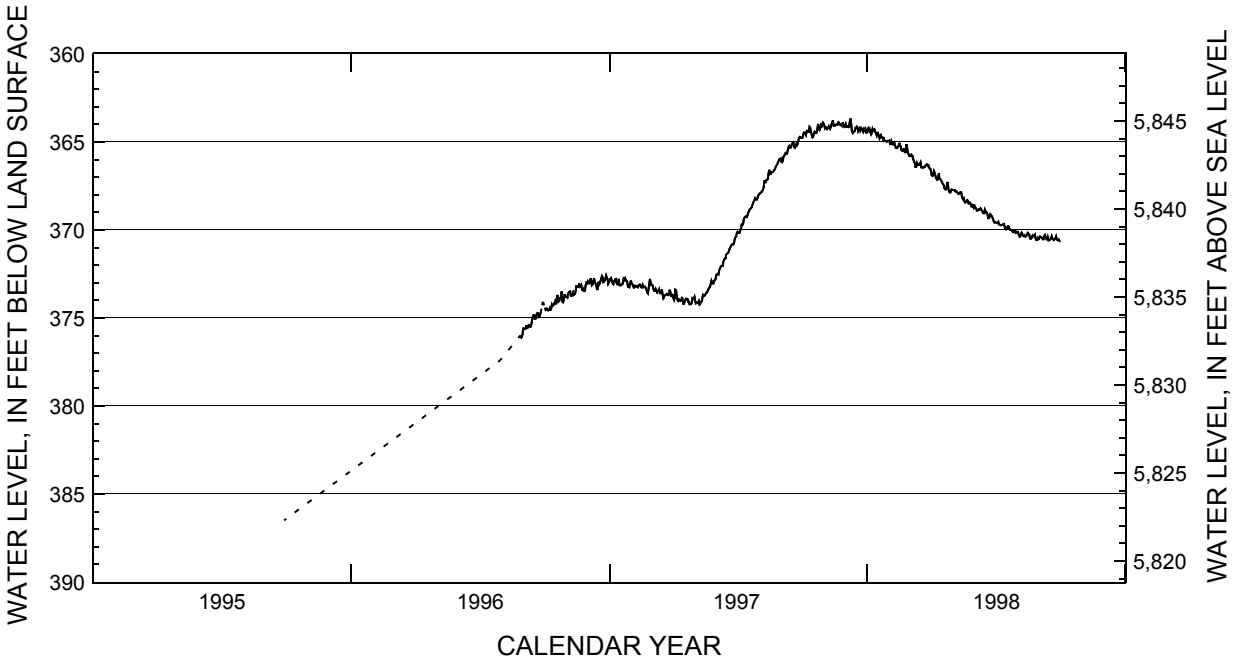
INSTRUMENTATION.—Electronic data logger -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 6,209.8 ft above sea level. Measuring point: Top of steel casing, 2.5 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1995 to September 1998.

EXTREMES.—Highest daily water level, 364.71 ft below land-surface datum, Sept. 27, 1997; lowest daily water level, 386.5 ft (estimated) below land-surface datum, Sept. 28, 1995 (from driller's log).



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	e386.5
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	---	386.50

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	375.59
2	---	---	---	---	---	---	---	---	---	---	---	375.60
3	---	---	---	---	---	---	---	---	---	---	---	375.61
4	---	---	---	---	---	---	---	---	---	---	---	375.61
5	---	---	---	---	---	---	---	---	---	---	---	375.42
6	---	---	---	---	---	---	---	---	---	---	---	375.56
7	---	---	---	---	---	---	---	---	---	---	---	375.55
8	---	---	---	---	---	---	---	---	---	---	---	375.42
9	---	---	---	---	---	---	---	---	---	---	---	375.40
10	---	---	---	---	---	---	---	---	---	---	---	375.48
11	---	---	---	---	---	---	---	---	---	---	---	375.49
12	---	---	---	---	---	---	---	---	---	---	---	375.39
13	---	---	---	---	---	---	---	---	---	---	---	375.13
14	---	---	---	---	---	---	---	---	---	---	---	374.93
15	---	---	---	---	---	---	---	---	---	---	---	374.84
16	---	---	---	---	---	---	---	---	---	---	---	374.84
17	---	---	---	---	---	---	---	---	---	---	---	375.03
18	---	---	---	---	---	---	---	---	---	---	---	375.03
19	---	---	---	---	---	---	---	---	---	---	---	374.94
20	---	---	---	---	---	---	---	---	---	---	---	374.75
21	---	---	---	---	---	---	---	---	---	---	---	374.72
22	---	---	---	---	---	---	---	---	---	---	---	374.77
23	---	---	---	---	---	---	---	---	---	---	---	374.94
24	---	---	---	---	---	---	---	---	---	---	---	374.89
25	---	---	---	---	---	---	---	---	---	---	---	374.71
26	---	---	---	---	---	---	---	---	---	---	---	374.62
27	---	---	---	---	---	---	---	---	---	---	376.01	---
28	---	---	---	---	---	---	---	---	---	---	376.06	374.13
29	---	---	---	---	---	---	---	---	---	---	376.11	374.14
30	---	---	---	---	---	---	---	---	---	e377.40	376.06	---
31	---	---	---	---	---	---	---	---	---	---	375.83	---
LOW	---	---	---	---	---	---	---	---	---	377.40	376.11	375.61

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	373.81	372.92	372.90	373.02	373.12	373.87	373.80	372.56	370.10	367.95	366.13
2	374.55	373.84	373.03	372.75	373.07	373.11	373.98	374.08	372.50	370.17	367.90	366.15
3	374.53	373.67	373.04	372.72	373.17	373.16	373.86	374.16	372.54	370.16	367.85	366.06
4	374.48	373.53	373.02	372.89	373.28	373.35	373.38	374.12	372.54	370.16	367.84	365.84
5	374.53	373.49	372.74	373.04	373.25	373.45	373.42	374.15	372.28	369.97	367.78	365.77
6	374.58	373.48	372.87	373.08	373.17	373.43	373.75	374.12	372.17	369.88	367.67	365.69
7	374.55	373.72	373.13	372.91	373.20	373.34	374.01	374.03	372.12	369.69	367.59	365.63
8	374.44	373.74	373.09	372.89	373.18	373.47	374.04	374.24	372.03	369.70	367.18	365.66
9	374.53	373.65	372.93	372.79	373.23	373.55	373.94	374.23	372.04	369.60	367.29	365.66
10	374.52	373.54	372.75	372.78	373.26	373.45	374.01	374.07	372.04	369.36	367.28	365.50
11	374.24	373.68	372.95	373.02	373.15	373.45	374.03	374.05	371.78	369.28	367.15	365.31
12	374.29	373.66	373.06	373.09	373.10	373.36	374.00	373.96	371.67	369.24	367.15	365.24
13	374.29	373.62	373.16	373.09	373.10	373.59	373.86	373.69	371.64	369.22	367.10	365.33
14	374.18	373.37	373.36	372.78	373.20	373.59	373.89	373.76	371.61	369.25	366.79	365.32
15	374.16	373.19	373.36	373.13	373.27	373.47	374.19	373.76	371.40	369.18	366.58	365.24
16	374.03	373.21	372.95	373.15	373.27	373.38	374.19	373.70	371.36	369.03	366.83	365.10
17	374.17	373.23	373.11	373.12	373.13	373.67	374.09	373.60	371.31	368.92	366.81	365.10
18	374.13	373.23	373.03	373.09	373.26	373.88	373.96	373.55	371.27	368.83	366.71	365.04
19	373.69	373.04	372.88	373.08	373.26	373.79	373.91	373.55	371.18	368.81	366.71	365.29
20	373.89	373.23	372.77	372.94	373.22	373.71	373.93	373.40	371.03	368.76	366.71	365.32
21	374.04	373.22	372.62	372.68	373.28	373.68	373.91	373.36	370.95	368.72	366.63	365.20
22	373.99	373.15	372.70	372.82	373.42	373.67	374.07	373.25	370.88	368.61	366.59	365.11
23	373.84	373.40	372.96	372.75	373.54	373.64	374.06	373.23	370.82	368.48	366.53	365.19
24	373.80	373.42	372.95	372.90	373.60	373.69	374.21	373.08	370.81	368.36	366.40	365.09
25	373.49	373.35	372.86	372.89	373.37	373.70	374.21	372.89	370.82	368.30	366.33	364.95
26	374.09	373.46	372.77	372.96	373.08	373.66	374.21	373.01	370.77	368.20	366.29	364.78
27	374.11	373.45	372.59	373.23	372.79	373.40	374.17	373.04	370.51	368.27	366.18	364.71
28	374.00	373.13	372.73	373.23	372.98	373.53	373.88	373.04	370.41	368.27	366.06	364.75
29	373.66	372.98	372.78	373.25	---	373.76	373.90	372.87	370.36	368.22	365.99	364.76
30	373.78	373.01	373.04	373.02	---	373.76	373.92	372.83	370.17	368.07	365.98	364.77
31	373.78	---	372.94	372.87	---	373.64	---	372.78	---	367.98	365.94	---
LOW	374.58	373.84	373.36	373.25	373.60	373.88	374.21	374.24	372.56	370.17	367.95	366.15

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364.75	364.11	363.97	364.30	364.92	365.79	366.68	367.71	368.55	369.56	370.11	370.51
2	364.62	364.22	364.12	364.22	365.11	365.80	366.90	367.73	368.74	369.58	370.11	370.37
3	364.46	364.16	364.10	364.35	365.10	365.74	366.93	367.72	368.74	369.60	370.25	370.39
4	364.47	364.19	364.12	364.28	364.97	365.70	366.86	367.77	368.78	369.61	370.38	370.40
5	364.52	364.25	364.16	364.44	365.12	365.81	366.66	367.75	368.89	369.53	370.38	370.44
6	364.60	364.20	364.10	364.56	365.14	365.81	366.74	367.82	368.90	369.66	370.27	370.53
7	364.36	364.11	363.81	364.49	365.05	366.01	366.87	367.81	368.87	369.71	370.15	370.53
8	364.36	364.22	363.66	364.26	365.02	366.13	367.04	367.84	368.81	369.72	370.22	370.38
9	364.44	364.26	364.08	364.35	365.22	366.21	367.13	367.93	368.84	369.73	370.33	370.29
10	364.43	364.15	364.39	364.39	365.32	366.41	367.15	367.95	368.76	369.72	370.34	370.42
11	364.15	363.98	364.50	364.31	365.33	366.41	367.02	367.90	368.81	369.70	370.29	370.50
12	364.20	363.87	364.43	364.45	365.35	366.20	366.77	367.85	368.95	369.68	370.38	370.46
13	364.44	363.78	364.40	364.50	365.27	366.28	367.07	367.84	368.95	369.66	370.38	370.37
14	364.61	364.07	364.38	364.63	365.20	366.27	367.09	367.90	369.04	369.77	370.33	370.59
15	364.73	364.07	364.20	364.43	365.05	366.29	367.17	368.16	369.04	369.95	370.21	370.59
16	364.70	364.07	364.21	364.52	365.22	366.27	367.25	368.25	368.85	369.96	370.17	370.57
17	364.49	364.01	364.12	364.60	365.24	366.16	367.34	368.19	368.93	369.91	370.23	370.48
18	364.42	364.02	364.19	364.78	365.48	366.44	367.38	368.37	369.02	369.81	370.25	370.45
19	364.47	364.01	364.41	364.70	365.50	366.46	367.49	368.43	369.02	369.79	370.48	370.35
20	364.49	363.89	364.34	364.61	365.49	366.46	367.65	368.40	369.17	369.82	370.50	370.50
21	364.47	363.87	364.13	364.72	365.40	366.41	367.69	368.33	369.33	369.96	370.48	370.55
22	364.26	364.00	364.32	364.72	365.42	366.45	367.69	368.29	369.33	369.99	370.35	370.57
23	363.97	363.99	364.21	364.85	365.59	366.41	367.56	368.32	369.21	369.98	370.30	370.50
24	364.28	364.01	364.27	364.72	365.59	366.32	367.28	368.49	369.11	370.01	370.35	370.46
25	364.32	364.07	364.34	364.93	365.12	366.30	367.46	368.50	369.16	370.05	370.35	370.35
26	364.21	364.10	364.43	364.95	365.32	366.26	367.75	368.44	369.21	370.12	370.28	370.54
27	364.03	363.87	364.27	364.94	365.57	366.33	367.87	368.49	369.32	370.12	370.50	370.57
28	364.10	364.04	364.32	364.98	365.69	366.32	367.87	368.65	369.39	370.05	370.57	370.54
29	363.98	364.14	364.24	364.97	---	366.45	367.81	368.66	369.55	370.04	370.57	370.54
30	363.89	364.10	364.46	364.93	---	366.50	367.69	368.61	369.58	370.14	370.45	370.68
31	363.96	---	364.46	364.94	---	366.52	---	368.72	---	370.10	370.53	---
LOW	364.75	364.26	364.50	364.98	365.69	366.52	367.87	368.72	369.58	370.14	370.57	370.68

SITE NUMBER FROM LOCATION MAP.—21.

COUNTY.—Lawrence.

LOCAL WELL NUMBER.—3N2E33DBDA.

SITE ID (STATION NUMBER).—441034103524701.

OTHER IDENTIFIERS.—LA-94B and Black Fox.

LOCATION.—Lat 44°10′34.0″, long 103°52′47.0″, in NE1/4SE1/4NW1/4SE1/4 sec. 33, T. 3 N., R. 2 E., Hydrologic Unit 10120102, 10 mi west of Rochford. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled observation well, 363 ft deep with 227 ft of 5-in. steel casing; open hole from 227 ft to 363 ft.

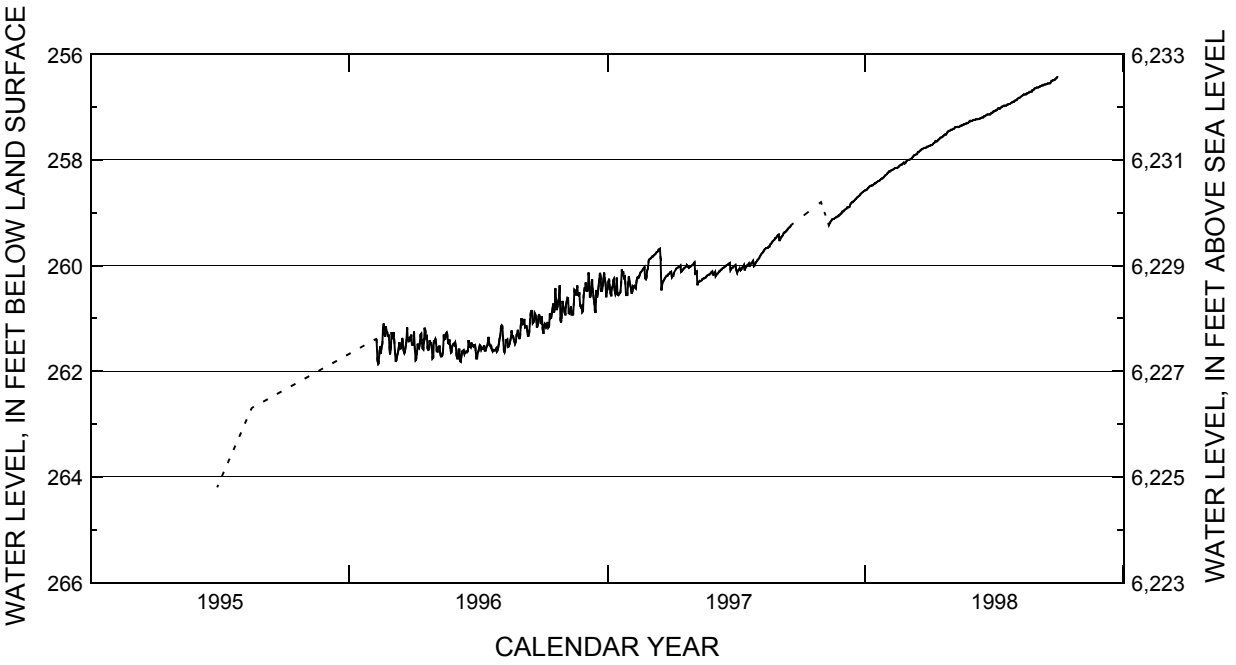
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 6,489 ft above sea level. Measuring point: Top of steel casing 2.3 ft above land surface datum.

REMARKS.—Records poor.

PERIOD OF RECORD.—June 1995 to September 1998.

EXTREMES.—Highest daily water level, 256.42 ft below land-surface datum, Sept. 30, 1998; lowest daily water level, 264.20 ft (estimated) below land-surface datum, June 28, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	e262.7	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	e264.2	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	264.20	---	262.70	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	261.26	261.50	261.42	261.69	261.65	261.39	261.00
2	---	---	---	---	---	261.35	261.25	261.39	261.76	261.63	261.33	261.05
3	---	---	---	---	---	261.37	261.58	261.44	261.76	261.56	261.15	261.11
4	---	---	---	---	---	261.26	261.79	261.62	261.59	261.51	261.13	261.10
5	---	---	---	---	---	261.43	261.78	261.63	261.59	261.52	261.15	261.01
6	---	---	---	---	---	261.64	261.65	261.55	261.81	261.59	261.38	261.17
7	---	---	---	---	---	261.82	261.48	261.53	261.82	261.56	261.62	261.16
8	---	---	---	---	261.39	261.79	261.56	261.53	261.70	261.58	261.64	261.13
9	---	---	---	---	261.41	261.70	261.57	261.65	261.62	261.58	261.55	261.22
10	---	---	---	---	261.79	261.65	261.48	261.72	261.61	261.51	261.41	261.33
11	---	---	---	---	261.86	261.59	261.31	261.72	261.60	261.61	261.41	261.33
12	---	---	---	---	261.85	261.45	261.29	261.70	261.67	261.61	261.40	261.27
13	---	---	---	---	261.64	261.57	261.44	261.62	261.64	261.56	261.54	261.05
14	---	---	---	---	261.53	261.57	261.57	261.31	261.63	261.52	261.53	260.90
15	---	---	---	---	261.67	261.54	261.59	261.40	261.62	261.50	261.48	260.86
16	---	---	---	---	261.54	261.37	261.43	261.39	261.64	261.35	261.43	260.86
17	---	---	---	---	261.48	261.42	261.18	261.29	261.62	261.44	261.37	261.09
18	---	---	---	---	261.19	261.61	261.23	261.27	261.41	261.51	261.23	261.07
19	---	---	---	---	261.10	261.66	261.37	261.31	261.53	261.53	261.36	261.02
20	---	---	---	---	261.29	261.63	261.35	261.47	261.53	261.50	261.32	260.91
21	---	---	---	---	261.35	261.55	261.57	261.48	261.55	261.59	261.39	260.94
22	---	---	---	---	261.15	261.44	261.60	261.40	261.46	261.62	261.44	261.04
23	---	---	---	---	261.26	261.17	261.59	261.53	261.51	261.60	261.48	261.18
24	---	---	---	---	261.27	261.42	261.42	261.65	261.51	261.61	261.44	261.13
25	---	---	---	---	261.35	261.43	261.46	261.64	261.53	261.61	261.31	260.97
26	---	---	---	---	261.31	261.38	261.47	261.52	261.51	261.60	261.30	260.92
27	---	---	---	---	261.57	261.41	261.54	261.49	261.50	261.57	261.22	260.97
28	---	---	---	---	261.68	261.37	261.76	261.48	261.57	261.63	261.34	261.09
29	---	---	---	---	261.56	261.31	261.74	261.50	261.76	261.61	261.39	261.10
30	---	---	---	---	---	261.50	261.43	261.46	261.76	261.55	261.34	260.96
31	---	---	---	---	---	---	---	261.52	---	261.47	261.14	---
LOW	---	---	---	---	261.86	261.82	261.79	261.72	261.82	261.65	261.64	261.33

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261.21	260.90	260.32	260.44	260.31	259.88	260.12	259.99	260.15	259.99	259.90	259.52
2	261.29	260.94	260.48	260.29	260.36	259.87	260.22	259.98	260.12	260.09	259.88	259.52
3	261.13	260.76	260.48	260.25	260.43	259.86	260.20	259.95	260.20	260.14	259.87	259.47
4	261.10	260.68	260.47	260.40	260.53	259.85	260.20	259.94	260.17	260.11	259.84	259.46
5	261.12	260.61	260.13	260.54	260.49	259.83	260.13	260.18	260.16	260.09	259.82	259.44
6	261.17	260.62	260.35	260.58	260.40	259.83	---	260.12	260.15	260.07	259.79	259.42
7	261.15	260.90	260.61	260.42	260.42	259.81	260.08	260.11	260.13	260.05	259.77	259.39
8	261.07	260.91	260.57	260.41	260.39	259.80	260.06	260.37	260.11	260.09	259.76	259.37
9	261.17	260.86	260.43	260.27	260.42	259.79	260.05	260.33	260.11	260.07	259.74	259.37
10	261.15	260.77	260.26	260.25	260.43	259.77	260.04	260.31	260.08	260.05	259.72	259.36
11	260.91	260.92	260.47	260.47	260.29	259.75	260.03	260.29	260.08	260.03	259.70	259.34
12	261.00	260.91	260.60	260.54	260.22	259.74	260.02	260.30	260.06	260.01	259.69	259.33
13	260.99	260.94	260.69	260.51	260.21	259.73	260.01	260.29	260.05	259.99	259.67	259.30
14	260.89	260.71	260.88	260.23	260.22	259.70	260.00	260.28	260.04	260.09	259.67	259.29
15	260.83	260.46	260.88	260.55	260.19	259.69	260.12	260.26	260.03	260.04	259.66	259.28
16	260.72	260.48	260.46	260.56	260.14	259.68	260.11	260.25	260.02	260.03	259.66	259.27
17	260.89	260.55	260.61	260.53	260.12	259.87	260.08	260.24	260.01	260.00	259.64	259.25
18	260.83	260.55	260.52	260.53	260.11	260.47	260.07	260.24	260.00	260.00	259.64	259.23
19	260.43	260.38	260.41	260.51	260.09	260.35	260.05	260.23	259.99	259.98	259.60	---
20	260.65	260.56	260.29	260.35	260.07	260.31	260.04	260.22	259.98	259.96	259.59	---
21	260.84	260.57	260.14	260.07	260.05	260.29	260.03	260.20	259.97	260.02	259.57	---
22	260.77	260.51	260.21	260.20	260.03	260.26	260.01	260.19	259.96	259.98	259.55	---
23	260.68	260.76	260.48	260.11	260.24	260.24	259.99	260.18	259.95	259.96	259.53	---
24	260.63	260.79	260.48	260.23	260.26	260.22	260.02	260.17	260.08	259.95	259.52	---
25	260.38	260.77	260.36	260.21	260.23	260.20	260.01	260.17	260.05	259.92	259.51	---
26	261.03	260.88	260.28	260.31	260.09	260.19	260.04	260.16	260.05	259.91	259.48	---
27	261.08	260.86	260.13	260.56	260.05	260.19	260.03	260.14	260.04	260.01	259.48	---
28	260.96	260.57	260.27	260.56	259.90	260.16	260.02	260.12	260.02	260.00	259.46	---
29	260.67	260.44	260.34	260.56	---	260.16	260.01	260.11	260.01	259.96	259.44	---
30	260.80	260.45	260.60	260.34	---	260.13	260.00	260.17	260.00	259.93	259.42	---
31	260.80	---	260.48	260.20	---	260.13	---	260.17	---	259.92	259.41	---
LOW	261.29	260.94	260.88	260.58	260.53	260.47	260.22	260.37	260.20	260.14	259.90	259.52

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	258.97	258.57	258.25	258.01	257.73	257.44	257.26	257.08	256.87	256.63
2	---	---	258.95	258.57	258.24	258.00	257.73	257.43	257.25	257.08	256.87	256.63
3	---	---	258.94	258.56	258.22	258.00	257.72	257.43	257.24	257.07	256.87	256.62
4	---	---	258.93	258.54	258.22	258.00	257.72	257.42	257.24	257.06	256.84	256.61
5	---	---	258.92	258.53	258.22	257.99	257.72	257.41	257.24	257.06	256.83	256.61
6	---	---	258.90	258.51	258.20	257.98	257.71	257.41	257.23	257.05	256.82	256.60
7	---	---	258.90	258.50	258.19	257.98	257.69	257.40	257.23	257.04	256.82	256.59
8	---	---	258.90	258.49	258.19	257.96	257.68	257.38	257.23	257.02	256.81	256.59
9	---	---	258.89	258.49	258.18	257.94	257.66	257.38	257.23	257.02	256.80	256.59
10	---	259.24	258.86	258.48	258.17	257.93	257.64	257.38	257.22	257.03	256.79	256.58
11	---	259.20	258.82	258.48	258.16	257.91	257.65	257.37	257.22	257.02	256.78	256.57
12	---	259.18	258.81	258.47	258.15	257.91	257.65	257.38	257.21	257.00	256.77	256.57
13	---	259.16	258.80	258.46	258.15	257.90	257.64	257.37	257.21	256.99	256.76	256.57
14	---	259.14	258.80	258.44	258.15	257.89	257.62	257.37	257.20	256.99	256.76	256.56
15	---	259.12	258.78	258.44	258.15	257.89	257.61	257.36	257.20	256.98	256.76	256.56
16	---	259.12	258.77	258.43	258.14	257.85	257.60	257.35	257.20	256.97	256.76	256.55
17	---	259.12	258.76	258.42	258.13	257.85	257.58	257.35	257.18	256.97	256.74	256.55
18	---	259.11	258.74	258.41	258.11	257.84	257.57	257.34	257.17	256.97	256.74	256.55
19	---	259.10	258.73	258.40	258.10	257.83	257.57	257.33	257.17	256.97	256.73	256.55
20	---	259.09	258.71	258.40	258.09	257.81	257.56	257.33	257.16	256.96	256.72	256.54
21	---	259.08	258.70	258.39	258.09	257.80	257.55	257.32	257.15	256.95	256.72	256.50
22	---	259.07	258.69	258.37	258.08	257.80	257.53	257.32	257.14	256.95	256.71	256.50
23	---	259.07	258.68	258.36	258.07	257.79	257.52	257.31	257.14	256.94	256.71	256.49
24	---	259.05	258.66	258.35	258.05	257.78	257.52	257.31	257.14	256.94	256.71	256.49
25	---	259.05	258.64	258.35	258.07	257.77	257.52	257.30	257.14	256.93	256.68	256.49
26	---	259.03	258.63	258.33	258.05	257.77	257.50	257.30	257.14	256.92	256.68	256.48
27	---	259.02	258.62	258.32	258.05	257.77	257.47	257.29	257.13	256.91	256.67	256.46
28	---	259.01	258.61	258.31	258.02	257.76	257.46	257.27	257.11	256.91	256.65	256.45
29	---	258.98	258.60	258.29	---	257.75	257.45	257.26	257.11	256.90	256.64	256.44
30	e258.8	258.98	258.59	258.28	---	257.75	257.45	257.27	257.10	256.90	256.64	256.42
31	---	---	258.58	258.27	---	257.74	---	257.26	---	256.88	256.63	---
LOW	258.80	259.24	258.97	258.57	258.25	258.01	257.73	257.44	257.26	257.08	256.87	256.63

e Estimated

SITE NUMBER FROM LOCATION MAP.—22.

COUNTY.—Meade.

LOCAL WELL NUMBER.—6N5E16CDCC.

SITE ID (STATION NUMBER).—442828103312001.

OTHER IDENTIFIER.—MD-89A and Bear Butte.

LOCATION.—Lat 44°28′27.8″, long 103°31′23.2″, in SW1/4SW1/4SE1/4SW1/4 sec. 16, T. 6 N., R. 5 E., Hydrologic Unit 10120202, 4 mi north of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Lakota (Inyan Kara). This aquifer type is not shown in figures 5 or 7.

WELL CHARACTERISTICS.—Drilled observation well, 482 ft deep with 447 ft of 5-in. steel casing; screened from 447 to 477 ft with 18-slot, 3-in. PVC.

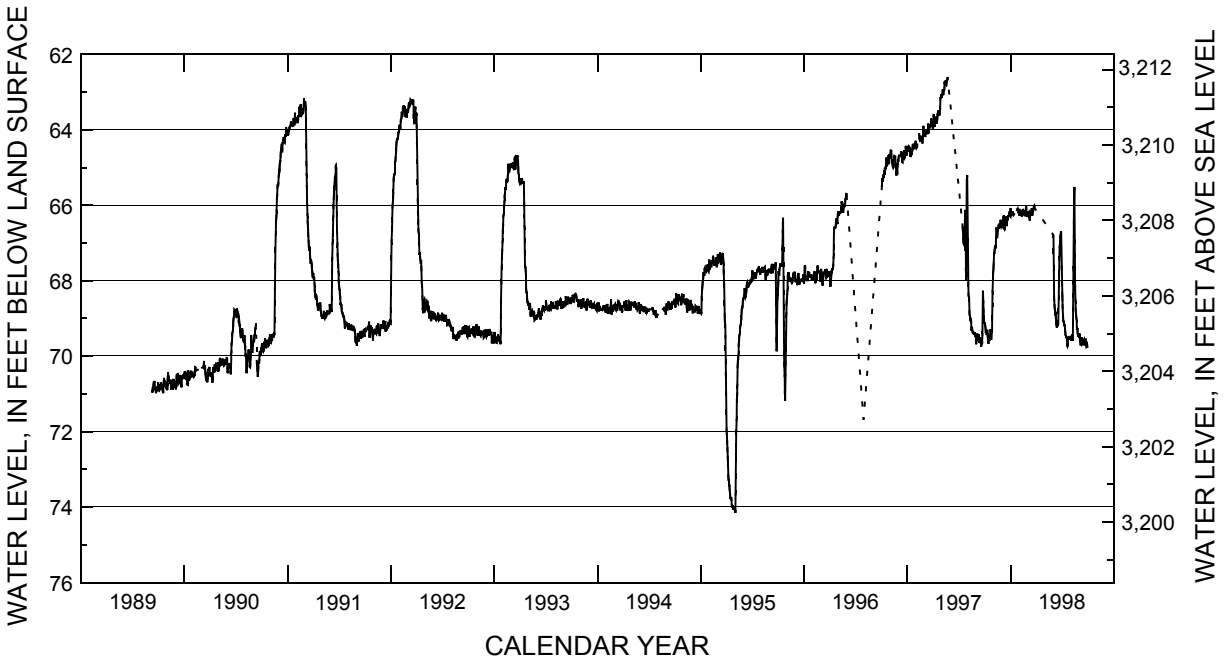
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,274.4 ft above sea level. Measuring point: Top of steel casing, 1.80 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1989 to September 1998.

EXTREMES.—Highest daily water level, 62.60 ft below land-surface datum, May 24, 1997; lowest daily water level, 74.15 ft below land-surface datum, May 4, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.55	68.36	68.65	68.82	67.44	67.58	70.99	74.06	68.46	67.94	67.73	67.74
2	68.55	68.57	68.66	68.83	67.62	67.47	71.49	74.02	68.45	67.83	67.72	67.69
3	68.69	68.57	68.69	68.86	67.70	67.31	71.97	74.06	68.43	67.73	67.78	67.71
4	68.69	68.51	68.84	68.84	67.60	67.35	72.03	74.15	68.42	67.86	67.71	67.78
5	68.53	68.56	68.84	68.47	67.57	67.35	72.29	73.63	68.34	67.90	67.69	67.74
6	68.34	68.59	68.76	68.23	67.55	67.39	72.48	72.72	68.20	67.97	67.67	67.79
7	68.57	68.59	68.79	68.19	67.62	67.49	72.71	72.02	68.39	67.92	67.68	67.79
8	68.62	68.62	68.83	68.08	67.62	67.47	72.88	71.66	68.44	67.92	67.77	67.65
9	68.56	68.62	68.79	68.02	67.48	67.30	73.19	71.16	68.42	67.88	67.79	67.59
10	68.47	68.52	68.84	67.93	67.48	67.27	73.28	71.03	68.35	67.87	67.71	67.58
11	68.43	68.49	68.79	67.80	67.50	67.26	73.28	70.80	68.32	67.79	67.69	67.58
12	68.59	68.49	68.75	67.80	67.49	67.35	73.44	70.26	68.23	67.84	67.71	67.64
13	68.61	68.71	68.74	67.85	67.49	67.53	73.44	70.09	68.12	67.89	67.72	67.78
14	68.42	68.82	68.68	67.85	67.34	67.58	73.54	70.10	68.10	67.95	67.73	67.78
15	68.36	68.82	68.69	67.68	67.39	67.55	73.67	69.93	68.05	67.89	67.65	67.58
16	68.45	68.50	68.69	67.65	67.49	67.53	73.79	69.68	68.06	67.89	67.64	67.65
17	68.45	68.54	68.79	67.67	67.45	67.53	73.76	69.60	68.12	67.84	67.67	67.62
18	68.48	68.71	68.78	67.73	67.58	67.42	73.76	69.45	68.16	67.79	67.89	67.64
19	68.49	68.71	68.69	67.75	67.58	67.29	73.76	69.42	68.16	67.76	67.97	67.67
20	68.49	68.62	68.75	67.77	67.58	67.29	73.77	69.40	68.09	67.73	67.93	67.68
21	68.48	68.77	68.77	67.76	67.47	67.27	74.00	69.20	68.13	67.74	67.88	67.69
22	68.55	68.79	68.87	67.68	67.45	67.44	74.00	69.18	68.09	67.73	67.85	67.60
23	68.57	68.71	68.80	67.66	67.55	67.54	74.00	69.16	68.09	67.69	67.85	67.54
24	68.65	68.63	68.67	67.67	67.55	67.77	73.96	69.06	68.07	67.69	67.72	67.54
25	68.60	68.63	68.71	67.67	67.38	68.12	73.99	69.00	68.03	67.68	67.79	68.59
26	68.47	68.51	68.71	67.57	67.49	68.59	74.07	68.82	67.99	67.62	67.80	69.57
27	68.35	68.54	68.78	67.62	67.62	68.93	74.01	68.69	67.97	67.68	67.77	69.87
28	68.49	68.74	68.78	67.73	67.62	69.09	74.03	68.74	68.02	67.78	67.77	69.44
29	68.57	68.77	68.79	67.75	---	69.19	74.06	68.71	68.03	67.72	67.70	68.80
30	68.57	68.71	68.80	67.61	---	69.79	74.06	68.61	68.02	67.81	67.69	68.50
31	68.53	---	68.89	67.46	---	70.49	---	68.51	---	67.84	67.74	---
LOW	68.69	68.82	68.89	68.86	67.70	70.49	74.07	74.15	68.46	67.97	67.97	69.87

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.34	68.60	67.80	68.07	67.96	67.75	67.79	66.19	65.79	---	---	---
2	68.16	68.46	67.94	68.08	67.96	67.69	67.78	66.19	---	---	---	---
3	68.04	68.40	68.04	67.90	67.96	67.77	67.98	66.19	---	---	---	---
4	67.75	68.22	67.97	67.62	67.96	67.78	68.13	66.26	---	---	---	---
5	67.85	67.90	68.00	67.62	67.88	67.79	68.13	66.26	---	---	---	---
6	67.85	67.79	68.00	67.62	67.81	68.07	68.02	66.21	---	---	---	---
7	67.70	67.94	68.01	67.89	67.76	68.11	67.86	66.20	---	---	---	---
8	67.64	67.94	68.10	67.89	67.79	68.11	67.80	66.16	---	---	---	---
9	67.60	67.78	68.10	67.95	67.79	68.02	67.79	66.19	---	---	---	---
10	67.59	68.00	68.08	67.96	68.07	67.83	67.76	66.19	---	---	---	---
11	67.54	68.00	68.01	67.97	68.05	67.80	67.69	66.19	---	---	---	---
12	67.59	67.90	67.88	67.93	68.03	67.79	67.69	66.13	---	---	---	---
13	67.63	67.99	67.80	67.90	67.90	67.79	67.66	66.09	---	---	---	---
14	67.61	67.97	67.99	67.99	67.85	67.79	67.62	65.90	---	---	---	---
15	67.57	67.99	67.99	67.99	67.98	67.79	67.35	65.96	---	---	---	---
16	67.57	67.97	67.99	67.75	67.97	67.73	67.10	65.97	---	---	---	---
17	67.14	67.97	68.08	67.89	67.79	67.70	66.70	66.09	---	---	---	---
18	66.66	67.94	68.08	67.89	67.70	67.79	66.59	66.09	---	---	---	---
19	66.44	68.06	68.02	67.89	67.60	67.94	66.59	66.20	---	---	---	---
20	66.34	68.07	67.97	67.77	67.75	67.94	66.58	66.07	---	---	---	---
21	66.80	68.05	68.01	67.89	67.79	67.79	66.59	66.05	---	---	---	---
22	68.70	67.94	68.01	67.89	67.74	67.79	66.59	66.05	---	---	---	---
23	69.59	67.94	68.01	67.89	67.76	67.69	66.56	66.01	---	---	---	---
24	70.22	67.90	67.97	67.86	67.79	67.89	66.40	66.03	---	---	---	---
25	70.56	67.90	67.97	67.85	67.79	67.89	66.38	66.03	---	---	---	---
26	70.97	67.79	68.00	67.85	67.79	67.87	66.38	66.01	---	---	---	---
27	71.18	67.92	68.01	67.89	67.79	67.86	66.35	65.84	---	---	---	---
28	70.55	67.92	68.01	67.88	68.00	67.86	66.48	65.83	---	---	---	---
29	69.83	67.79	67.89	67.97	68.00	67.78	66.48	65.82	---	---	---	---
30	69.40	67.79	67.84	67.97	---	67.79	66.25	65.69	---	e71.69	---	---
31	68.91	---	67.95	67.92	---	67.79	---	65.68	---	---	---	---
LOW	71.18	68.60	68.10	68.08	68.07	68.11	68.13	66.26	65.79	71.69	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	64.69	64.79	64.52	64.39	64.06	63.95	63.06	---	---	65.21	69.65
2	---	64.71	64.69	64.46	64.39	64.06	63.99	63.13	---	---	66.59	69.68
3	65.53	64.62	64.69	64.43	64.39	64.09	63.93	63.15	---	---	67.29	69.61
4	65.36	64.55	64.69	64.50	64.46	64.15	63.60	63.09	---	---	67.84	69.48
5	65.29	64.55	64.69	64.54	64.44	64.17	63.59	63.08	---	---	68.10	69.47
6	65.37	64.54	64.69	64.58	---	64.17	63.69	63.02	---	---	68.39	69.40
7	65.32	64.86	64.69	64.51	---	64.02	63.90	62.93	---	---	68.44	69.48
8	65.19	64.86	64.69	64.46	---	64.09	63.92	63.08	---	---	68.49	69.57
9	65.26	64.89	64.69	64.48	---	64.09	63.84	63.05	---	---	68.85	69.59
10	65.26	64.89	64.59	64.48	---	64.00	63.81	62.92	---	---	68.92	69.51
11	65.07	64.99	64.59	64.69	---	64.03	63.81	62.97	---	---	68.96	69.43
12	65.17	65.01	64.69	64.69	64.09	64.00	63.75	62.92	---	---	69.05	69.48
13	65.19	64.99	64.76	64.69	64.24	64.09	63.70	62.73	---	---	69.05	69.65
14	65.06	64.91	64.85	64.51	64.25	64.09	63.65	62.79	---	---	68.99	69.62
15	65.07	64.69	64.86	64.49	64.30	64.03	63.81	62.79	---	---	69.05	69.64
16	65.01	---	64.61	64.65	64.30	63.84	63.81	62.75	---	66.55	69.27	69.51
17	65.02	---	64.69	64.64	64.20	64.06	63.71	62.69	---	66.69	69.32	69.56
18	65.02	---	64.69	64.58	64.27	64.09	63.58	62.81	---	66.90	69.23	69.54
19	64.74	---	64.79	64.54	64.27	64.03	63.56	62.82	---	67.01	69.29	69.67
20	64.79	64.70	64.58	64.43	64.19	63.92	63.54	62.79	---	67.03	69.35	69.75
21	64.97	64.97	64.54	64.38	64.20	63.94	63.49	62.69	---	67.06	69.39	69.65
22	64.95	64.97	64.59	64.46	64.29	63.93	63.58	62.68	---	67.06	69.39	69.59
23	64.82	65.19	64.73	64.37	64.34	63.89	63.57	62.67	---	67.03	69.38	69.68
24	64.83	65.19	64.72	64.49	64.34	63.89	63.60	62.60	---	66.42	69.38	69.40
25	64.69	65.10	64.64	64.49	64.20	63.92	63.60	---	---	66.13	69.44	68.71
26	64.89	65.17	64.61	64.49	63.96	63.83	63.54	---	---	67.14	69.40	68.27
27	64.89	65.17	64.43	64.49	63.90	63.70	63.45	---	---	67.72	69.39	68.59
28	64.83	64.92	64.65	64.49	63.98	63.78	63.15	---	---	67.99	69.39	68.79
29	64.64	64.79	64.65	64.49	---	63.89	63.14	---	---	67.71	69.40	68.97
30	64.71	64.85	64.68	64.38	---	63.89	63.14	---	---	66.31	69.49	69.10
31	64.76	---	64.60	64.29	---	63.79	---	---	---	65.34	69.43	---
LOW	65.53	65.19	64.86	64.69	64.46	64.17	63.99	63.15	---	67.99	69.49	69.75

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.13	67.78	66.44	66.10	66.15	66.29	---	---	---	67.66	69.47	69.50
2	69.13	67.67	66.53	66.10	66.26	66.29	---	---	66.79	68.07	69.50	69.40
3	69.16	67.57	66.55	66.27	66.26	66.29	---	---	67.66	68.36	69.52	69.46
4	69.22	67.26	66.52	66.20	66.19	66.17	---	---	68.14	68.48	69.59	69.49
5	69.29	67.29	66.59	66.19	66.23	66.20	---	---	68.47	68.69	69.56	69.55
6	69.39	67.21	66.52	66.24	66.23	66.20	---	---	68.69	68.94	69.49	69.69
7	69.31	67.10	66.35	66.22	66.20	66.19	---	---	68.75	69.06	69.43	69.69
8	69.35	67.07	66.27	66.16	66.17	66.29	---	---	68.78	69.09	69.50	69.60
9	69.44	67.13	66.48	66.19	66.19	66.34	---	---	68.89	69.09	69.58	69.50
10	69.41	67.12	66.62	66.24	66.28	66.39	---	---	68.88	69.16	69.59	69.59
11	69.30	66.87	66.64	66.27	66.28	66.39	---	---	68.99	69.19	69.13	69.67
12	69.40	66.82	66.60	---	66.27	66.23	---	---	69.13	69.19	67.68	69.66
13	69.49	66.59	66.52	---	66.20	66.19	---	---	69.12	69.28	66.80	69.62
14	69.58	66.79	66.48	---	66.20	66.19	---	---	69.23	69.37	66.03	69.65
15	69.67	66.87	66.30	---	66.10	66.19	---	---	69.23	69.45	65.52	69.66
16	69.62	66.80	66.45	---	66.16	66.16	---	---	69.19	69.47	66.96	69.63
17	69.47	66.67	66.33	---	66.16	66.09	---	---	69.19	69.49	67.69	69.59
18	69.49	66.62	66.38	---	66.24	66.25	---	---	69.13	69.49	68.11	69.56
19	69.59	66.61	66.53	---	66.25	66.25	---	---	69.16	69.52	68.55	69.59
20	69.54	66.53	66.53	---	66.25	66.25	---	---	68.81	69.56	68.78	69.69
21	69.54	66.52	66.30	---	66.21	66.16	---	---	68.10	69.73	68.89	69.69
22	69.42	66.58	66.39	---	66.18	66.16	---	---	67.80	69.74	68.99	69.69
23	69.29	66.59	66.38	---	66.27	66.14	---	---	67.41	69.69	69.05	69.62
24	69.52	66.50	66.29	---	66.27	66.11	---	---	67.13	69.53	69.27	69.60
25	69.56	66.50	66.29	---	66.01	66.04	---	---	67.00	69.52	69.27	69.54
26	69.50	66.58	66.29	---	66.06	66.02	---	---	66.82	69.54	69.26	69.69
27	69.34	66.39	66.27	66.09	66.25	66.07	---	---	66.80	69.54	69.39	69.73
28	69.37	66.49	66.23	66.19	66.29	66.08	---	---	66.77	69.53	69.46	69.70
29	69.00	66.56	66.17	66.19	---	---	---	---	66.70	69.54	69.46	69.69
30	68.32	66.58	66.27	66.10	---	---	---	---	66.96	69.54	69.40	69.78
31	67.93	---	66.29	66.16	---	---	---	---	---	69.51	69.48	---
LOW	69.67	67.78	66.64	66.27	66.29	66.39	---	---	69.23	69.74	69.59	69.78

SITE NUMBER FROM LOCATION MAP.—23.

COUNTY.—Meade.

LOCAL WELL NUMBER.—5N5E16CAAD.

SITE ID (STATION NUMBER).—442335103311001.

OTHER IDENTIFIER.—MD-86A and Sturgis.

LOCATION.—Lat 44°23′36.7″, long 103°31′11.2″, in SE1/4NE1/4NE1/4SW1/4 sec. 16, T. 5 N., R. 5 E., Hydrologic Unit 10120202, 1 mi southwest of Sturgis. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 839 ft deep with 712 ft of 5-in. steel casing; open hole from 712 to 839 ft.

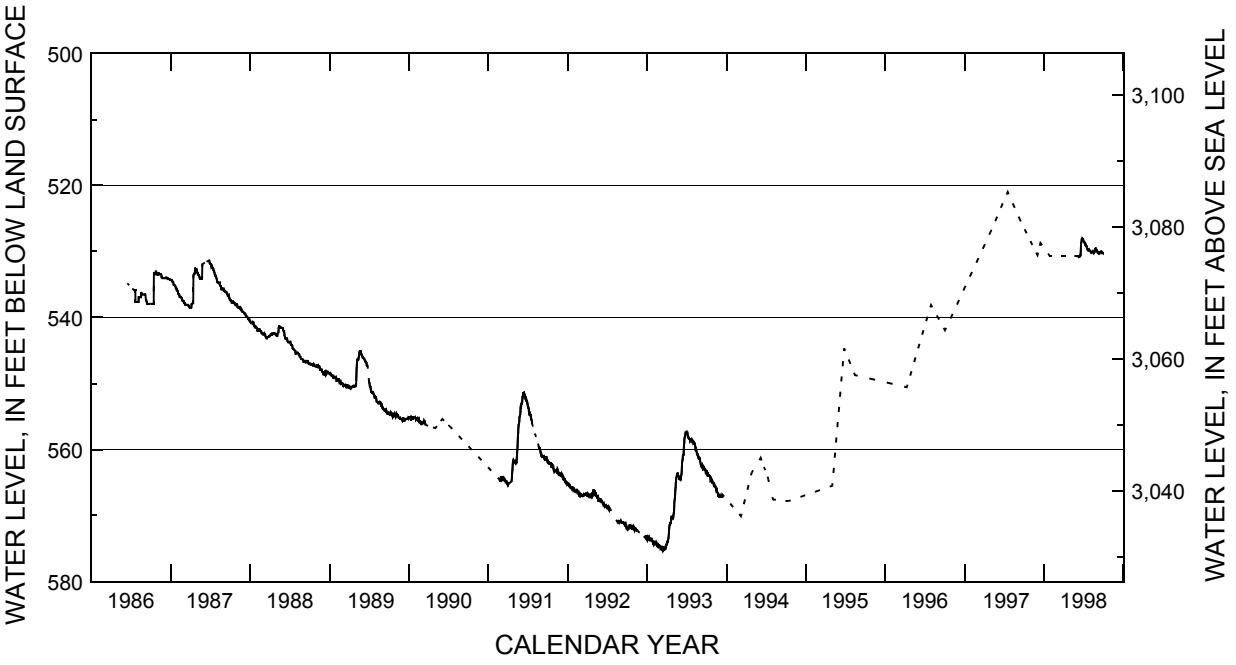
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- 60-minute interval. Digital water-level recorder prior to February 1991.

DATUM.—Elevation of land-surface datum is 3,606.3 ft above sea level. Measuring point: Top of steel casing, 1.90 ft above land-surface datum.

REMARKS.—Records fair. The recording equipment furnished no record from Dec. 15, 1993 until June 2, 1998.

PERIOD OF RECORD.—June 1986 to September 1998.

EXTREMES.—Highest daily water level, 521.0 ft (estimated) below land-surface datum, July 17, 1997; lowest daily water level, 575.40 ft below land-surface datum, Mar. 12, 1993.



SITE NUMBER 23—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	e565.50	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	e567.85	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	e548.77	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	e544.68	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	567.85	---	---	---	---	---	---	565.50	544.68	---	548.77	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	e550.60	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e538.10	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	550.60	---	---	538.10	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	e541.95	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	e525.10
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	e521.00	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	e527.10	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	541.95	---	---	---	---	---	527.10	---	---	521.00	---	525.10

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e530.58	---	---	---	---	---	---	528.37	529.93	529.81
2	---	---	---	---	---	---	---	---	530.73	528.48	529.98	530.02
3	---	---	---	---	---	---	---	---	530.82	528.54	530.06	530.07
4	---	---	---	---	---	---	---	---	530.71	528.59	529.94	530.18
5	---	---	---	---	---	---	---	---	530.73	528.61	530.09	530.16
6	---	---	---	---	---	---	---	---	530.75	528.71	530.13	530.11
7	---	---	---	---	---	---	---	---	530.75	528.71	530.19	530.17
8	---	---	---	---	---	---	---	---	530.74	528.83	530.12	530.27
9	---	---	---	---	---	---	---	---	530.77	528.96	530.11	530.33
10	---	---	---	---	---	---	---	---	530.83	529.06	530.12	530.36
11	---	---	---	---	---	---	---	---	530.80	529.10	530.07	530.37
12	---	---	---	---	---	---	---	---	530.77	529.00	530.06	530.31
13	---	---	---	---	---	---	---	---	530.79	529.06	530.08	530.19
14	---	---	---	---	---	---	---	---	530.69	e529.05	530.07	530.15
15	---	---	e528.73	---	---	---	---	---	530.75	529.15	530.16	530.20
16	---	---	---	---	---	---	---	---	530.76	529.25	530.20	530.21
17	---	---	---	---	---	---	---	---	530.67	529.41	530.21	530.25
18	---	---	---	---	---	---	---	---	530.57	529.61	530.23	530.36
19	---	---	---	---	---	---	---	---	529.94	529.64	530.10	530.17
20	---	---	---	---	---	---	---	---	529.28	529.66	530.14	530.04
21	---	---	---	---	---	---	---	---	528.80	529.71	530.09	530.06
22	---	---	---	---	---	---	---	---	528.47	529.82	529.78	530.07
23	---	---	---	---	---	---	---	---	528.18	529.80	529.69	530.10
24	---	---	---	---	---	---	---	---	528.11	529.82	529.56	530.18
25	---	---	---	---	---	---	---	---	528.08	529.74	529.64	530.23
26	---	---	---	---	---	---	---	---	528.01	529.70	529.59	530.11
27	---	---	---	e530.65	---	---	---	---	528.03	529.80	529.54	530.14
28	---	---	---	---	---	---	---	---	528.17	529.79	529.56	530.24
29	---	---	---	---	---	---	---	---	528.15	529.80	529.70	530.29
30	---	---	---	---	---	---	---	---	528.21	529.81	529.74	530.21
31	---	---	---	---	---	---	---	---	---	529.93	529.76	---
LOW	---	---	530.58	530.65	---	---	---	---	530.83	529.93	530.23	530.37

e Estimated

SITE NUMBER FROM LOCATION MAP.—24.

COUNTY.—Meade.

LOCAL WELL NUMBER.—4N6E19AABA3.

SITE ID (STATION NUMBER).—441759103261203.

OTHER IDENTIFIERS.—MD-95A and Tilford Mnkt.

LOCATION.—Lat 44°17′59.9″, long 103°26′12.3″, in NE1/4NW1/4NE1/4NE1/4 sec. 19, T. 4 N., R. 6 E., Hydrologic Unit 10120111, at Tilford. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnekahta.

WELL CHARACTERISTICS.—Drilled observation well, 180 ft deep with 131 ft of 2-in. PVC casing, and 18-slot, 2-in. PVC schedule 80 screen, from 131 to 180 ft.

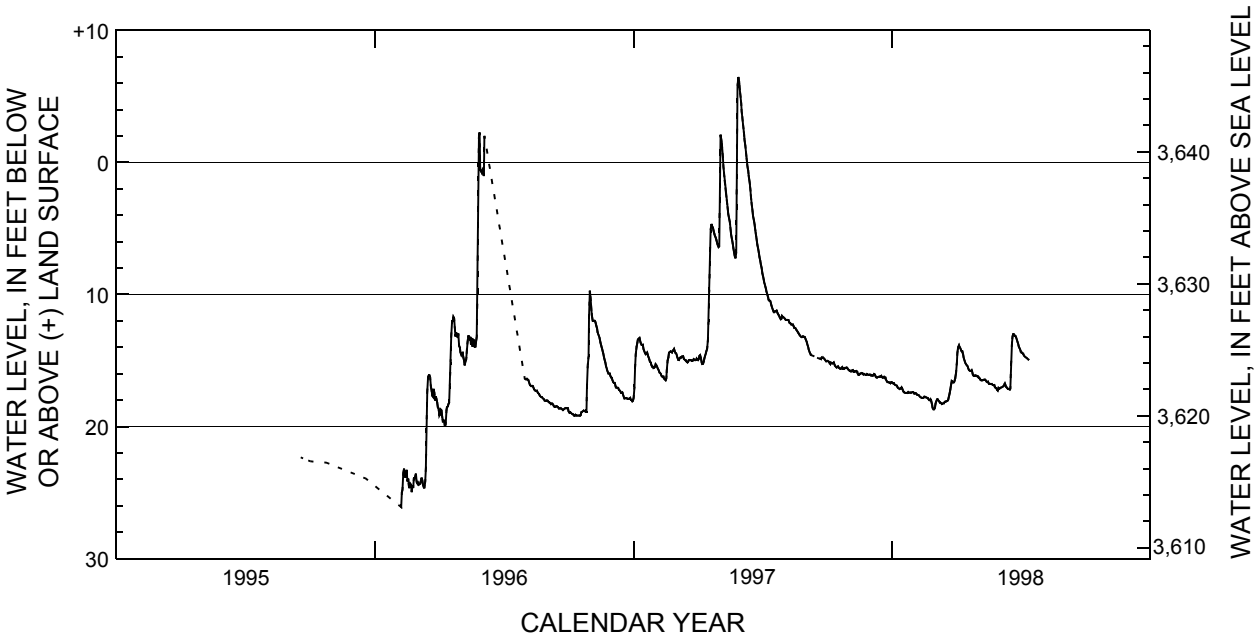
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,639.2 ft above sea level. Measuring point: Top of PVC casing, 1.8 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1995 to September 1998.

EXTREMES.—Highest daily water level, 6.47 ft above land-surface datum, May 29, 1997; lowest daily water level, 26.11 ft below land-surface datum, Feb. 7, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	e22.35
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	---	22.35

WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	24.34	19.18	14.41	.58	---	16.43	18.05
2	e22.65	---	---	---	---	24.27	19.09	14.58	.47	---	16.44	18.11
3	---	---	---	---	---	24.41	18.73	14.43	1.02	---	16.40	18.18
4	---	---	---	---	---	24.35	18.79	14.42	e+2.00	---	16.44	18.19
5	---	---	---	---	---	24.34	19.15	14.74	---	---	16.49	18.23
6	---	---	---	---	26.07	24.12	19.60	15.01	---	---	16.67	18.30
7	---	---	---	---	26.11	23.89	19.54	15.38	---	---	16.87	18.28
8	---	---	---	---	24.99	24.10	19.69	15.03	---	---	16.91	18.27
9	---	---	---	---	24.79	24.45	20.00	14.93	---	---	16.96	18.35
10	---	---	---	---	23.54	24.63	19.83	14.29	---	---	16.93	18.48
11	---	---	---	---	23.20	24.63	18.79	13.60	---	---	16.94	18.52
12	---	---	---	---	23.62	24.20	18.54	13.11	---	---	17.03	18.52
13	---	---	---	---	23.87	23.24	18.49	13.21	---	---	17.20	18.48
14	---	---	---	---	23.62	20.31	18.28	13.38	---	---	17.27	18.47
15	---	---	---	---	23.30	17.33	18.17	13.22	---	---	17.30	18.52
16	---	---	---	---	24.17	16.25	16.92	13.83	---	---	17.31	18.54
17	---	---	---	---	23.97	16.12	15.11	13.30	---	---	17.30	18.65
18	---	---	---	---	24.48	16.13	13.08	13.96	---	---	17.43	18.65
19	---	---	e23.95	---	24.67	16.30	12.03	13.43	---	---	17.49	18.64
20	---	---	---	---	24.35	17.02	12.03	13.48	---	---	17.53	18.63
21	---	---	---	---	24.46	17.18	11.71	13.97	---	---	17.68	18.68
22	---	---	---	---	24.98	17.67	11.83	13.96	---	---	17.72	18.71
23	---	---	---	---	24.48	17.75	12.62	13.57	---	---	17.78	18.77
24	---	---	---	---	24.66	17.16	13.18	13.25	---	---	17.78	18.72
25	e22.75	---	---	---	23.93	17.44	12.90	9.73	---	---	17.86	18.66
26	---	---	---	---	23.95	18.03	13.20	2.30	---	---	17.91	18.62
27	---	---	---	---	23.77	17.73	13.22	+1.99	---	---	17.94	18.59
28	---	---	---	---	23.59	17.90	12.97	+2.26	---	---	18.04	18.62
29	---	---	---	---	24.24	18.20	13.91	.60	---	---	18.07	18.64
30	---	---	---	---	---	18.55	14.05	.68	---	---	18.07	18.62
31	---	---	---	---	---	18.64	---	.79	---	16.38	18.03	---
LOW	22.75	---	23.95	---	26.11	24.63	20.00	15.38	1.02	16.38	18.07	18.77

e Estimated

WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.87	10.31	16.32	17.83	15.30	14.44	14.95	6.41	+5.10	8.01	11.74	13.39
2	18.96	11.05	16.54	17.01	15.35	14.47	14.97	6.33	+4.48	8.39	11.79	13.47
3	18.91	11.62	16.63	15.47	15.48	14.66	14.88	.57	+3.85	8.65	11.84	13.62
4	18.96	12.01	16.70	14.53	15.62	14.80	14.65	+2.08	+3.30	8.90	11.94	13.87
5	19.02	12.02	16.70	13.99	15.71	14.96	14.60	+1.70	+2.71	9.17	11.95	14.07
6	19.08	11.99	16.87	13.67	15.86	14.98	14.82	+1.28	+2.14	9.36	11.94	14.23
7	19.09	12.01	17.05	13.43	15.93	14.82	15.15	+.52	+1.66	9.58	11.95	14.41
8	19.11	12.10	17.07	13.34	16.00	14.78	15.28	.34	+1.25	9.82	11.95	14.52
9	19.19	12.35	17.07	13.29	16.16	14.80	15.27	.92	+.64	10.00	12.12	14.60
10	19.18	12.56	17.09	13.44	16.20	14.71	15.09	1.53	+.17	10.21	12.15	14.61
11	19.12	12.83	17.23	13.70	16.27	14.71	14.89	2.10	.30	10.42	12.20	---
12	19.18	13.05	17.27	13.83	16.24	14.68	14.66	2.47	.66	10.50	12.29	---
13	19.18	13.22	17.33	13.84	16.36	14.88	14.45	3.00	1.13	10.50	12.30	---
14	19.18	13.32	17.47	13.81	16.44	14.94	14.26	3.53	1.52	10.65	12.28	---
15	19.18	13.63	17.47	14.19	16.50	15.01	14.12	3.91	2.00	10.84	12.39	---
16	19.18	13.87	17.43	14.30	16.35	15.01	13.43	4.22	2.63	11.05	12.53	---
17	19.19	14.09	17.63	14.45	15.75	15.10	12.09	4.53	3.20	11.19	12.55	---
18	19.15	14.23	17.83	14.54	15.02	15.16	9.65	5.10	3.68	11.36	12.56	---
19	18.91	14.48	17.89	14.49	14.77	15.08	6.61	5.48	4.06	11.36	12.69	---
20	18.89	14.80	17.87	14.41	14.41	14.99	5.12	5.80	4.35	11.28	12.76	---
21	18.84	14.98	17.85	14.61	14.36	14.96	4.68	6.14	4.72	11.27	12.84	14.87
22	18.80	15.16	17.86	14.74	14.31	14.98	4.86	6.50	5.04	11.24	12.94	14.87
23	18.85	15.50	17.93	14.89	14.36	14.97	4.92	6.79	5.48	11.37	13.01	14.90
24	18.85	15.64	17.93	15.11	14.40	15.05	5.16	7.14	5.89	11.47	13.11	14.78
25	18.90	15.86	17.91	15.17	14.28	15.05	5.41	7.27	6.25	11.55	13.18	14.80
26	18.90	15.99	17.91	15.34	14.24	14.98	5.61	6.82	6.48	11.69	13.23	14.79
27	16.97	16.00	17.86	15.49	14.15	14.90	5.66	+1.20	6.81	11.78	13.25	14.86
28	15.40	16.00	18.00	15.49	14.32	14.96	5.87	+5.81	7.16	11.89	13.18	14.92
29	14.71	16.20	18.02	15.59	---	14.99	6.11	+6.47	7.45	11.83	13.19	14.99
30	11.69	16.28	18.10	15.55	---	14.98	6.26	+6.11	7.74	11.64	13.22	15.07
31	9.73	---	18.07	15.49	---	14.86	---	+5.68	---	11.71	13.23	---
LOW	19.19	16.28	18.10	17.83	16.50	15.16	15.28	7.27	7.74	11.89	13.25	15.07

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.08	15.73	16.07	16.64	17.43	18.71	16.33	16.18	17.08	14.09	---	---
2	15.04	15.78	16.12	16.71	17.51	18.71	15.93	16.21	17.14	14.24	---	---
3	15.08	15.77	16.11	16.75	17.49	18.59	15.18	16.21	17.13	14.39	---	---
4	15.09	15.84	16.16	16.72	17.49	18.31	14.45	16.32	17.09	14.39	---	---
5	15.18	15.84	16.17	16.83	17.56	18.09	13.98	16.33	17.06	14.45	---	---
6	15.26	15.75	16.12	16.87	17.60	17.94	13.86	16.44	17.02	14.53	---	---
7	15.16	15.73	16.04	16.88	17.61	17.94	13.97	16.48	16.99	14.62	---	---
8	15.21	15.86	16.07	16.91	17.64	18.03	14.07	16.51	16.97	14.70	---	---
9	15.23	15.88	16.19	17.01	17.71	18.08	14.23	16.51	16.87	14.74	---	---
10	15.21	15.82	16.28	17.08	17.75	18.21	14.30	16.50	16.76	14.79	---	---
11	15.16	15.84	16.31	17.13	17.80	18.21	14.31	16.47	16.89	14.82	---	---
12	15.32	15.80	16.28	17.17	17.82	18.25	14.55	16.48	17.03	14.87	---	---
13	15.42	15.85	16.26	17.13	17.86	18.30	14.84	16.46	17.06	14.92	---	---
14	15.50	16.01	16.25	17.13	17.85	18.28	15.03	16.52	17.16	14.99	---	---
15	15.54	16.11	16.23	17.05	17.83	18.24	15.18	16.60	17.16	---	---	---
16	15.52	16.10	16.24	17.17	17.75	18.25	15.27	16.65	17.18	---	---	---
17	15.45	16.01	16.18	17.31	17.76	18.15	15.37	16.62	17.21	---	---	---
18	15.55	15.98	16.25	17.42	17.80	18.14	15.43	16.72	17.16	---	---	---
19	15.59	15.97	16.32	17.42	17.81	18.10	15.58	16.79	15.22	---	---	---
20	15.64	15.99	16.28	17.47	17.84	18.08	15.71	16.79	13.76	---	---	---
21	15.64	16.00	16.26	17.48	17.86	18.06	15.78	16.78	13.19	---	---	---
22	15.54	16.06	16.34	17.46	17.94	17.96	15.80	16.79	13.01	---	---	---
23	15.52	16.03	16.31	17.47	18.02	17.75	15.80	16.81	13.03	---	---	---
24	15.66	16.06	16.47	17.41	18.02	17.49	15.75	16.86	13.14	---	---	---
25	15.66	16.11	16.58	17.45	17.95	17.21	15.93	16.88	13.16	---	---	---
26	15.58	16.11	16.65	17.45	18.08	16.83	16.08	16.86	13.27	---	---	---
27	15.55	16.04	16.65	17.44	18.35	16.56	16.16	16.99	13.46	---	---	---
28	15.60	16.08	16.68	17.45	18.60	16.62	16.18	17.09	13.62	---	---	---
29	15.54	16.11	16.69	17.45	---	16.68	16.14	17.13	13.80	---	---	---
30	15.56	16.09	16.73	17.40	---	16.66	16.14	17.22	14.00	---	---	---
31	15.65	---	16.66	17.41	---	16.53	---	17.29	---	---	---	---
LOW	15.66	16.11	16.73	17.48	18.60	18.71	16.33	17.29	17.21	14.99	---	---

SITE NUMBER FROM LOCATION MAP.—25.

COUNTY.—Meade.

LOCAL WELL NUMBER.—4N6E19AABA2.

SITE ID (STATION NUMBER).—441759103261202.

OTHER IDENTIFIERS.—MD-90A and Tilford Mdsn.

LOCATION.—Lat 44°17′59.7″, long 103°26′12.2″, in NE1/4NW1/4NE1/4NE1/4 sec. 19, T. 4 N., R. 6 E., Hydrologic Unit 10120111, at Tilford. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 840 ft deep with 750 ft of 5-in. steel casing; open hole from 750 to 840 ft.

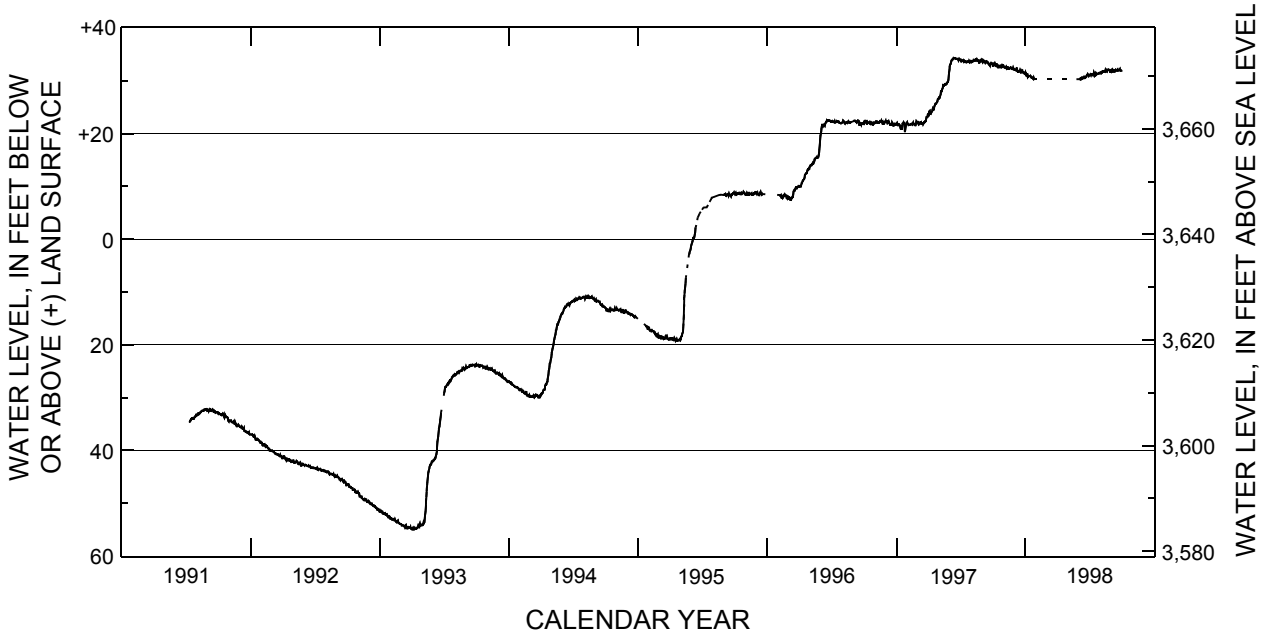
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,639.1 ft above sea level. Measuring point: Top of steel casing, 2.20 ft above land-surface datum. Base for gage 4.1 ft above land-surface datum since August 1995.

REMARKS.—Records fair.

PERIOD OF RECORD.—July 1991 to September 1998.

EXTREMES.—Highest daily water level, 34.34 ft above land-surface datum, June 15, 1997; lowest daily water level, 54.96 ft below land-surface datum, Mar. 31, Apr. 1, 3, 7, 1993.



WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.07	13.12	13.75	---	16.75	18.64	18.77	19.03	1.02	---	---	+8.44
2	13.12	13.35	13.79	---	17.15	18.53	18.78	18.71	.79	---	---	+8.47
3	13.49	13.37	13.85	---	17.27	18.34	18.99	18.44	.54	---	e+8.01	+8.49
4	13.50	13.36	14.11	---	17.20	18.41	18.98	18.37	.34	---	---	+8.42
5	13.35	13.43	14.13	---	17.21	18.42	18.75	18.22	.02	e+6.00	---	+8.50
6	13.15	13.48	14.06	---	17.28	18.67	18.76	17.89	+.39	---	---	+8.24
7	13.59	13.43	14.12	---	17.43	18.79	18.75	17.67	+.24	---	---	+8.22
8	13.64	13.50	14.18	---	17.39	18.75	18.72	17.50	+.24	---	---	+8.28
9	13.60	13.49	14.19	---	17.25	18.48	19.03	16.46	+.44	---	---	+8.40
10	13.46	13.36	14.29	---	17.36	18.54	19.10	14.74	+.75	---	e+8.19	+8.48
11	13.36	13.30	14.14	---	17.42	18.47	19.03	12.84	+1.27	---	---	+8.60
12	13.59	13.28	14.23	---	17.40	18.52	19.09	11.02	+2.07	---	---	+8.54
13	13.66	13.56	14.22	---	17.40	18.82	19.08	9.73	+2.22	---	---	+8.33
14	13.41	13.83	14.22	---	17.40	18.93	18.81	9.25	---	e+6.05	---	+8.27
15	13.21	13.83	14.24	---	17.50	18.88	19.00	8.33	---	---	---	+8.60
16	13.42	13.41	14.33	---	17.70	18.86	19.17	7.32	---	---	e+8.32	+8.39
17	13.42	13.37	14.50	---	17.68	18.86	19.07	---	---	---	---	+8.47
18	13.46	13.69	14.50	---	18.01	18.70	19.05	---	---	---	---	+8.39
19	13.47	13.69	14.49	---	18.01	18.44	19.01	---	e+4.12	---	---	+8.26
20	13.44	13.56	14.59	---	18.11	18.48	18.90	---	---	---	---	+8.20
21	13.33	13.93	14.79	---	17.95	18.34	19.27	---	---	---	---	+8.12
22	13.40	13.96	14.83	---	18.03	18.49	19.28	---	---	---	---	+8.31
23	13.45	13.94	14.79	16.37	18.29	18.59	19.18	---	e+4.80	---	e+8.43	+8.46
24	13.54	13.75	14.62	16.56	18.20	18.42	19.14	---	---	---	---	+8.44
25	13.51	13.75	14.73	16.53	18.07	18.74	19.10	2.94	---	---	---	+8.57
26	13.31	13.49	---	16.41	18.31	18.82	19.16	2.69	---	e+7.50	---	+8.71
27	13.09	13.49	---	16.68	18.60	18.99	19.09	2.31	---	---	---	+8.74
28	13.28	13.80	---	16.97	18.64	19.02	19.00	2.16	---	e+7.90	---	+8.72
29	13.40	13.87	---	16.97	---	19.02	19.10	1.97	---	---	---	+8.83
30	13.42	13.79	---	16.85	---	18.90	19.00	1.68	---	---	---	+8.66
31	13.40	---	---	16.70	---	18.80	---	1.30	---	---	+8.37	---
LOW	13.66	13.96	14.83	16.97	18.64	19.02	19.28	19.03	1.02	+6.00	+8.01	+8.12

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+8.64	+8.40	+8.90	---	---	+8.08	+9.97	+13.83	+20.05	+22.24	+22.14	---
2	+8.56	+8.37	+8.71	---	---	+7.99	+10.27	+13.99	+20.42	+22.25	+22.22	---
3	+8.61	+8.38	+8.57	---	---	+8.00	+10.00	+14.03	+20.83	+22.34	+22.47	---
4	+8.77	+8.41	+8.76	---	---	+7.94	+9.95	+13.97	+21.38	+22.41	+22.44	+22.45
5	+8.47	+8.73	+8.58	---	---	+7.70	+9.95	+13.95	+21.83	+22.33	+22.34	+22.60
6	+8.45	+8.62	+8.57	---	+8.35	+7.51	+10.27	+14.16	+21.51	+22.22	+22.13	+22.35
7	+8.60	+8.41	+8.56	---	+8.26	+7.34	+10.56	+14.26	+21.40	+22.26	+21.97	+22.34
8	+8.65	+8.41	+8.37	---	+8.23	+7.56	+10.67	+14.37	+21.57	+22.18	+21.90	+22.37
9	+8.68	+8.90	+8.33	---	+8.28	+7.51	+10.72	+14.20	+21.66	+22.12	+22.05	+22.32
10	+8.67	+8.45	+8.49	---	+7.88	+7.81	+11.02	+14.24	+21.61	+22.28	+22.12	+22.12
11	+8.76	+8.44	+8.66	---	+7.87	+7.90	+11.11	+14.31	+21.67	+22.19	+22.15	+22.09
12	+8.81	+8.66	+8.81	---	+7.91	+7.99	+11.18	+14.51	+21.51	+22.10	+22.19	+22.16
13	+8.61	+8.55	+8.97	---	+8.19	+7.98	+11.32	+14.67	+21.79	+22.16	+22.03	+22.34
14	+8.59	+8.57	+8.67	---	+8.10	+8.08	+11.33	+15.08	+22.06	+22.19	+22.01	+22.48
15	+8.73	+8.53	+8.66	---	+7.89	+8.51	+11.42	+15.10	+22.10	+22.29	+22.10	+22.45
16	+8.79	+8.62	+8.69	---	+8.02	+9.10	+11.67	+15.19	+22.19	+22.41	+22.13	+22.40
17	+8.77	+8.55	+8.44	---	+8.17	+9.28	+12.19	+15.37	+22.24	+22.33	+22.24	+22.19
18	+8.79	+8.65	+8.46	---	+8.37	+9.20	+12.30	+15.43	+22.49	+22.26	+22.34	+21.65
19	+8.50	+8.45	+8.53	---	+8.48	+9.21	+12.44	+15.49	+22.40	+22.24	+22.16	+21.63
20	+8.50	+8.36	---	---	+8.26	+9.28	+12.49	+15.44	+22.44	+22.28	+22.21	+22.04
21	+8.77	+8.36	---	---	+8.25	+9.61	+12.52	+15.43	+22.45	+22.16	+22.13	+22.00
22	+8.71	+8.59	---	---	+8.37	+9.69	+12.51	+15.59	+22.55	+22.11	+22.05	+21.92
23	+8.68	+8.58	---	---	+8.30	+9.96	+12.70	+15.58	+22.54	+22.14	+22.05	+21.72
24	+8.71	+8.70	---	---	+8.23	+9.64	+13.11	+15.54	+22.53	+21.99	+22.16	+21.80
25	+8.78	+8.68	---	---	+7.97	+9.62	+13.25	+15.64	+22.48	+21.99	+22.18	+21.93
26	+8.99	+8.80	---	---	+8.00	+9.79	+13.26	+16.03	+22.42	+22.01	---	+21.95
27	+8.88	+8.62	---	---	+7.71	+9.82	+13.36	+16.48	+22.44	+21.94	---	+21.95
28	+8.79	+8.67	---	---	+7.59	+9.88	+13.24	+16.99	+22.43	+21.94	---	+21.89
29	+8.69	+8.88	---	---	+7.67	+10.01	+13.27	+17.84	+22.24	+21.91	---	+21.85
30	+8.69	+8.91	---	---	---	+9.90	+13.71	+18.83	+22.22	+22.01	---	+22.02
31	+8.63	---	---	---	---	+9.88	---	+19.58	---	+22.07	---	---
LOW	+8.45	+8.36	+8.33	---	+7.59	+7.34	+9.95	+13.83	+20.05	+21.91	+21.90	+21.63

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+22.23	+22.08	+22.36	+21.85	+21.93	+22.09	+23.50	+26.79	+32.73	+34.03	+33.69	+33.62
2	+22.07	+22.06	+22.20	+21.92	+21.89	+22.14	+23.44	+26.73	+33.02	+33.81	+33.78	+33.54
3	+22.27	+22.28	+22.14	+22.02	+21.77	+22.03	+23.66	+26.75	+33.12	+33.69	+33.56	+33.64
4	+22.42	+22.33	+22.15	+21.72	+21.63	+21.84	+24.25	+27.00	+33.36	+33.70	+33.67	+33.77
5	+22.42	+22.33	+22.47	+21.55	+21.66	+21.72	+24.28	+27.29	+33.75	+33.75	+33.69	+33.69
6	+22.23	+22.34	+22.27	+21.58	+21.69	+21.76	+23.98	+27.53	+33.81	+33.85	+33.70	+33.75
7	+22.28	+22.08	+21.96	+21.76	+21.69	+22.07	+23.78	+27.95	+33.98	+33.83	+33.82	+33.67
8	+22.30	+22.09	+22.01	+21.78	+21.72	+21.95	+23.74	+27.92	+34.08	+33.76	+34.15	+33.52
9	+21.90	+22.15	+22.24	+21.76	+21.71	+21.94	+23.96	+28.00	+34.00	+33.85	+33.88	+33.44
10	+21.90	+22.14	+22.31	+21.65	+21.71	+22.10	+24.06	+28.40	+34.08	+33.71	+33.81	+33.59
11	+22.17	+22.03	+22.01	e+21.37	+21.78	+22.10	+24.11	+28.50	+34.29	+33.88	+33.90	+33.70
12	+22.03	+22.04	+21.93	e+21.10	+21.79	+22.13	+24.30	+28.72	+34.25	+33.83	+33.81	+33.66
13	+22.03	+22.05	+21.89	e+21.16	+21.90	+21.86	+24.48	+29.09	+34.24	+33.78	+33.90	+33.49
14	+22.05	+22.23	+21.62	+20.75	+21.87	+21.84	+24.69	+29.02	+34.29	+33.64	+34.13	+33.49
15	+22.05	+22.40	+21.62	+21.55	+21.75	e+21.88	+24.47	+29.03	+34.34	+33.37	+34.17	+33.55
16	+22.10	+22.36	+21.92	e+21.17	+21.84	e+21.93	+24.50	+29.23	+34.29	+33.70	+33.85	+33.50
17	+21.90	+22.28	+21.66	+20.71	+22.06	+21.97	+24.77	+29.34	+34.17	+33.67	+33.77	+33.49
18	+21.89	+22.27	+21.67	+21.84	+21.78	+21.87	+25.08	+29.25	+34.18	+33.64	+33.94	+33.41
19	+22.40	+22.45	+21.78	+21.87	+21.85	+22.05	+25.26	+29.23	+34.18	+33.53	+33.85	+33.10
20	+22.06	+22.21	+22.06	+22.04	+21.87	+22.17	+25.42	+29.25	+34.15	+33.55	+33.78	+33.01
21	+21.89	+22.22	+21.92	+22.11	+21.85	+22.13	+25.65	+29.47	+34.14	+33.56	+33.83	+33.16
22	+21.96	+22.29	+21.78	+22.01	+21.60	+22.17	+25.65	+29.50	+34.20	+33.66	+33.83	+33.16
23	+22.03	+21.87	+21.51	+22.05	+21.55	+22.20	+25.67	+29.47	+34.14	+33.74	+33.32	+32.99
24	+22.05	+21.87	+21.53	+21.70	+21.55	+22.40	+25.80	+29.65	+34.02	+33.75	+33.91	+33.22
25	+22.23	+21.92	+21.62	e+20.28	+21.87	+22.40	+25.84	+29.76	+33.90	+33.39	+33.79	+33.26
26	+21.70	+21.88	+21.62	e+20.94	+22.13	+22.70	+25.94	+29.73	+33.98	+33.70	+33.83	+33.39
27	+21.67	+21.88	+22.03	e+21.25	+22.32	+23.13	+26.15	+29.86	+34.15	+33.58	+33.84	+33.35
28	+21.81	+22.26	+21.74	e+21.49	+22.21	+23.12	+26.54	+30.23	+34.03	+33.47	+33.75	+33.26
29	+22.04	+22.27	+21.72	+21.74	---	+23.12	+26.58	+30.98	+34.01	+33.53	+33.96	+33.22
30	+21.97	+22.23	+21.69	+22.01	---	+23.21	+26.59	+31.59	+34.01	+33.67	+33.85	+33.14
31	+21.97	---	+21.75	+22.13	---	+23.57	---	+32.16	---	+33.74	+33.94	---
LOW	+21.67	+21.87	+21.51	+20.28	+21.55	+21.72	+23.44	+26.73	+32.73	+33.37	+33.32	+32.99

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+32.73	+32.65	+32.23	+31.58	---	---	---	---	---	+31.06	+31.60	+31.90
2	+33.28	+32.56	+32.08	+31.33	---	---	---	---	+30.29	+31.18	+31.59	+32.10
3	+33.30	+32.56	+32.08	+30.86	---	---	---	---	+30.29	+31.13	+31.56	+32.10
4	+33.28	+32.50	+32.01	+31.29	---	---	---	---	+30.39	+31.20	+31.43	+31.64
5	+33.17	+32.49	+31.98	+31.19	---	---	---	---	+30.29	+31.09	+31.49	+31.98
6	+33.02	+32.55	+32.08	+31.05	---	---	---	---	+30.27	+31.19	+31.66	+31.81
7	+33.24	+32.67	+32.39	+31.12	---	---	---	---	+30.40	+31.14	+31.81	+31.86
8	+33.02	+32.41	+32.37	+30.72	---	---	---	---	+30.52	+31.16	+31.83	+32.04
9	+32.94	+32.30	+32.01	+30.83	---	---	---	---	+30.43	+31.22	+31.76	+32.02
10	+33.01	+32.44	+31.72	+30.87	---	---	---	---	+30.63	+31.27	+31.81	+31.61
11	+33.30	+32.53	+31.70	---	---	---	---	---	+30.61	+31.18	+31.84	+31.92
12	+33.00	+32.61	+31.76	---	---	---	---	---	+30.49	+31.37	+31.60	+31.95
13	+32.80	+32.59	+31.81	---	---	---	---	---	+30.57	+31.16	+31.83	+32.08
14	+32.66	+32.25	+31.84	+30.82	---	---	---	---	+30.47	+31.51	+31.87	+31.91
15	+32.55	+32.25	+31.87	+30.94	---	---	---	---	+30.49	+31.26	+31.80	+31.95
16	+32.56	+32.27	+31.79	+30.83	---	---	---	---	+30.64	+30.90	+32.09	+31.96
17	+32.78	+32.39	+32.00	+30.78	---	---	---	---	+30.61	+30.99	+31.90	+31.97
18	+32.66	+32.45	+31.84	+30.65	---	---	---	---	+30.64	+31.09	+31.96	+32.15
19	+32.60	+32.44	+31.63	+30.68	---	---	---	---	+30.61	+31.23	+31.85	+32.18
20	+32.60	+32.54	+31.72	+30.64	---	---	---	---	+30.72	+31.46	+31.74	+31.94
21	+32.60	+32.49	+31.90	+30.51	---	---	---	---	+30.66	+31.31	+31.91	+31.91
22	+32.84	+32.34	+31.70	+30.47	---	---	---	---	+30.71	+31.21	+32.03	+31.92
23	+33.01	+32.34	+31.82	+30.40	---	---	---	---	+30.96	+31.32	+32.11	+32.04
24	+32.60	+32.37	+31.64	+30.57	---	---	---	---	+31.07	+31.33	+32.09	+32.10
25	+32.56	+32.23	+31.55	+30.31	---	---	---	---	+31.12	+31.36	+32.10	+32.20
26	+32.67	+32.22	+31.51	+30.28	---	---	---	---	+31.27	+31.39	+32.07	+32.01
27	+32.96	+32.42	+31.58	+30.29	---	---	---	---	+31.18	+31.40	+32.03	+31.91
28	+32.83	+32.25	+31.57	---	---	---	---	---	+31.08	+31.45	+31.96	+32.01
29	+32.95	+32.13	+31.53	---	---	---	---	---	+31.09	+31.49	+31.57	+31.96
30	+32.97	+32.16	+31.29	---	---	---	---	---	+30.99	+31.43	+31.99	+31.74
31	+32.83	---	+31.29	---	---	---	---	---	---	+31.51	+31.96	---
LOW	+32.55	+32.13	+31.29	+30.28	---	---	---	---	+30.27	+30.90	+31.43	+31.61

e Estimated

SITE NUMBER FROM LOCATION MAP.—26.

COUNTY.—Meade.

LOCAL WELL NUMBER.—4N6E19AABA.

SITE ID (STATION NUMBER).—441759103261201.

OTHER IDENTIFIERS.—MD-84B and Tilford Mnls.

LOCATION.—Lat 44°18′00.1″, long 103°26′12.4″, in NE1/4NW1/4NE1/4NE1/4 sec. 19, T. 4 N., R. 6 E., Hydrologic Unit 10120111, at Tilford. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 302 ft deep with 296 ft of 5-in. steel casing; open hole from 296 to 302 ft.

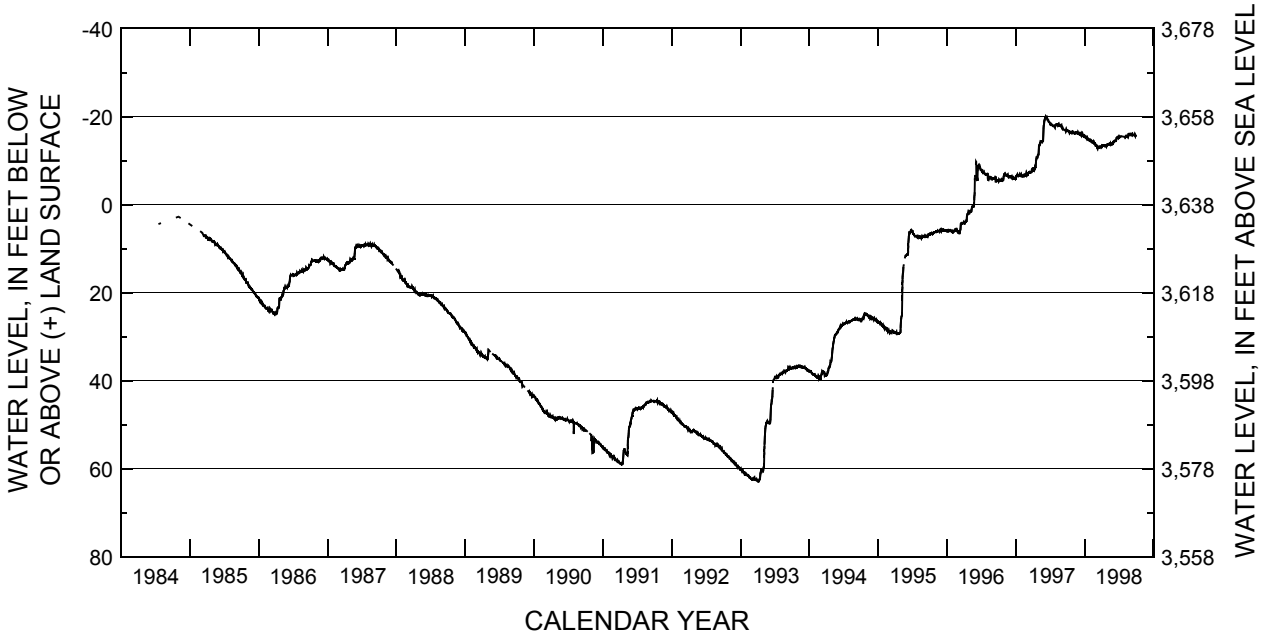
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,638.0 ft above sea level. Measuring point: Top of steel casing, 2.10 ft above land-surface datum, base of gage 3.2 ft above land-surface datum since June 4, 1996.

REMARKS.—Records fair. Unusual fluctuations in water level during 1990 probably caused by drilling adjacent observation well (MD-90A).

PERIOD OF RECORD.—July 1984 to September 1998.

EXTREMES.—Highest daily water level, 20.03 ft above land-surface datum, June 11-12, 15, 1997; lowest daily water level, 62.89 ft below land-surface datum, Apr. 6-7, 1993.



SITE NUMBER 26—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.25	24.69	25.66	26.68	27.63	29.01	28.99	28.91	11.40	6.00	7.39	7.27
2	26.22	25.05	25.67	26.84	27.98	28.93	29.02	27.55	11.40	5.91	7.33	7.23
3	26.50	25.07	25.75	26.87	28.09	28.78	29.22	26.38	11.39	5.93	7.39	7.21
4	26.68	25.06	25.94	26.87	27.96	28.85	29.22	25.93	11.37	6.22	7.35	7.23
5	26.34	25.19	25.94	26.47	27.98	28.85	29.04	25.67	11.19	6.42	7.27	7.19
6	26.07	25.20	25.90	26.62	28.03	29.10	29.05	25.39	11.13	6.59	7.17	7.39
7	26.08	25.25	25.97	26.72	28.17	29.19	29.04	25.27	11.37	6.59	7.21	7.39
8	26.05	25.32	26.01	26.76	28.11	29.13	29.01	25.09	11.37	6.69	7.36	7.21
9	25.95	25.32	26.02	26.76	27.98	28.90	29.32	21.24	11.17	6.71	7.37	7.20
10	25.80	25.21	26.14	26.71	28.08	28.93	29.37	19.24	9.94	6.80	7.29	7.12
11	25.75	25.21	25.92	26.72	28.16	28.87	29.28	17.73	8.64	6.77	7.24	7.02
12	25.97	25.20	26.04	26.86	28.23	28.92	29.35	16.39	7.83	6.83	7.33	7.07
13	25.98	25.50	26.01	26.98	28.23	29.07	29.35	15.60	7.21	6.99	7.37	7.26
14	25.77	25.71	25.95	26.94	28.05	29.13	29.11	15.46	6.82	7.14	7.39	7.26
15	25.68	25.70	25.96	26.81	28.11	29.01	29.26	14.77	6.44	7.17	7.28	7.01
16	25.74	25.29	25.99	26.89	28.34	28.95	29.36	14.14	6.27	7.22	7.23	7.14
17	25.60	25.41	26.23	27.07	28.30	28.95	29.33	---	6.27	7.22	7.27	7.06
18	25.14	25.68	26.17	27.22	28.61	28.82	29.27	---	6.30	7.17	7.61	7.14
19	25.12	25.66	26.15	27.34	28.60	28.59	29.27	---	6.30	7.19	7.63	7.17
20	24.90	25.56	26.22	27.41	28.67	28.63	29.14	---	6.33	7.19	7.56	7.27
21	24.72	25.86	26.41	27.41	28.50	28.52	29.40	---	6.36	7.16	7.51	7.30
22	24.74	25.92	26.47	27.40	28.57	28.78	29.40	---	6.29	7.17	7.51	7.09
23	24.79	25.88	26.37	27.39	28.76	28.83	29.25	---	6.04	7.12	7.48	6.99
24	24.87	25.74	26.22	27.52	28.69	28.65	29.20	---	5.94	7.16	7.29	6.99
25	24.84	25.74	26.38	27.51	28.55	28.96	29.16	---	5.78	7.15	7.40	6.84
26	24.70	25.45	26.39	27.38	28.76	29.01	29.17	11.63	5.73	7.14	7.41	6.70
27	24.56	25.50	26.48	27.61	29.00	29.16	29.10	11.62	5.82	7.20	7.36	6.69
28	24.81	25.75	26.48	27.83	29.01	29.18	29.02	11.67	5.95	7.38	7.36	6.69
29	24.94	25.84	26.58	27.83	---	29.17	29.07	11.65	6.08	7.35	7.28	6.63
30	24.96	25.72	26.70	27.65	---	29.09	28.98	11.56	6.08	7.47	7.34	6.77
31	24.98	---	26.73	27.55	---	29.02	---	11.43	---	7.51	7.34	---
LOW	26.68	25.92	26.73	27.83	29.01	29.19	29.40	28.91	11.40	7.51	7.63	7.39

WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.78	6.17	5.65	6.02	6.25	5.88	4.11	1.60	---	+7.88	+6.84	+6.17
2	6.79	6.18	5.77	6.02	6.25	6.03	3.85	1.53	---	+7.84	+6.89	+6.09
3	6.75	6.17	5.97	5.65	6.28	6.01	4.23	1.58	---	+7.82	+7.03	+5.86
4	6.63	6.13	5.78	6.06	6.23	6.02	4.34	1.66	e+9.77	+7.84	+7.00	+5.89
5	6.79	5.85	5.88	6.07	6.20	6.22	4.34	1.67	+9.68	+7.72	+6.98	+6.08
6	6.78	6.05	5.83	6.08	6.08	6.36	4.12	1.54	+6.19	+7.57	+5.84	+5.89
7	6.54	6.18	5.81	6.03	5.96	6.51	3.92	1.49	+5.99	+7.56	+5.66	+5.89
8	6.51	6.14	5.98	5.92	5.97	6.50	3.92	1.44	+6.02	+7.45	+5.63	+6.03
9	6.48	5.77	5.98	5.98	5.74	6.34	3.92	1.55	+5.92	+7.36	+5.82	+6.17
10	6.48	6.14	5.93	5.95	6.05	6.17	3.78	1.55	+5.72	+7.46	+5.94	+5.98
11	6.43	6.14	5.74	5.95	6.04	6.15	3.79	1.42	+5.73	+7.30	+6.15	+5.95
12	6.51	5.97	5.62	5.93	6.00	6.01	3.78	1.16	+5.42	+7.27	+6.24	+6.00
13	6.61	6.04	5.59	5.76	5.76	5.78	3.78	.95	+8.25	+7.26	+6.08	+6.17
14	6.61	6.00	5.82	5.95	5.83	5.57	3.81	.54	+8.77	+7.26	+6.04	+6.32
15	6.48	6.01	5.82	5.90	6.04	4.89	3.75	.53	+8.84	+7.28	+6.13	+6.27
16	6.42	5.96	5.81	5.56	5.91	4.30	3.34	.49	+8.88	+7.34	+6.17	+6.26
17	6.48	5.98	6.00	5.98	5.82	4.23	2.63	.36	+8.89	+7.20	+6.25	+5.25
18	6.45	5.86	5.98	6.02	5.57	4.39	2.36	.36	+8.98	+7.09	+6.26	+5.26
19	6.69	6.04	5.90	5.72	5.48	4.44	2.13	.33	+8.80	+7.08	+6.13	+5.54
20	6.66	6.09	5.78	5.71	5.49	4.40	2.07	.42	+8.80	+7.08	+6.18	+5.68
21	6.34	6.06	6.00	5.95	5.67	4.22	2.09	.42	+8.67	+6.99	+6.08	+5.64
22	6.49	5.90	6.00	5.99	5.66	4.18	2.09	.33	+8.71	+6.94	+6.03	+5.56
23	6.48	5.93	5.89	5.89	5.73	4.01	2.00	.41	+8.61	+6.90	+6.05	+5.41
24	6.41	5.82	5.89	5.90	5.79	4.30	1.74	.41	+8.61	+6.81	+6.15	+5.46
25	6.33	5.82	5.89	5.99	6.01	4.30	1.83	+.08	+8.46	+6.84	+6.16	+5.61
26	6.06	5.79	5.95	6.01	6.01	4.18	1.83	+1.64	+8.42	+6.86	+6.08	+5.62
27	6.18	5.93	5.95	6.08	6.23	4.16	1.84	+2.13	+8.38	+6.80	+5.84	+5.62
28	6.19	5.81	5.80	6.01	6.31	4.16	1.99	+2.24	+8.17	+6.75	+5.74	+5.58
29	6.27	5.64	5.73	6.17	6.25	4.03	1.99	e+6.20	+7.94	+6.75	+5.69	+5.54
30	6.27	5.65	5.60	6.20	---	4.16	1.63	---	+7.93	+6.77	+5.75	+5.72
31	6.08	---	5.77	6.10	---	4.17	---	---	---	+6.81	+5.91	---
LOW	6.79	6.18	6.00	6.20	6.31	6.51	4.34	1.67	+5.42	+6.75	+5.63	+5.25

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+5.40	+6.94	+6.56	+6.09	+6.66	+6.99	+7.69	+11.47	+18.81	+18.63	+18.13	+17.72
2	+5.25	+6.92	+6.38	+5.76	+6.64	+7.01	+7.60	+11.56	+19.04	+18.40	+18.18	+17.68
3	+5.46	+7.01	+6.35	+6.48	+6.53	+6.92	+7.79	+12.18	+19.21	+18.27	+18.14	+17.71
4	+5.60	+6.90	+6.35	+6.49	+6.44	+6.79	+8.29	+12.93	+19.32	+18.27	+18.06	+17.52
5	+5.54	+6.90	+6.62	+6.45	+6.45	+6.72	+8.29	+13.23	+19.64	+18.28	+18.05	+17.38
6	+5.41	+6.91	+6.44	+6.45	+6.49	+6.73	---	+13.37	+19.75	+18.29	+18.08	+17.45
7	+5.47	+6.69	+6.19	+6.67	+6.46	+7.18	+7.79	+13.68	+19.84	+18.26	+18.15	+17.22
8	+5.53	+6.70	+6.20	+6.72	+6.52	+7.17	+7.77	+13.56	+19.93	+18.19	+18.45	+17.10
9	+5.40	+6.73	+6.43	+6.78	+6.47	+7.13	+7.93	+13.60	+19.83	+18.21	+18.15	+17.07
10	+5.41	+6.74	+6.48	+6.70	+6.45	+7.30	+8.02	+13.89	+19.87	+18.30	+18.12	+17.16
11	+5.67	+6.61	+6.23	---	+6.48	+7.30	+8.03	+13.90	+20.03	+18.20	+18.18	---
12	+5.54	+6.61	+6.18	---	+6.50	+7.34	+8.19	+14.04	+20.03	+18.15	+18.10	---
13	+5.54	+6.58	+6.08	---	+6.56	+7.11	+8.39	+14.32	+20.00	+18.07	+18.13	---
14	+5.59	+6.78	+5.86	---	+6.50	+7.10	+8.54	+14.26	+20.00	+18.00	+18.32	---
15	+5.59	+6.78	+5.86	+6.44	+6.46	+7.28	+8.42	+14.26	+20.03	+17.98	+18.35	---
16	+5.64	+6.74	+6.16	---	+6.50	+7.49	+8.43	+14.38	+19.71	+17.96	+18.07	---
17	+5.49	+6.68	+5.94	---	+6.74	+7.18	+8.84	+14.46	+19.48	+17.96	+18.04	---
18	+5.49	+6.67	+5.98	+6.62	+6.68	+7.07	+9.44	+14.30	+19.38	+17.86	+18.15	---
19	+5.93	+6.77	+6.06	+6.64	+6.69	+7.24	+9.98	+14.30	+19.36	+17.82	+18.03	---
20	+5.68	+6.53	+6.22	+6.83	+6.80	+7.38	+10.35	+14.35	+19.31	+17.83	+17.95	---
21	+5.57	+6.52	+6.18	+6.86	+6.80	+7.34	+10.64	+14.45	+19.26	+17.83	+18.03	+16.90
22	+5.60	+6.61	+6.10	+6.70	+6.61	+7.36	+10.61	+14.42	+19.24	+17.87	+18.00	+16.83
23	+5.61	+6.27	+5.90	+6.79	+6.60	+7.37	+10.61	+14.39	+19.11	+17.92	+17.98	+16.73
24	+5.61	+6.27	+5.92	+6.55	+6.57	+7.38	+10.68	+14.48	+18.92	+17.90	+18.07	+16.86
25	+5.79	+6.27	+6.00	---	+6.87	+7.38	+10.68	+14.53	+18.79	+17.90	+17.97	+16.93
26	+5.54	+6.19	+6.01	---	+7.07	+7.57	+10.78	+14.56	+18.79	+17.83	+18.00	+17.04
27	+5.55	+6.24	+6.27	---	+7.23	+7.77	+10.89	+15.58	+18.87	+17.66	+17.98	+16.97
28	+5.92	+6.53	+6.06	---	+7.07	+7.67	+11.26	+16.67	+18.79	+17.58	+18.06	+16.91
29	+6.51	+6.49	+6.05	+6.45	---	+7.58	+11.28	+17.44	+18.77	+17.77	+18.07	+16.84
30	+6.57	+6.47	+5.94	+6.70	---	+7.61	+11.30	+17.89	+18.72	+18.05	+18.01	+16.76
31	+6.88	---	+6.00	+6.81	---	+7.86	---	+18.31	---	+18.14	+18.08	---
LOW	+5.25	+6.19	+5.86	+5.76	+6.44	+6.72	+7.60	+11.47	+18.72	+17.58	+17.95	+16.73

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+16.80	+16.42	+16.24	+15.60	+14.60	+13.43	+13.09	+13.63	+14.14	+15.19	---	+16.00
2	+16.89	+16.34	+16.10	+15.47	+14.42	+13.41	+13.06	+13.60	+14.06	+15.32	---	+16.08
3	+16.89	+16.36	+16.10	+15.28	+14.43	+13.49	+13.06	+13.68	+14.08	+15.25	+15.40	+16.06
4	+16.88	+16.30	+16.02	+15.48	+14.58	+13.50	+13.23	+13.69	+14.22	+15.25	+15.32	+16.02
5	+16.74	+16.24	+16.01	+15.30	+14.39	+13.44	+13.53	+13.71	+14.19	+15.38	+15.37	+15.95
6	+16.62	+16.34	+16.10	+15.21	+14.38	+13.45	+13.48	+13.68	+14.21	+15.32	+15.52	+15.81
7	+16.82	+16.46	+16.35	+15.27	+14.48	+13.28	+13.41	+13.68	+14.27	+15.34	+15.61	+15.86
8	+16.70	+16.20	+16.37	+15.32	+14.43	+13.16	+13.32	+13.68	+14.41	+15.35	+15-56	+16.03
9	+16.62	+16.17	+16.06	+15.20	+14.24	+13.12	+13.32	+13.68	+14.42	+15.42	+15.42	+16.09
10	+16.70	+16.23	+15.83	+15.15	+14.18	+12.86	+13.32	+13.71	+14.54	+15.43	+15.47	+15.97
11	+16.92	+16.34	+15.78	+15.18	+14.17	+12.76	+13.49	+13.80	+14.58	+15.43	+15.51	+15.83
12	+16.68	+16.43	+15.87	+15.08	+14.16	+13.24	+13.69	+13.85	+14.45	+15.52	+15.52	+15.90
13	+16.57	+16.43	+15.93	+15.12	+14.18	+13.06	+13.46	+13.90	+14.45	+15.58	+15.54	+15.96
14	+16.46	+16.17	+15.97	+15.06	+14.21	+13.07	+13.46	+13.90	+14.45	+15.58	+15.54	+15.82
15	+16.32	+16.17	+16.02	+15.22	+14.37	+13.07	+13.40	+13.75	+14.45	---	+15.65	+15.81
16	+16.38	+16.22	+15.99	+15.09	+14.24	+13.13	+13.34	+13.69	+14.61	---	+15.57	+15.86
17	+16.59	+16.33	+16.13	+14.99	+14.18	+13.12	+13.39	+13.85	+14.62	---	+15.57	+15.89
18	+16.49	+16.31	+15.97	+14.84	+13.98	+12.92	+13.35	+13.66	+14.70	---	+15.57	+15.89
19	+16.43	+16.33	+15.78	+14.92	+13.96	+12.91	+13.32	+13.61	+14.85	---	+15.46	+15.94
20	+16.39	+16.38	+15.87	+14.84	+13.97	+12.93	+13.27	+13.71	+15.12	---	+15.40	+15.78
21	+16.39	+16.36	+16.04	+14.82	+14.04	+12.97	+13.26	+13.82	+15.13	---	+15.59	+15.76
22	+16.61	+16.24	+15.86	+14.82	+13.97	+12.95	+13.31	+13.85	+15.12	---	+16.01	+15.75
23	+16.75	+16.26	+15.96	+14.70	+13.80	+12.97	+13.46	+13.85	+15.22	---	+16.16	+15.85
24	+16.38	+16.30	+15.71	+14.84	+13.81	+13.13	+13.73	+13.73	+15.38	---	+16.13	+15.89
25	+16.33	+16.19	+15.61	+14.66	+14.18	+13.22	+13.59	+13.75	+15.42	---	+16.12	+15.97
26	+16.45	+16.18	+15.53	+14.66	+13.92	+13.25	+13.40	+13.85	+15.44	---	+16.24	+15.72
27	+16.66	+16.35	+15.62	+14.67	+13.66	+13.19	+13.31	+13.83	+15.34	---	+16.02	+15.67
28	+16.55	+16.21	+15.55	+14.60	+13.55	+13.18	+13.38	+13.71	+15.30	---	+15.96	+15.80
29	+16.64	+16.13	+15.60	+14.60	---	+13.10	+13.50	+13.71	+15.27	---	+15.96	+15.73
30	+16.68	+16.14	+15.40	+14.66	---	+13.06	+13.64	+13.79	+15.18	---	+16.06	+15.49
31	+16.59	---	+15.41	+14.62	---	+13.11	---	+13.66	---	---	+16.00	---
LOW	+16.32	+16.13	+15.40	+14.60	+13.55	+12.76	+13.06	+13.60	+14.06	+15.19	+15.32	+15.49

SITE NUMBER FROM LOCATION MAP.—27.

COUNTY.—Meade.

LOCAL WELL NUMBER.—3N6E15ABB2.

SITE ID (STATION NUMBER).—441337103225002.

OTHER IDENTIFIER.—MD-94A and Piedmont Mdsn.

LOCATION.—Lat 44°13′35.5″, long 103°22′50.5″, in NW1/4NW1/4NE1/4 sec. 15, T. 3 N, R. 6 E., Hydrologic Unit 10120111, 0.5 mi southeast of Piedmont. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 880 ft deep, with 810 ft of 5-in. steel casing; open hole from 810 to 880 ft.

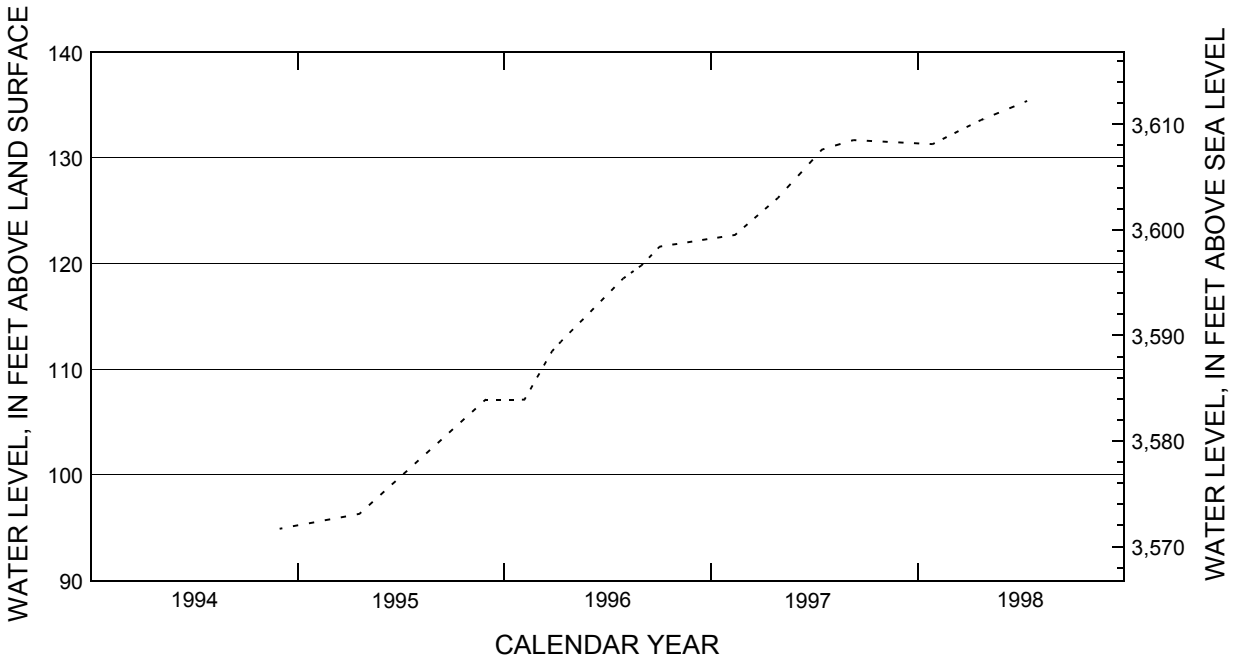
INSTRUMENTATION.—Electronic data logger with submersible transducer.

DATUM.—Elevation of land-surface datum is 3,476.8 ft above sea level. Measuring point: Base of gage 2.9 ft above land-surface datum since Sept. 11, 1996.

REMARKS.—Records poor. Gage readings at inspections used.

PERIOD OF RECORD.—November 1994 to September 1998.

EXTREMES.—Highest daily water level, 135.4 ft (estimated) above land-surface datum, July 14, 1998; lowest daily water level, 94.9 ft (estimated) above land-surface datum, Nov. 30, 1994.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	e+96.3	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	e+94.9	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+94.90	---	---	---	---	+96.30	---	---	---	---	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	e+107.1	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	e+112.6	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	+115.94
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	e+111.7	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	e+107.1	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e+118.6	e+119.8	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+107.10	---	---	+107.10	+111.70	+112.60	---	---	+118.60	+119.80	+115.94

e Estimated

SITE NUMBER 27—Continued

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	e+121.6	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	e+131.7
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	e+122.7	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	e+130.8	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	e+126.2	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	+121.60	---	---	---	+122.70	---	+126.20	---	---	+130.80	---	+131.70

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	e+135.4	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	e+133.6	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	e+131.3	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	+131.30	---	---	+133.60	---	---	+135.40	---	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—28.

COUNTY.—Meade.

LOCAL WELL NUMBER.—3N6E15ABB.

SITE ID (STATION NUMBER).—441337103225001.

OTHER IDENTIFIER.—MD-84A and Piedmont Mnls.

LOCATION.—Lat 44°13′35.6″, long 103°22′50.7″, in NW1/4NW1/4NE1/4 sec. 15, T. 3 N, R. 6 E., Hydrologic Unit 10120111, 0.5 mi southeast of Piedmont. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 440 ft deep, with 409 ft of 5-in. steel casing; open hole from 409 to 440 ft.

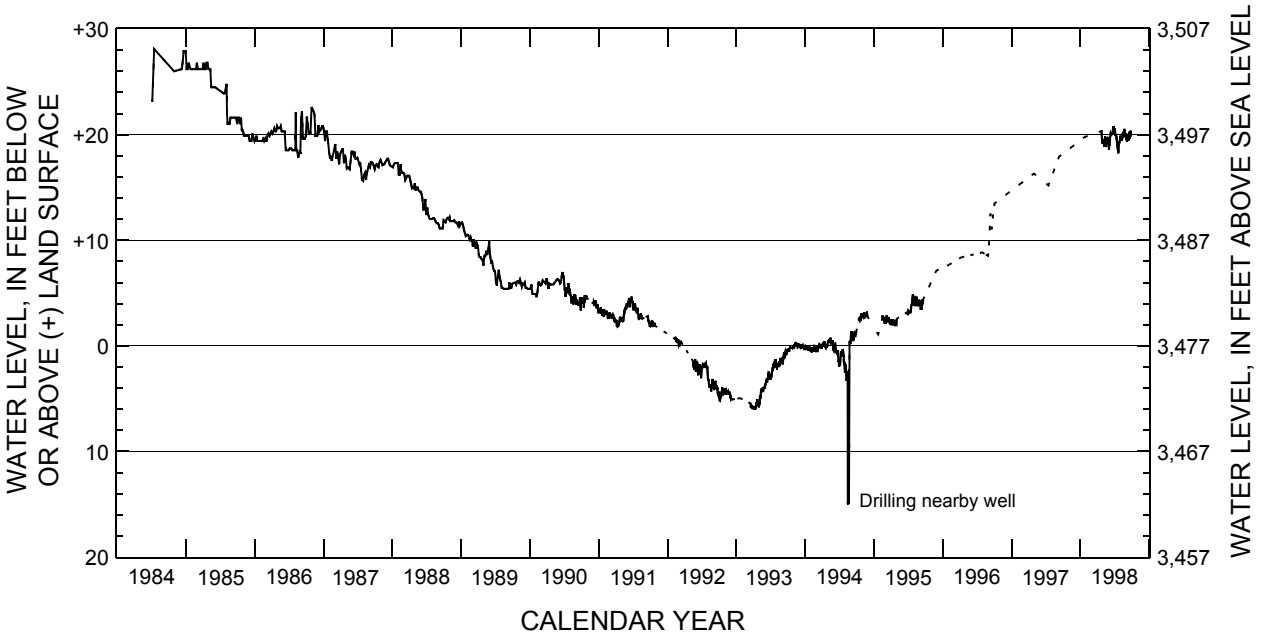
INSTRUMENTATION.—Electronic data logger with submersible transducer (pressure transducer used from June 1990 to Feb. 11, 1992) -- 60-minute interval. Prior to June 1990, circular-chart pressure recorder.

DATUM.—Elevation of land-surface datum is 3,477.0 ft above sea level. Measuring point: Top of 3/4-in. nipple 1.50 ft above land-surface datum for pressure measurements, 1.8 ft since Oct. 12, 1995; top of concrete pad at land-surface datum for water-level measurements.

REMARKS.—Records good. Unusual fluctuations in water level during August 1994 was caused by drilling adjacent observation well MD-94A.

PERIOD OF RECORD.—July 1984 to September 1998.

EXTREMES.—Highest daily water level, 28.1 ft above land-surface datum, July 17, 1984; lowest daily water level, 14.96 ft below land-surface datum, Aug. 17, 1994.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	+3.05	---	---	---	+2.08	+2.51	+2.08	---	+3.18	+4.04	+4.24
2	---	+2.81	---	---	---	+2.26	+2.35	+2.40	---	+3.34	+4.54	+4.22
3	---	+2.77	---	---	---	+2.58	+2.01	+2.56	---	+3.32	+4.38	+4.04
4	---	---	---	---	---	+2.40	+1.96	---	---	+3.33	+4.48	+3.94
5	---	+2.77	---	---	---	+2.35	+2.40	---	---	+3.23	+4.61	+3.97
6	---	+2.63	---	---	---	+2.17	+2.26	---	---	+3.02	+4.73	+3.53
7	---	+2.86	---	---	---	+2.08	+2.26	---	---	+3.16	+4.43	+3.41
8	---	+2.77	---	---	---	+2.21	+2.24	---	---	+3.25	+4.01	+3.53
9	---	+2.81	---	---	---	+2.65	+2.03	---	---	+3.25	+3.90	+3.55
10	---	+3.05	---	---	---	+2.81	+2.01	---	---	+3.28	+4.01	+3.51
11	---	+3.11	---	---	---	+2.81	+2.12	---	---	+3.39	+3.76	+3.41
12	---	+3.18	---	---	---	+2.49	+2.33	---	---	+3.23	+3.83	+3.60
13	---	+2.86	---	---	---	+2.40	+2.33	---	---	+3.21	+4.04	+3.92
14	---	+2.61	---	---	---	+2.33	+2.51	---	---	+3.09	+4.04	+3.90
15	+2.63	---	---	---	+2.61	+2.35	+2.35	---	---	+3.18	+4.48	+4.38
16	+2.45	---	---	---	+2.81	+2.38	+2.17	---	---	+3.32	+4.66	+4.20
17	+2.42	---	---	---	+2.88	+2.33	+2.17	---	---	+3.32	+4.43	+4.13
18	+2.63	---	---	---	+2.61	+2.45	+2.26	---	---	+3.55	+4.08	+4.06
19	+2.63	---	---	---	+2.61	+2.72	+2.24	---	---	+3.83	+3.94	+4.11
20	+2.65	---	---	---	+2.54	+2.54	+2.40	---	---	+3.85	+4.04	+4.41
21	+2.72	---	---	---	+2.75	+2.72	+2.12	---	---	+3.90	+3.97	---
22	+2.72	---	---	---	+2.65	+2.54	+2.08	---	---	+4.01	+4.01	---
23	+2.61	+2.93	---	---	+2.47	+2.38	+2.12	---	---	+4.15	+4.11	---
24	+2.35	+2.95	---	+1.08	+2.49	+2.54	+2.08	---	---	+4.31	+4.24	---
25	+2.49	+2.98	---	---	+2.68	+2.28	+2.15	---	---	+4.50	+4.11	---
26	+2.79	+3.23	---	---	+2.35	+2.17	+2.12	---	---	+4.73	+3.94	---
27	+3.05	+3.07	---	---	+2.17	+2.10	+2.19	---	+3.19	+4.89	+3.97	---
28	+2.91	+2.84	---	---	+2.17	+2.10	+2.24	---	+2.99	+4.59	+4.11	---
29	+2.77	+2.77	---	---	---	+2.19	+2.15	---	+3.03	+4.50	+4.24	---
30	+2.65	---	---	---	---	+2.33	+2.12	---	+3.02	+4.01	+4.36	---
31	+2.70	---	---	---	---	+2.40	---	---	---	+3.81	+4.27	---
LOW	+2.35	+2.61	---	+1.08	+2.17	+2.08	+1.96	+2.08	+2.99	+3.02	+3.76	+3.41

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	e+9.76
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	e+7.70	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	e+8.39	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	e+12.53
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	e+11.03
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	e+7.12	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e+8.85	e+8.51	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+7.12	---	---	+7.70	---	+8.39	---	---	+8.85	+8.51	+9.76

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	e+13.5	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	e+17.9
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	e+15.2	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	e+16.3	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	+13.50	---	---	---	---	---	+16.30	---	---	+15.20	---	+17.90

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	+19.43	+19.19	+20.28	+19.89	+19.70
2	---	---	---	---	---	---	---	+19.13	+18.66	+20.30	+19.82	+20.12
3	---	---	---	---	---	---	---	+19.24	+18.57	+20.23	+19.70	+19.66
4	---	---	---	---	---	---	---	+19.31	+19.01	+20.39	+19.56	+19.47
5	---	---	---	---	---	---	---	+19.22	+19.01	+20.58	+19.45	+19.63
6	---	---	---	---	---	---	---	+19.10	+19.29	+20.07	+19.73	+19.40
7	---	---	---	---	---	---	---	+18.87	+19.45	+19.91	+19.75	+19.40
8	---	---	---	---	---	---	---	+18.99	+19.54	+20.05	+19.75	+19.56
9	---	---	---	---	---	---	---	+18.94	+19.75	+19.89	+19.68	+20.00
10	---	---	---	---	---	---	---	+19.33	+20.05	+19.98	+19.45	+19.84
11	---	---	---	---	---	---	---	+19.43	+20.14	+19.96	+19.52	+19.52
12	---	---	---	---	---	---	---	+19.59	+20.12	+19.73	+19.70	+19.59
13	---	---	---	---	---	---	---	+19.84	+20.19	+19.63	+20.07	+19.56
14	---	---	---	---	---	---	---	+19.77	+20.05	+19.66	+20.12	+19.45
15	---	---	---	---	---	---	---	+19.52	+20.03	+19.31	+20.16	+19.59
16	---	---	---	---	---	---	---	+19.29	+20.14	+19.06	+20.07	+19.98
17	---	---	---	---	---	---	---	+19.59	+20.03	+18.85	+19.77	+20.19
18	---	---	---	---	---	---	---	+19.10	+20.07	+18.80	+19.79	+20.19
19	---	---	---	---	---	---	---	+18.83	+19.98	+18.66	+20.09	+19.98
20	---	---	---	---	---	---	---	+19.01	+20.19	+18.66	+20.14	+19.75
21	---	---	---	---	---	---	---	+19.13	+20.09	+18.41	+20.30	+19.68
22	---	---	---	---	---	---	---	+19.13	+20.21	+18.23	+20.53	+19.68
23	---	---	---	---	---	---	+20.35	+19.38	+20.51	+18.39	+20.42	+20.09
24	---	---	---	---	---	---	+20.35	+19.40	+20.65	+18.71	+20.42	+20.21
25	---	---	---	---	---	---	+19.82	+19.43	+20.63	+19.13	+20.37	+20.37
26	---	---	---	---	---	---	+19.47	+19.59	+20.81	+19.22	+20.53	+20.26
27	---	---	---	e+19.8	---	---	+19.29	+19.79	+20.56	+19.22	+20.21	+19.98
28	---	---	---	e+19.8	---	---	+19.31	+19.38	+20.28	+19.40	+20.09	+19.96
29	---	---	---	---	---	---	+19.33	+19.15	+20.16	+19.29	+19.93	+20.05
30	---	---	---	---	---	---	+19.52	+19.24	+20.12	+19.40	+20.09	+20.05
31	---	---	---	---	---	---	---	+19.06	---	+19.63	+19.86	---
LOW	---	---	---	+19.80	---	---	+19.29	+18.83	+18.57	+18.23	+19.45	+19.40

e Estimated

SITE NUMBER FROM LOCATION MAP.—29.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N7E34BCCA.

SITE ID (STATION NUMBER).—440528103161001.

OTHER IDENTIFIERS.—PE-64A and Cement Plant.

LOCATION.—Lat 44°05′30.9″, long 103°16′14.2″, in NE1/4SW1/4SW1/4NW1/4 sec. 34, T. 2 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 400 ft deep with 228 ft of 3-in. steel casing, and 400 ft of 1.25-in. steel casing; perforated casing from 242 to 400 ft.

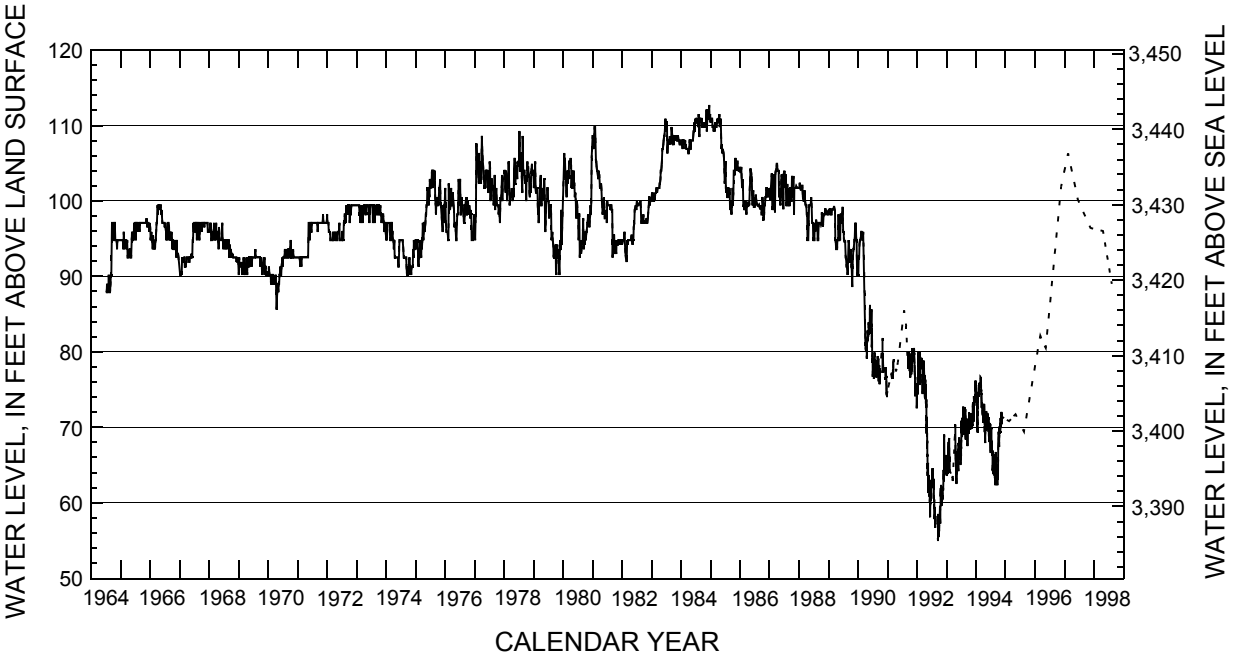
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval. Prior to October 1991, circular-chart pressure recorder.

DATUM.—Elevation of land-surface datum is 3,330.5 ft above sea level. Measuring point: Base of gage, 2.5 ft above land-surface datum until Apr. 3, 1990, 2.2 ft above land-surface datum Apr. 3, 1990, to Sept. 16, 1991. Base of gage, 3.2 ft above land-surface datum from Sept. 16, 1991, to present.

REMARKS.—Records poor because of numerous problems with well, instrumentation, and amount of fluid used for antifreeze. Large errors are possible for numerous periods. Water levels may be affected by pumping of nearby wells, especially since 1989.

PERIOD OF RECORD.—June 1964 to September 1998.

EXTREMES.—Highest daily water level, 112.7 ft above land-surface datum, Dec. 15, 1984; lowest daily water level, 54.95 ft above land-surface datum, Sept. 17, 1992. Note: Extreme values published by Winter (1994) are in error.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+64.17	+69.99	---	---	---	---	---	---	---	---	---	---
2	+65.67	e+70.80	---	---	---	---	---	---	---	---	---	---
3	+67.33	+71.21	---	---	---	---	---	---	---	---	---	---
4	+67.57	+70.29	---	---	---	---	---	e+71.72	---	---	---	---
5	+67.80	e+70.29	---	---	---	---	---	---	---	---	---	---
6	+68.03	+70.98	---	---	---	---	---	---	---	---	---	---
7	+68.33	+71.26	---	---	---	---	---	---	---	---	---	---
8	+68.44	+71.03	---	---	---	---	---	---	---	---	---	---
9	+69.36	+70.86	---	---	---	---	---	---	---	---	---	---
10	+69.30	+70.91	---	---	---	---	---	---	---	---	---	---
11	+68.10	+71.03	---	---	---	---	---	---	---	---	---	---
12	+67.87	+71.37	---	---	---	---	---	---	---	---	---	---
13	+67.80	+72.02	---	---	---	---	---	---	---	---	---	---
14	+67.40	+70.40	---	---	---	---	---	---	---	---	---	---
15	+68.03	e+71.20	---	---	e+70.80	---	---	---	---	---	---	---
16	+68.95	+71.90	---	---	---	---	---	---	---	---	e+69.40	---
17	+69.87	+71.37	---	---	---	---	---	---	---	---	---	---
18	+69.99	---	---	---	---	---	---	---	---	---	---	---
19	+69.99	---	---	---	---	---	---	---	---	---	---	---
20	+69.76	---	---	---	---	---	---	---	---	---	---	---
21	+69.13	---	---	---	---	---	---	---	---	---	---	---
22	+70.10	---	---	---	---	---	---	---	---	---	---	---
23	+69.71	---	---	---	---	---	---	---	---	---	---	---
24	+69.36	---	---	---	---	---	---	---	---	---	---	---
25	+69.36	---	---	---	---	---	---	---	---	---	---	---
26	+70.17	---	---	---	---	---	---	---	---	---	---	---
27	+69.30	---	---	---	---	---	---	---	---	---	---	---
28	+70.06	---	---	---	---	---	---	---	---	---	---	---
29	+69.99	---	---	---	---	---	---	---	---	---	---	---
30	+70.56	---	---	---	---	---	---	---	---	---	---	---
31	+70.40	---	---	---	---	---	---	---	---	---	---	---
LOW	+64.17	+69.99	---	---	+70.80	---	---	+71.72	---	---	+69.40	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	e+82.1	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	e+80.5	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	+82.10	---	+80.50	---	---	---	---

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	e+106.3	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	e+100.1	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	e+101.90	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+101.90	---	---	+106.30	---	---	---	+100.10	---	---	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	e+89.0	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	e+96.4	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	e+96.0	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+96.40	---	---	---	---	+96.00	---	---	---	+89.00	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—30.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N7E32ABBC2.

SITE ID (STATION NUMBER).—440544103180002.

OTHER IDENTIFIERS.—PE-89C and City Quarry Mdsn.

LOCATION.—Lat 44°05′43.6″, long 103°18′05.2″, in SW1/4NW1/4NW1/4NE1/4 sec. 32, T. 2 N., R. 7 E, Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 825 ft deep with 801 ft of 6 3/8-in. steel casing; open hole from 801 to 825 ft.

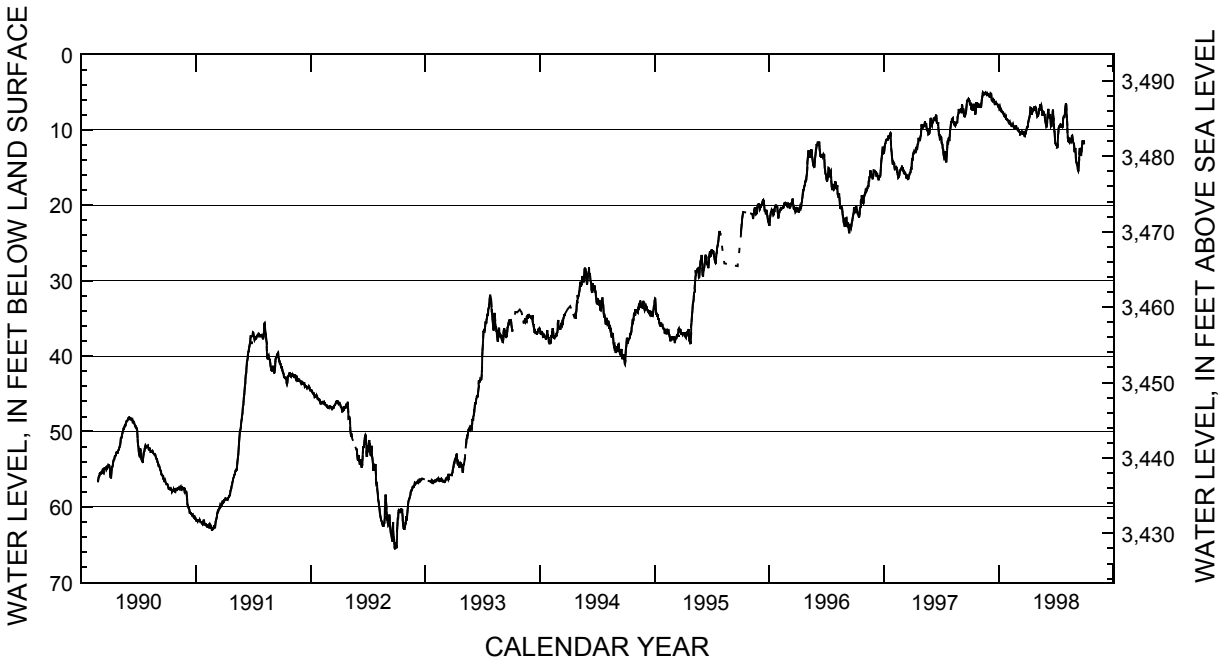
INSTRUMENTATION.—Electronic data logger with float-driven shaft encoder -- 60-minute interval. Prior to July 1992, digital water-level recorder.

DATUM.—Elevation of land-surface datum is 3,493.5 ft above sea level. Measuring point: Top of steel casing, 1.80 ft above land-surface datum.

REMARKS.—Records good. Water levels affected by pumping of nearby well.

PERIOD OF RECORD.—February 1990 to September 1998.

EXTREMES.—Highest daily water level, 5.05 ft below land-surface datum, Nov. 12, 1997; lowest daily water level, 65.60 ft below land-surface datum, Sept. 26, 1992.



SITE NUMBER 30—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39.58	33.91	33.82	32.70	36.40	37.62	36.95	34.25	27.40	26.08	---	---
2	39.03	33.90	33.41	32.35	36.93	37.62	37.08	33.50	28.60	25.86	---	---
3	38.57	34.01	33.27	32.38	36.96	37.49	37.05	33.09	29.19	26.13	---	---
4	38.14	33.97	33.38	33.09	36.96	37.49	37.06	32.90	29.47	26.20	---	---
5	37.57	34.09	33.61	33.60	36.66	37.67	36.84	32.55	28.89	26.00	---	---
6	37.72	33.90	33.54	34.26	36.68	38.19	36.94	32.04	28.63	26.34	---	---
7	38.21	34.10	33.53	34.52	36.64	38.27	37.40	31.60	28.36	26.04	---	---
8	38.23	34.11	33.86	34.25	37.01	37.63	36.96	31.55	28.32	26.47	---	---
9	37.92	34.13	33.93	34.79	37.01	37.59	37.41	30.75	27.88	26.65	---	---
10	37.64	33.66	34.03	34.69	36.39	37.66	37.52	30.15	27.48	26.89	---	---
11	37.84	33.70	33.98	34.46	36.84	37.65	36.98	29.38	26.94	27.13	e27.71	---
12	37.70	33.13	34.04	35.10	36.98	37.45	37.01	28.61	26.68	27.40	---	---
13	37.63	33.10	34.04	35.09	36.65	37.29	36.89	28.93	26.68	27.60	---	---
14	37.56	33.43	34.16	34.99	36.60	37.32	36.86	28.95	26.90	27.68	---	---
15	37.08	33.10	34.36	35.30	36.97	37.23	37.00	28.68	26.90	27.59	---	---
16	37.11	32.73	34.44	35.59	37.08	37.34	36.78	28.57	27.59	27.07	---	---
17	37.21	32.73	34.23	35.65	37.18	37.35	36.78	28.49	27.75	26.31	---	---
18	36.87	33.50	33.97	35.98	37.47	36.46	36.60	28.40	27.70	26.28	---	---
19	36.81	33.51	34.34	35.98	37.51	36.38	36.42	28.37	27.86	25.76	---	---
20	36.11	33.23	34.38	35.83	38.02	36.73	37.12	28.55	28.22	25.44	---	---
21	36.01	33.34	34.09	35.86	37.62	36.70	37.59	28.89	28.33	25.22	---	---
22	35.69	33.56	34.67	35.55	37.73	36.59	37.98	29.61	28.10	25.13	---	e28.07
23	35.41	33.61	34.74	36.02	37.79	36.52	38.07	29.56	27.45	24.68	---	---
24	35.51	33.62	34.06	36.03	37.72	36.51	38.14	28.91	26.69	24.21	---	---
25	35.18	33.62	34.63	35.88	37.37	36.59	38.31	28.43	26.61	23.92	---	---
26	35.17	32.69	34.65	35.87	37.60	36.98	38.29	27.88	26.11	23.83	---	---
27	34.38	32.95	34.25	36.19	37.78	37.13	37.22	27.45	26.31	23.42	---	---
28	34.30	33.52	34.05	36.32	37.78	36.93	35.95	27.25	26.75	23.87	---	---
29	34.53	33.60	33.69	36.34	---	36.98	35.16	27.06	26.70	23.68	---	---
30	34.47	33.89	33.84	36.34	---	37.10	34.46	26.95	25.91	---	---	---
31	34.61	---	33.39	36.35	---	36.95	---	26.60	---	---	---	---
LOW	39.58	34.13	34.74	36.35	38.02	38.27	38.31	34.25	29.47	27.68	27.71	28.07

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	19.94	22.65	21.07	19.73	20.43	15.23	12.01	16.36	17.22	21.85
2	---	---	20.52	22.71	21.03	19.88	20.44	14.31	11.95	16.66	17.72	21.69
3	23.90	---	20.49	22.02	20.87	19.81	20.65	13.64	11.73	16.85	17.76	21.65
4	23.26	---	19.95	21.40	20.67	19.83	20.88	13.18	11.76	16.71	17.57	22.27
5	22.65	---	20.24	21.33	20.59	20.06	20.88	12.82	11.75	16.48	17.35	22.78
6	22.33	---	20.22	20.99	20.47	20.20	20.60	12.84	11.85	16.15	18.49	22.81
7	21.78	---	20.00	20.92	20.51	20.33	20.45	13.28	11.83	15.72	18.65	22.68
8	21.40	---	19.90	20.81	20.54	20.31	20.36	13.68	11.57	15.06	18.73	22.29
9	21.25	21.15	19.90	20.63	20.36	20.06	20.42	13.48	12.12	15.11	19.02	22.62
10	20.91	21.71	19.69	20.73	---	19.87	20.16	13.72	12.67	15.42	18.87	23.02
11	20.90	21.72	19.46	20.75	---	19.79	20.25	13.32	13.19	16.17	18.38	23.60
12	---	21.31	19.35	20.70	20.40	19.68	20.16	13.39	13.58	16.15	19.23	23.60
13	---	21.02	19.30	20.94	20.25	19.60	19.68	13.28	13.49	15.80	19.84	22.86
14	---	20.67	19.52	21.27	20.28	19.53	19.50	12.58	13.62	15.52	20.37	22.49
15	---	20.52	19.51	21.22	20.40	19.30	19.13	12.81	13.71	15.43	20.40	22.67
16	---	20.56	20.05	20.92	20.20	19.11	19.00	13.08	13.42	16.09	20.02	22.91
17	---	20.55	20.51	20.82	20.07	19.78	18.24	13.66	13.26	16.96	20.22	23.05
18	---	20.26	20.84	20.80	19.76	20.08	18.31	13.88	13.49	17.51	20.24	22.83
19	---	20.72	20.71	20.33	19.73	20.42	18.05	14.28	13.59	17.84	20.27	22.72
20	---	21.03	20.62	20.14	19.87	20.49	17.95	14.64	13.50	17.97	20.22	22.28
21	---	20.93	21.10	20.18	19.87	20.56	17.71	14.78	13.29	17.80	20.88	22.23
22	---	21.13	21.10	20.18	19.78	20.33	17.44	14.88	13.42	17.18	21.17	22.00
23	---	21.05	20.63	20.03	19.82	20.39	17.33	14.81	13.30	17.60	21.45	21.58
24	---	20.45	20.94	20.03	19.81	20.81	17.04	14.84	13.31	17.81	21.69	21.44
25	---	20.22	21.13	20.08	19.95	20.76	16.87	14.36	14.22	17.72	22.17	21.22
26	---	19.82	21.43	20.10	19.90	20.58	16.87	13.75	14.94	17.86	22.41	20.92
27	---	20.32	21.73	20.26	20.13	20.68	16.56	13.41	15.43	17.76	22.46	20.30
28	---	20.18	21.92	20.82	20.21	20.51	16.56	13.04	15.72	17.47	22.68	20.40
29	---	19.78	22.16	21.33	20.08	20.42	16.28	12.71	15.92	16.82	22.86	20.52
30	---	19.93	22.17	21.75	---	20.48	15.80	12.41	15.96	17.35	22.37	20.77
31	---	---	22.50	21.52	---	20.58	---	11.89	---	17.32	21.84	---
LOW	23.90	21.72	22.50	22.71	21.07	20.81	20.88	15.23	15.96	17.97	22.86	23.60

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.96	18.43	15.30	13.06	14.42	15.25	14.04	9.42	9.40	10.81	9.47	7.50
2	21.02	18.42	15.52	12.49	14.50	14.96	13.94	9.80	9.48	11.05	8.97	7.48
3	20.13	18.10	15.61	12.12	14.86	15.43	13.24	9.79	9.23	11.77	8.95	7.14
4	20.00	18.16	15.68	11.88	15.24	15.43	13.10	9.44	9.10	11.79	8.97	7.68
5	20.21	18.19	15.49	11.84	15.23	15.76	13.15	9.60	8.88	11.91	8.66	7.68
6	20.64	17.94	15.89	11.72	15.07	15.77	13.12	9.56	8.89	11.97	8.63	6.63
7	20.85	17.94	16.03	11.44	15.11	15.81	12.90	9.45	8.74	12.49	8.45	6.84
8	20.85	17.80	15.98	11.40	15.04	15.71	13.02	9.53	8.39	12.63	8.42	7.53
9	21.18	17.72	15.71	11.29	15.00	15.69	12.99	9.53	8.45	13.06	8.96	7.54
10	21.19	17.51	15.81	11.29	15.10	15.79	12.92	9.34	8.82	13.40	9.12	7.17
11	21.17	17.45	16.21	11.35	15.45	16.02	12.95	8.89	8.66	13.69	8.96	7.48
12	21.46	17.45	16.26	11.35	15.43	16.14	12.88	9.25	8.65	13.65	9.07	8.00
13	21.64	16.83	16.10	11.22	15.90	16.36	12.76	9.35	8.67	12.84	9.04	8.20
14	21.49	16.79	16.56	10.80	16.06	16.38	12.25	9.35	8.21	13.12	9.06	8.24
15	21.12	16.27	16.56	11.13	16.32	16.20	12.55	9.11	8.10	13.64	9.42	8.24
16	20.48	16.24	16.00	11.13	16.27	15.93	12.52	9.59	8.14	14.02	9.44	7.85
17	20.32	16.19	16.16	10.92	16.16	16.44	12.12	10.00	8.52	14.21	9.25	7.89
18	20.27	15.47	16.22	10.81	16.08	16.64	11.88	10.18	9.05	14.30	9.10	7.71
19	19.36	15.47	16.19	10.75	15.95	16.55	11.84	9.81	9.14	13.66	9.15	7.53
20	19.30	15.90	16.09	10.51	15.53	16.36	11.42	10.04	9.16	13.19	9.07	6.99
21	19.40	15.99	15.51	10.44	15.46	16.19	11.08	10.23	9.16	12.29	9.04	6.87
22	18.66	15.96	14.73	10.55	15.27	16.03	11.30	10.59	9.14	11.57	9.10	6.03
23	19.21	16.13	14.11	11.75	15.24	15.85	11.30	10.57	9.96	11.57	8.30	6.19
24	19.21	16.13	13.80	12.77	15.26	15.72	11.38	10.49	10.15	11.63	8.10	6.09
25	19.65	16.44	13.35	12.99	15.13	15.72	11.38	10.46	10.73	11.34	7.95	6.00
26	19.66	16.45	13.06	13.45	15.14	15.58	11.17	10.31	10.57	11.05	7.77	5.91
27	19.72	16.19	12.47	14.04	14.77	15.26	10.88	9.69	10.98	11.36	7.26	5.95
28	19.57	15.94	12.49	14.31	15.23	15.13	10.63	9.12	11.23	11.47	7.40	5.97
29	18.76	15.42	12.45	14.58	---	15.15	10.10	8.43	11.20	10.76	7.52	6.16
30	18.77	15.47	12.60	14.36	---	14.59	9.28	8.56	11.01	10.02	7.55	6.16
31	18.60	---	13.08	14.31	---	13.79	---	8.60	---	9.95	7.52	---
LOW	21.64	18.43	16.56	14.58	16.32	16.64	14.04	10.59	11.23	14.30	9.47	8.24

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.65	6.97	5.37	6.72	8.81	9.99	9.67	7.54	9.15	11.91	7.18	12.58
2	6.65	6.97	5.60	6.94	9.04	10.00	9.63	7.84	9.61	11.76	6.95	12.43
3	6.62	6.53	5.60	7.08	9.03	9.93	9.61	7.95	9.58	11.97	6.48	13.19
4	6.57	7.00	5.62	6.91	8.93	10.06	9.41	8.20	9.22	11.92	6.73	13.83
5	6.70	7.01	5.63	7.15	9.18	10.14	9.03	8.15	8.38	11.78	7.09	14.34
6	7.30	6.93	5.48	7.28	9.19	10.12	8.85	8.11	7.94	12.34	8.38	14.37
7	7.00	6.44	5.18	7.23	9.15	10.27	8.66	8.01	7.61	12.31	9.16	14.53
8	7.38	6.06	5.25	7.35	9.20	10.31	8.48	7.85	7.24	12.17	10.08	14.68
9	7.27	5.90	5.74	7.54	9.43	10.33	8.32	7.73	7.98	10.84	11.12	14.90
10	7.41	5.54	6.07	7.55	9.48	10.61	8.10	7.18	8.07	10.24	11.52	15.29
11	6.66	5.17	6.13	7.54	9.51	10.60	7.69	7.47	8.19	9.73	11.56	15.48
12	6.66	5.05	6.04	7.65	9.52	10.18	7.04	7.15	8.42	9.51	11.21	15.37
13	6.76	5.11	5.97	7.66	9.47	10.38	7.08	6.63	8.42	9.52	11.17	14.68
14	6.75	5.35	5.94	7.73	9.43	10.37	7.27	6.90	7.92	9.65	11.13	13.95
15	7.39	5.35	6.05	7.75	9.30	10.33	7.45	6.86	8.88	9.61	11.16	12.99
16	7.39	5.22	6.06	7.89	9.48	10.26	7.99	6.71	9.49	9.29	11.60	12.41
17	7.46	5.06	6.06	8.02	9.48	10.34	7.89	7.02	9.45	9.26	11.56	12.60
18	7.88	5.13	6.29	8.10	9.68	10.54	7.61	7.30	9.46	9.35	11.54	12.60
19	7.88	5.14	6.48	8.01	9.72	10.54	7.42	7.63	9.18	9.47	11.57	13.37
20	7.64	5.10	6.39	8.18	9.69	10.50	7.56	7.97	8.57	9.51	11.41	13.37
21	7.11	5.15	6.28	8.27	9.62	10.34	7.13	8.12	8.13	9.61	11.30	12.99
22	6.33	5.26	6.47	8.29	9.63	10.31	7.23	7.87	7.62	9.61	10.81	12.85
23	6.90	5.23	6.38	8.39	9.75	10.38	7.32	7.58	7.33	9.67	10.76	12.40
24	6.93	5.14	6.56	8.30	9.73	10.83	6.93	7.63	8.48	9.54	11.05	11.82
25	6.86	5.33	6.59	8.55	9.41	10.84	7.17	8.03	8.51	8.65	11.36	11.42
26	6.44	5.33	6.63	8.59	9.66	10.64	7.30	8.03	9.46	8.33	11.67	11.52
27	6.97	5.24	6.56	8.59	9.85	10.47	7.48	7.90	10.27	8.12	11.73	11.58
28	6.97	5.35	6.62	8.69	9.90	10.45	7.21	8.62	10.32	8.32	11.83	11.39
29	6.96	5.42	6.70	8.69	---	10.25	7.07	8.83	10.96	8.32	12.08	11.60
30	6.86	5.42	6.94	8.75	---	10.07	7.24	8.97	11.40	8.03	12.75	11.91
31	6.94	---	6.94	8.77	---	9.85	---	9.19	---	7.42	12.96	---
LOW	7.88	7.01	6.94	8.77	9.90	10.84	9.67	9.19	11.40	12.34	12.96	15.48

SITE NUMBER FROM LOCATION MAP.—31.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N7E32ABBC.

SITE ID (STATION NUMBER).—440544103180001.

OTHER IDENTIFIERS.—PE-89D and City Quarry Mnls.

LOCATION.—Lat 44°05′43.6″, long 103°18′05.2″, in SW1/4NW1/4NW1/4NE1/4 sec. 32, T. 2 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 175 ft deep with 135 ft of 6 3/8-in. steel casing; open hole from 135 to 175 ft.

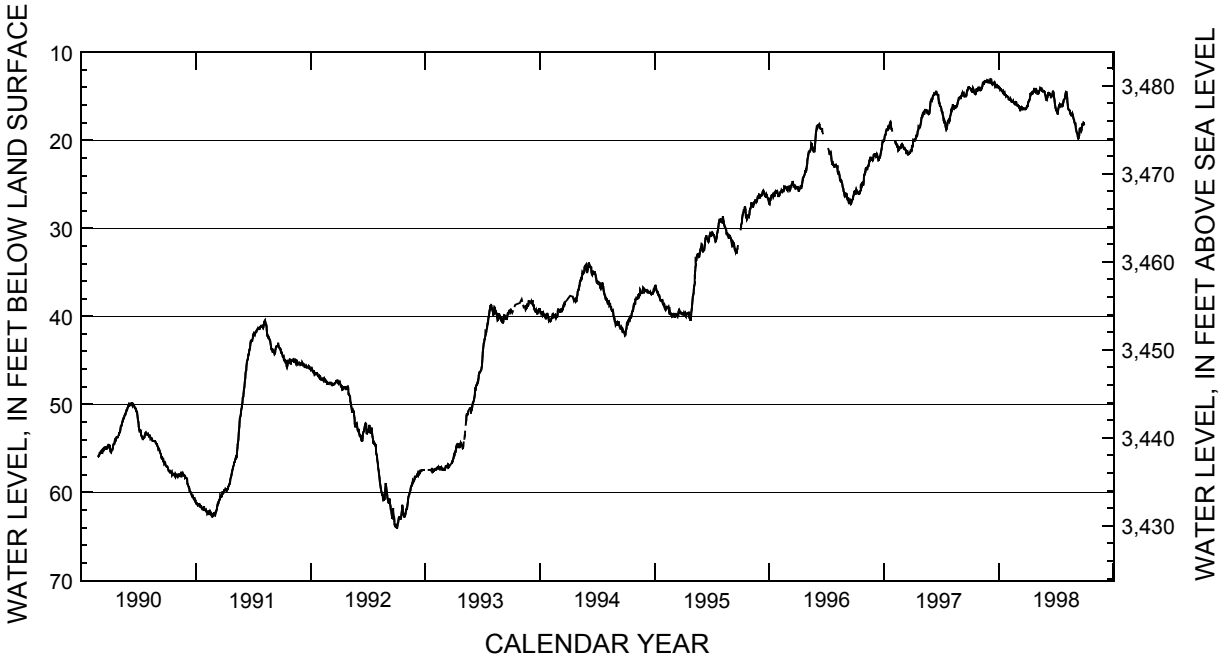
INSTRUMENTATION.—Electronic data logger with float-driven shaft encoder -- 60-minute interval. Prior to July 1992, digital water-level recorder.

DATUM.—Elevation of land-surface datum is 3,493.8 ft above sea level. Measuring point: Top of steel casing, 1.45 ft above land-surface datum.

REMARKS.—Records good. Water levels affected by pumping of nearby wells.

PERIOD OF RECORD.—February 1990 to September 1998.

EXTREMES.—Highest daily water level, 13.25 ft below land-surface datum, Nov. 24, 1997; lowest daily water level, 64.05 ft below land-surface datum, Oct. 2, 1992.



SITE NUMBER 31—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41.86	38.00	37.01	36.72	38.66	39.90	39.63	38.58	31.87	30.52	29.11	31.14
2	41.52	38.10	36.96	36.54	39.09	39.86	39.64	37.96	32.34	30.46	29.23	31.32
3	41.42	38.14	36.99	36.52	39.16	39.75	39.80	37.72	32.59	30.45	29.32	31.52
4	41.28	37.94	37.07	36.50	39.02	39.74	39.80	37.60	32.71	30.49	29.35	31.76
5	40.75	38.01	37.10	36.62	38.98	39.78	39.63	37.35	32.54	30.58	29.19	31.90
6	40.64	38.01	37.07	36.85	38.99	40.05	39.64	36.93	32.32	30.73	28.84	32.02
7	40.94	37.91	37.09	37.07	39.12	40.15	39.77	36.60	32.48	30.71	28.61	31.96
8	40.94	37.94	37.16	37.11	39.00	39.91	39.70	36.36	32.47	30.72	29.13	31.61
9	40.64	37.94	37.25	37.24	39.00	39.80	39.91	35.48	32.20	30.76	29.23	31.65
10	40.51	37.59	37.36	37.23	38.95	39.85	39.99	34.95	31.73	30.89	29.42	31.69
11	40.40	37.61	37.18	37.23	39.02	39.81	39.76	34.28	31.46	31.01	29.64	31.85
12	40.55	37.41	37.24	37.53	39.14	39.78	39.85	33.57	31.15	31.20	29.76	32.03
13	40.55	37.49	37.24	37.58	39.07	39.94	39.74	33.62	31.04	31.37	29.87	32.38
14	40.36	37.64	37.22	37.52	38.96	40.01	39.60	33.61	30.89	31.52	29.91	32.39
15	40.09	37.51	37.23	37.53	39.18	39.77	39.71	33.30	30.88	31.46	30.00	32.42
16	40.13	37.01	37.30	37.63	39.36	39.86	39.71	33.08	31.10	31.35	30.10	32.66
17	40.16	37.04	37.44	37.78	39.29	39.86	39.70	33.02	31.20	31.12	30.24	32.63
18	40.02	37.37	37.27	38.08	39.63	39.54	39.59	32.92	31.22	30.98	30.62	32.72
19	40.02	37.34	37.38	38.09	39.59	39.39	39.57	32.90	31.24	30.65	30.63	32.76
20	39.69	37.14	37.40	38.18	39.80	39.45	39.66	32.89	31.44	30.45	30.59	32.54
21	39.56	37.31	37.35	38.17	39.60	39.37	40.06	32.94	31.53	30.21	30.75	32.44
22	39.40	37.45	37.50	38.10	39.71	39.56	40.15	33.23	31.50	30.15	30.85	32.19
23	39.34	37.34	37.46	38.23	39.87	39.58	40.15	33.21	31.25	29.80	30.86	---
24	39.34	37.25	37.24	38.30	39.81	39.44	40.16	33.00	31.09	29.45	30.89	---
25	39.15	37.24	37.40	38.23	39.62	39.62	40.41	32.87	30.87	29.36	31.08	---
26	38.96	36.75	37.43	38.22	39.84	39.63	40.42	32.56	30.69	29.15	31.07	---
27	38.55	36.82	37.30	38.50	40.03	39.73	40.09	32.32	30.73	28.93	30.83	---
28	38.55	37.12	37.27	38.65	40.02	39.77	39.56	32.25	30.89	29.05	30.91	---
29	38.63	37.21	37.02	38.68	---	39.76	39.23	32.15	30.89	29.00	30.78	---
30	38.46	37.09	37.06	38.58	---	39.68	38.82	32.00	30.78	29.11	31.03	---
31	38.47	---	37.00	38.57	---	39.63	---	31.79	---	29.18	31.08	---
LOW	41.86	38.14	37.50	38.68	40.03	40.15	40.42	38.58	32.71	31.52	31.08	32.76

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	27.83	26.21	27.24	26.30	25.19	25.29	22.66	18.63	---	22.83	26.06
2	---	27.78	26.46	27.25	26.29	25.36	25.29	22.24	18.62	---	22.93	26.07
3	29.91	27.62	26.58	26.79	26.20	25.27	25.60	21.93	18.45	---	22.99	26.07
4	29.59	27.43	26.25	26.84	26.04	25.26	25.74	21.75	18.28	---	23.04	26.16
5	29.44	27.07	26.32	26.83	26.00	25.46	25.73	21.57	18.29	---	23.00	26.57
6	29.30	27.30	26.30	26.65	25.84	25.56	25.53	21.27	18.30	---	23.50	26.69
7	28.84	27.43	26.23	26.44	25.82	25.67	25.43	21.26	18.30	---	23.70	26.66
8	28.55	27.27	26.25	26.30	25.85	25.63	25.45	21.33	18.16	---	23.76	26.49
9	28.36	27.10	26.23	26.30	25.67	25.40	25.45	21.29	18.20	21.17	23.90	26.70
10	28.28	27.54	26.06	26.23	---	25.24	25.33	21.32	18.47	21.24	23.76	26.99
11	28.10	27.54	25.84	26.23	---	25.17	25.43	21.13	18.67	21.55	23.72	27.16
12	27.97	27.22	25.73	26.17	25.84	24.99	25.40	21.00	18.68	21.56	23.99	27.16
13	27.99	27.23	25.68	26.12	25.69	25.01	25.22	20.85	18.68	21.50	24.38	26.97
14	27.94	27.04	25.87	26.41	25.72	24.99	25.21	20.40	18.69	21.43	24.57	26.80
15	27.65	26.99	25.87	26.33	25.89	24.82	24.94	20.51	18.69	21.39	24.61	26.88
16	27.50	26.92	25.93	26.11	25.67	24.62	24.71	20.50	18.70	21.60	24.53	27.03
17	27.87	26.93	26.20	26.33	25.59	24.86	24.24	20.69	18.70	22.06	24.50	27.21
18	28.22	26.73	26.27	26.33	25.26	25.06	24.29	20.78	19.04	22.37	24.62	27.18
19	28.69	26.92	26.23	25.94	25.29	25.22	24.15	20.94	---	22.59	24.81	27.05
20	28.74	27.04	26.10	25.84	25.41	25.21	24.12	21.18	---	22.71	24.74	26.83
21	28.70	26.97	26.44	25.93	25.43	25.21	24.02	21.23	---	22.74	25.11	26.82
22	28.96	26.95	26.44	25.95	25.34	25.14	23.94	21.22	---	22.66	25.23	26.74
23	28.89	26.94	26.17	25.76	25.37	25.14	23.78	21.26	---	22.75	25.41	26.70
24	28.71	26.64	26.26	25.76	25.35	25.46	23.52	21.26	---	22.87	25.50	26.56
25	28.67	26.57	26.31	25.80	25.49	25.46	23.55	20.93	---	22.95	25.80	26.33
26	28.46	26.33	26.49	25.78	25.46	25.34	23.54	20.45	---	23.01	25.91	26.16
27	28.68	26.55	26.59	25.85	25.63	25.41	23.36	19.99	---	23.00	26.05	25.94
28	28.71	26.42	26.62	26.00	25.69	25.35	23.40	19.52	---	22.99	26.31	25.85
29	28.52	26.19	26.73	26.28	25.54	25.24	23.28	19.18	---	22.85	26.39	25.88
30	28.36	26.21	26.69	26.44	---	25.39	22.84	18.90	---	22.92	26.30	25.74
31	27.98	---	27.01	26.32	---	25.42	---	18.60	---	22.92	26.04	---
LOW	29.91	27.83	27.01	27.25	26.30	25.67	25.74	22.66	19.04	23.01	26.39	27.21

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.11	23.63	21.52	20.05	---	20.59	20.70	17.32	15.45	16.24	17.04	15.22
2	26.18	23.63	21.69	19.68	---	20.51	20.70	17.37	15.50	16.39	16.76	15.22
3	25.77	23.28	21.71	19.46	---	20.73	20.32	17.34	15.40	16.70	16.59	15.02
4	25.60	23.20	21.69	19.41	---	20.82	19.92	17.09	15.27	16.71	16.64	14.96
5	25.66	23.19	21.48	19.39	---	20.96	19.95	16.84	14.98	16.82	16.54	14.95
6	25.74	23.09	21.72	19.32	20.31	20.96	20.05	16.98	14.97	16.82	16.29	14.70
7	25.75	23.29	21.89	19.00	20.37	20.92	20.05	16.90	14.87	17.15	16.23	14.60
8	25.81	23.28	21.86	18.92	20.31	21.02	20.05	17.00	14.75	17.30	15.91	14.83
9	25.99	23.05	21.58	18.78	20.41	21.05	19.92	16.99	14.77	17.48	16.28	14.82
10	25.98	22.95	21.62	18.77	20.45	21.02	19.86	16.77	14.81	17.72	16.34	14.61
11	25.87	22.91	21.90	18.84	20.62	21.11	19.84	16.65	14.73	17.98	16.25	14.59
12	26.06	22.91	21.93	18.84	20.59	21.15	19.73	16.43	14.69	17.98	16.27	14.91
13	26.10	22.74	21.99	18.71	20.82	21.45	19.62	16.60	14.68	17.83	16.23	14.99
14	26.11	22.55	22.26	18.33	20.92	21.45	19.36	16.64	14.60	18.02	16.05	15.01
15	26.04	22.33	22.25	18.64	21.13	21.30	19.52	16.56	14.48	18.22	16.18	15.01
16	25.79	22.34	21.84	18.64	21.08	21.16	19.50	16.57	14.47	18.47	16.30	14.97
17	25.75	22.27	22.00	18.40	20.94	21.58	19.20	16.61	14.62	18.60	16.29	14.97
18	25.70	22.00	21.97	18.25	21.02	21.70	18.96	16.85	14.72	18.74	15.99	14.91
19	25.07	21.88	21.86	18.21	20.99	21.56	18.89	16.85	14.76	18.68	16.15	14.98
20	25.10	22.11	21.72	17.97	20.81	21.49	18.72	16.76	14.84	18.58	16.15	14.91
21	25.17	22.11	21.53	17.90	20.81	21.52	18.46	16.84	14.87	18.31	16.02	14.69
22	24.91	21.98	21.35	18.04	20.84	21.46	18.53	17.00	14.86	18.03	16.00	14.35
23	24.81	22.21	21.10	18.27	20.84	21.43	18.52	17.04	15.21	17.84	15.76	14.35
24	24.80	22.21	20.98	18.70	20.85	21.40	18.52	17.00	15.46	17.84	15.57	14.26
25	24.78	22.21	20.67	18.71	20.51	21.40	18.52	16.97	15.72	17.72	15.49	14.12
26	25.05	22.27	20.50	---	20.49	21.26	18.38	16.77	15.72	17.63	15.39	13.91
27	25.04	22.13	20.10	---	20.30	21.06	18.20	16.35	15.90	17.79	15.20	14.01
28	24.71	21.83	20.13	---	20.57	21.15	17.95	15.96	16.08	17.83	15.14	14.00
29	23.99	21.67	20.09	---	---	21.20	17.82	15.57	16.10	17.67	15.16	14.03
30	23.97	21.68	20.02	---	---	21.04	17.42	15.50	16.15	17.38	15.17	14.03
31	23.84	---	20.06	---	---	20.57	---	15.40	---	17.17	15.10	---
LOW	26.18	23.63	22.26	20.05	21.13	21.70	20.70	17.37	16.15	18.74	17.04	15.22

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.07	14.28	13.26	13.82	15.14	16.07	16.12	14.34	15.09	16.30	14.85	18.07
2	14.07	14.30	13.41	14.01	15.33	16.07	16.11	14.42	15.40	16.43	14.73	18.07
3	14.14	14.19	13.41	14.17	15.32	16.00	16.11	14.42	15.41	16.60	14.50	18.45
4	14.14	14.28	13.44	13.94	15.21	16.06	15.95	14.65	15.22	16.60	14.52	18.66
5	14.19	14.30	13.44	14.16	15.39	16.14	15.65	14.62	15.08	16.61	14.51	18.93
6	14.42	14.24	13.33	14.23	15.39	16.13	15.58	14.70	14.94	16.85	14.86	19.13
7	14.27	14.04	13.07	14.17	15.31	16.29	15.50	14.69	14.78	16.95	15.19	19.16
8	14.48	14.02	13.09	14.19	15.37	16.35	15.46	14.63	14.53	16.95	15.62	19.22
9	14.48	14.00	13.41	14.32	15.55	16.38	15.39	14.58	14.60	16.59	16.06	19.37
10	14.45	13.81	13.62	14.36	15.60	16.59	15.27	14.37	14.51	16.34	16.39	19.66
11	14.10	13.58	13.66	14.34	15.62	16.58	14.98	14.31	14.66	16.19	16.45	19.82
12	14.18	13.45	13.58	14.41	15.62	16.15	14.63	14.23	14.80	16.03	16.55	19.79
13	14.32	13.41	13.53	14.39	15.62	16.36	14.69	14.07	14.80	15.96	16.55	19.62
14	14.34	13.59	13.49	14.46	15.56	16.35	14.67	14.13	14.73	16.06	16.59	19.40
15	14.59	13.59	13.53	14.39	15.49	16.33	14.64	14.11	14.79	16.14	16.62	19.09
16	14.59	13.45	13.54	14.51	15.65	16.26	14.76	14.11	15.11	16.05	16.85	18.66
17	14.46	13.32	13.47	14.62	15.65	16.31	14.73	14.10	15.11	15.96	16.96	18.64
18	14.74	13.33	13.65	14.72	15.80	16.48	14.69	14.28	15.07	15.92	16.97	18.64
19	14.75	13.32	13.81	14.62	15.81	16.48	14.58	14.40	14.96	15.96	17.15	18.83
20	14.65	13.27	13.71	14.76	15.78	16.45	14.62	14.42	14.80	16.00	17.18	18.94
21	14.60	13.30	13.62	14.77	15.72	16.37	14.54	14.46	14.70	16.08	17.14	18.87
22	14.19	13.36	13.77	14.80	15.76	16.38	14.39	14.41	14.58	16.13	16.98	18.74
23	14.17	13.35	13.66	14.90	15.88	16.37	14.34	14.34	14.37	16.10	16.91	18.50
24	14.40	13.25	13.78	14.77	15.87	16.41	14.06	14.36	14.58	16.00	17.10	18.30
25	14.40	13.38	13.80	14.97	15.56	16.46	14.30	14.40	14.62	15.75	17.16	18.07
26	14.12	13.38	13.84	14.97	15.76	16.43	14.41	14.40	15.00	15.60	17.28	18.20
27	14.10	13.26	13.75	14.97	15.94	16.45	14.47	14.47	15.36	15.33	17.55	18.20
28	14.16	13.34	13.82	15.05	16.00	16.44	14.39	14.78	15.50	15.38	17.62	18.00
29	14.13	13.38	13.81	15.05	---	16.36	14.24	14.84	15.86	15.35	17.70	18.02
30	14.05	13.37	14.00	15.05	---	16.33	14.22	15.00	16.08	15.26	17.98	18.26
31	14.19	---	13.99	15.09	---	16.23	---	15.14	---	15.05	18.10	---
LOW	14.75	14.30	14.00	15.09	16.00	16.59	16.12	15.14	16.08	16.95	18.10	19.82

SITE NUMBER FROM LOCATION MAP.—32.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N7E17BAAD.

SITE ID (STATION NUMBER).—440818103180801.

OTHER IDENTIFIER.—PE-84B and Dog Track.

LOCATION.—Lat 44°08′19.8″, long 103°18′09.9″, in SE1/4NE1/4NE1/4NW1/4 sec. 17, T. 2 N., R. 7 E., Hydrologic Unit 10120111, at Blackhawk. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observationó well, 560 ft deep with 510 ft of 5-in. steel casing; open hole from 510 to 560 ft.

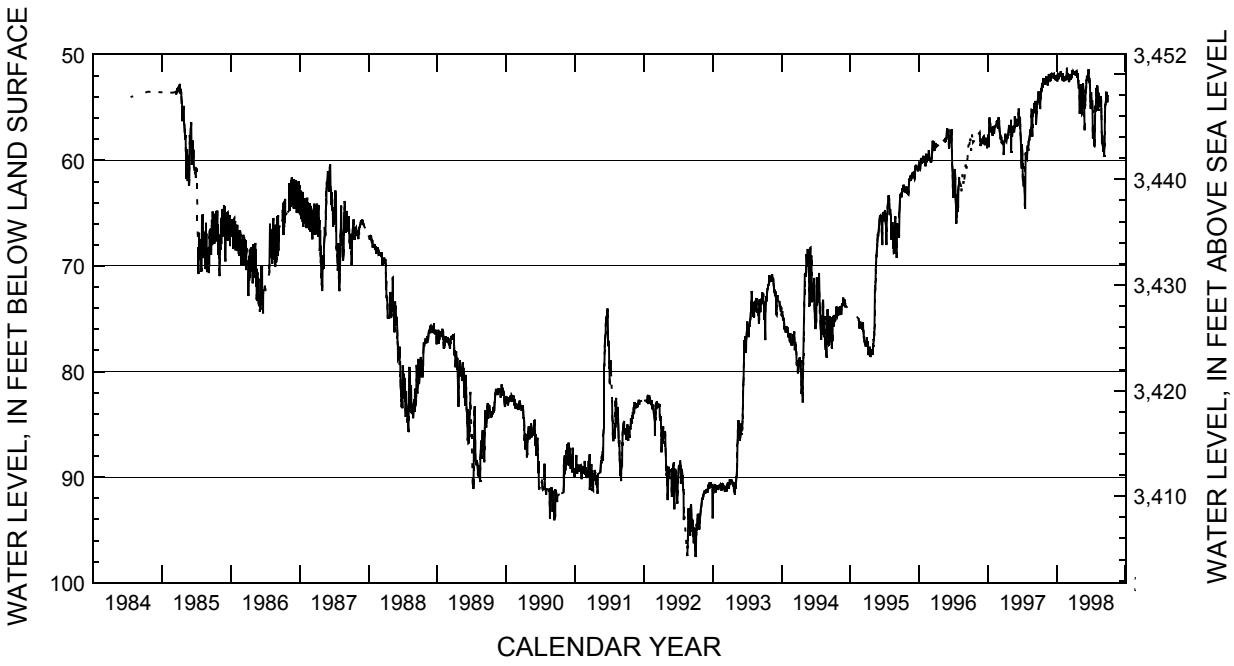
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,501.8 ft above sea level. Measuring point: Top of steel casing, 1.40 ft above land-surface datum.

REMARKS.—Records good. Water levels affected by pumping of nearby well.

PERIOD OF RECORD.—July 1984 to September 1998.

EXTREMES.—Highest daily water level, 51.25 ft below land-surface datum, Feb. 25, 1998; lowest daily water level, 97.55 ft below land-surface datum, Oct. 3, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75.49	74.01	73.41	---	---	75.67	77.14	78.35	66.79	65.38	64.61	67.86
2	75.37	74.06	73.26	---	---	75.77	77.36	78.11	66.69	65.71	64.73	68.80
3	75.16	74.07	73.26	---	---	75.41	77.36	77.68	66.35	65.76	65.08	68.80
4	74.72	74.43	73.66	---	---	75.67	77.14	77.58	66.05	65.10	65.19	68.71
5	74.85	74.58	73.66	---	---	75.93	77.22	77.58	65.79	64.73	65.27	69.24
6	75.42	74.58	73.50	---	---	75.94	77.69	76.93	65.55	65.57	66.26	68.01
7	75.73	74.24	73.92	---	---	75.96	78.41	77.01	65.49	65.63	66.89	66.65
8	74.64	74.11	73.78	---	---	75.96	78.14	76.84	65.36	65.51	67.50	65.98
9	74.76	73.89	---	---	---	75.56	78.36	76.66	65.20	65.81	66.49	66.21
10	75.13	73.82	---	---	---	75.44	78.36	76.43	65.31	66.18	66.68	66.76
11	75.13	74.04	---	---	---	75.44	78.19	75.79	65.37	66.84	66.92	66.76
12	75.03	73.94	---	---	---	76.12	77.97	74.48	65.30	67.18	66.92	66.13
13	74.99	74.12	---	---	---	76.12	77.96	72.18	65.35	68.00	66.20	66.57
14	75.13	74.52	---	---	---	76.21	77.67	72.47	65.35	66.50	65.86	66.35
15	75.09	74.53	---	---	74.99	76.86	77.78	72.12	65.75	65.52	66.27	66.23
16	74.71	74.24	---	---	75.15	76.79	77.67	71.40	65.74	65.25	66.87	66.54
17	74.83	73.75	---	---	75.28	76.78	77.98	70.53	65.89	65.11	67.74	67.25
18	74.56	73.70	---	---	75.73	77.18	78.61	69.95	66.72	65.09	68.35	67.25
19	74.56	73.56	---	---	75.78	77.23	78.55	69.81	67.16	64.36	67.33	65.21
20	74.13	73.81	---	---	75.93	77.21	78.12	69.05	67.79	64.12	68.09	64.67
21	73.85	73.75	---	---	75.58	77.34	77.87	69.05	68.01	64.14	68.75	64.44
22	74.73	73.75	---	---	75.52	77.34	78.05	68.86	65.85	63.89	68.72	64.02
23	74.80	73.69	---	---	75.42	77.20	78.06	68.58	65.24	63.45	68.85	63.38
24	74.73	73.61	---	---	75.28	77.50	78.07	68.35	65.06	63.45	67.92	63.42
25	74.30	73.19	---	---	75.40	77.65	78.05	68.08	64.99	63.31	67.01	63.26
26	73.97	73.00	---	---	75.77	77.59	78.05	67.52	65.15	63.46	66.44	63.20
27	74.30	73.68	---	---	75.77	77.46	78.26	67.40	65.45	63.60	66.74	63.22
28	74.42	73.60	---	---	75.55	77.46	78.38	66.98	65.45	64.28	66.74	63.22
29	74.44	73.58	---	---	---	77.34	78.23	67.09	64.90	64.61	65.30	63.09
30	74.48	73.65	---	---	---	77.08	78.35	67.11	65.14	65.05	66.28	63.19
31	74.31	---	---	---	---	76.79	---	66.88	---	65.05	66.66	---
LOW	75.73	74.58	73.92	---	75.93	77.65	78.61	78.35	68.01	68.00	68.85	69.24

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	62.84	61.33	60.74	59.84	59.84	58.67	---	57.20	63.15	e61.58	---
2	63.49	62.84	61.28	60.74	60.10	59.77	58.69	---	57.21	63.47	---	---
3	63.18	62.78	61.65	60.29	60.32	60.09	58.60	---	57.21	63.57	---	---
4	62.69	62.70	61.58	60.34	60.14	60.21	58.49	---	57.11	62.86	---	---
5	62.94	63.23	61.36	60.39	60.57	60.15	58.69	---	57.22	62.60	e62.18	e60.40
6	62.94	63.25	61.23	60.42	60.08	60.14	---	---	57.20	61.30	---	---
7	62.69	63.01	61.07	60.74	59.65	60.13	---	---	57.59	61.62	---	---
8	62.85	63.07	61.45	60.78	59.55	59.79	---	---	58.51	61.22	---	---
9	62.85	62.13	61.62	60.38	59.39	59.89	---	---	58.91	60.86	---	---
10	62.32	61.85	61.74	60.04	59.98	59.87	---	---	58.72	62.25	e62.27	e60.79
11	62.48	61.79	61.70	60.04	60.19	59.34	---	---	58.30	61.26	---	---
12	62.45	61.73	61.10	59.92	60.04	59.22	---	---	58.31	61.52	---	---
13	62.61	61.99	60.60	59.78	59.70	58.99	---	---	58.27	61.88	---	---
14	62.78	61.72	60.58	60.21	59.56	58.63	---	---	58.17	63.51	---	---
15	62.97	61.64	60.58	60.25	59.63	58.17	---	---	57.74	63.84	e62.93	e59.76
16	62.79	61.52	60.43	59.83	59.78	58.38	---	---	57.98	64.42	---	---
17	62.74	61.45	60.84	59.93	59.67	58.58	---	---	57.97	65.32	---	---
18	62.53	61.59	60.84	60.30	59.56	58.66	---	58.02	58.17	65.98	---	---
19	62.95	61.86	60.61	59.95	59.58	58.55	---	58.28	57.56	65.21	---	---
20	62.95	61.86	60.73	59.80	59.61	58.45	---	58.17	57.63	64.93	e61.35	e58.55
21	62.68	61.83	60.66	59.84	59.60	58.42	---	58.22	57.41	63.26	---	---
22	62.83	61.45	60.66	60.21	59.30	58.23	---	58.22	57.07	63.50	---	---
23	63.03	61.58	60.81	60.19	59.04	58.48	---	58.20	57.62	63.69	---	---
24	62.90	61.29	60.87	59.80	59.41	59.09	---	58.04	57.99	64.83	---	---
25	62.92	61.28	60.67	59.59	59.91	58.76	---	58.06	59.18	64.81	e62.22	e58.49
26	62.59	61.36	60.97	59.64	59.73	58.66	---	57.92	60.49	62.78	---	---
27	62.49	61.57	60.97	60.01	59.94	58.50	---	57.84	60.68	64.50	---	---
28	62.67	61.59	60.84	59.73	59.94	58.43	---	57.46	60.89	63.80	---	---
29	63.05	61.37	61.01	60.11	59.92	58.58	---	57.20	61.58	62.63	---	---
30	63.05	61.14	60.84	60.21	---	58.38	---	56.97	62.53	e62.50	---	e57.94
31	62.52	---	60.41	60.14	---	58.48	---	57.11	---	e62.31	e61.59	---
LOW	63.49	63.25	61.74	60.78	60.57	60.21	58.69	58.28	62.53	65.98	62.93	60.79

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	58.29	58.14	57.26	56.27	58.16	56.83	56.74	60.78	58.61	55.55
2	---	---	58.12	58.11	57.31	56.20	58.23	56.78	56.75	58.48	59.06	55.29
3	---	---	58.04	57.58	57.42	56.97	57.93	56.85	56.19	59.19	58.95	55.07
4	---	---	58.09	58.43	57.41	57.13	57.50	56.18	56.19	59.55	59.10	55.14
5	e59.08	---	57.95	58.75	57.02	57.25	57.76	59.18	56.38	60.52	58.37	54.65
6	---	---	57.89	58.53	56.73	57.42	58.07	59.18	56.40	61.55	58.24	54.59
7	---	---	58.11	57.12	56.90	57.60	58.16	57.07	56.75	61.95	58.08	55.05
8	---	---	58.46	56.28	56.92	57.64	58.17	56.83	56.70	61.50	58.08	55.02
9	---	---	58.15	55.96	56.83	57.94	58.19	56.86	56.53	62.11	58.12	54.49
10	e57.56	---	57.81	56.03	56.83	57.94	57.94	57.66	56.71	62.30	57.91	54.50
11	---	---	57.78	56.47	56.78	57.78	57.88	57.66	56.48	62.45	57.78	54.50
12	---	---	57.99	56.57	---	57.79	57.89	57.14	55.51	62.29	57.55	54.38
13	---	---	57.97	56.46	---	57.87	57.74	57.36	55.54	61.59	57.77	55.71
14	---	---	58.48	56.52	56.58	57.84	57.81	56.91	55.11	62.13	57.49	56.62
15	e58.33	---	58.32	57.24	56.73	58.01	57.89	57.25	55.25	62.50	57.08	56.31
16	---	---	58.48	56.97	56.59	58.36	57.89	57.25	56.15	62.95	57.31	55.85
17	---	---	58.56	56.99	56.38	58.30	57.57	57.24	56.40	64.28	57.31	55.48
18	---	---	58.38	57.00	56.38	58.35	57.50	57.12	56.40	64.57	57.15	55.57
19	---	e57.35	58.24	57.19	56.21	58.35	57.60	56.71	56.16	62.12	56.93	54.72
20	---	58.25	57.88	56.84	56.32	58.30	57.65	57.03	55.95	60.86	57.09	54.69
21	---	58.08	58.00	57.37	56.38	58.43	57.28	57.34	55.96	59.30	55.74	54.69
22	---	57.97	58.46	57.39	56.56	58.44	56.95	57.10	56.82	59.36	55.22	54.55
23	---	58.63	58.41	57.24	56.69	58.25	56.80	56.89	57.58	59.51	55.23	54.25
24	---	58.49	58.20	57.31	57.02	58.46	56.71	55.91	57.63	59.43	56.55	54.28
25	---	58.63	58.31	57.40	56.38	58.42	56.67	55.82	58.06	59.21	57.47	54.14
26	---	58.39	57.92	57.37	56.13	58.42	57.12	55.99	58.73	59.40	57.74	53.81
27	---	58.34	58.36	57.69	55.93	59.48	57.37	56.03	59.03	59.93	55.67	53.47
28	---	58.26	58.85	57.29	56.15	58.51	57.13	56.30	60.10	59.97	55.67	53.62
29	---	58.00	58.62	56.90	---	58.40	56.66	56.59	60.39	59.22	55.39	53.75
30	---	58.09	58.48	56.76	---	58.16	56.85	56.39	60.63	58.90	55.31	53.75
31	---	---	58.42	56.96	---	58.20	---	56.74	---	58.75	55.45	---
LOW	59.08	58.63	58.85	58.75	57.42	59.48	58.23	59.18	60.63	64.57	59.10	56.62

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.87	52.39	52.41	51.91	52.36	52.39	51.64	52.86	---	54.87	53.44	57.63
2	53.99	52.83	52.14	52.19	52.36	52.27	51.68	54.07	54.91	55.12	53.20	58.08
3	54.13	52.48	52.02	52.36	51.90	52.01	51.86	55.59	54.11	54.83	53.08	58.54
4	54.39	52.60	51.78	52.46	51.74	51.97	51.63	54.55	53.51	53.59	52.91	58.69
5	55.07	52.67	52.17	52.45	52.03	52.03	51.76	54.11	53.51	54.29	53.03	59.18
6	55.07	52.42	52.12	52.05	52.16	52.14	51.69	54.11	53.14	54.71	53.08	59.14
7	54.10	52.04	51.85	51.86	52.21	52.51	51.72	53.51	53.21	54.70	53.32	58.88
8	54.10	52.19	51.90	51.89	52.52	52.59	51.66	53.46	52.47	54.70	53.68	58.85
9	53.64	52.65	51.81	51.79	52.42	52.47	51.58	54.05	52.36	54.35	55.22	58.41
10	53.64	52.40	51.83	52.04	52.30	52.30	51.86	52.98	52.47	54.83	55.22	59.58
11	53.34	52.14	52.02	52.33	52.24	52.09	51.73	52.78	52.02	55.21	54.32	59.59
12	53.17	52.31	51.96	52.09	52.18	51.87	51.59	52.97	52.21	57.13	53.61	58.67
13	53.37	52.25	51.92	51.90	52.20	52.04	51.99	53.04	52.22	57.82	53.97	58.61
14	53.39	52.41	52.21	52.02	52.11	52.32	51.74	53.56	51.96	57.95	53.97	56.22
15	53.09	52.84	51.87	51.85	52.38	52.36	51.53	55.44	52.13	56.79	54.61	55.60
16	52.85	52.84	51.86	51.74	52.47	52.14	51.58	55.60	52.11	56.66	54.96	54.82
17	52.68	52.52	51.98	51.95	52.34	52.02	51.57	55.57	51.99	56.84	54.77	54.72
18	53.11	52.51	51.91	51.95	52.12	52.17	51.87	55.17	51.70	57.13	54.66	54.69
19	53.06	52.46	52.14	51.74	52.07	52.19	51.76	54.41	51.38	58.21	54.62	54.42
20	53.01	52.17	51.96	51.95	52.01	51.82	52.18	53.43	51.52	58.63	54.62	54.45
21	52.97	51.82	52.23	51.88	52.20	51.92	52.04	52.80	52.25	58.65	54.16	54.11
22	52.42	52.44	52.11	51.63	52.24	52.21	52.19	52.73	52.66	58.55	53.94	53.68
23	52.21	52.38	52.33	51.56	52.11	52.08	51.74	53.14	52.20	58.21	54.77	53.70
24	52.58	52.49	52.33	51.91	51.79	51.72	52.05	53.36	52.68	56.01	54.77	53.52
25	52.81	52.34	52.23	51.95	51.25	51.45	52.60	54.02	52.44	54.95	54.75	54.21
26	52.70	52.23	52.24	51.89	51.81	51.59	52.39	54.38	52.75	54.83	54.28	54.43
27	52.71	52.18	52.24	51.74	51.75	51.61	52.65	54.92	52.88	55.04	55.30	54.51
28	52.52	52.18	52.13	52.05	51.91	51.65	53.18	54.46	53.99	55.36	55.94	54.38
29	52.25	52.25	51.99	52.12	---	51.79	53.12	56.95	54.47	54.43	57.45	54.08
30	52.36	52.44	52.43	51.79	---	51.79	53.21	57.14	54.44	53.70	58.38	53.81
31	52.30	---	52.23	51.89	---	51.86	---	56.71	---	53.16	58.38	---
LOW	55.07	52.84	52.43	52.46	52.52	52.59	53.21	57.14	54.91	58.65	58.38	59.59

e Estimated

SITE NUMBER FROM LOCATION MAP.—33.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N7E13DDAA.

SITE ID (STATION NUMBER).—440746103124201.

OTHER IDENTIFIERS.—PE-95E and West Nike Rd.

LOCATION.—Lat 44°07′46.0″, long 103°12′41.8″, in NE1/4NE1/4SE1/4SE1/4 sec. 13, T. 2 N., R. 7 E., Hydrologic Unit 10120111, about 2 mi north of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Inyan Kara.

WELL CHARACTERISTICS.—Drilled observation well, 1,448 ft deep with 1,418 ft of 5.5-in. steel casing; 3-in. PVC, 18-slot well screen from 1,418 to 1,448 ft.

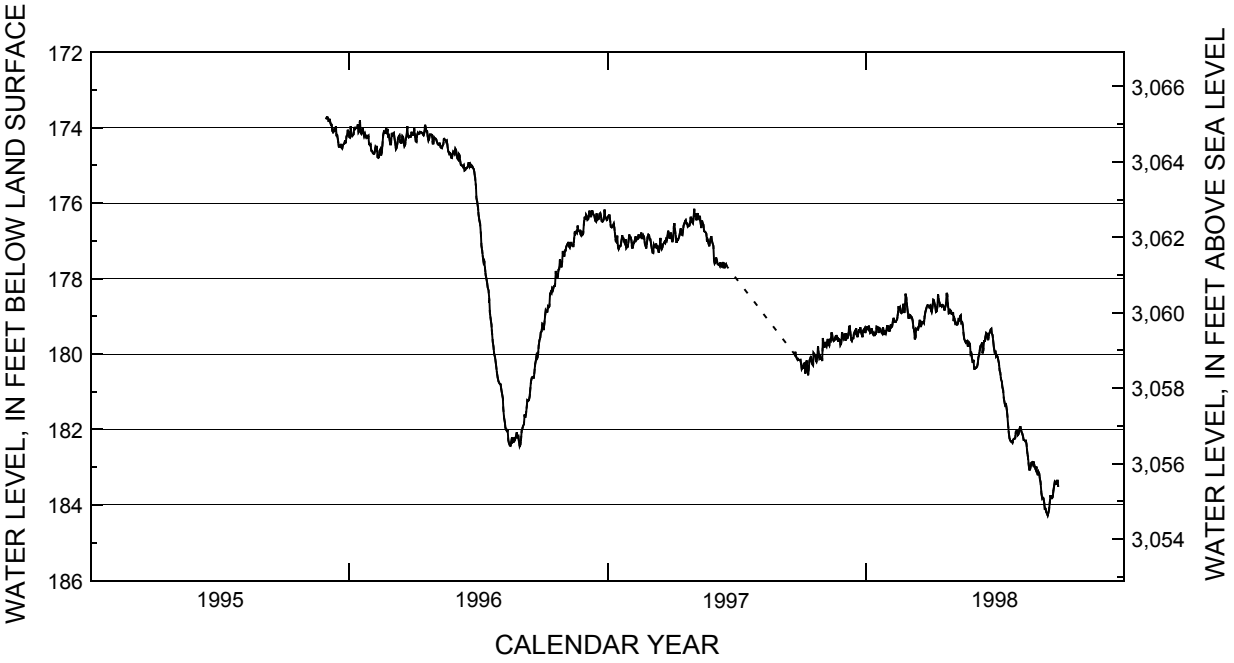
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,238.9 ft above sea level. Measuring point: Top of steel casing, 1.5 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—November 1995 to September 1998.

EXTREMES.—Highest daily water level, 173.72 ft below land-surface datum, Nov. 30 and Dec. 1, 1995. Lowest daily water level, 184.28 ft below land-surface datum, Sept. 15, 1998.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	173.72	174.25	174.60	174.14	174.18	174.29	174.73	176.12	180.79	182.02
2	---	---	173.76	174.26	174.61	174.19	174.01	174.29	174.81	176.30	180.80	181.96
3	---	---	173.84	173.96	174.66	174.16	174.21	174.31	174.84	176.45	180.93	181.90
4	---	---	173.76	174.19	174.69	174.14	174.36	174.38	174.70	176.54	181.05	181.86
5	---	---	173.85	174.22	174.69	174.28	174.37	174.44	174.73	176.82	181.17	181.60
6	---	---	173.92	174.20	174.64	174.42	174.20	174.45	174.90	177.12	181.46	181.69
7	---	---	173.92	174.18	174.52	174.57	174.13	174.42	174.99	177.27	181.70	181.58
8	---	---	174.08	173.98	174.56	174.54	174.16	174.42	174.99	177.45	181.82	181.37
9	---	---	174.12	174.03	174.48	174.42	174.16	174.52	175.02	177.57	181.96	181.22
10	---	---	174.09	174.00	174.78	174.26	174.11	174.53	175.04	177.53	182.01	181.24
11	---	---	174.03	174.01	174.80	174.23	174.12	174.54	175.00	177.75	182.04	181.22
12	---	---	174.05	174.01	174.78	174.20	174.12	174.46	175.13	177.91	181.99	181.12
13	---	---	173.96	173.91	174.60	174.39	174.14	174.44	175.11	178.01	182.28	180.95
14	---	---	174.20	174.11	174.56	174.40	174.18	174.27	175.07	178.12	182.38	180.72
15	---	---	174.20	174.07	174.73	174.40	174.20	174.32	175.07	178.25	182.42	180.63
16	---	---	174.34	173.80	174.64	174.22	174.14	174.32	175.04	178.32	182.43	180.61
17	---	---	174.50	174.14	174.43	174.25	173.92	174.38	175.00	178.58	182.34	180.63
18	---	---	174.50	174.16	174.20	174.36	173.97	174.35	174.91	178.90	182.21	180.63
19	---	---	174.50	174.10	174.09	174.48	174.09	174.48	175.02	179.07	182.34	180.46
20	---	---	174.43	174.00	174.11	174.44	174.09	174.63	174.98	179.22	182.32	180.27
21	---	---	174.53	174.13	174.16	174.27	174.22	174.69	175.06	179.42	182.21	180.16
22	---	---	174.55	174.22	174.01	174.22	174.33	174.66	175.00	179.67	182.28	180.04
23	---	---	174.45	174.16	174.09	173.96	174.27	174.68	175.02	179.82	182.23	180.09
24	---	---	174.43	174.22	174.03	174.22	174.18	174.79	175.07	180.00	182.15	180.00
25	---	---	174.42	174.26	174.22	174.25	174.18	174.80	175.09	180.06	182.08	179.79
26	---	---	174.33	174.22	174.20	174.22	174.18	174.71	175.18	180.20	182.20	179.62
27	---	---	174.41	174.25	174.33	174.24	174.19	174.63	175.33	180.34	182.18	179.56
28	---	---	174.22	174.22	174.44	174.24	174.42	174.66	175.55	180.52	182.30	179.43
29	---	173.77	174.20	174.44	174.44	174.11	174.42	174.69	175.87	180.63	182.44	179.40
30	---	173.72	174.05	174.46	---	174.16	174.26	174.56	175.97	180.73	182.39	179.20
31	---	---	174.13	174.44	---	174.19	---	174.60	---	180.76	182.24	---
LOW	---	173.77	174.55	174.46	174.80	174.57	174.42	174.80	175.97	180.76	182.44	182.02

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179.21	177.26	176.31	176.36	176.91	176.96	176.96	176.53	177.60	---	---	---
2	179.36	177.26	176.36	176.32	176.91	176.96	177.03	176.40	177.56	---	---	---
3	179.18	177.14	176.44	176.32	176.99	177.10	176.96	176.15	177.44	---	---	---
4	178.95	177.09	176.42	176.44	177.18	177.20	176.61	176.36	177.52	---	---	---
5	178.84	177.09	176.29	176.62	177.18	177.31	176.53	176.27	177.61	---	---	---
6	178.88	177.03	176.20	176.64	177.05	177.32	176.74	176.45	177.63	---	---	---
7	178.88	177.15	176.35	176.61	177.05	177.09	176.92	176.40	177.62	---	---	---
8	178.74	177.17	176.35	176.59	176.98	177.13	177.05	176.26	177.66	---	---	---
9	178.76	177.05	176.21	176.54	176.88	177.19	176.96	176.39	177.57	---	---	---
10	178.73	177.05	176.21	176.66	176.98	177.07	176.97	176.42	177.66	---	---	---
11	178.40	177.12	176.29	176.84	176.95	177.17	176.92	176.33	177.68	---	---	---
12	178.35	177.14	176.32	177.01	176.95	177.15	176.85	176.51	177.61	---	---	---
13	178.38	177.14	176.36	177.03	176.85	177.26	176.76	176.66	177.56	---	---	---
14	178.26	176.98	176.47	176.86	176.85	177.31	176.67	176.46	177.72	---	---	---
15	178.30	176.75	176.49	177.17	176.91	177.18	176.83	176.53	177.64	---	---	---
16	178.21	176.80	176.27	177.22	176.90	176.92	176.84	176.58	177.67	---	---	---
17	178.19	176.75	176.44	177.16	176.78	177.13	176.76	176.74	177.62	---	---	---
18	178.19	176.78	176.42	177.13	176.93	177.21	176.58	176.75	177.67	---	---	---
19	177.80	176.59	176.41	177.13	176.93	177.16	176.52	176.77	---	---	---	---
20	177.86	176.74	176.28	177.01	176.86	177.08	176.48	176.81	---	---	---	---
21	177.95	176.74	176.26	176.85	176.91	177.06	176.45	177.02	---	---	---	179.98
22	177.95	176.73	176.33	176.94	177.08	177.02	176.54	176.97	---	---	---	180.02
23	177.76	176.83	176.48	176.94	177.13	177.05	176.54	177.05	---	---	---	179.94
24	177.75	176.85	176.49	177.03	177.20	176.96	176.62	177.14	---	---	---	180.06
25	177.48	176.78	176.47	177.08	177.04	176.99	176.60	177.07	---	---	---	180.11
26	177.65	176.83	176.42	176.96	176.89	176.90	176.59	176.95	---	---	---	180.15
27	177.70	176.81	176.17	177.19	176.83	176.73	176.53	176.87	---	---	---	180.13
28	177.60	176.52	176.35	177.15	176.85	176.80	176.36	176.98	---	---	---	180.15
29	177.27	176.36	176.39	177.15	---	176.92	176.41	177.07	---	---	---	180.16
30	177.34	176.43	176.45	176.99	---	176.92	176.50	177.14	---	---	---	180.15
31	177.41	---	176.44	176.83	---	176.78	---	177.52	---	---	---	---
LOW	179.36	177.26	176.49	177.22	177.20	177.32	177.05	177.52	177.72	---	---	180.16

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180.23	179.58	179.52	179.35	179.31	178.85	178.72	178.85	180.23	179.82	182.06	183.21
2	180.39	179.74	179.46	179.27	179.25	179.04	178.70	178.93	180.15	179.95	182.03	183.13
3	180.35	179.83	179.64	179.33	179.40	179.04	178.85	178.94	180.39	179.94	182.05	183.18
4	180.39	179.68	179.45	179.35	179.35	178.97	178.89	178.89	180.39	180.06	182.14	183.32
5	180.25	179.74	179.58	179.25	179.22	178.98	178.76	179.12	180.36	180.03	182.11	183.40
6	180.24	179.79	179.57	179.37	179.29	179.04	178.56	179.06	180.36	180.07	181.99	183.69
7	180.51	179.69	179.49	179.44	179.27	179.03	178.57	179.18	180.33	180.15	181.91	183.82
8	180.45	179.60	179.27	179.42	179.12	179.12	178.66	179.16	180.26	180.25	181.97	183.80
9	180.17	179.74	179.26	179.32	179.04	179.31	178.74	179.22	180.09	180.43	182.07	183.82
10	180.35	179.77	179.46	179.45	179.14	179.35	178.88	179.22	180.02	180.49	182.11	183.96
11	180.56	179.63	179.63	179.48	179.15	179.61	178.86	179.18	179.86	180.68	182.18	184.10
12	180.39	179.65	179.65	179.44	179.15	179.55	178.74	179.08	179.79	180.74	182.28	184.10
13	180.18	179.43	179.58	179.52	179.10	179.33	178.41	179.10	179.76	180.87	182.28	184.20
14	180.11	179.48	179.58	179.42	179.08	179.35	178.58	178.99	179.69	180.96	182.31	184.23
15	180.05	179.61	179.46	179.48	178.93	179.31	178.65	178.97	179.98	181.20	182.30	184.28
16	180.18	179.65	179.40	179.27	178.73	179.33	178.72	179.18	179.90	181.31	182.39	184.20
17	180.27	179.63	179.44	179.28	178.79	179.24	178.70	179.16	179.63	181.36	182.58	184.12
18	180.30	179.57	179.31	179.35	178.76	179.09	178.74	179.24	179.67	181.34	182.73	183.91
19	179.97	179.63	179.46	179.44	178.90	179.26	178.70	179.48	179.55	181.48	182.94	183.74
20	180.01	179.50	179.55	179.31	178.92	179.26	178.71	179.61	179.44	181.61	183.06	183.82
21	180.02	179.55	179.46	179.33	178.90	179.16	178.76	179.65	179.46	181.89	183.06	183.82
22	180.18	179.57	179.34	179.39	178.79	179.18	178.84	179.69	179.61	182.11	182.96	183.78
23	180.20	179.67	179.42	179.43	178.67	179.15	178.77	179.66	179.61	182.25	182.88	183.62
24	180.07	179.61	179.29	179.46	178.91	179.18	178.69	179.65	179.46	182.29	182.87	183.51
25	179.79	179.62	179.42	179.29	178.83	179.01	178.38	179.79	179.42	182.32	182.93	183.38
26	179.98	179.75	179.49	179.39	178.40	178.88	178.42	179.79	179.35	182.32	182.85	183.40
27	180.10	179.70	179.55	179.49	178.51	178.80	178.70	179.69	179.33	182.35	182.93	183.46
28	180.06	179.42	179.37	179.37	178.70	178.74	178.92	179.73	179.46	182.28	183.01	183.36
29	180.13	179.51	179.35	179.44	---	178.70	178.91	180.00	179.50	182.25	183.06	183.36
30	180.13	179.58	179.31	179.37	---	178.71	178.83	179.98	179.69	182.25	182.98	183.52
31	180.18	---	179.44	179.24	---	178.75	---	180.11	---	182.22	183.14	---
LOW	180.56	179.83	179.65	179.52	179.40	179.61	178.92	180.11	180.39	182.35	183.14	184.28

SITE NUMBER FROM LOCATION MAP.—34.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N6E15ADAA2.

SITE ID (STATION NUMBER).—440811103222202.

OTHER IDENTIFIER.—PE-96B and Doty Ddwd.

LOCATION.—Lat 44°08′11.0″, long 103°22′21.8″, in NE1/4NE1/4SE1/4NE1/4 sec. 15, T. 2N., R. 6 E., Hydrologic Unit 10120111, 5 mi west of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled observation well, 910 ft deep with 870 ft of 5-in. steel casing; open hole from 870 to 910 ft.

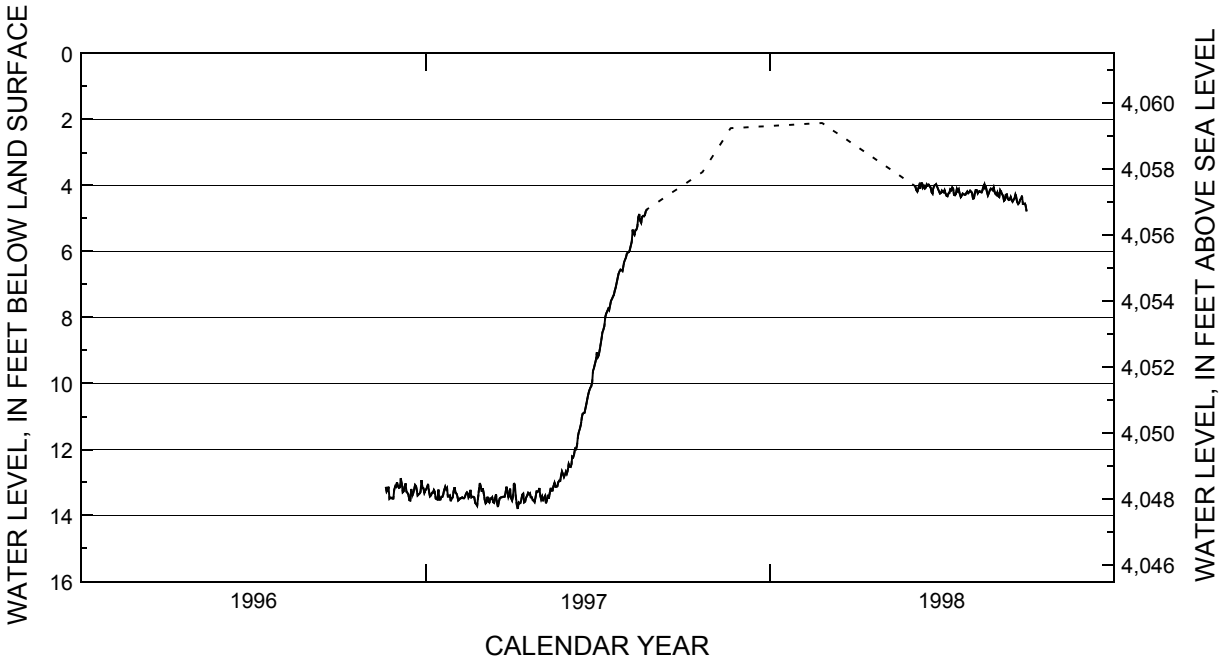
INSTRUMENTATION.—Electronic data logger.

DATUM.—Elevation of land-surface datum is 4,061.5 ft above sea level. Measuring point: Top of steel casing, 1.0 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—November 1996 to September 1998.

EXTREMES.—Highest daily water level, 2.11 ft (estimated) below land-surface datum, Feb. 25, 1998; lowest water level, 13.8 ft below land-surface datum, Apr. 8, 1997.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	13.00	13.20	13.32	13.28	13.48	13.17	12.45	9.06	6.18	---
2	---	---	13.12	13.13	13.34	13.18	13.55	13.41	12.52	9.20	6.06	---
3	---	---	13.16	13.05	13.44	13.33	13.43	13.51	12.53	9.14	6.03	---
4	---	---	13.15	13.27	13.55	13.52	13.02	13.43	12.44	8.99	6.02	---
5	---	---	12.87	13.43	13.52	13.63	13.09	13.57	12.22	8.81	5.95	---
6	---	---	13.05	13.40	13.48	13.59	13.45	13.47	12.24	8.63	5.83	---
7	---	---	13.30	13.32	13.48	13.44	13.68	13.41	12.14	8.44	5.71	---
8	---	---	13.27	13.32	13.45	13.58	13.80	13.63	11.98	8.37	5.34	---
9	---	---	13.11	13.23	13.48	13.61	13.61	13.54	11.99	8.26	5.45	---
10	---	---	13.03	13.29	13.48	13.49	13.63	13.38	11.88	7.98	5.50	---
11	---	---	13.29	13.49	13.42	13.50	13.62	13.49	11.60	7.87	5.36	---
12	---	---	13.32	13.51	13.34	13.45	13.53	13.32	11.46	7.81	5.34	---
13	---	---	13.36	13.52	13.30	13.60	13.37	13.17	11.37	7.74	5.25	---
14	---	---	13.54	13.22	13.34	13.62	13.34	13.25	11.25	7.78	4.95	---
15	---	---	13.55	13.52	13.45	13.48	13.60	13.25	11.04	7.64	4.87	---
16	---	---	13.20	13.52	13.40	13.36	13.58	13.10	10.92	7.49	5.08	---
17	---	---	13.41	13.44	13.23	13.61	13.46	13.01	10.90	7.43	5.14	---
18	---	---	13.33	13.44	13.45	13.74	13.40	13.13	10.89	7.37	4.95	---
19	---	13.14	13.22	13.37	13.44	13.58	13.32	13.13	10.75	7.32	4.92	---
20	---	13.27	13.08	13.22	13.44	13.48	13.36	13.12	10.62	7.19	4.94	---
21	---	13.22	13.12	13.13	13.46	13.46	13.33	12.99	10.46	7.09	4.90	---
22	---	13.13	13.22	13.22	13.62	13.45	13.45	12.95	10.32	6.94	4.78	---
23	---	13.50	13.40	13.17	13.66	13.44	13.45	12.96	10.21	6.80	4.73	---
24	---	13.47	13.37	13.43	13.71	13.44	13.54	12.78	10.13	6.67	---	---
25	---	13.47	13.34	13.43	13.45	13.44	13.55	12.67	10.09	6.60	---	---
26	---	13.49	13.28	13.40	13.23	13.33	13.59	12.75	9.96	6.55	---	---
27	---	13.49	12.93	13.57	13.02	13.13	13.45	12.84	9.62	6.57	---	---
28	---	13.21	13.16	13.48	13.13	13.26	13.27	12.77	9.53	6.60	---	---
29	---	13.11	13.18	13.46	---	13.46	13.28	12.67	9.41	6.50	---	---
30	---	13.13	13.32	13.26	---	13.38	13.27	12.74	9.29	6.33	---	---
31	---	---	13.24	13.15	---	13.19	---	12.64	---	6.25	---	---
LOW	---	13.50	13.55	13.57	13.71	13.74	13.80	13.63	12.53	9.20	6.18	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	4.23	4.16	4.35
2	---	---	---	---	---	---	---	---	---	4.16	4.19	e4.16
3	---	---	---	---	---	---	---	---	4.01	4.20	4.24	e4.21
4	---	---	---	---	---	---	---	---	4.04	4.21	4.40	e4.27
5	---	---	---	---	---	---	---	---	4.14	4.14	4.39	e4.31
6	---	---	---	---	---	---	---	---	4.19	4.25	4.25	e4.47
7	---	---	---	---	---	---	---	---	4.10	4.31	4.14	e4.44
8	---	---	---	---	---	---	---	---	4.00	4.33	4.14	e4.28
9	---	---	---	---	---	---	---	---	4.10	4.25	4.24	e4.27
10	---	---	---	---	---	---	---	---	3.94	4.23	4.19	e4.40
11	---	---	---	---	---	---	---	---	3.94	4.12	4.17	e4.44
12	---	---	---	---	---	---	---	---	4.07	4.15	4.20	e4.43
13	---	---	---	---	---	---	---	---	4.02	4.06	4.21	e4.35
14	---	---	---	---	---	---	---	---	4.10	4.10	4.15	e4.44
15	---	---	---	---	---	---	---	---	4.07	4.28	4.04	e4.50
16	---	---	---	---	---	---	---	---	3.97	4.30	3.97	e4.45
17	---	---	---	---	---	---	---	---	4.01	4.26	4.08	e4.40
18	---	---	---	---	---	---	---	---	3.98	4.11	4.06	e4.28
19	---	---	---	---	---	---	---	---	4.02	4.17	4.19	e4.36
20	---	e2.27	---	---	---	---	---	---	4.06	4.12	4.30	e4.51
21	e3.60	---	---	---	---	---	---	---	4.20	4.26	4.23	e4.57
22	---	---	---	---	---	---	---	---	4.25	4.36	4.15	e4.53
23	---	---	---	---	---	---	---	---	4.10	4.31	4.10	e4.44
24	---	---	---	---	---	---	---	---	4.01	4.25	4.12	e4.40
25	---	---	---	---	e2.11	---	---	---	3.99	4.27	4.15	e4.31
26	---	---	---	---	---	---	---	---	3.96	4.28	4.06	e4.56
27	---	---	---	---	---	---	---	---	4.04	4.28	4.20	e4.57
28	---	---	---	---	---	---	---	---	4.11	4.23	4.26	e4.55
29	---	---	---	---	---	---	---	---	4.18	4.19	4.29	e4.61
30	---	---	---	---	---	---	---	---	4.25	4.24	4.21	e4.79
31	---	---	---	---	---	---	---	---	---	4.21	4.33	---
LOW	3.60	2.27	---	---	2.11	---	---	---	4.25	4.36	4.40	4.79

e Estimated

SITE NUMBER FROM LOCATION MAP.—35.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N6E15ADAA.

SITE ID (STATION NUMBER).—440811103222201.

OTHER IDENTIFIER.—PE-95C and Doty Mdsn.

LOCATION.—Lat 44°08′11.1″, long 103°22′21.8″, in NE1/4NE1/4SE1/4NE1/4 sec. 15, T. 2N., R. 6 E., Hydrologic Unit 10120111, 5 mi west of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 425 ft deep with 385 ft of 5-in. steel casing; open hole from 385 to 425 ft.

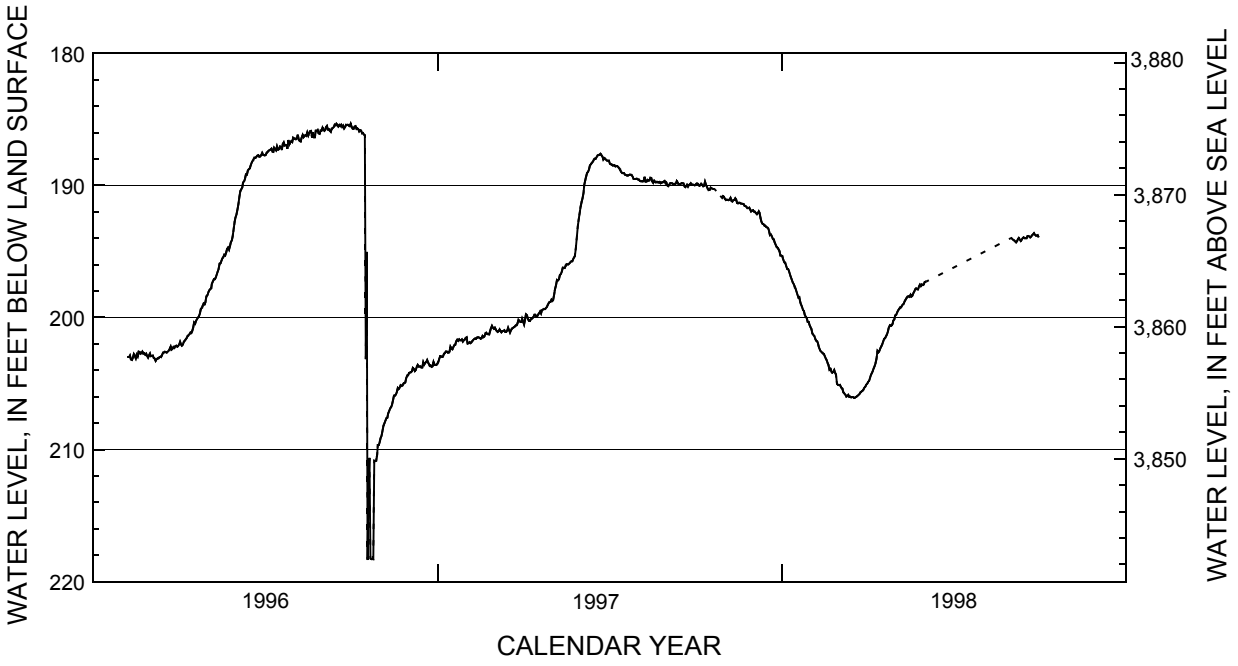
INSTRUMENTATION.—Electronic data logger.

DATUM.—Elevation of land-surface datum is 4,060.7 ft above sea level. Measuring point: Top of steel casing, 1.2 ft above land-surface datum.

REMARKS.—Records good. Sudden decrease in water level during October 1996 caused by drilling of adjacent well at site.

PERIOD OF RECORD.—February 1996 to September 1998.

EXTREMES.—Highest daily water level, 185.33 ft below land-surface datum, Sept. 15, 1996; lowest water level, 218.36 ft below land-surface datum, Oct. 18, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	202.74	202.05	198.32	192.19	187.72	186.47	185.76
2	---	---	---	---	---	202.94	201.85	198.08	191.82	187.69	186.44	185.86
3	---	---	---	---	---	202.93	202.05	197.94	191.42	187.52	186.50	185.77
4	---	---	---	---	---	202.90	202.16	197.84	190.87	187.48	186.44	185.60
5	---	---	---	---	---	203.07	202.08	197.81	190.42	187.38	186.17	185.50
6	---	---	---	---	202.99	203.13	201.84	197.44	190.29	187.33	186.53	185.76
7	---	---	---	---	202.99	203.30	201.77	197.27	190.17	187.29	186.63	185.74
8	---	---	---	---	203.00	203.19	201.68	197.11	189.78	187.22	186.68	185.86
9	---	---	---	---	202.89	203.11	201.57	197.11	189.70	187.44	186.37	185.95
10	---	---	---	---	203.18	203.11	201.40	196.97	189.49	187.46	186.18	185.69
11	---	---	---	---	203.21	203.01	201.35	196.75	189.16	187.14	186.34	185.67
12	---	---	---	---	203.06	202.98	201.28	196.53	189.18	187.25	186.22	185.60
13	---	---	---	---	202.80	202.99	201.15	196.34	188.88	187.35	186.20	185.39
14	---	---	---	---	202.93	202.87	201.18	195.92	188.77	187.05	186.25	185.46
15	---	---	---	---	203.12	202.67	201.04	195.90	188.71	187.29	186.00	185.33
16	---	---	---	---	202.84	202.67	200.78	195.70	188.45	187.26	186.22	185.43
17	---	---	---	---	202.96	202.61	200.40	195.54	188.26	187.05	186.02	185.54
18	---	---	---	---	202.59	202.63	200.48	195.43	188.15	187.09	185.89	185.42
19	---	---	---	---	202.62	202.67	200.26	195.25	188.01	187.32	185.88	185.51
20	---	---	---	---	202.75	202.60	200.14	195.30	187.90	186.86	186.37	185.41
21	---	---	---	---	202.72	202.53	200.02	195.10	187.93	186.75	186.00	185.57
22	---	---	---	---	202.60	202.40	199.92	194.82	187.84	186.98	186.36	185.47
23	---	---	---	---	202.73	202.21	199.70	194.71	187.74	186.93	186.36	185.69
24	---	---	---	---	202.70	202.44	199.36	194.86	187.71	186.96	185.86	185.59
25	---	---	---	---	202.84	202.38	199.28	194.61	187.83	187.22	185.88	185.41
26	---	---	---	---	202.75	202.24	199.13	194.29	187.81	186.56	185.80	185.43
27	---	---	---	---	202.92	202.31	198.94	194.14	187.71	186.88	186.05	185.39
28	---	---	---	---	203.05	202.18	198.99	193.86	187.53	186.75	186.09	185.47
29	---	---	---	---	202.87	202.14	198.83	193.33	187.70	186.65	185.85	185.52
30	---	---	---	---	---	202.22	198.40	192.78	187.71	186.71	185.86	185.32
31	---	---	---	---	---	202.18	---	192.40	---	186.40	185.62	---
LOW	---	---	---	---	203.21	203.30	202.16	198.32	192.19	187.72	186.68	185.95

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185.55	209.11	204.20	203.38	201.98	200.88	200.34	198.65	191.58	188.13	189.57	189.99
2	185.70	208.94	204.18	203.17	201.97	200.79	200.56	198.75	191.25	188.37	189.55	190.05
3	185.72	208.57	204.16	202.94	201.89	200.91	200.21	198.67	190.96	188.41	189.66	189.97
4	185.54	208.16	204.09	202.95	201.97	201.03	199.76	198.28	190.56	188.42	189.69	189.83
5	185.51	208.00	203.83	202.99	201.91	201.10	199.83	197.83	190.00	188.51	189.69	189.83
6	185.71	207.79	203.90	202.98	201.81	201.04	200.11	197.56	189.65	188.50	189.70	189.83
7	185.67	207.62	204.08	202.75	201.71	200.92	200.26	197.17	189.33	188.47	189.65	189.91
8	185.73	207.59	203.99	202.71	201.65	201.06	200.28	197.19	189.06	188.57	189.35	189.88
9	185.91	207.26	203.74	202.59	201.60	201.14	200.14	197.11	188.96	188.54	189.71	189.91
10	185.82	207.09	203.61	202.59	201.62	201.03	200.10	196.80	188.78	188.54	189.72	189.85
11	185.83	206.89	203.73	202.67	201.52	201.03	200.08	196.71	188.48	188.61	189.59	189.67
12	186.05	206.81	203.73	202.67	201.50	200.97	199.98	196.53	188.39	188.71	189.64	189.77
13	186.04	206.60	203.71	202.61	201.52	201.10	199.80	196.23	188.29	188.84	189.63	189.95
14	186.15	206.29	203.80	202.24	201.57	201.11	199.79	196.25	188.21	188.99	189.42	189.94
15	186.20	205.93	203.80	202.38	201.62	201.01	199.94	196.26	188.05	189.07	189.44	189.89
16	203.14	205.93	203.40	202.41	201.59	200.79	199.92	196.12	187.97	189.08	189.69	189.83
17	195.06	205.83	203.58	202.24	201.40	200.98	199.78	195.99	188.00	189.07	189.80	189.83
18	218.36	205.65	203.46	202.09	201.50	201.16	199.69	195.98	187.87	189.18	189.65	189.85
19	212.68	205.36	203.39	202.08	201.45	200.98	199.55	196.00	187.73	189.21	189.73	190.07
20	210.65	205.42	203.23	201.82	201.21	200.86	199.71	195.93	187.69	189.25	189.78	190.12
21	218.27	205.33	203.42	201.69	201.17	200.80	199.45	195.83	187.69	189.26	189.73	190.03
22	218.32	205.14	203.50	201.78	201.27	200.75	199.40	195.75	187.61	189.22	189.77	189.96
23	218.31	205.19	203.67	201.67	201.28	200.72	199.37	195.75	187.69	189.18	189.79	190.10
24	218.32	205.16	203.64	201.75	201.29	200.61	199.38	195.58	187.80	189.19	189.74	189.97
25	210.85	205.00	203.74	201.75	201.04	200.60	199.31	195.48	188.04	189.21	189.83	189.93
26	210.88	204.99	203.71	201.67	200.82	200.45	199.24	195.35	187.93	189.33	189.78	189.84
27	210.87	204.93	203.39	201.83	200.64	200.20	199.07	194.72	187.96	189.53	189.77	189.95
28	210.42	204.58	203.60	201.74	200.79	200.29	198.93	193.95	188.06	189.52	189.72	189.95
29	209.67	204.39	203.60	201.69	---	200.37	198.84	193.10	188.13	189.53	189.68	189.97
30	209.68	204.39	203.61	201.55	---	200.35	198.83	192.56	188.15	189.50	189.85	189.99
31	209.42	---	203.51	201.51	---	200.12	---	192.09	---	189.50	189.79	---
LOW	218.36	209.11	204.20	203.38	201.98	201.16	200.56	198.75	191.58	189.53	189.85	190.12

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189.93	191.03	191.87	195.34	200.87	205.12	205.03	199.86	197.32	---	---	193.98
2	189.86	191.11	192.00	195.64	201.22	205.14	204.89	199.79	197.29	---	---	194.05
3	189.86	191.07	192.00	195.84	201.32	205.10	204.81	199.61	197.28	---	---	194.13
4	189.91	191.12	192.10	195.85	201.39	205.26	204.58	199.46	---	---	---	194.16
5	190.03	191.13	192.19	196.10	201.65	205.36	204.35	199.38	---	---	---	194.26
6	190.00	191.07	192.10	196.34	201.78	205.40	204.21	199.25	---	---	---	194.33
7	189.88	190.95	191.97	196.34	201.82	205.68	204.07	199.24	---	---	---	194.23
8	189.95	191.19	192.09	196.51	202.02	205.78	203.86	199.10	---	---	---	194.08
9	190.06	191.23	192.46	196.76	202.31	205.85	203.68	199.02	---	---	---	193.98
10	190.03	191.12	192.77	196.92	202.48	206.00	203.46	198.96	---	---	---	194.10
11	189.73	191.12	192.92	197.10	202.59	205.97	203.13	198.77	---	---	---	194.21
12	189.96	190.98	192.93	197.33	202.65	205.88	202.55	198.65	---	---	---	194.12
13	190.13	191.08	193.04	197.46	202.73	206.02	202.63	198.52	---	---	---	194.00
14	190.25	191.34	193.04	197.63	202.76	206.00	202.53	198.41	---	---	---	193.94
15	190.35	191.36	193.17	197.80	202.93	206.07	202.33	198.40	---	---	---	194.00
16	190.34	191.31	193.18	198.02	203.12	206.03	202.18	198.45	---	---	---	194.01
17	190.17	191.31	193.27	198.25	203.25	206.03	202.02	198.28	---	---	---	194.00
18	190.23	191.38	193.50	198.49	203.46	206.11	201.84	198.42	---	---	---	193.83
19	190.26	191.39	193.76	198.46	203.62	206.09	201.63	198.35	---	---	---	193.83
20	190.27	191.40	193.73	198.82	203.95	206.04	201.58	198.17	---	---	---	193.86
21	190.28	191.42	193.87	199.03	203.90	205.99	201.43	198.06	---	---	---	193.95
22	---	191.57	194.08	199.20	204.09	205.94	201.30	197.87	---	---	---	193.89
23	---	191.57	194.09	199.43	204.19	205.88	201.06	197.81	---	---	---	193.78
24	---	191.62	194.34	199.51	204.13	205.80	200.76	197.88	---	---	---	193.72
25	---	191.72	194.51	199.83	203.99	205.67	200.59	197.89	---	---	---	193.62
26	---	191.72	194.69	199.97	204.22	205.62	200.65	197.66	---	---	---	193.74
27	---	191.70	194.74	200.06	204.35	205.59	200.59	197.51	---	---	---	193.82
28	---	191.82	194.87	200.35	205.03	205.48	200.46	197.61	---	---	---	193.82
29	190.95	191.99	195.00	200.35	---	205.34	200.23	197.51	---	---	---	193.77
30	190.82	191.91	195.32	200.59	---	205.27	200.16	197.55	---	---	---	193.94
31	190.86	---	195.32	200.74	---	205.11	---	197.52	---	---	---	---
LOW	190.95	191.99	195.32	200.74	205.03	206.11	205.03	199.86	197.32	---	---	194.33

SITE NUMBER FROM LOCATION MAP.—36.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2N1E27ADAC.

SITE ID (STATION NUMBER).—440623103583701.

OTHER IDENTIFIERS.—PE-91A and Blind Park.

LOCATION.—Lat 44°06′26.8″, long 103°58′35.9″, in SW1/4NE1/4SE1/4NE1/4 sec. 27, T. 2 N., R. 1 E., Hydrologic Unit 10120107, about 13 mi west of Rochford. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled observation well, 450 ft deep with 420 ft of 5.5-in. steel casing; open hole from 420 to 450 ft.

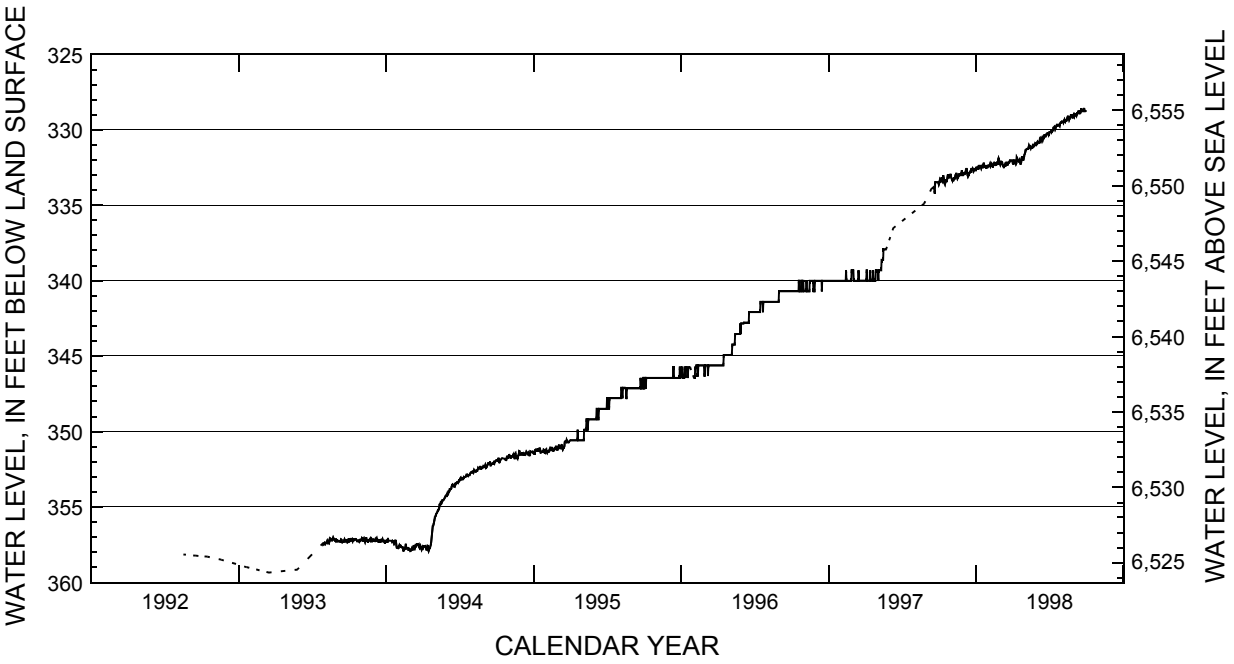
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 6,883.7 ft above sea level. Measuring point: Top of steel casing, 3.0 ft above land-surface datum.

REMARKS.—Records good. The raw data were truncated to nearest 0.01 volt before converting to feet, which caused the stairstep look for years 1995-97.

PERIOD OF RECORD.—August 1992 to September 1998.

EXTREMES.—Highest daily water level, 328.56 ft below land-surface datum, Sept. 19, 26, 1998; lowest daily water level, 359.35 ft below land-surface datum, Mar. 16, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351.90	351.50	351.47	351.43	351.18	351.21	350.58	350.58	349.19	348.50	347.80	347.14
2	351.89	351.62	351.44	351.48	351.33	351.12	350.58	350.58	349.19	347.80	347.80	347.14
3	---	351.63	351.44	351.50	351.40	351.02	350.58	350.58	349.19	347.80	347.80	347.14
4	---	351.63	351.52	351.50	351.32	350.92	350.58	350.58	349.19	347.80	347.80	347.14
5	351.97	351.74	351.52	351.22	351.30	350.93	350.58	350.58	349.19	347.80	347.80	347.14
6	351.74	351.74	351.47	351.19	351.30	351.08	350.58	349.88	348.50	348.50	347.11	347.14
7	352.03	351.66	351.54	351.20	351.35	351.12	350.58	349.88	348.50	348.50	347.11	347.14
8	352.04	351.67	351.54	351.28	351.32	351.12	350.58	349.88	349.19	347.80	347.11	347.14
9	352.03	351.67	351.54	351.28	351.20	350.97	350.58	349.88	349.19	347.80	347.80	347.14
10	351.94	351.59	351.55	351.24	351.13	350.93	350.58	349.88	349.19	347.80	347.11	347.14
11	351.85	351.54	351.43	351.12	351.20	350.89	350.58	349.88	349.19	347.80	347.11	347.14
12	---	351.48	351.43	351.25	351.24	350.90	350.58	349.19	348.50	347.80	347.11	347.14
13	---	---	351.43	351.29	351.24	351.16	350.58	349.19	348.50	347.80	347.11	347.14
14	351.77	351.78	351.35	351.29	351.08	351.20	350.58	349.88	348.50	347.80	347.11	347.14
15	---	351.78	351.39	351.17	351.08	351.16	350.58	349.88	348.50	347.80	347.11	347.14
16	---	351.51	351.43	351.07	351.19	351.07	350.58	349.19	348.50	347.80	347.14	347.14
17	---	351.46	351.51	351.24	351.19	351.07	350.58	349.19	348.50	347.80	347.14	347.14
18	---	351.66	351.51	351.39	351.28	350.94	350.58	349.19	348.50	347.80	347.14	347.14
19	---	351.66	351.43	351.39	351.28	350.70	350.58	349.19	348.50	347.80	347.84	347.14
20	---	351.57	351.51	351.37	351.26	350.70	349.88	349.19	348.50	347.80	347.14	347.14
21	351.81	351.78	351.57	351.37	351.19	350.61	350.58	349.19	348.50	347.80	347.14	347.14
22	351.82	351.81	351.57	351.32	351.07	350.68	350.58	349.19	348.50	347.80	347.14	347.14
23	351.88	---	351.53	351.32	351.17	350.71	350.58	349.19	348.50	347.80	347.14	346.45
24	351.89	351.59	351.32	351.35	351.16	350.57	350.58	349.19	348.50	347.80	347.14	347.14
25	351.89	351.56	351.35	351.35	351.00	350.64	350.58	349.19	348.50	347.80	347.14	347.14
26	351.78	351.29	351.35	351.20	351.00	350.65	350.58	349.19	348.50	347.80	347.14	347.14
27	351.61	351.31	351.37	351.24	351.19	350.71	350.58	349.19	348.50	347.80	347.14	347.14
28	351.67	351.51	351.37	351.41	351.21	350.72	350.58	349.19	348.50	347.80	347.14	347.14
29	351.75	351.54	351.33	351.43	---	350.72	350.58	349.19	348.50	347.80	347.14	346.45
30	351.75	351.54	351.38	351.37	---	350.67	350.58	349.19	348.50	347.80	347.14	346.45
31	351.71	---	351.42	351.20	---	---	---	349.19	---	347.80	347.14	---
LOW	352.04	351.81	351.57	351.50	351.40	351.21	350.58	350.58	349.19	348.50	347.84	347.14

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347.14	346.45	346.45	345.76	---	345.62	345.62	344.93	342.85	342.09	341.40	340.70
2	347.14	346.45	346.45	346.45	346.45	345.62	345.62	344.93	342.85	342.09	341.40	340.70
3	346.45	346.45	346.45	345.76	346.45	345.62	345.62	344.93	342.85	342.09	341.40	340.70
4	346.45	346.45	346.45	345.76	346.45	345.62	345.62	344.93	342.85	342.09	341.40	340.70
5	346.45	346.45	346.45	346.45	345.76	345.62	345.62	344.93	342.78	342.09	341.40	340.70
6	347.14	346.45	346.45	346.45	345.76	345.62	345.62	344.93	342.78	342.09	341.40	340.70
7	346.45	346.45	346.45	346.45	345.76	345.62	345.62	344.24	342.78	342.09	341.40	340.70
8	346.45	346.45	346.45	346.45	345.62	346.31	345.62	344.24	342.78	342.09	341.40	340.70
9	346.45	346.45	346.45	346.45	345.62	345.62	345.62	344.24	342.78	342.09	341.40	340.70
10	346.45	346.45	346.45	345.76	345.62	345.62	345.62	344.24	342.78	342.09	341.40	340.70
11	346.45	346.45	346.45	345.76	346.31	345.62	345.62	344.24	342.78	342.09	341.40	340.70
12	346.45	346.45	346.45	346.45	346.31	345.62	345.62	344.24	342.78	342.09	341.40	340.70
13	346.45	346.45	345.76	345.76	345.62	345.62	345.62	344.24	342.78	342.09	341.40	340.70
14	346.45	346.45	345.76	345.76	345.62	345.62	345.62	343.54	342.78	342.09	341.40	340.70
15	346.45	346.45	346.45	345.76	345.62	345.62	345.62	343.54	342.78	342.09	341.40	340.70
16	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.78	341.40	341.40	340.70
17	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.78	341.40	341.40	340.70
18	346.45	346.45	346.45	346.45	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
19	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
20	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
21	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
22	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	342.09	341.40	340.70
23	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
24	346.45	346.45	346.45	345.76	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
25	346.45	346.45	346.45	---	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
26	346.45	346.45	346.45	---	345.62	345.62	344.93	343.54	342.09	341.40	341.40	340.70
27	346.45	346.45	346.45	---	345.62	345.62	344.93	342.85	342.09	341.40	341.40	340.70
28	346.45	346.45	346.45	---	346.31	345.62	344.93	343.54	342.09	341.40	341.40	340.70
29	346.45	346.45	345.76	---	346.31	345.62	344.93	342.85	342.09	341.40	341.40	340.70
30	346.45	346.45	345.76	---	---	345.62	344.93	342.85	342.09	341.40	341.40	340.70
31	346.45	---	345.76	---	---	345.62	---	342.85	---	341.40	340.70	---
LOW	347.14	346.45	346.45	346.45	346.45	346.31	345.62	344.93	342.85	342.09	341.40	340.70

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340.70	340.70	340.01	340.01	340.01	339.32	340.01	339.32	---	---	---	---
2	340.70	340.70	340.01	340.01	340.01	339.32	340.01	339.32	---	---	---	---
3	340.70	340.70	340.01	340.01	340.01	339.32	340.01	339.32	---	---	---	---
4	340.70	340.70	340.01	340.01	340.01	340.01	340.01	340.01	---	---	---	---
5	340.70	340.70	340.01	340.01	340.01	340.01	339.32	339.32	---	---	---	---
6	340.70	340.70	340.01	340.01	340.01	340.01	339.32	339.32	---	---	---	---
7	340.70	340.01	340.01	340.01	340.01	340.01	340.01	339.32	---	---	---	---
8	340.70	340.70	340.01	340.01	340.01	340.01	340.01	339.32	---	---	---	---
9	340.70	340.70	340.01	340.01	340.01	340.01	340.01	339.32	---	---	---	---
10	340.70	340.70	340.01	340.01	340.01	340.01	340.01	339.32	336.50	---	---	---
11	340.70	340.70	340.01	340.01	340.01	340.01	340.01	339.32	---	---	---	---
12	340.70	340.70	340.01	340.01	340.01	340.01	340.01	338.62	---	---	---	333.93
13	340.70	340.70	340.01	340.01	339.32	340.01	340.01	338.62	---	---	---	---
14	340.70	340.70	340.01	340.01	340.01	340.01	339.32	338.62	---	---	---	---
15	340.70	340.01	340.70	340.01	340.01	340.01	340.01	338.62	---	---	---	---
16	340.70	340.01	340.01	340.01	340.01	339.32	340.01	338.62	---	---	---	---
17	340.70	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	---
18	340.70	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	333.80
19	340.01	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	---
20	340.01	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	334.18
21	340.70	340.01	340.01	340.01	340.01	340.01	339.32	337.93	---	---	---	334.18
22	340.70	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	333.48
23	340.70	340.01	340.01	340.01	340.01	340.01	340.01	337.93	---	---	---	333.48
24	340.70	340.70	340.01	340.01	340.01	340.01	340.01	---	---	---	---	333.48
25	340.01	340.70	340.01	340.01	340.01	340.01	340.01	---	---	---	334.90	333.48
26	340.01	340.70	340.01	340.01	340.01	340.01	340.01	---	---	---	---	333.48
27	340.70	340.70	340.01	340.01	339.32	340.01	340.01	---	---	---	---	333.48
28	340.70	340.01	340.01	340.01	339.32	340.01	339.32	---	---	---	---	333.48
29	340.01	340.01	340.01	340.01	---	340.01	339.32	---	---	---	---	333.48
30	340.01	340.01	340.01	340.01	---	340.01	339.32	---	---	---	---	333.48
31	340.70	---	340.01	340.01	---	340.01	---	---	---	---	---	---
LOW	340.70	340.70	340.70	340.01	340.01	340.01	340.01	340.01	336.50	---	334.90	334.18

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333.62	333.22	332.87	332.60	332.39	332.25	332.04	331.63	330.86	330.29	329.46	329.12
2	333.55	333.29	332.94	332.46	332.32	332.32	332.18	331.56	330.80	330.16	329.46	328.98
3	333.35	333.36	332.94	332.53	332.46	332.25	332.25	331.49	330.86	330.16	329.46	329.02
4	333.41	333.22	332.80	332.53	332.32	332.11	332.25	331.35	330.80	330.16	329.46	328.98
5	333.41	333.36	332.94	332.46	332.25	332.11	332.04	331.35	330.80	330.09	329.53	328.98
6	333.48	333.36	332.87	332.60	332.39	332.18	332.04	331.28	330.86	330.09	329.46	328.98
7	333.35	333.29	332.67	332.60	332.32	332.18	332.04	331.28	330.86	330.16	329.39	329.05
8	333.14	333.15	332.60	332.39	332.25	332.32	332.11	331.28	330.66	330.09	329.32	328.91
9	333.35	333.29	332.60	332.39	332.32	332.39	332.18	331.28	330.73	330.09	329.39	328.91
10	333.41	333.15	332.80	332.46	332.39	332.39	332.25	331.28	330.66	330.02	329.46	328.84
11	333.21	333.01	333.01	332.39	332.46	332.53	332.18	331.21	330.59	330.02	329.39	328.91
12	333.00	333.01	333.08	332.39	332.46	332.39	331.83	331.07	330.66	329.88	329.39	328.91
13	333.21	332.87	333.01	332.46	332.32	332.32	331.90	331.14	330.73	329.88	329.39	328.77
14	333.41	332.94	333.01	332.53	332.32	332.39	332.04	331.07	330.59	329.81	329.32	328.77
15	333.55	333.15	332.87	332.46	332.18	332.39	332.04	331.07	330.66	329.88	329.19	328.91
16	333.62	333.22	332.87	332.39	332.18	332.32	332.04	331.21	330.52	329.95	329.12	328.91
17	333.48	333.15	332.80	332.46	332.25	332.18	332.11	331.14	330.57	329.88	329.12	328.84
18	333.28	333.08	332.74	332.46	332.18	332.18	332.11	331.14	330.57	329.81	329.19	328.77
19	333.41	333.08	332.80	332.53	332.32	332.32	332.04	331.21	330.36	329.74	329.12	328.56
20	333.41	332.94	332.80	332.18	332.32	332.32	332.11	331.21	330.36	329.67	329.32	328.70
21	333.41	332.94	332.53	332.39	332.25	332.25	332.25	331.14	330.43	329.67	329.26	328.77
22	333.21	332.94	332.67	332.46	332.11	332.18	332.25	331.00	330.50	329.74	329.19	328.77
23	333.00	333.01	332.67	332.46	332.25	332.18	332.11	331.00	330.36	329.74	329.12	328.77
24	333.00	333.01	332.60	332.39	332.32	332.18	331.90	331.00	330.29	329.67	328.98	328.77
25	333.21	332.94	332.67	332.39	331.97	332.11	331.77	331.07	330.29	329.67	329.12	328.63
26	333.14	333.01	332.74	332.53	331.90	332.04	331.90	331.00	330.23	329.67	329.05	328.56
27	333.07	332.67	332.67	332.53	332.04	332.04	331.97	330.93	330.23	329.74	329.05	328.77
28	333.07	332.87	332.60	332.46	332.18	332.04	332.04	331.00	330.29	329.60	329.19	328.77
29	333.00	333.01	332.60	332.53	---	332.04	331.90	331.07	330.29	329.53	329.19	328.77
30	332.93	333.01	332.60	332.39	---	332.04	331.77	330.86	330.36	329.53	329.12	328.70
31	333.08	---	332.74	332.39	---	332.04	---	330.93	---	329.53	329.05	---
LOW	333.62	333.36	333.08	332.60	332.46	332.53	332.25	331.63	330.86	330.29	329.53	329.12

SITE NUMBER FROM LOCATION MAP.—37.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N8E19AAAB.

SITE ID (STATION NUMBER).—440216103114101.

OTHER IDENTIFIERS.—PE-95B and Scales.

LOCATION.—Lat 44°02′15.6″, long 103°11′41.4″, in NW1/4NE1/4NE1/4NE1/4 sec. 19, T. 1 N., R. 8 E., Hydrologic Unit 10120110, 1 mi south of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Inyan Kara.

WELL CHARACTERISTICS.—Drilled observation well, 600 ft deep with 560 ft of 5-in. steel casing; 3-in., 18-slot, schedule 80 well screen from 560 to 600 ft.

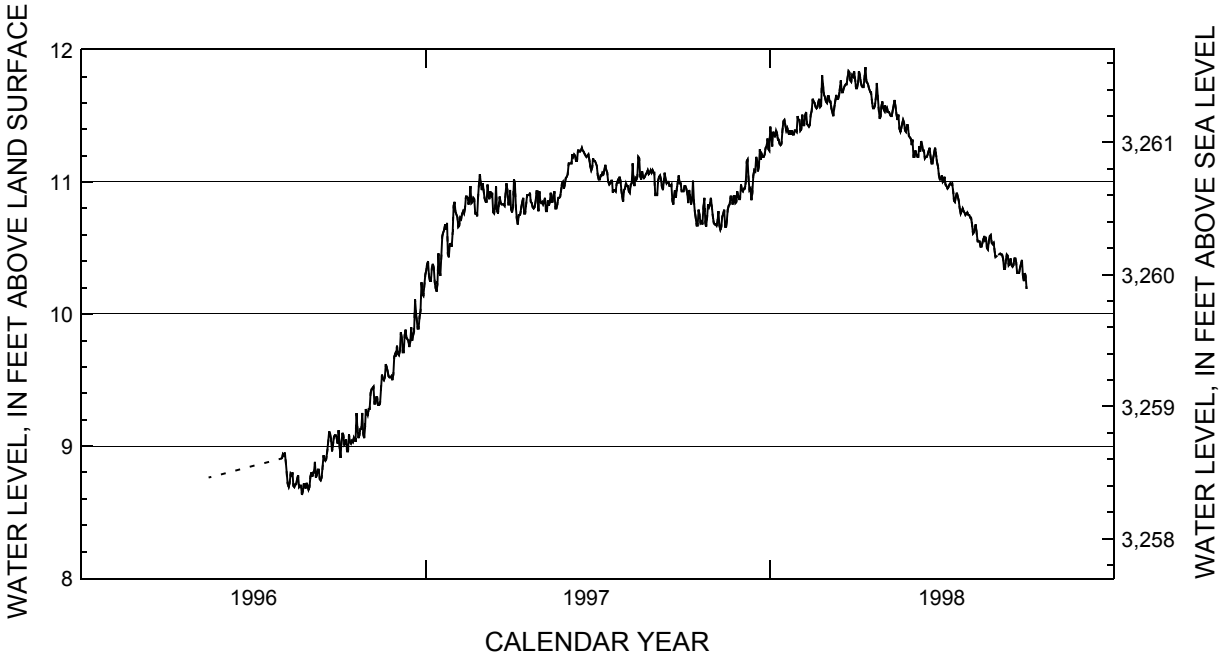
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,249.7 ft above sea level. Measuring point: Top of steel casing, 1.50 ft above land-surface datum.

REMARKS.—Records fair.

PERIOD OF RECORD.—May 1996 to September 1998.

EXTREMES.—Highest daily water level, 11.87 ft above land-surface datum, Apr. 12, 1998; lowest daily water level, 8.74 ft above land-surface datum, Sept. 11, 1996.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	+8.91	+8.80
2	---	---	---	---	---	---	---	---	---	---	+8.94	+8.77
3	---	---	---	---	---	---	---	---	---	---	+8.93	+8.80
4	---	---	---	---	---	---	---	---	---	---	+8.95	+8.80
5	---	---	---	---	---	---	---	---	---	---	+8.88	+8.88
6	---	---	---	---	---	---	---	---	---	---	+8.79	+8.76
7	---	---	---	---	---	---	---	---	---	---	+8.71	+8.78
8	---	---	---	---	---	---	---	---	---	---	+8.69	+8.82
9	---	---	---	---	---	---	---	---	---	---	+8.72	+8.82
10	---	---	---	---	---	---	---	---	---	---	+8.79	+8.75
11	---	---	---	---	---	---	---	---	---	---	+8.78	+8.74
12	---	---	---	---	---	---	---	---	---	---	+8.80	+8.76
13	---	---	---	---	---	---	---	---	---	---	+8.70	+8.84
14	---	---	---	---	---	---	---	---	---	---	+8.69	+8.93
15	---	---	---	---	---	---	---	e+8.76	---	---	+8.71	+8.90
16	---	---	---	---	---	---	---	---	---	---	+8.71	+8.89
17	---	---	---	---	---	---	---	---	---	---	+8.75	e+8.90
18	---	---	---	---	---	---	---	---	---	---	+8.78	+8.96
19	---	---	---	---	---	---	---	---	---	---	+8.69	+9.03
20	---	---	---	---	---	---	---	---	---	---	+8.70	+9.11
21	---	---	---	---	---	---	---	---	---	---	+8.70	+9.09
22	---	---	---	---	---	---	---	---	---	---	+8.63	+9.05
23	---	---	---	---	---	---	---	---	---	---	+8.66	+8.96
24	---	---	---	---	---	---	---	---	---	---	+8.71	+9.01
25	---	---	---	---	---	---	---	---	---	---	+8.71	+9.07
26	---	---	---	---	---	---	---	---	---	---	+8.68	+9.08
27	---	---	---	---	---	---	---	---	---	---	+8.72	+9.08
28	---	---	---	---	---	---	---	---	---	---	+8.70	+9.06
29	---	---	---	---	---	---	---	---	---	---	+8.67	+9.02
30	---	---	---	---	---	---	---	---	---	---	+8.69	+9.12
31	---	---	---	---	---	---	---	---	---	e+8.91	+8.77	---
LOW	---	---	---	---	---	---	---	+8.76	---	+8.91	+8.63	+8.74

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+9.00	+9.28	+9.76	+10.33	+10.77	+10.94	+10.79	+10.93	+11.14	+11.12	+10.99	+10.90
2	+8.91	+9.28	+9.70	+10.38	+10.75	+10.99	+10.77	+10.85	+11.14	+11.05	+10.97	+10.90
3	+9.03	+9.40	+9.69	+10.40	+10.73	+10.93	+10.81	+10.84	+11.14	+11.02	+10.97	+10.90
4	+9.10	+9.43	+9.72	+10.29	+10.66	+10.87	+11.02	+10.85	+11.14	+11.02	+10.93	+11.01
5	+9.08	+9.44	+9.86	+10.25	+10.67	+10.85	+10.99	+10.83	+11.21	+11.05	+10.92	+11.04
6	+9.01	+9.45	+9.82	+10.25	+10.73	+10.85	+10.81	+10.85	+11.19	+11.05	+10.98	+11.05
7	+9.02	+9.32	+9.71	+10.35	+10.72	+10.98	+10.72	+10.88	+11.21	+11.07	+10.99	+11.02
8	+9.05	+9.32	+9.71	+10.38	+10.76	+10.89	+10.68	+10.78	+11.20	+11.06	+11.14	+10.96
9	+8.96	+9.37	+9.84	+10.35	+10.78	+10.87	+10.75	+10.78	+11.16	+11.09	+11.01	+10.94
10	+8.96	+9.37	+9.88	+10.24	+10.76	+10.93	+10.75	+10.86	+11.16	+11.13	+10.97	+11.01
11	+9.09	+9.31	+9.82	+10.19	+10.80	+10.90	+10.76	+10.82	+11.24	+11.09	+11.03	+11.07
12	+9.03	+9.31	+9.81	+10.17	+10.89	+10.92	+10.81	+10.85	+11.24	+11.07	+11.02	+11.02
13	+9.02	+9.32	+9.80	+10.23	+10.89	+10.77	+10.85	+10.92	+11.23	+11.00	+11.04	+10.99
14	+9.04	+9.44	+9.75	+10.46	+10.88	+10.76	+10.88	+10.85	+11.24	+10.98	+11.19	+11.00
15	+9.03	+9.54	+9.79	+10.31	+10.83	+10.81	+10.76	+10.85	+11.26	+10.99	+11.18	+11.00
16	+9.06	+9.51	+9.90	+10.29	+10.86	+10.97	+10.76	+10.90	+11.24	+11.01	+11.04	+10.97
17	+9.04	+9.50	+9.80	+10.43	+10.97	+10.78	+10.83	+10.93	+11.23	+11.01	+11.02	+10.97
18	+9.04	+9.52	+9.84	+10.59	+10.84	+10.76	+10.90	+10.80	e+11.21	+10.92	+11.08	+10.98
19	+9.25	+9.62	+9.87	+10.62	+10.85	+10.83	+10.90	+10.80	+11.20	+10.94	+11.04	+10.86
20	+9.13	e+9.60	+10.11	+10.64	+10.88	+10.89	+10.90	+10.83	+11.19	+10.94	+11.03	+10.83
21	+9.06	+9.57	+10.01	+10.68	+10.87	+10.84	+10.92	+10.88	+11.20	+10.93	+11.04	+10.90
22	+9.08	+9.53	+9.96	+10.64	+10.76	+10.83	+10.85	+10.88	+11.21	+10.99	+11.06	+10.94
23	+9.13	+9.52	+9.89	+10.69	+10.76	+10.83	+10.84	+10.89	+11.17	+11.01	+11.07	+10.88
24	+9.13	+9.52	+9.89	+10.45	+10.74	+10.83	+10.81	+10.94	+11.12	+10.99	+11.09	+10.95
25	+9.25	+9.53	+9.98	+10.43	+10.89	+10.82	+10.80	+10.99	+11.09	+11.04	+11.06	+11.00
26	+9.09	+9.50	+10.02	+10.53	+10.98	+10.90	+10.81	+11.00	+11.11	+11.01	+11.07	+11.05
27	+9.06	+9.54	+10.24	e+10.53	+11.06	+10.99	+10.85	+10.95	+11.18	+10.93	+11.09	+10.99
28	+9.15	+9.68	+10.15	+10.51	+10.99	+10.94	+10.93	+10.98	+11.16	+10.88	+11.07	+10.99
29	+9.28	+9.70	+10.14	+10.62	---	+10.83	+10.93	+11.03	+11.16	+10.85	+11.09	+10.93
30	+9.25	+9.68	+10.22	+10.82	---	+10.83	+10.78	+11.04	+11.14	+10.94	+11.07	+10.93
31	+9.23	---	+10.30	+10.85	---	+10.94	---	+11.06	---	+10.95	+11.07	---
LOW	+8.91	+9.28	+9.69	+10.17	+10.66	+10.76	+10.68	+10.78	+11.09	+10.85	+10.92	+10.83

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+10.93	+10.74	+10.98	+11.42	+11.47	+11.61	+11.78	+11.56	+11.32	+11.02	+10.73	---
2	+10.97	+10.69	+10.94	+11.36	+11.39	+11.60	+11.71	+11.54	+11.19	+11.05	+10.73	+10.46
3	+10.97	+10.68	+10.93	+11.27	+11.40	+11.65	+11.71	+11.58	+11.19	+11.00	+10.68	+10.45
4	+10.95	+10.68	+10.95	+11.38	+11.51	+11.65	+11.75	+11.54	+11.24	+11.01	+10.61	+10.45
5	+10.92	+10.67	+10.95	+11.36	+11.43	+11.61	+11.84	+11.56	+11.21	+11.04	+10.62	+10.42
6	+10.84	+10.70	+11.00	+11.34	+11.43	+11.61	+11.81	+11.53	+11.19	+10.98	+10.65	+10.34
7	+10.94	+10.78	+11.16	+11.39	+11.51	+11.56	+11.76	+11.53	+11.19	+10.97	+10.68	+10.34
8	+10.89	+10.67	+11.17	+11.37	+11.53	+11.53	+11.73	+11.51	+11.27	+10.95	+10.62	+10.40
9	+10.83	+10.64	+11.03	+11.32	+11.44	+11.50	+11.72	+11.50	+11.23	+10.96	+10.55	+10.45
10	+10.87	+10.66	+10.94	+11.32	+11.43	e+11.56	+11.72	+11.50	+11.31	+10.98	+10.55	+10.44
11	+11.01	+10.74	+10.95	+11.29	+11.42	e+11.61	+11.79	+11.54	+11.28	+10.99	+10.55	+10.37
12	+10.85	+10.76	e+10.86	+11.28	+11.43	+11.66	+11.87	+11.58	+11.24	+10.98	+10.51	+10.38
13	+10.77	+10.79	e+10.92	+11.29	+11.51	+11.63	+11.76	+11.62	+11.24	+10.99	+10.51	+10.42
14	+10.73	+10.66	+11.05	+11.39	+11.54	+11.63	+11.75	+11.57	+11.18	+10.93	+10.54	+10.37
15	+10.67	+10.66	+11.09	+11.46	+11.63	+11.66	+11.73	+11.51	+11.19	+10.86	+10.57	+10.36
16	+10.67	+10.70	+11.08	+11.47	+11.61	+11.71	+11.70	+11.47	+11.19	+10.85	+10.59	+10.37
17	+10.79	+10.79	+11.19	+11.43	+11.60	+11.77	+11.68	+11.51	+11.21	+10.89	+10.56	+10.42
18	+10.75	+10.82	+11.16	+11.39	+11.57	+11.68	+11.68	+11.40	+11.24	+10.92	+10.57	+10.42
19	+10.69	+10.83	+11.08	+11.41	+11.56	+11.68	+11.61	+11.38	+11.26	+10.89	+10.50	+10.39
20	+10.70	+10.89	+11.12	+11.38	+11.57	+11.71	+11.56	+11.41	+11.19	+10.86	+10.49	+10.31
21	+10.68	+10.89	+11.25	+11.36	+11.61	+11.73	+11.56	+11.44	+11.14	+10.80	+10.55	+10.31
22	+10.81	+10.83	+11.17	+11.39	+11.63	+11.74	+11.58	+11.47	+11.14	+10.76	+10.59	+10.31
23	+10.88	+10.85	+11.21	+11.36	+11.57	+11.74	+11.64	+11.45	+11.18	+10.78	+10.60	+10.35
24	+10.69	+10.90	+11.19	+11.39	+11.58	+11.79	+11.75	+11.39	+11.22	+10.80	+10.54	+10.38
25	+10.66	+10.84	+11.19	+11.36	+11.81	+11.84	+11.64	+11.38	+11.26	+10.78	+10.53	+10.41
26	+10.73	+10.85	+11.21	+11.36	+11.73	+11.83	+11.55	+11.43	+11.21	+10.77	e+10.54	+10.29
27	+10.83	+10.93	+11.26	+11.39	+11.66	+11.77	+11.48	+11.43	+11.15	+10.75	+10.48	+10.25
28	+10.81	+10.90	+11.27	+11.39	+11.64	+11.76	+11.50	+11.35	+11.12	+10.76	+10.43	+10.31
29	+10.83	+10.87	+11.33	+11.38	---	+11.81	+11.57	+11.34	+11.05	+10.77	---	+10.29
30	+10.88	+10.87	+11.25	+11.50	---	+11.80	+11.61	+11.33	+11.02	+10.75	---	+10.19
31	+10.81	---	+11.24	+11.47	---	+11.84	---	+11.28	---	+10.75	---	---
LOW	+10.66	+10.64	+10.86	+11.27	+11.39	+11.50	+11.48	+11.28	+11.02	+10.75	+10.43	+10.19

e Estimated

SITE NUMBER FROM LOCATION MAP.—38.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E29CADD.

SITE ID (STATION NUMBER).—440052103181201.

OTHER IDENTIFIERS.—PE-84A and Countryside.

LOCATION.—Lat 44°00′53.6″, long 103°18′10.4″, in SE1/4SE1/4NE1/4SW1/4 sec. 29, T. 1 N., R. 7 E., Hydrologic Unit 10120110, 3 mi southwest of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled observation well, 940 ft deep with 895 ft of 5-in. steel casing; open hole from 895 to 940 ft.

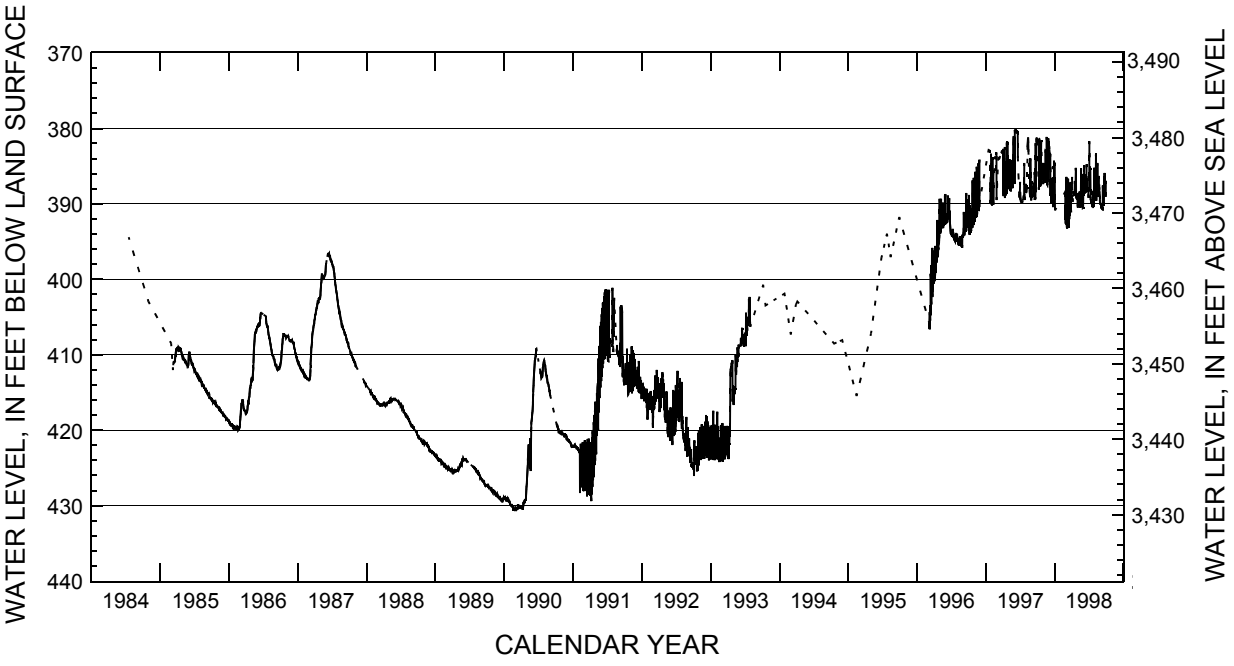
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,861.2 ft above sea level. Measuring point: Top of steel casing, 1.50 ft above land-surface datum.

REMARKS.—Available records fair. Water levels affected by pumping of nearby well since 1991.

PERIOD OF RECORD.—July 1984 to September 1998.

EXTREMES.—Highest daily water level, 380.12 ft below land-surface datum, June 6, 1997; lowest daily water level, 430.60 ft below land-surface datum, Feb. 27, 1990.



SITE NUMBER 38—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e408.06	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	e407.16	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	e415.46	---	---	---	---	---	e397.06	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	e408.52	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	e393.96	---	---
27	---	---	---	---	---	---	---	---	e397.16	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	e391.75
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	408.52	---	408.06	---	415.46	---	---	407.16	397.16	393.96	397.06	391.75

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	400.19	393.89	391.69	393.98	393.99	394.46
2	---	---	---	---	---	---	396.23	392.27	391.36	394.08	394.62	394.38
3	---	---	---	---	---	---	400.17	393.84	392.04	393.79	394.80	394.30
4	---	---	---	---	---	---	400.23	391.93	391.32	394.00	394.87	394.00
5	---	---	---	---	---	---	399.44	393.90	391.32	394.21	394.95	393.19
6	---	---	---	---	---	---	399.44	393.65	391.27	394.37	395.16	391.11
7	---	---	---	---	---	405.86	399.42	390.20	391.38	393.50	395.31	393.26
8	---	---	---	---	---	406.53	395.60	393.20	391.77	394.15	395.39	393.97
9	---	---	---	---	---	404.36	397.89	389.35	392.45	393.77	395.38	394.15
10	---	---	---	---	---	406.60	399.18	393.27	392.41	393.32	394.53	393.88
11	---	---	---	---	---	404.48	395.74	390.08	392.18	394.28	394.65	393.45
12	---	---	---	---	---	405.46	397.65	393.13	391.90	393.79	395.22	393.05
13	---	---	---	---	---	403.51	395.95	392.04	391.72	394.40	395.51	393.16
14	---	---	---	---	---	404.77	397.79	393.04	388.90	394.42	395.27	391.97
15	---	---	---	---	---	399.28	395.75	392.84	391.57	394.17	395.36	393.31
16	---	---	---	---	---	403.98	397.52	392.84	390.74	394.25	394.36	393.66
17	---	---	---	---	---	400.51	392.70	392.53	391.59	394.62	394.76	392.68
18	---	---	---	---	---	403.31	397.00	389.86	390.99	394.81	394.90	393.39
19	---	---	---	---	---	398.19	392.15	392.98	391.35	394.61	395.14	388.59
20	---	---	---	---	---	402.11	396.79	393.21	389.28	394.68	394.31	392.60
21	---	---	---	---	---	396.44	397.03	390.32	392.04	394.94	394.69	391.94
22	---	---	---	---	---	401.68	397.05	392.93	391.31	394.99	395.18	393.13
23	---	---	---	---	---	395.86	395.84	390.22	390.93	394.69	395.43	393.07
24	---	---	---	---	---	402.32	396.03	392.91	391.66	394.92	395.43	389.80
25	---	---	---	---	---	396.48	395.14	391.11	392.32	394.74	395.54	393.01
26	---	---	---	---	---	401.41	394.59	392.65	392.86	395.00	395.68	390.13
27	---	---	---	---	---	399.02	395.32	391.83	393.20	393.88	395.57	392.44
28	---	---	---	---	---	400.42	394.58	392.73	393.58	394.89	395.63	390.88
29	---	---	---	---	---	400.13	394.44	388.91	393.84	394.19	395.78	393.16
30	---	---	---	---	---	400.59	389.34	391.98	393.86	394.88	394.10	392.69
31	---	---	---	---	---	399.25	---	388.77	---	394.35	394.33	---
LOW	---	---	---	---	---	406.60	400.23	393.90	393.86	395.00	395.78	394.46

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389.40	392.36	---	---	390.08	---	---	384.58	381.26	388.89	387.36	---
2	393.56	389.59	---	---	388.15	---	383.20	384.31	387.32	387.10	388.55	387.00
3	388.85	392.19	---	---	390.18	---	388.74	384.31	384.28	---	388.40	389.17
4	392.74	392.19	---	---	389.64	---	382.75	388.03	380.20	388.73	388.48	389.11
5	393.69	387.30	---	---	---	---	388.95	384.85	380.49	389.52	---	---
6	394.09	391.59	---	---	---	---	387.52	384.30	380.12	389.57	---	---
7	393.00	385.75	---	---	383.86	383.91	---	384.10	380.32	389.74	387.94	---
8	390.22	391.69	---	---	390.08	---	---	384.31	380.32	389.49	387.94	---
9	393.39	388.70	---	---	385.87	---	---	384.31	380.33	389.65	---	387.67
10	391.80	391.82	---	---	390.07	---	---	388.22	380.52	389.79	382.47	389.05
11	393.21	391.10	---	---	387.50	---	382.50	384.31	380.52	389.88	381.91	---
12	393.18	390.99	---	---	---	---	389.18	385.32	380.29	389.89	381.32	---
13	393.67	391.65	---	---	---	---	386.92	387.57	380.32	389.88	381.32	---
14	393.81	385.10	---	---	---	384.01	388.40	388.32	380.36	---	381.91	---
15	393.49	391.43	---	382.86	---	---	384.74	387.96	380.37	---	383.11	---
16	393.60	---	---	---	---	---	388.78	384.31	380.53	---	---	385.79
17	390.77	---	---	---	---	---	388.78	384.31	380.53	---	---	389.48
18	393.22	---	---	---	---	---	---	384.31	380.33	---	---	---
19	390.60	---	---	---	383.70	---	---	384.30	380.54	---	---	---
20	392.89	390.43	---	---	---	---	388.53	384.30	384.00	389.18	---	389.18
21	391.09	384.64	---	---	384.08	---	388.54	384.30	---	389.01	---	389.20
22	393.14	---	---	382.92	---	---	381.89	387.83	---	389.01	388.15	381.97
23	386.89	385.55	---	---	---	---	388.27	387.83	---	389.46	388.58	383.25
24	392.62	390.84	---	---	---	---	381.89	384.31	---	384.64	389.10	388.43
25	387.06	390.84	---	389.80	---	---	381.89	384.27	---	---	388.93	385.50
26	392.49	386.96	---	386.43	383.18	---	381.89	387.32	---	388.98	384.00	381.43
27	389.39	390.40	---	---	389.47	382.92	388.01	381.90	388.72	389.47	388.28	381.33
28	392.79	384.17	---	---	---	---	384.30	381.32	388.99	---	389.21	381.32
29	386.56	389.84	---	383.37	---	383.15	384.19	381.02	389.08	---	389.08	381.40
30	392.71	---	---	389.62	---	---	387.54	387.32	389.13	---	389.52	381.91
31	387.06	---	---	384.65	---	383.12	---	381.03	---	388.09	389.22	---
LOW	394.09	392.36	---	389.80	390.18	384.01	389.18	388.32	389.13	389.89	389.52	389.48

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	387.25	385.35	384.63	---	392.61	---	389.32	390.48	389.14	388.56	389.98
2	---	387.25	384.13	389.06	---	389.95	---	389.05	390.49	---	385.40	389.89
3	---	---	---	390.86	---	392.51	388.19	390.22	386.03	387.96	387.71	390.09
4	---	---	382.37	---	---	386.45	386.45	390.47	388.89	388.33	388.60	390.14
5	---	387.07	---	---	---	392.77	---	389.80	388.82	381.74	388.00	390.27
6	---	384.64	383.10	---	---	389.72	389.23	388.60	388.82	---	386.65	390.52
7	---	386.85	---	---	---	393.10	389.72	390.09	385.38	---	388.94	390.52
8	---	384.78	383.33	---	---	393.24	---	390.23	384.91	---	383.35	390.36
9	388.12	---	388.88	---	---	392.85	---	389.75	---	385.34	387.17	390.02
10	387.11	---	383.40	---	---	392.87	---	388.75	387.93	385.34	389.56	390.55
11	381.47	387.02	---	---	---	390.81	388.69	390.06	388.61	388.44	388.32	390.69
12	381.41	387.18	---	---	---	392.70	388.33	---	388.05	389.41	388.51	390.71
13	381.42	382.89	389.61	---	---	386.68	388.86	389.33	388.50	389.46	---	390.74
14	385.02	---	389.85	---	---	392.66	388.68	388.39	388.00	389.83	387.89	387.60
15	384.56	382.90	389.34	---	---	392.07	388.47	388.83	388.26	389.95	388.93	389.87
16	---	387.08	387.36	---	---	393.11	---	389.70	388.45	389.74	384.61	389.81
17	387.68	383.87	389.12	---	---	389.10	388.76	389.62	386.68	389.97	388.93	389.93
18	385.61	---	386.60	---	---	392.47	386.99	390.41	387.95	390.04	389.06	389.92
19	381.99	381.15	389.84	---	---	387.68	388.39	390.42	384.80	390.14	388.78	389.96
20	387.54	386.94	387.69	---	---	392.02	388.89	389.90	---	390.13	387.32	390.22
21	384.87	384.72	---	---	---	389.52	388.63	388.77	---	390.39	388.62	386.37
22	381.66	387.43	385.04	---	---	391.62	388.39	385.32	388.40	390.30	388.55	388.68
23	381.66	387.50	---	---	---	390.44	385.23	388.72	---	390.44	388.50	385.90
24	---	387.12	---	---	---	391.43	385.50	388.27	387.98	388.88	388.32	388.79
25	---	385.38	390.32	---	388.46	387.78	389.14	388.77	386.60	388.28	386.34	387.17
26	---	387.05	390.42	---	388.73	390.88	389.21	388.76	---	389.52	---	388.94
27	---	385.17	387.47	---	392.15	387.12	---	389.45	---	389.97	387.76	388.82
28	386.75	381.33	390.12	---	390.71	390.73	389.27	389.61	388.09	390.31	388.72	389.05
29	384.58	382.31	384.31	---	---	390.59	389.36	388.96	389.07	390.28	389.02	388.85
30	386.85	381.72	390.39	---	---	391.11	389.47	389.84	389.07	389.14	389.79	386.94
31	385.80	---	384.55	---	---	---	---	390.52	---	385.21	389.92	---
LOW	388.12	387.50	390.42	390.86	392.15	393.24	389.72	390.52	390.49	390.44	389.92	390.74

SITE NUMBER FROM LOCATION MAP.—39.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E18AAAD.

SITE ID (STATION NUMBER).—440308103184601.

OTHER IDENTIFIERS.—PE-96A and Cleghorn.

LOCATION.—Lat 44°03′08.5″, long 103°18′47.5″, in SE1/4NE1/4NE1/4NE1/4 sec. 18, T. 1 N., R. 7 E., Hydrologic Unit 10120110, 1 mi west of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 200 ft deep with 90 ft of 5-in. steel casing; open hole from 90 to 200 ft.

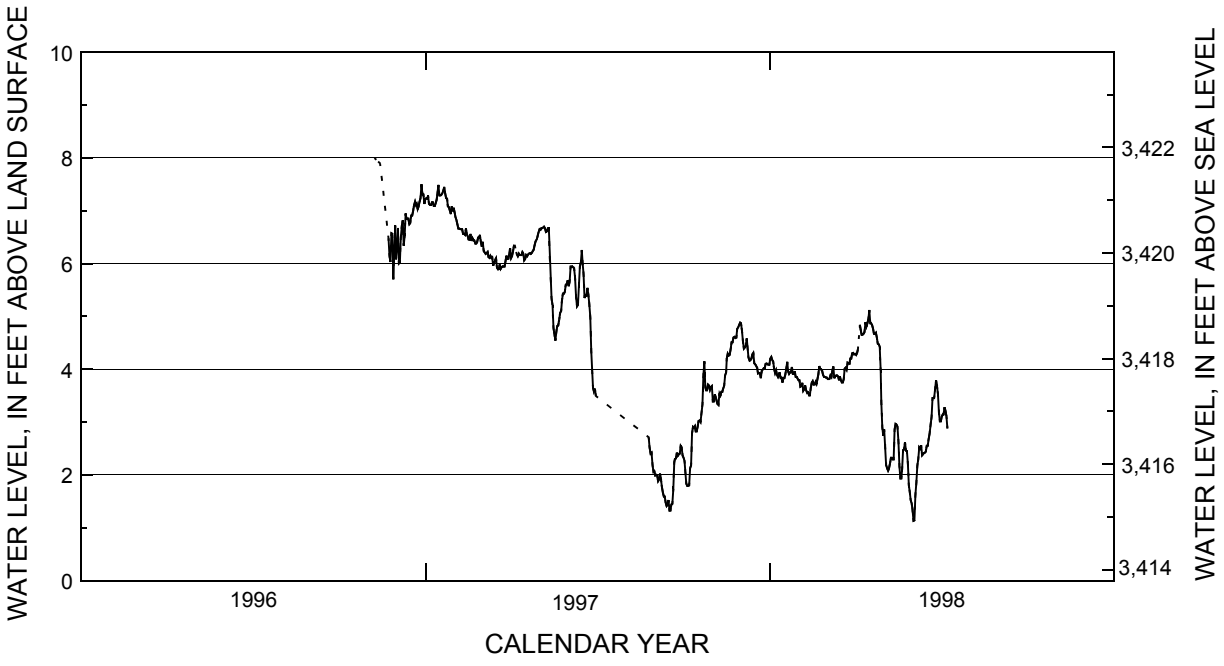
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,415.4 ft above sea level. Measuring point: Top of steel casing, 1.65 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—November 1996 to September 1998.

EXTREMES.—Highest daily water level, 8.0 ft (estimated) above land-surface datum, Nov. 7, 1996; lowest daily water level, 1.13 ft above land-surface datum, June 2, 1998.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	+6.29	+7.24	+6.87	+6.32	+6.11	+6.65	+5.57	---	---	+1.99
2	---	---	+6.67	+7.23	+6.82	+6.41	+6.15	+6.64	+5.66	---	---	+2.00
3	---	---	+6.00	+7.29	+6.74	+6.24	+6.23	+6.67	+5.94	---	---	+1.99
4	---	---	+6.02	+7.13	+6.66	+6.21	+6.34	+6.67	+5.94	---	---	+1.88
5	---	---	+6.50	+7.11	+6.66	+6.18	+6.34	+6.68	+5.95	---	---	+1.91
6	---	---	+6.71	+7.11	+6.65	+6.20	---	+6.70	+5.93	---	---	+2.02
7	---	e+8.0	+6.82	+7.16	+6.65	+6.22	+6.17	+6.67	+5.91	---	---	+1.91
8	---	---	+6.34	+7.16	+6.65	+6.12	+6.14	+6.60	+5.73	---	---	+1.76
9	---	---	+6.53	+7.09	+6.56	+6.11	+6.19	+6.61	+5.37	---	---	+1.66
10	---	---	+6.95	+7.09	+6.56	+6.15	+6.16	+6.67	+5.19	---	---	+1.59
11	---	---	+6.85	+7.15	+6.54	+6.11	+6.16	+6.67	+5.22	---	---	+1.59
12	---	---	+6.85	+7.21	+6.66	+6.12	+6.16	+6.09	+5.60	---	---	+1.48
13	---	e+7.9	+6.85	+7.33	+6.55	+5.96	+6.22	+5.69	+5.95	---	---	+1.41
14	---	---	+6.75	+7.49	+6.51	+6.01	+6.19	+5.34	+6.02	---	---	+1.44
15	---	---	+6.77	+7.29	+6.46	+6.07	+6.06	+5.22	+6.26	---	---	+1.52
16	---	---	+6.91	+7.29	+6.45	+6.10	+6.09	+4.78	+6.02	---	---	+1.32
17	---	---	+6.91	+7.30	+6.56	+5.92	+6.16	+4.66	+5.80	---	---	+1.32
18	---	---	+7.00	+7.33	+6.43	+5.89	+6.14	+4.54	+5.35	---	---	+1.44
19	---	---	+7.11	+7.39	+6.48	+5.90	+6.17	+4.71	+5.40	---	---	+1.45
20	---	---	+7.17	+7.45	+6.44	+5.98	+6.19	+4.82	+5.39	---	---	+1.73
21	---	---	+7.11	+7.33	+6.44	+5.90	+6.20	+4.83	+5.54	---	---	+2.24
22	---	+6.48	+7.13	+7.24	+6.38	+5.93	+6.18	+4.94	+5.41	---	---	+2.30
23	---	+6.15	+7.03	+7.23	+6.38	+5.95	+6.20	+5.07	+5.23	---	---	+2.31
24	---	+6.03	+7.08	+7.08	+6.41	+5.94	+6.24	+5.10	+4.99	---	---	+2.42
25	---	+6.57	+7.17	+7.07	+6.49	+5.94	+6.26	+5.30	+4.35	---	+2.71	+2.36
26	---	+6.56	+7.24	+7.00	+6.49	+6.04	+6.35	+5.43	+3.96	---	+2.51	+2.39
27	---	+5.70	+7.50	+6.94	+6.54	+6.15	+6.42	+5.43	+3.65	---	+2.40	+2.40
28	---	+6.31	+7.31	+7.08	+6.41	+6.09	+6.45	+5.47	+3.58	---	+2.42	+2.55
29	---	+6.72	+7.31	+6.99	---	+6.09	+6.51	+5.60	+3.63	---	+2.19	+2.52
30	---	+6.08	+7.13	+7.06	---	+6.18	+6.59	+5.61	+3.49	---	+2.06	+2.36
31	---	---	+7.22	+6.97	---	+6.29	---	+5.68	---	---	+2.07	---
LOW	---	+5.70	+6.00	+6.94	+6.38	+5.89	+6.06	+4.54	+3.49	---	+2.06	+1.32

WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+2.32	+3.39	+4.87	+4.20	+3.79	+3.84	+4.29	+2.74	+1.34	+3.01	---	---
2	+2.26	+3.39	+4.73	+4.23	+3.67	+3.84	+4.27	+2.86	+1.13	+3.11	---	---
3	+2.06	+3.52	+4.53	+4.17	+3.68	+3.81	+4.30	+2.53	+1.14	+3.14	---	---
4	+1.83	+3.47	+4.39	+4.15	+3.74	+3.81	+4.38	+2.18	+1.62	+3.14	---	---
5	+1.79	+3.41	+4.41	+4.01	+3.59	+3.82	---	+2.12	+1.85	+3.28	---	---
6	+1.79	+3.34	+4.45	+3.93	+3.62	+3.88	+4.84	+2.08	+2.17	+3.21	---	---
7	+1.80	+3.32	+4.58	+3.98	+3.69	+3.85	+4.75	+2.12	+2.30	+3.11	---	---
8	+2.13	+3.54	+4.40	+3.89	+3.60	+3.97	+4.65	+2.21	+2.52	+2.88	---	---
9	+2.18	+3.50	+4.21	+3.85	+3.55	+4.05	+4.65	+2.32	+2.50	---	---	---
10	+2.79	+3.57	+4.16	+3.88	+3.56	+3.83	+4.67	+2.32	+2.56	---	---	---
11	+2.91	+3.57	+4.17	+3.94	+3.50	+3.87	+4.71	+2.29	+2.37	---	---	---
12	+2.89	+3.64	+4.20	+3.84	+3.50	+3.88	+4.89	+2.29	+2.39	---	---	---
13	+2.92	+3.69	+4.28	+3.84	+3.64	+3.88	+4.81	+2.86	+2.41	---	---	---
14	+2.82	+3.89	+4.31	+3.75	+3.74	+3.86	+4.87	+2.96	+2.42	---	---	---
15	+2.82	+3.94	+4.11	+3.83	+3.77	+3.79	+4.95	+2.95	+2.44	---	---	---
16	+2.91	+4.20	+4.09	+3.83	+3.71	+3.86	+5.12	+2.91	+2.55	---	---	---
17	+3.02	+4.29	+4.06	+3.90	+3.71	+3.79	+4.87	+2.63	+2.55	---	---	---
18	+3.03	+4.26	+4.03	+4.01	+3.76	+3.75	+4.87	+2.17	+2.68	---	---	---
19	+3.00	+4.27	+3.92	+4.14	+3.72	+3.75	+4.84	+1.93	+2.78	---	---	---
20	+3.17	+4.37	+3.93	+3.95	+3.81	+3.81	+4.77	+1.93	+2.95	---	---	---
21	+3.33	+4.51	+3.92	+3.91	+3.91	+4.01	+4.67	+2.11	+3.09	---	---	---
22	+3.88	+4.51	+3.83	+3.94	+4.06	+4.03	+4.67	+2.47	+3.45	---	---	---
23	+4.15	+4.60	+3.97	+3.94	+4.00	+3.99	+4.69	+2.48	+3.45	---	---	---
24	+3.66	+4.61	+3.99	+4.04	+4.00	+4.12	+4.60	+2.62	+3.45	---	---	---
25	+3.60	+4.59	+4.02	+3.91	+3.97	+4.11	+4.48	+2.46	+3.63	---	---	---
26	+3.60	+4.60	+4.01	+3.91	+3.89	+4.10	+4.47	+2.45	+3.79	---	---	---
27	+3.71	+4.76	+4.10	+3.96	+3.85	+4.20	+4.42	+2.21	+3.68	---	---	---
28	+3.69	+4.79	+4.11	+3.85	+3.85	+4.20	+3.98	+1.80	+3.53	---	---	---
29	+3.61	+4.84	+4.09	+3.85	---	+4.30	+3.37	+1.67	+3.18	---	---	---
30	+3.66	+4.88	+4.08	+3.82	---	+4.31	+2.90	+1.51	+3.01	---	---	---
31	+3.68	---	+4.08	+3.79	---	+4.28	---	+1.45	---	---	---	---
LOW	+1.79	+3.32	+3.83	+3.75	+3.50	+3.75	+2.90	+1.45	+1.13	.36	---	---

SITE NUMBER FROM LOCATION MAP.—40.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E8DDCD.

SITE ID (STATION NUMBER).—440310103173801.

OTHER IDENTIFIER.—Chapel Lane 1.

LOCATION.—Lat 44°03′12.4″, long 103°17′41.6″, in SE1/4SW1/4SE1/4SE1/4 sec. 8, T. 1N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: Chapel Lane Water Company.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled unused production well, 360 ft deep with 360 ft of 7-in. steel casing.

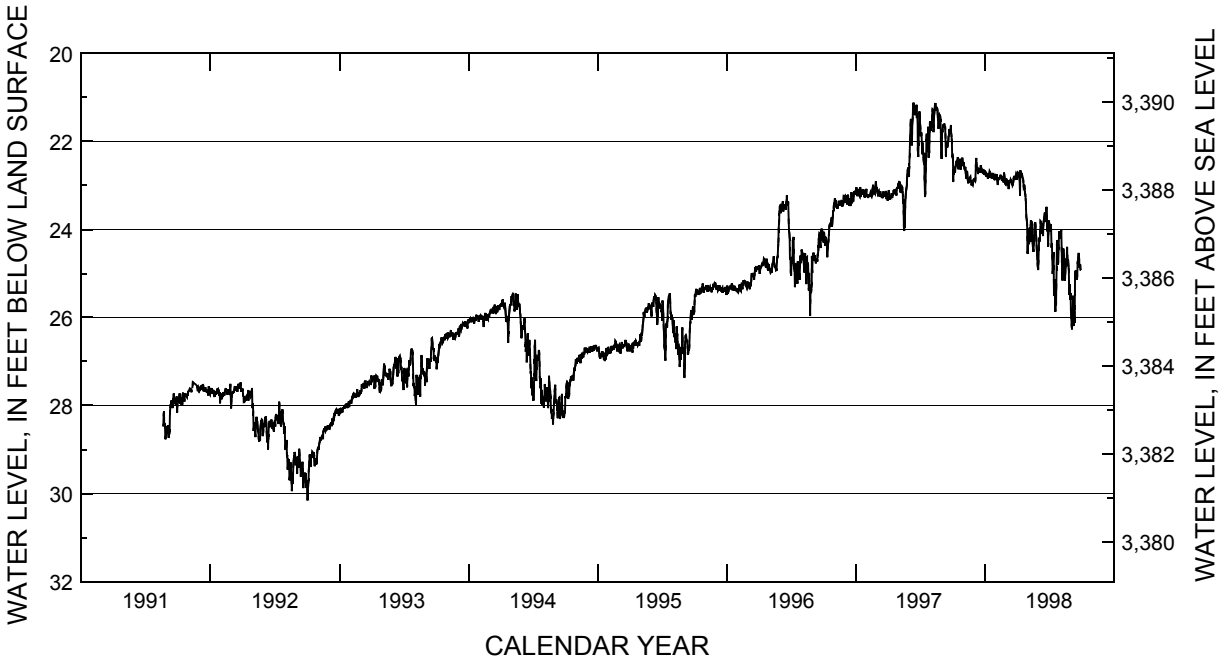
INSTRUMENTATION.—Electronic data logger with float.

DATUM.—Elevation of land-surface datum is 3,411.1 ft above sea level. Measuring point: Top of recorder platform, 2.0 ft above land-surface datum since June 2, 1997.

REMARKS.—Records good.

PERIOD OF RECORD.—August 1991 to September 1998.

EXTREMES.—Highest daily water level, 21.12 ft below land-surface datum, June 13, 1997; lowest water level, 30.16 ft below land-surface datum, Oct. 2, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.18	26.95	26.71	26.69	26.69	26.74	26.67	26.53	25.78	25.88	26.03	26.68
2	27.79	27.04	26.72	26.75	26.80	26.64	26.77	26.39	25.87	25.84	26.14	26.73
3	27.83	27.04	26.77	26.71	26.80	26.63	26.73	26.49	25.98	26.07	26.29	26.79
4	27.78	26.92	26.79	26.70	26.82	26.71	26.65	26.55	25.70	25.62	26.36	27.37
5	27.56	26.99	26.77	26.75	26.75	26.64	26.67	26.50	25.70	25.68	26.07	27.11
6	27.50	26.96	26.73	26.83	26.72	26.67	26.68	26.35	25.66	25.95	26.45	26.60
7	27.52	26.94	26.75	26.90	26.81	26.82	26.64	26.42	25.71	26.22	26.40	26.42
8	27.49	27.01	26.72	26.92	26.72	26.70	26.63	26.31	25.76	26.30	26.36	26.41
9	27.51	26.93	26.74	26.92	26.65	26.60	26.75	26.18	25.62	26.66	26.52	26.43
10	27.85	26.86	26.80	26.87	26.69	26.64	26.80	26.13	25.52	26.71	26.57	26.53
11	27.70	26.92	26.70	26.83	26.75	26.56	26.62	26.01	25.60	26.77	26.54	26.53
12	27.78	26.85	26.77	26.90	26.71	26.70	26.71	25.88	25.54	26.98	26.72	26.51
13	27.77	27.01	26.66	26.83	26.69	26.67	26.59	25.97	25.50	26.70	26.21	26.71
14	27.51	27.04	26.69	26.82	26.67	26.70	26.56	25.98	25.51	26.17	26.52	26.85
15	27.52	26.94	26.71	26.77	26.65	26.63	26.62	25.85	25.52	26.15	26.37	26.82
16	27.43	26.85	26.70	26.90	26.73	26.65	26.64	25.89	25.64	26.13	26.60	26.69
17	27.43	26.84	26.78	26.83	26.66	26.64	26.55	25.80	25.84	26.23	26.85	26.75
18	27.35	26.94	26.66	26.80	26.64	26.62	26.55	25.82	25.98	26.04	26.66	26.67
19	27.43	26.90	26.69	26.96	26.60	26.63	26.53	25.78	26.17	25.73	26.65	26.29
20	27.35	26.83	26.70	26.91	26.69	26.60	26.56	25.81	26.09	25.65	26.72	26.11
21	27.34	26.89	26.72	26.93	26.54	26.51	26.60	25.89	25.93	25.60	26.91	26.14
22	27.37	26.89	26.76	26.99	26.56	26.62	26.64	25.84	25.54	25.52	27.12	25.97
23	27.38	26.80	26.65	26.90	26.62	26.62	26.60	25.79	25.65	25.51	26.88	25.84
24	27.42	26.82	26.65	26.96	26.62	26.57	26.57	25.80	25.76	25.47	26.94	26.02
25	27.42	26.82	26.65	26.78	26.77	26.67	26.63	25.82	25.67	25.47	26.94	26.05
26	27.30	26.69	26.67	26.70	26.69	26.67	26.61	25.70	25.74	25.63	26.67	25.93
27	27.16	26.72	26.67	26.75	26.71	26.77	26.60	25.70	25.77	25.91	26.80	25.93
28	27.16	26.78	26.63	26.85	26.73	26.67	26.58	25.72	25.80	25.91	26.69	25.79
29	27.22	26.78	26.73	26.84	---	26.65	26.64	25.78	25.73	26.05	26.23	25.75
30	27.12	26.72	26.71	26.71	---	26.68	26.57	25.81	25.74	25.94	26.50	25.93
31	27.08	---	26.77	26.69	---	26.60	---	25.73	---	25.99	26.83	---
LOW	28.18	27.04	26.80	26.99	26.82	26.82	26.80	26.55	26.17	26.98	27.12	27.37

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.91	25.35	25.24	25.49	25.41	25.19	24.83	24.88	23.52	24.97	24.46	24.63
2	25.85	25.35	25.34	25.41	25.41	25.27	24.82	24.90	23.44	25.05	24.51	24.70
3	25.66	25.32	25.36	25.28	25.43	25.26	24.90	24.90	23.63	24.78	24.65	24.53
4	25.47	25.29	25.36	25.45	25.40	25.21	25.01	24.94	23.42	24.77	24.67	24.68
5	25.53	25.29	25.35	25.45	25.37	25.29	24.95	24.98	23.49	24.70	24.55	24.65
6	25.45	25.30	25.29	25.42	25.30	25.34	24.88	24.97	23.43	24.62	24.54	24.67
7	25.37	25.40	25.29	25.41	25.26	25.36	24.85	24.94	23.52	24.24	24.80	24.59
8	25.37	25.40	25.38	25.33	25.30	25.30	24.88	24.97	23.38	24.22	24.89	24.64
9	25.37	25.27	25.36	25.36	25.25	25.25	24.83	24.98	23.36	24.17	24.98	24.71
10	25.38	25.40	25.32	25.31	25.39	25.26	24.80	24.80	23.59	24.85	24.67	24.77
11	25.39	25.40	25.29	25.31	25.40	25.17	24.83	24.77	23.47	24.84	24.55	24.72
12	25.47	25.33	25.29	25.28	25.32	25.04	24.77	24.75	23.43	24.96	24.91	24.71
13	25.47	25.35	25.29	25.31	25.24	25.05	24.83	24.69	23.46	25.31	24.89	24.67
14	25.45	25.34	25.39	25.36	25.25	25.08	24.81	24.61	23.50	24.77	25.24	24.73
15	25.45	25.31	25.34	25.30	25.36	24.99	24.77	24.77	23.44	25.09	24.64	24.58
16	25.42	25.33	25.34	25.23	25.22	25.07	24.67	24.79	23.45	24.79	24.63	24.58
17	25.45	25.36	25.41	25.38	25.27	25.02	24.68	24.85	23.55	24.99	24.85	24.43
18	25.33	25.35	25.38	25.37	25.16	25.06	24.68	24.85	23.38	25.05	24.78	24.22
19	25.45	25.39	25.35	25.30	25.18	25.15	24.69	24.87	23.37	25.15	24.78	24.22
20	25.44	25.43	25.33	25.32	25.20	25.05	24.78	24.93	23.22	25.23	25.07	24.10
21	25.33	25.35	25.44	25.34	25.23	25.04	24.83	24.92	23.47	24.73	25.39	24.11
22	25.41	25.32	25.38	25.39	25.18	24.88	24.87	24.94	23.38	25.04	24.99	24.30
23	25.38	25.37	25.39	25.30	25.19	24.87	24.77	24.71	23.41	25.06	25.13	24.42
24	25.32	25.29	25.35	25.30	25.24	24.96	24.67	24.62	23.37	24.99	25.30	24.14
25	25.31	25.30	25.35	25.34	25.29	24.94	24.78	24.64	23.82	25.00	25.96	24.04
26	25.23	25.28	25.41	25.33	25.24	24.87	24.78	24.39	24.03	25.15	25.32	24.00
27	25.34	25.31	25.37	25.36	25.32	24.87	24.89	24.25	24.11	24.80	25.45	24.00
28	25.39	25.24	25.31	25.39	25.34	24.90	24.94	24.02	24.20	24.60	25.41	24.17
29	25.44	25.25	25.35	25.39	25.30	24.85	24.90	23.83	24.69	24.76	25.26	24.25
30	25.38	25.21	25.31	25.39	---	24.90	24.79	23.63	24.63	24.74	24.61	24.11
31	25.31	---	25.37	25.34	---	24.90	---	23.47	---	24.71	24.99	---
LOW	25.91	25.43	25.44	25.49	25.43	25.36	25.01	24.98	24.69	25.31	25.96	24.77

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.09	23.41	23.25	23.12	23.25	23.13	23.33	22.97	22.80	21.39	21.64	22.40
2	24.30	23.39	23.39	23.14	23.21	23.05	23.33	22.96	22.56	21.59	21.76	21.77
3	24.06	23.29	23.32	23.04	23.25	23.15	23.19	23.07	22.32	21.67	21.68	21.79
4	24.17	23.42	23.34	23.17	23.27	23.19	23.11	22.93	21.91	21.88	21.68	21.78
5	24.18	23.34	23.23	23.24	23.27	23.18	23.13	22.93	21.60	21.80	21.45	21.62
6	24.37	23.36	23.35	23.21	23.24	23.15	23.27	22.97	21.49	21.82	21.27	21.68
7	24.19	23.50	23.43	23.09	23.21	23.13	23.31	23.10	21.68	22.08	21.28	21.62
8	24.19	23.43	23.40	23.13	23.26	23.19	23.31	23.16	21.58	22.29	21.39	21.61
9	24.21	23.53	23.28	23.08	23.23	23.25	23.23	23.06	22.09	22.03	21.79	21.61
10	24.27	23.46	23.21	23.18	23.23	23.15	23.25	23.16	21.57	22.21	21.67	21.66
11	24.35	23.52	23.36	23.23	23.21	23.15	23.24	23.13	21.50	22.26	21.40	21.67
12	24.63	23.46	23.29	23.25	23.17	23.15	23.25	23.04	21.24	22.41	21.28	21.88
13	24.50	23.45	23.33	23.16	23.20	23.23	23.18	23.05	21.12	22.52	21.20	22.35
14	24.42	23.35	23.47	23.04	23.24	23.24	23.28	23.19	21.14	22.27	21.13	22.07
15	24.30	23.37	23.40	23.26	23.25	23.23	23.22	23.42	21.17	22.83	21.24	22.12
16	24.27	23.45	23.30	23.22	23.18	23.22	23.22	23.31	21.23	23.26	21.23	21.99
17	24.09	23.42	23.47	23.17	23.09	23.27	23.19	23.93	21.40	23.19	21.29	22.14
18	23.94	23.40	23.33	23.12	23.07	23.29	23.13	24.03	21.25	22.64	21.23	22.10
19	23.90	23.37	23.26	23.21	22.99	23.21	23.13	23.52	21.28	22.42	21.24	22.02
20	23.88	23.46	23.16	23.09	23.09	23.14	23.10	23.96	21.21	21.94	21.28	21.99
21	23.94	23.41	23.26	23.11	23.05	23.23	23.14	23.52	21.40	21.83	21.36	21.88
22	23.91	23.33	23.28	23.15	23.17	23.26	23.12	23.25	21.17	22.24	21.48	21.86
23	23.86	23.48	23.37	23.10	23.16	23.19	23.09	23.15	21.47	21.88	21.71	21.72
24	23.76	23.45	23.35	23.17	23.18	23.21	23.14	23.09	21.39	21.88	21.65	21.80
25	23.73	23.45	23.35	23.26	23.06	23.22	23.11	23.02	21.62	21.67	21.45	21.76
26	23.93	23.45	23.21	23.22	23.02	23.17	23.23	22.89	22.19	22.37	21.40	21.81
27	23.85	23.40	23.13	23.28	22.91	23.13	23.07	22.78	22.35	21.78	21.41	21.63
28	23.71	23.25	23.20	23.20	23.01	23.18	23.06	22.65	22.04	22.27	21.43	21.81
29	23.57	23.26	23.16	23.25	---	23.31	23.05	22.62	21.66	21.75	21.50	21.84
30	23.59	23.26	23.21	23.11	---	23.25	23.02	22.59	21.32	21.56	21.96	22.00
31	23.47	---	23.13	23.08	---	23.17	---	22.77	---	21.56	22.30	---
LOW	24.63	23.53	23.47	23.28	23.27	23.31	23.33	24.03	22.80	23.26	22.30	22.40

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.36	22.56	22.87	22.66	22.82	22.97	22.76	23.86	24.92	23.82	24.10	25.46
2	22.34	22.52	22.87	22.70	22.88	22.91	22.87	24.55	24.75	23.82	24.04	25.84
3	22.42	22.47	22.84	22.77	22.84	22.84	22.83	24.37	24.44	23.88	24.07	25.98
4	22.92	22.58	22.89	22.75	22.75	22.88	22.82	24.03	24.23	23.91	24.20	26.20
5	22.65	22.63	22.90	22.75	22.83	22.91	22.71	24.23	24.19	23.97	24.02	26.27
6	22.76	22.64	22.87	22.80	22.87	22.88	22.72	24.31	24.27	24.04	24.03	25.88
7	22.58	22.58	22.52	22.74	22.99	23.00	22.78	24.30	24.07	23.88	24.46	26.15
8	22.62	22.68	22.38	22.76	22.81	22.96	22.79	23.96	23.82	23.97	25.00	25.51
9	22.71	22.84	22.53	22.76	22.88	22.97	22.78	24.04	23.83	24.41	25.16	25.97
10	22.60	22.70	22.65	22.85	22.85	23.08	22.84	24.28	23.98	24.31	24.92	26.19
11	22.56	22.74	22.65	22.80	22.85	23.01	23.23	23.94	24.06	24.63	24.44	25.85
12	22.47	22.67	22.64	22.82	22.83	22.89	22.66	23.79	24.10	25.01	24.48	26.12
13	22.45	22.76	22.74	22.76	22.82	22.91	22.75	23.83	24.06	24.94	24.59	25.45
14	22.46	22.86	22.64	22.77	22.81	22.89	22.72	23.85	23.87	24.68	24.93	25.05
15	22.55	22.95	22.68	22.69	22.76	22.92	22.76	23.85	24.15	24.53	25.15	24.94
16	22.51	22.90	22.66	22.71	22.84	22.88	22.78	24.19	23.87	25.51	25.15	25.14
17	22.36	22.93	22.62	22.73	22.81	22.90	22.77	24.31	23.84	25.13	24.98	25.12
18	22.58	22.88	22.65	22.82	22.87	22.94	22.82	24.42	23.75	25.38	24.82	25.11
19	22.63	22.84	22.71	22.72	22.89	22.96	22.86	24.51	23.69	25.36	24.67	25.15
20	22.56	22.82	22.60	22.82	22.84	22.91	22.88	24.32	23.62	25.87	24.73	25.05
21	22.45	22.81	22.54	22.84	22.79	22.99	23.05	24.24	23.68	25.40	24.66	24.73
22	22.40	22.92	22.60	22.78	22.84	22.98	23.04	24.02	23.83	25.72	24.40	24.71
23	22.42	22.89	22.63	22.76	22.93	22.92	22.99	23.87	23.68	24.89	24.64	24.59
24	22.51	22.92	22.68	22.72	22.82	22.84	23.04	23.84	23.72	24.37	24.83	24.54
25	22.64	23.00	22.70	22.82	22.71	22.79	23.19	23.90	23.49	24.25	24.68	24.71
26	22.49	22.96	22.71	22.83	22.80	22.83	23.20	24.09	23.72	24.72	24.79	24.84
27	22.40	22.95	22.65	22.76	22.86	22.85	23.35	24.22	24.04	24.80	24.93	24.87
28	22.44	22.98	22.65	22.80	22.96	22.86	23.50	24.41	23.87	24.75	25.47	24.80
29	22.39	22.96	22.67	22.77	---	22.85	23.71	24.60	24.39	24.40	25.47	24.92
30	22.39	22.88	22.76	22.74	---	22.79	23.78	24.64	24.37	24.05	25.26	24.93
31	22.47	---	22.69	22.83	---	22.74	---	24.81	---	24.07	25.60	---
LOW	22.92	23.00	22.90	22.85	22.99	23.08	23.78	24.81	24.92	25.87	25.60	26.27

SITE NUMBER FROM LOCATION MAP.—41.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E8ADDD2.

SITE ID (STATION NUMBER).—440338103173302.

OTHER IDENTIFIERS.—PE-89A and Canyon Lake Mdsn.

LOCATION.—Lat 44°03′37.7″, long 103°17′34.9″, in SE1/4SE1/4SE1/4NE1/4 sec. 8, T. 1 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 700 ft deep with 630 ft of 6 3/8-in. steel casing; open hole from 630 to 700 ft.

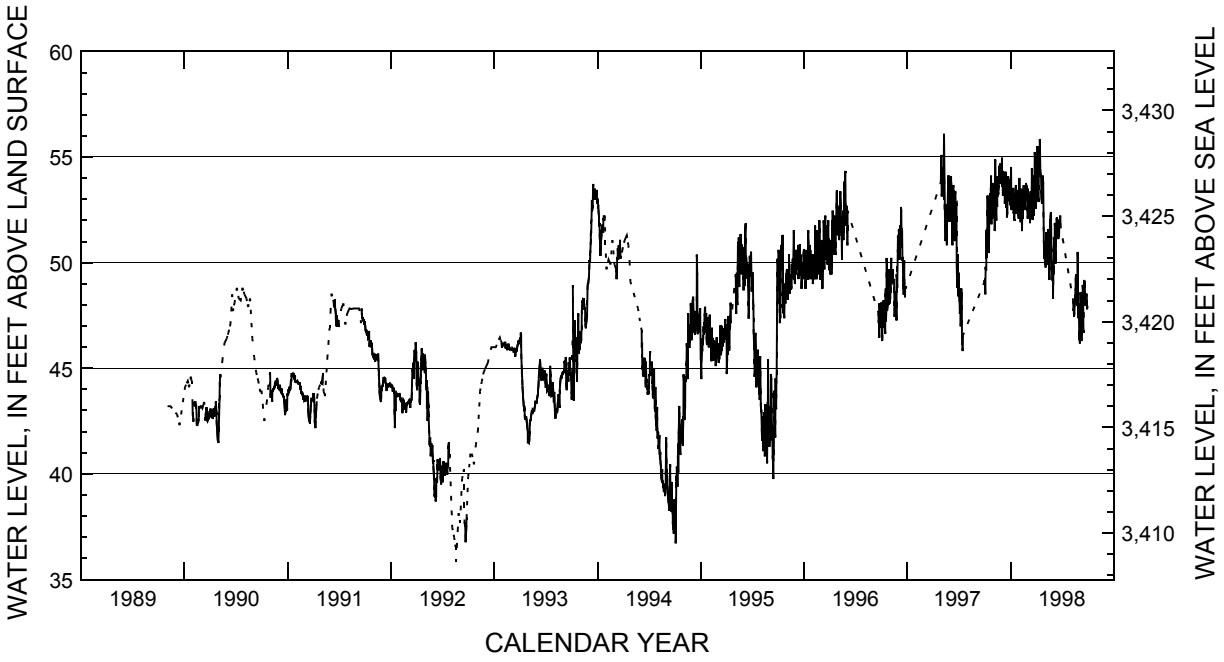
INSTRUMENTATION.—Electronic data logger with pressure transducer and calibrated test gage.

DATUM.—Elevation of land-surface datum is 3,372.8 ft above sea level. Measuring point: Top of steel casing, 4.0 ft above land-surface datum.

REMARKS.—Records for 1993-94 poor because of problems with recording equipment. Other records good. Water levels affected by pumping of nearby wells. Data corrected for antifreeze density difference beginning Oct. 1, 1994.

PERIOD OF RECORD.—November 1989 to September 1998.

EXTREMES.—Highest daily water level, 56.09 ft above land-surface datum, May 11, 1997; lowest daily water level, 35.84 ft (estimated) above land-surface datum, Aug. 19, 1992.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+38.63	+42.60	+46.36	+45.46	+46.40	+45.53	+46.38	---	+49.86	+48.64	+43.93	+41.28
2	+37.68	+44.70	+46.79	+45.46	+47.53	+45.50	+47.07	---	+48.69	+49.08	+43.24	+41.49
3	+38.58	+44.30	+47.23	+44.49	+46.82	+45.50	+46.82	---	+50.30	+49.54	+42.99	+41.67
4	+38.33	+42.97	+48.16	+45.41	+46.59	+46.17	+44.74	---	+50.74	+49.52	+42.99	+41.86
5	+36.71	+42.55	+48.34	+45.62	+46.33	+45.48	+45.43	+49.45	+49.82	+49.06	+42.04	+41.58
6	+39.46	+43.08	+48.34	+45.83	+46.08	+45.25	+45.87	+48.04	+48.89	+48.11	+41.81	+42.46
7	+39.90	+43.13	+47.63	+45.80	+45.83	+45.46	+45.64	+47.58	+51.41	+47.88	+41.56	+44.72
8	+39.67	+44.56	+47.14	+46.24	+45.34	+45.46	+47.00	+49.42	+51.64	+46.73	+42.71	+44.44
9	+40.34	+44.37	+46.66	+46.22	+45.78	+45.66	+47.46	+49.40	+51.85	+46.01	+42.00	+43.70
10	+40.08	+44.42	+47.09	+46.43	+46.91	+45.90	+47.00	+48.46	+50.23	+46.01	+41.07	+42.27
11	+39.39	+44.49	+47.07	+46.86	+46.20	+46.13	+47.44	+47.99	+50.21	+44.60	+41.53	+42.23
12	+40.29	+45.23	+46.59	+46.84	+46.40	+47.03	+45.83	+49.15	+49.98	+44.83	+41.28	+41.49
13	+41.42	+46.17	+46.79	+46.59	+46.38	+46.10	+46.03	+50.97	+49.75	+44.81	+42.90	+40.75
14	+40.06	+45.78	+47.69	+47.03	+46.13	+45.62	+46.96	+49.59	+49.96	+46.66	+42.18	+40.70
15	+41.93	+45.39	+46.98	+47.46	+45.41	+45.85	+46.96	+49.10	+49.26	+45.48	+41.58	+39.76
16	+42.02	+44.49	+46.96	+47.90	+45.41	+47.00	+47.39	+51.18	+49.24	+44.56	+40.84	+40.61
17	+43.20	+46.38	+47.39	+47.88	+45.62	+46.52	+48.09	+49.54	+49.93	+44.10	+41.26	+41.03
18	+42.80	+47.58	+46.93	+46.96	+46.31	+45.83	+47.14	+48.85	+48.99	+44.53	+43.29	+42.60
19	+42.18	+46.26	+50.37	+46.68	+45.62	+46.73	---	+49.75	+48.06	+44.76	+41.86	+43.93
20	+41.28	+46.08	+49.40	+47.60	+46.06	+46.03	---	+50.21	+47.35	+44.74	+41.81	+43.68
21	+40.89	+47.05	+46.86	+47.58	+46.06	+46.26	---	+49.75	+47.58	+44.97	+40.87	+42.60
22	+42.09	+45.96	+46.61	+46.40	+46.26	+46.47	---	+51.34	+49.42	+45.87	+41.51	+41.72
23	+41.67	+46.24	+47.05	+46.15	+45.11	+46.24	---	+50.42	+49.86	+44.72	+41.70	+44.51
24	+41.49	+46.29	+47.26	+46.59	+45.57	+46.45	---	+49.93	+50.32	+44.26	+40.50	+43.47
25	+41.77	+46.33	+47.23	+46.10	+45.78	+46.22	---	+50.86	+49.38	+44.23	+42.53	+43.06
26	+42.27	+46.61	+47.44	+46.31	+45.78	+46.91	---	+49.45	+49.38	+44.23	+43.40	+44.28
27	+42.57	+48.06	+47.42	+47.21	+46.45	+46.66	---	+50.83	+49.36	+43.75	+43.36	+44.79
28	+42.16	+47.42	+46.70	+47.42	+45.53	+46.66	---	+50.12	+50.51	+44.21	+45.41	+48.06
29	+41.74	+46.77	+47.63	+46.24	---	+47.33	---	+49.89	+49.56	+43.50	+42.11	+50.14
30	+41.33	+46.36	+47.83	+45.99	---	+46.40	---	+49.89	+48.87	+45.34	+42.76	+50.14
31	+42.09	---	+47.09	+46.20	---	+46.40	---	+49.86	---	+45.55	+43.17	---
LOW	+36.71	+42.55	+46.36	+44.49	+45.11	+45.25	+44.74	+47.58	+47.35	+43.50	+40.50	+39.76

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+49.91	+49.45	+48.99	+50.60	+50.37	+50.37	+50.83	+51.29	+52.68	---	---	---
2	+50.14	+49.68	+50.37	+50.60	+48.99	+49.91	+51.06	+52.22	+52.22	---	---	---
3	+49.45	+48.99	+50.60	+49.68	+49.22	+50.83	+50.83	+52.68	+50.83	---	---	---
4	+50.60	+48.29	+49.45	+50.60	+49.68	+51.06	+49.45	+51.99	+52.45	---	---	---
5	+50.14	+48.29	+49.68	+49.68	+49.45	+49.45	+49.91	+51.06	---	---	---	---
6	+48.06	+49.45	+49.91	+48.99	+49.22	+49.68	+51.06	+51.75	---	---	---	---
7	+48.29	+49.45	+49.91	+48.76	+49.68	+48.76	+50.83	+52.45	---	---	---	---
8	+47.14	+48.53	+49.68	+48.99	+49.91	+49.68	+49.45	+52.22	---	---	---	---
9	+47.60	+48.76	+49.91	+49.22	+49.22	+49.68	+49.91	+53.37	---	---	---	---
10	+47.37	+50.37	+50.37	+49.68	+51.75	+50.37	+51.99	+52.91	---	---	---	---
11	+48.53	+48.99	+50.37	+49.68	+50.14	+50.60	+51.06	+52.68	---	---	---	---
12	+50.37	+48.53	+50.83	+49.45	+49.22	+51.99	+52.45	+51.52	---	---	---	---
13	+50.83	+49.22	+49.22	+49.91	+50.37	+50.37	+51.06	+51.29	---	---	---	---
14	+49.68	+48.76	+49.45	+50.60	+51.06	+49.68	+50.60	+51.29	---	---	---	---
15	+49.68	+48.76	+49.68	+49.22	+51.52	+51.29	+50.37	+50.14	---	---	---	---
16	+50.14	+49.45	+49.91	+49.22	+49.22	+51.75	+50.83	+51.99	---	---	---	---
17	+51.29	+49.22	+50.83	+51.52	+51.52	+52.22	+51.06	+51.06	---	---	---	---
18	+50.60	+48.76	+50.83	+50.37	+50.14	+51.52	+52.22	+51.99	---	---	---	---
19	+51.29	+49.91	+49.45	+50.60	+49.91	+50.83	+51.06	+52.45	---	---	---	---
20	+48.29	+49.45	+49.45	+49.68	+50.37	+50.37	+51.99	+51.06	---	---	---	---
21	+47.60	+49.45	+50.37	+49.22	+49.68	+50.37	+50.60	+51.52	---	---	---	+47.60
22	+48.99	+50.14	+49.91	+50.83	+49.45	+50.14	+50.37	+53.14	---	---	---	+47.14
23	+47.60	+50.14	+48.99	+49.68	+50.37	+51.75	+50.83	+53.83	---	---	---	+47.60
24	+47.37	+49.22	+48.76	+50.60	+49.68	+50.37	+51.99	+53.37	---	---	---	+46.45
25	+48.29	+49.68	+48.99	+50.37	+51.99	+49.91	+51.99	+53.14	---	---	---	+48.06
26	+48.29	+50.60	+49.91	+49.22	+51.52	+51.52	+53.37	+54.29	---	---	---	+47.60
27	+48.99	+51.52	+49.91	+49.91	+49.91	+51.99	+53.37	+54.29	---	---	---	+46.91
28	+48.06	+50.14	+49.45	+49.91	+49.22	+51.75	+51.52	+52.68	---	---	---	+47.37
29	+48.53	+49.22	+49.22	+50.14	+49.22	+50.37	+52.22	+52.45	---	---	---	+48.06
30	+49.22	+49.22	+49.45	+49.22	---	+49.68	+51.52	+52.68	---	---	---	+47.37
31	+49.45	---	+50.37	+49.68	---	+49.68	---	+51.75	---	---	---	---
LOW	+47.14	+48.29	+48.76	+48.76	+48.99	+48.76	+49.45	+50.14	+50.83	---	---	+46.45

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+47.14	+48.18	+50.53	---	---	---	---	+55.05	+52.98	+49.52	---	---
2	+48.13	+48.36	+51.59	---	---	---	---	+55.05	+53.79	+49.29	---	---
3	+47.26	+48.80	+50.44	---	---	---	---	+53.14	+53.95	+48.64	---	---
4	+46.29	+48.59	+50.60	---	---	---	---	+53.21	+53.67	+48.36	---	---
5	+46.45	+50.21	+50.14	---	---	---	---	+54.36	+54.06	+48.13	---	---
6	+48.13	+49.10	+51.18	---	---	---	---	+53.95	+53.67	+47.56	---	---
7	+47.14	+49.06	+51.75	---	---	---	---	+54.29	+53.21	+47.79	---	---
8	+47.90	+49.38	+51.29	---	---	---	---	+54.52	+53.02	+47.56	---	---
9	e+48.21	+49.22	+50.79	---	---	---	---	+53.21	+52.26	+46.98	---	---
10	e+47.93	+49.68	+52.63	---	---	---	---	+54.94	+50.83	+47.65	---	---
11	+46.91	+49.63	+52.40	---	---	---	---	+56.09	+52.17	+48.76	---	---
12	+47.03	+49.17	+51.52	---	---	---	---	+53.09	+53.49	+48.41	---	---
13	+47.26	+49.06	+51.64	---	---	---	---	+52.63	+53.67	+48.59	---	---
14	+47.56	+48.99	+51.52	---	---	---	---	+51.87	+53.25	+46.45	---	---
15	+46.63	+49.22	+50.09	---	---	---	---	+51.75	+53.42	+46.22	---	---
16	+48.48	+48.71	+50.26	---	---	---	---	+51.02	+52.10	+45.83	---	---
17	+48.76	+47.44	+49.22	---	---	---	---	+51.18	+52.40	+46.56	---	---
18	+47.21	+47.72	+48.87	---	---	---	---	+52.75	+51.02	---	---	---
19	+47.83	+48.36	+48.48	---	---	---	---	+51.02	+52.10	---	---	---
20	+50.21	+48.64	+49.29	---	---	---	---	+51.18	+53.37	---	---	---
21	+49.96	+47.72	+50.09	---	---	---	---	+50.83	+52.56	---	---	---
22	+47.72	+48.29	+49.10	---	---	---	---	+52.56	+51.82	---	---	---
23	+47.95	+48.06	+48.76	---	---	---	---	+51.94	+52.75	---	---	---
24	+48.59	+47.26	+48.36	---	---	---	---	+52.63	+52.79	---	---	---
25	+48.41	+49.45	+48.87	---	---	---	---	+53.37	+49.91	---	---	---
26	+49.33	+48.80	+48.76	---	---	---	---	+53.90	+49.29	---	---	---
27	+48.80	+48.94	---	---	---	---	---	+54.13	+48.80	---	---	---
28	+48.02	+50.49	---	---	---	---	---	+53.83	+49.91	---	---	---
29	+49.68	+51.29	---	---	---	---	---	+52.79	+50.37	---	---	---
30	+49.63	+50.79	---	---	---	---	+53.83	+51.99	+48.41	---	---	+49.06
31	+48.06	---	---	---	---	---	---	+51.94	---	---	---	---
LOW	+46.29	+47.26	+48.36	---	---	---	+53.83	+50.83	+48.41	+45.83	---	+49.06

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+49.08	+53.14	+54.18	+52.95	+52.56	+53.49	+52.56	+50.83	+48.29	---	---	+46.68
2	+49.17	+53.76	+54.96	+53.88	+53.99	+52.56	+53.42	+50.42	+49.84	---	---	+46.33
3	+48.76	+52.72	+53.60	+54.52	+52.38	+52.08	+53.23	+49.91	+49.45	---	---	+46.56
4	+48.50	+53.07	+54.34	+52.49	+52.38	+53.49	+53.19	+50.26	+51.18	---	---	+46.17
5	+49.79	+53.19	+53.23	+52.61	+52.15	+52.56	+53.53	+49.77	+50.42	---	---	+47.33
6	+49.68	+51.50	+53.23	+52.72	+51.92	+52.33	+54.52	+50.07	+49.96	---	---	+48.59
7	+49.63	+52.08	+53.95	+52.49	+52.22	+52.91	+55.49	+50.60	+51.87	---	---	+48.23
8	+51.55	+54.87	+53.30	+53.30	+52.15	+52.49	+53.95	+51.45	+51.80	---	---	+47.72
9	+50.23	+54.22	+54.11	+53.23	+53.49	+52.84	+53.07	+50.92	+50.60	---	---	+46.29
10	+50.60	+52.22	+54.29	+53.19	+52.61	+53.23	+52.91	+49.91	+49.96	---	---	+46.68
11	+50.72	+52.33	+53.30	+53.53	+51.50	+51.87	+52.91	+50.99	e+50.87	---	+48.18	+47.03
12	+53.16	+51.99	+52.79	+52.33	+52.15	+52.45	+55.49	+50.19	e+51.44	---	+47.72	+47.26
13	+52.84	+53.65	+53.02	+52.38	+53.02	+53.37	+55.26	+50.65	+52.08	---	+47.79	+48.36
14	+50.65	+54.06	+53.23	+52.03	+52.08	+52.95	+55.33	+50.99	+52.08	---	+47.44	+48.94
15	+50.86	+52.65	+54.29	+52.03	+52.65	+53.37	+55.84	+51.57	+51.50	---	+47.60	+48.48
16	+50.46	+53.30	+53.23	+52.65	+53.37	+52.08	+54.68	+51.11	e+51.56	---	+48.02	+46.98
17	+50.74	+53.14	+52.61	+52.72	+53.65	+53.49	+54.29	+50.07	e+51.75	---	+48.13	+46.68
18	+52.22	+53.37	+53.65	+53.14	+53.37	+54.45	+54.06	+49.45	+52.03	---	e+48.36	---
19	+52.47	+53.23	+53.99	+53.37	+52.65	+53.37	+54.18	+49.19	+51.11	---	e+48.78	+49.17
20	+53.28	+53.53	+52.15	+53.65	+52.49	+52.03	+53.30	+50.26	+51.29	---	+49.22	+48.80
21	+52.84	+53.95	+52.38	+52.84	+52.56	+53.23	+53.07	+51.99	+51.41	---	+49.45	+49.10
22	+52.33	+54.57	+53.07	+52.33	+53.07	+53.23	+52.79	+51.99	+51.22	---	+49.29	+48.02
23	+52.86	+53.95	+52.91	+52.65	+53.49	+54.11	+53.30	+52.22	+51.92	---	+49.10	+48.13
24	+54.11	+53.72	+54.06	+52.38	+52.91	+52.26	+52.79	+52.38	+51.69	---	+48.71	+47.95
25	+52.89	+54.68	+53.37	+52.45	+53.76	+52.22	+53.49	+51.69	+51.75	---	+48.18	+48.23
26	+51.82	+54.34	+53.19	+52.38	+53.60	+53.81	+54.11	+50.65	+52.22	---	+47.95	+48.41
27	+52.70	+54.22	+53.42	+52.38	+53.60	+53.81	+53.72	+49.72	+51.75	---	+50.49	+48.53
28	+52.89	+53.81	+53.49	+53.42	+53.19	+55.22	+52.26	+49.45	---	---	+48.02	+48.13
29	+52.08	+54.18	+53.65	+52.26	---	+55.03	+50.92	+50.07	---	---	+47.37	+47.79
30	+52.95	+53.95	+53.95	+52.08	---	+53.72	+50.19	+49.15	---	---	+48.02	+47.95
31	+52.95	---	+52.72	+53.53	---	+52.95	---	+49.61	---	---	+48.02	---
LOW	+48.50	+51.50	+52.15	+52.03	+51.50	+51.87	+50.19	+49.15	+48.29	---	+47.37	+46.17

e Estimated

SITE NUMBER FROM LOCATION MAP.—42.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E8ADDD.

SITE ID (STATION NUMBER).—440338103173301.

OTHER IDENTIFIERS.—PE-89B and Canyon Lake Mnls.

LOCATION.—Lat 44°03′37.6″, long 103°17′35.1″, in SE1/4SE1/4SE1/4NE1/4 sec. 8, T. 1 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 115 ft deep with 6 3/8-in. steel casing to 74 ft; open hole from 74 to 115 ft.

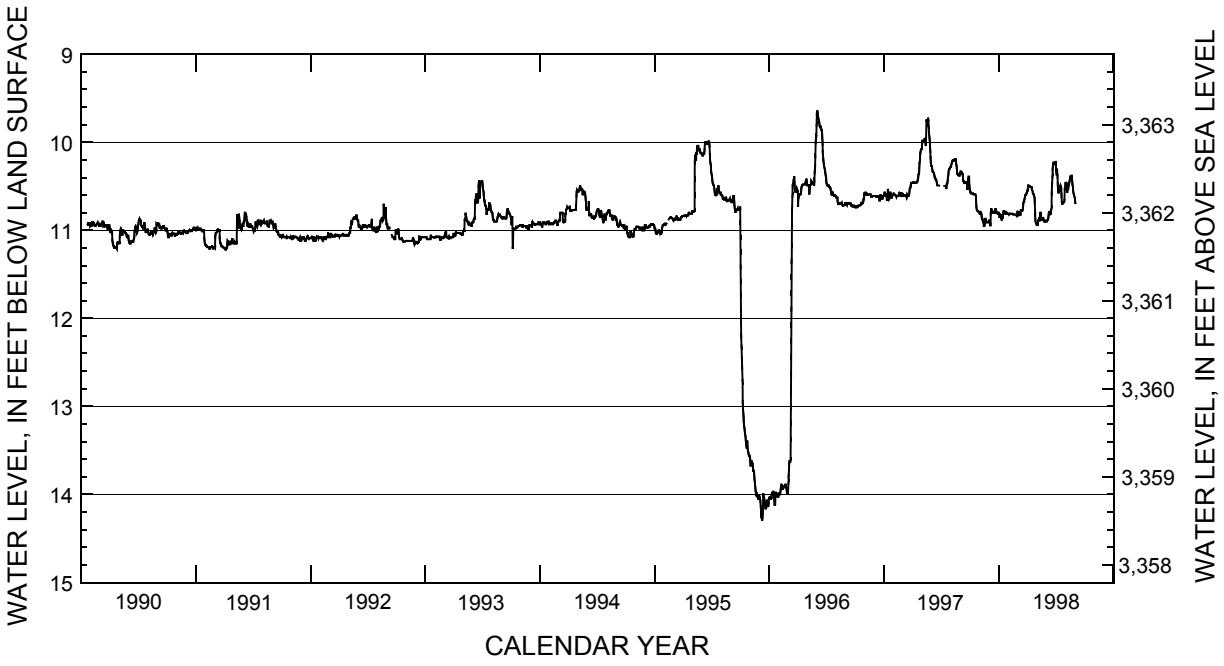
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,372.6 ft above sea level. Measuring point: Top of steel casing, 1.30 ft above land-surface datum.

REMARKS.—Records good. Water levels probably are affected by water level of Canyon Lake, which was drained from October 1995 through March 1996.

PERIOD OF RECORD.—January 1990 to September 1998.

EXTREMES.—Highest daily water level, 9.72 ft below land-surface datum, May 21, 1997; lowest daily water level, 14.29 ft below land-surface datum, Dec. 9, 10, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.99	10.98	10.94	10.98	10.94	10.88	10.84	10.78	10.14	10.35	10.60	10.67
2	10.97	10.98	10.94	10.98	10.94	10.89	10.84	10.78	10.15	10.38	10.60	10.68
3	10.96	10.98	10.94	10.98	10.93	10.88	10.84	10.78	10.15	10.39	10.61	10.68
4	10.96	10.96	10.97	11.00	10.94	10.87	10.84	10.79	10.15	10.44	10.61	10.68
5	11.01	10.96	10.97	11.03	10.94	10.87	10.84	10.79	10.12	10.46	10.61	10.68
6	11.03	10.96	10.97	11.04	---	10.88	10.83	10.79	10.13	10.48	10.64	10.66
7	11.03	10.96	10.97	11.04	---	10.88	10.83	10.78	10.13	10.48	10.64	10.64
8	11.06	10.96	10.97	11.04	---	10.88	10.83	10.78	10.13	10.49	10.64	10.61
9	11.07	10.96	10.95	11.03	---	10.87	10.83	10.23	10.09	10.50	10.65	10.61
10	11.07	10.96	10.97	11.03	---	10.85	10.83	10.14	9.99	10.52	10.65	10.61
11	11.08	10.97	10.97	11.01	---	10.84	10.83	10.21	10.02	10.55	10.65	10.61
12	11.08	10.97	10.97	11.01	---	10.84	10.84	10.16	10.03	10.59	10.65	10.69
13	11.08	10.98	10.96	11.00	---	10.86	10.82	10.21	10.01	10.59	10.63	10.75
14	11.08	10.98	10.95	11.00	---	10.86	10.83	10.11	10.01	10.60	10.63	10.77
15	11.08	10.98	10.94	11.00	---	10.86	10.83	10.14	10.01	10.61	10.65	10.79
16	11.01	10.97	10.96	11.01	---	10.88	10.83	10.07	10.00	10.60	10.65	10.79
17	11.02	10.97	10.96	11.02	10.86	10.88	10.83	10.04	10.00	10.60	10.64	10.79
18	11.02	10.97	10.94	11.02	10.86	10.87	10.83	10.04	10.01	10.58	10.66	10.78
19	11.04	10.99	10.93	11.03	10.86	10.87	10.80	10.04	10.02	10.53	10.66	10.77
20	11.04	10.99	10.93	11.02	10.85	10.87	10.80	10.04	10.02	10.53	10.66	10.77
21	11.05	10.98	10.94	11.04	10.85	10.87	10.80	10.10	10.02	10.53	10.67	10.76
22	11.07	11.00	10.94	11.04	10.85	10.88	10.80	10.08	9.98	10.52	10.67	10.75
23	11.07	11.00	10.94	11.03	10.86	10.88	10.81	10.08	9.99	10.49	10.66	10.77
24	11.07	10.99	10.94	11.02	10.87	10.88	10.81	10.07	10.00	10.53	10.66	10.77
25	11.07	10.99	10.93	10.97	10.86	10.86	10.81	10.08	10.03	10.56	10.66	10.77
26	11.07	10.97	10.93	10.96	10.86	10.85	10.81	10.12	10.15	10.57	10.66	10.77
27	11.02	10.97	10.93	10.94	10.87	10.85	10.81	10.12	10.21	10.58	10.65	10.76
28	10.99	11.00	10.93	10.94	10.88	10.85	10.81	10.12	10.24	10.58	10.65	10.76
29	10.99	11.00	10.94	10.94	---	10.84	10.81	10.12	10.26	10.58	10.64	10.75
30	10.99	10.98	10.94	10.93	---	10.84	10.81	10.13	10.32	10.57	10.66	10.74
31	10.98	---	10.95	10.93	---	10.84	---	10.13	---	10.57	10.66	---
LOW	11.08	11.00	10.97	11.04	10.94	10.89	10.84	10.79	10.32	10.61	10.67	10.79

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.74	13.59	14.02	14.03	13.99	13.96	10.55	10.49	9.67	10.44	10.61	10.69
2	11.25	13.64	14.04	14.04	13.99	13.86	10.73	10.49	9.64	10.47	10.63	10.69
3	11.91	13.68	14.05	14.06	14.00	13.79	10.62	10.49	9.66	10.48	10.64	10.70
4	12.20	13.66	14.07	14.02	14.00	13.72	10.62	10.49	9.69	10.50	10.63	10.70
5	12.33	13.62	14.15	14.03	13.99	13.65	10.61	10.49	9.72	10.49	10.63	10.71
6	12.46	13.62	14.22	14.06	13.96	13.61	10.60	10.49	9.74	10.49	10.68	10.70
7	12.55	13.66	14.26	14.03	13.93	13.62	10.59	10.58	9.75	10.49	10.69	10.68
8	12.72	13.65	14.26	14.05	13.89	13.64	10.59	10.59	9.77	10.49	10.69	10.69
9	12.96	13.65	14.29	13.99	13.88	13.61	10.59	10.53	9.79	10.49	10.71	10.69
10	13.05	13.70	14.29	13.97	13.93	13.38	10.59	10.50	9.82	10.51	10.68	10.70
11	13.11	13.74	14.24	14.00	13.94	12.44	10.58	10.49	9.83	10.51	10.69	10.70
12	13.16	13.72	14.19	14.00	13.94	11.17	10.52	10.48	9.82	10.50	10.70	10.70
13	13.22	13.74	13.99	13.99	13.94	10.95	10.51	10.47	9.82	10.52	10.70	10.69
14	13.25	13.76	14.02	13.96	13.92	10.77	10.49	10.44	9.86	10.52	10.70	10.69
15	13.27	13.82	14.04	13.99	13.90	10.60	10.49	10.45	9.85	10.54	10.69	10.68
16	13.31	13.87	14.05	14.00	13.92	10.48	10.49	10.45	9.86	10.57	10.69	10.70
17	13.34	13.89	14.07	14.06	13.92	10.47	10.48	10.46	9.90	10.59	10.70	10.72
18	13.36	13.93	14.10	14.12	13.92	10.45	10.48	10.46	9.95	10.60	10.70	10.72
19	13.41	13.96	14.13	14.12	13.92	10.43	10.48	10.46	10.01	10.60	10.69	10.71
20	13.44	13.98	14.16	14.11	13.91	10.41	10.48	10.47	10.11	10.58	10.70	10.72
21	13.47	14.02	14.16	14.04	13.90	10.39	10.48	10.48	10.19	10.57	10.72	10.72
22	13.47	13.99	14.16	13.97	13.88	10.47	10.48	10.48	10.22	10.58	10.72	10.73
23	13.39	13.99	14.14	13.99	13.90	10.54	10.48	10.49	10.24	10.59	10.71	10.73
24	13.46	14.01	14.10	14.01	13.92	10.55	10.48	10.43	10.28	10.60	10.72	10.73
25	13.50	14.03	14.07	14.02	13.93	10.57	10.48	10.33	10.29	10.61	10.72	10.73
26	13.52	14.03	14.07	14.02	13.96	10.55	10.46	10.28	10.30	10.61	10.71	10.72
27	13.53	14.00	14.11	14.02	13.99	10.53	10.43	10.15	10.33	10.60	10.71	10.72
28	13.56	14.06	14.14	14.01	13.99	10.52	10.42	9.99	10.35	10.60	10.71	10.73
29	13.56	14.02	14.13	14.03	13.99	10.54	10.42	9.97	10.37	10.61	10.71	10.73
30	13.56	14.01	14.10	14.03	---	10.55	10.45	9.92	10.41	10.61	10.68	10.72
31	13.56	---	14.05	14.01	---	10.55	---	9.79	---	10.61	10.69	---
LOW	13.56	14.06	14.29	14.12	14.00	13.96	10.73	10.59	10.41	10.61	10.72	10.73

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.74	10.59	10.61	10.60	10.58	10.61	10.46	10.07	10.27	---	10.28	10.33
2	10.74	10.57	10.61	10.57	10.59	10.61	10.46	10.01	10.27	---	10.28	10.33
3	10.73	10.57	10.61	10.57	10.59	10.60	10.46	9.97	10.29	---	10.25	10.33
4	10.73	10.58	10.61	10.57	10.60	10.61	10.45	9.99	10.33	---	10.24	10.34
5	10.74	10.58	10.61	10.60	10.60	10.61	10.45	9.99	10.33	---	10.23	10.34
6	10.74	10.58	10.61	10.61	10.60	10.60	10.46	9.99	10.33	---	10.21	10.35
7	10.74	10.60	10.62	10.61	10.61	10.60	10.46	9.99	10.34	---	10.20	10.36
8	10.73	10.60	10.62	10.58	10.61	10.61	10.46	9.98	10.35	---	10.20	10.36
9	10.73	10.59	10.62	10.60	10.62	10.61	10.46	9.97	10.35	---	10.21	10.39
10	10.73	10.59	10.61	10.66	10.61	10.60	10.46	9.96	10.38	---	10.21	10.44
11	10.72	10.59	10.61	10.65	10.61	10.60	10.46	9.96	10.40	---	10.20	10.44
12	10.72	10.59	10.61	10.65	10.61	10.60	10.46	9.98	10.40	---	10.20	10.45
13	10.72	10.59	10.61	10.53	10.61	10.61	10.46	10.02	10.41	---	10.20	10.47
14	10.72	10.59	10.61	10.59	10.61	10.63	10.46	10.04	10.42	---	10.19	10.46
15	10.72	10.59	10.61	10.62	10.61	10.62	10.45	9.97	10.42	---	10.19	10.45
16	10.72	10.59	10.62	10.64	10.61	10.60	10.45	9.74	10.43	---	10.19	10.45
17	10.71	10.59	10.66	10.65	10.58	10.61	10.44	9.76	10.44	10.50	10.19	10.47
18	10.71	10.59	10.66	10.64	10.57	10.61	10.43	9.81	10.46	10.53	10.22	10.46
19	10.70	10.59	10.66	10.57	10.57	10.61	10.41	9.81	10.49	10.48	10.25	10.46
20	10.69	10.62	10.60	10.57	10.58	10.61	10.37	9.81	10.49	10.48	10.27	10.46
21	10.70	10.62	10.60	10.57	10.58	10.59	10.36	9.72	---	10.47	10.33	10.45
22	10.70	10.62	10.63	10.59	10.59	10.59	10.36	9.74	---	10.45	10.36	10.45
23	10.69	10.62	10.64	10.59	10.60	10.54	10.30	9.83	---	10.41	10.36	10.54
24	10.69	10.62	10.64	10.61	10.62	10.52	10.23	9.90	---	10.38	10.37	10.48
25	10.69	10.61	10.64	10.63	10.58	10.52	10.20	9.93	---	10.37	10.37	10.43
26	10.69	10.61	10.64	10.63	10.58	10.51	10.13	9.96	---	10.31	10.38	10.41
27	10.65	10.61	10.64	---	10.58	10.49	10.11	10.02	---	10.30	10.38	10.39
28	10.65	10.61	10.61	---	10.59	10.46	10.08	10.09	---	10.30	10.38	10.39
29	10.63	10.61	10.61	---	---	10.46	10.08	10.18	---	10.30	10.38	10.39
30	10.57	10.61	10.61	10.58	---	10.46	10.08	10.24	---	10.28	10.36	10.51
31	10.59	---	10.61	10.58	---	10.46	---	10.27	---	10.28	10.35	---
LOW	10.74	10.62	10.66	10.66	10.62	10.63	10.46	10.27	10.49	10.53	10.38	10.54

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.55	10.81	10.89	10.80	10.81	10.79	10.57	10.93	10.90	10.25	10.50	10.64
2	10.56	10.81	10.89	10.80	10.81	10.79	10.55	10.94	10.90	10.21	10.46	10.70
3	10.56	10.78	10.89	10.82	10.82	10.79	10.55	10.94	10.90	10.32	10.46	---
4	10.58	10.80	10.91	10.86	10.81	10.78	10.52	10.94	10.89	10.35	10.46	---
5	10.58	10.80	10.95	10.82	10.81	10.81	10.49	10.94	10.88	10.38	10.53	---
6	10.58	10.80	10.94	10.82	10.81	10.84	10.49	10.89	10.88	10.30	10.46	---
7	10.58	10.82	10.80	10.83	10.81	10.79	10.50	10.89	10.88	10.38	10.57	---
8	10.58	10.86	10.75	10.82	10.81	10.83	10.50	10.88	10.85	10.48	10.53	---
9	10.58	10.87	10.77	10.86	10.81	10.81	10.50	10.89	10.82	10.54	10.53	---
10	10.58	10.87	10.79	10.88	10.81	10.81	10.50	10.89	10.78	10.57	10.53	---
11	10.58	10.89	10.80	10.88	10.81	10.83	10.50	10.89	10.82	10.57	10.51	---
12	10.59	10.90	10.81	10.86	10.81	10.77	10.51	10.85	10.82	10.54	10.48	---
13	10.59	10.90	10.79	10.86	10.81	10.77	10.51	10.83	10.79	10.50	10.48	---
14	10.59	10.92	10.79	10.86	10.81	10.77	10.51	10.79	10.79	10.51	10.45	---
15	10.59	10.95	10.79	10.81	10.82	10.78	10.51	10.83	10.81	10.50	10.43	---
16	10.59	10.95	10.79	10.78	10.82	10.78	10.51	10.85	10.81	10.49	10.41	---
17	10.59	10.93	10.79	10.78	10.82	10.78	10.54	10.87	10.77	10.50	10.39	---
18	10.59	10.92	10.79	10.79	10.82	10.77	10.55	10.88	10.75	10.51	10.39	---
19	10.59	10.89	10.80	10.79	10.82	10.76	10.56	10.88	10.58	10.53	10.39	---
20	10.61	10.86	10.80	10.80	10.82	10.70	10.58	10.88	10.48	10.60	10.39	---
21	10.66	10.89	10.76	10.81	10.82	10.68	10.59	10.87	10.38	10.70	10.37	---
22	10.73	10.90	10.75	10.81	10.82	10.67	10.59	10.86	10.30	10.70	10.41	---
23	10.77	10.91	10.80	10.79	10.82	10.67	10.59	10.86	10.26	10.70	10.44	---
24	10.77	10.91	10.80	10.79	10.82	10.65	10.62	10.89	10.24	10.69	10.49	---
25	10.78	10.91	10.79	10.80	10.82	10.63	10.63	10.90	10.22	10.69	10.50	---
26	10.78	10.91	10.80	10.80	10.82	10.61	10.68	10.90	10.24	10.68	10.55	---
27	10.78	10.91	10.80	10.80	10.82	10.60	10.82	10.89	10.24	10.68	10.58	---
28	10.79	10.91	10.81	10.81	10.85	10.60	10.89	10.89	10.24	10.68	10.59	---
29	10.79	10.91	10.81	10.81	---	10.59	10.91	10.89	10.25	10.67	10.61	---
30	10.79	10.91	10.80	10.81	---	10.58	10.92	10.90	10.25	10.52	10.62	---
31	10.80	---	10.80	10.81	---	10.58	---	10.90	---	10.52	10.63	---
LOW	10.80	10.95	10.95	10.88	10.85	10.84	10.92	10.94	10.90	10.70	10.63	10.70

SITE NUMBER FROM LOCATION MAP.—43.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E5DBCA.

SITE ID (STATION NUMBER).—440423103180501.

OTHER IDENTIFIER.—W. Cp Rapid 3.

LOCATION.—Lat 44°04′22.6″, long 103°18′06.8″, in NE1/4SW1/4NW1/4SE1/4 sec. 5, T. 1N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota National Guard.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled unused well, 224 ft deep with 224 ft of 5-in. steel casing; open end.

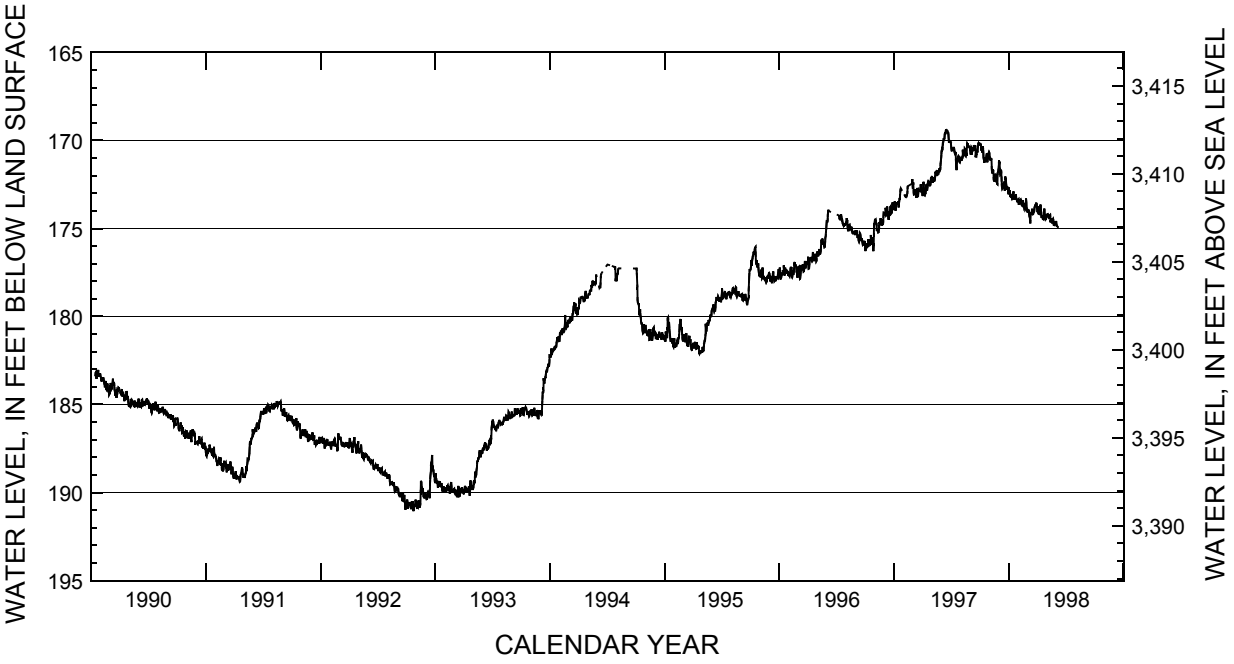
INSTRUMENTATION.—Electronic data logger with float.

DATUM.—Elevation of land-surface datum is 3,581.9 ft above sea level. Measuring point: Top of steel casing, 1.5 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—January 1990 to June 1998.

EXTREMES.—Highest daily water level, 169.41 ft below land-surface datum, June 16, 1997; lowest water level, 191.06 ft below land-surface datum, Oct. 23, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177.28	180.49	180.87	181.28	181.25	181.38	181.56	182.05	179.60	178.96	178.80	178.80
2	177.28	180.80	180.89	181.40	181.62	181.26	181.52	181.74	179.57	178.70	178.64	178.76
3	177.28	180.88	180.96	181.40	181.78	181.02	181.77	181.92	179.52	178.41	178.73	178.79
4	177.28	180.81	181.24	181.39	181.59	181.08	181.77	181.96	179.54	178.69	178.69	178.81
5	177.66	180.97	181.24	180.87	181.59	181.08	181.55	181.94	179.37	178.89	178.54	178.79
6	178.34	181.01	181.13	181.01	181.59	181.37	181.55	181.72	179.32	178.97	178.41	179.07
7	179.06	180.99	181.18	181.17	181.74	181.46	181.52	181.56	179.67	178.96	178.40	179.09
8	179.24	181.08	181.21	181.19	181.60	181.36	181.45	181.38	179.71	178.89	178.59	178.94
9	179.29	181.08	181.21	181.19	181.41	181.04	181.77	181.37	179.65	178.87	178.63	178.93
10	179.31	180.86	181.33	180.78	181.38	181.03	181.84	181.34	179.67	178.75	178.48	178.88
11	179.31	180.78	181.04	180.10	181.46	180.96	181.76	180.99	179.67	178.62	178.40	178.74
12	179.82	180.73	181.12	180.05	181.53	181.12	181.84	180.43	179.47	178.57	178.52	178.81
13	179.93	181.04	181.06	180.43	181.53	181.53	181.82	180.78	179.22	178.66	178.58	179.05
14	179.74	181.33	180.93	180.42	181.19	181.68	181.47	180.86	179.11	178.84	178.62	179.06
15	179.59	181.32	180.93	180.34	181.24	181.62	181.68	180.70	178.96	178.90	178.46	178.72
16	179.96	180.78	180.96	180.53	181.15	181.69	181.82	180.44	178.91	178.97	178.34	178.94
17	180.05	180.72	181.20	180.86	180.74	181.69	181.79	180.41	179.01	178.97	178.37	178.91
18	180.30	181.12	181.09	181.08	180.46	181.52	181.71	180.35	179.05	178.86	178.83	178.98
19	180.42	181.07	181.00	181.24	180.44	181.22	181.71	180.48	179.05	178.75	178.89	179.07
20	180.42	180.88	181.09	181.36	180.19	181.25	181.68	180.48	178.88	178.73	178.80	179.30
21	180.42	181.31	181.22	181.34	180.15	181.10	182.09	180.21	178.92	178.68	178.77	179.36
22	180.68	181.38	181.32	181.36	180.48	181.41	182.12	180.31	179.04	178.69	178.74	179.15
23	180.82	181.32	181.15	181.35	180.78	181.49	182.00	180.27	179.13	178.66	178.73	179.06
24	180.95	181.06	180.92	181.46	180.72	181.30	181.98	180.24	179.13	178.70	178.56	179.06
25	180.93	181.04	181.03	181.45	180.61	181.59	181.98	180.23	179.06	178.68	178.77	178.93
26	180.72	180.69	181.05	181.24	180.93	181.67	182.03	180.00	179.01	178.63	178.81	178.43
27	180.45	180.64	181.13	181.39	181.29	181.87	181.99	179.90	178.92	178.64	178.83	177.95
28	180.73	180.96	181.13	181.69	181.38	181.91	181.93	180.00	179.04	178.82	178.83	177.68
29	180.89	181.11	181.06	181.72	---	181.90	182.02	180.00	179.15	178.78	178.74	177.32
30	180.91	180.96	181.26	181.49	---	181.77	182.02	179.91	179.15	178.84	178.83	177.41
31	180.91	---	181.34	181.29	---	181.62	---	179.69	---	178.90	178.85	---
LOW	180.95	181.38	181.34	181.72	181.78	181.91	182.12	182.05	179.71	178.97	178.89	179.36

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177.36	177.67	177.57	177.76	177.67	177.17	176.95	176.38	174.64	---	174.66	175.10
2	177.30	177.74	177.74	177.77	177.67	177.24	176.62	176.30	174.63	---	174.60	175.18
3	177.17	177.74	178.00	177.23	177.71	177.20	177.10	176.38	174.57	---	174.42	175.25
4	176.79	177.71	177.71	177.81	177.58	177.18	177.28	176.54	174.23	---	174.51	175.26
5	177.08	177.34	177.89	177.86	177.51	177.44	177.27	176.54	173.95	---	174.59	175.12
6	177.08	177.55	177.88	177.86	177.31	177.67	177.03	176.37	174.01	---	174.92	175.49
7	176.82	177.82	177.87	177.79	177.20	177.87	176.78	176.30	---	---	175.11	175.49
8	176.68	177.80	178.07	177.54	177.25	177.86	176.80	176.18	---	---	175.11	175.45
9	176.57	177.23	178.07	177.63	177.21	177.56	176.80	176.43	---	---	174.88	175.48
10	176.56	177.82	177.99	177.56	177.74	177.30	176.63	176.44	---	174.27	174.83	175.72
11	176.40	177.82	177.78	177.56	177.78	177.20	176.72	176.43	---	174.46	174.83	175.77
12	176.32	177.70	177.59	177.55	177.75	177.09	176.71	176.29	---	174.48	174.81	175.70
13	176.46	177.84	177.45	177.37	177.44	177.23	176.81	176.13	---	174.40	175.03	175.48
14	176.45	177.87	177.78	177.59	177.42	177.27	176.87	175.70	---	174.38	175.05	175.29
15	176.21	177.89	177.78	177.51	177.65	177.20	176.85	175.71	---	174.34	175.00	175.32
16	176.10	177.87	177.72	177.11	177.49	177.06	176.71	175.69	---	174.20	175.05	175.39
17	176.06	177.92	177.98	177.56	177.38	177.13	176.35	175.62	---	174.34	174.98	175.63
18	176.47	177.81	177.95	177.68	176.99	177.36	176.41	175.62	---	174.47	174.91	175.67
19	176.99	178.00	177.88	177.34	176.91	177.45	176.55	175.73	---	174.53	175.11	175.67
20	177.01	178.08	177.72	177.23	177.13	177.44	176.56	175.90	---	174.52	175.11	175.55
21	176.79	178.04	177.95	177.45	177.17	177.17	176.82	175.91	---	174.71	175.23	175.64
22	177.11	177.83	177.95	177.54	177.06	177.14	176.82	175.79	---	174.77	175.28	175.77
23	177.17	177.90	177.82	177.37	177.14	176.85	176.79	175.97	---	174.80	175.29	175.94
24	177.17	177.78	177.76	177.37	177.16	177.21	176.45	176.07	---	174.87	175.24	175.93
25	177.17	177.78	177.76	177.45	177.41	177.22	176.53	176.05	---	174.84	175.20	175.76
26	176.99	177.65	177.82	177.46	177.40	177.12	176.55	175.84	---	174.77	175.26	175.76
27	177.33	177.85	177.83	177.57	177.68	177.07	176.63	175.49	---	174.80	175.14	175.76
28	177.50	177.76	177.64	177.41	177.80	177.02	176.85	175.45	---	174.81	175.22	175.88
29	177.68	177.55	177.50	177.64	177.67	176.86	176.84	175.29	---	174.81	175.33	175.91
30	177.68	177.54	177.32	177.68	---	177.00	176.41	174.93	---	174.78	175.33	175.71
31	177.52	---	177.46	177.53	---	177.05	---	174.63	---	174.72	175.17	---
LOW	177.68	178.08	178.07	177.86	177.80	177.87	177.28	176.54	174.64	174.87	175.33	175.94

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176.08	174.46	174.07	173.75	---	172.67	173.06	172.02	170.62	170.15	171.08	170.75
2	176.29	174.60	174.19	173.53	---	172.66	173.16	172.34	170.53	170.45	171.02	170.80
3	176.06	174.56	174.22	173.47	---	172.39	172.98	172.40	170.56	170.58	171.05	170.75
4	175.85	174.67	174.23	173.74	---	172.98	172.36	172.32	170.52	170.58	171.11	170.42
5	175.89	174.71	173.84	173.93	---	173.07	172.40	172.33	170.18	170.52	171.11	170.44
6	176.04	174.74	173.95	173.99	173.20	173.06	172.82	172.26	170.18	170.51	171.02	170.79
7	176.01	175.10	174.27	173.73	173.22	172.78	173.10	172.10	170.01	170.49	170.96	170.42
8	175.85	175.11	174.25	173.59	173.15	172.93	173.13	172.30	169.88	170.52	170.53	170.57
9	176.03	175.10	173.96	173.52	173.13	172.99	172.99	172.30	169.92	170.51	170.83	170.54
10	176.02	175.05	173.76	173.58	173.14	172.86	173.01	172.08	169.91	170.38	170.89	170.50
11	175.62	175.22	174.03	173.58	173.05	172.86	173.01	172.13	169.65	170.49	170.80	170.57
12	175.78	175.21	174.10	173.58	173.02	172.85	172.90	172.03	169.60	170.56	170.81	170.27
13	175.78	175.18	174.26	173.58	172.62	173.21	172.68	171.77	169.61	170.72	170.78	170.35
14	175.74	174.95	174.47	173.46	---	173.22	172.49	171.91	169.58	170.78	170.47	170.34
15	175.73	174.64	174.47	173.76	---	173.03	172.82	171.92	169.42	170.72	170.50	170.33
16	175.64	174.68	174.02	173.76	---	172.70	172.82	171.80	169.41	170.66	170.85	170.32
17	175.93	174.72	174.28	173.58	---	173.08	172.66	171.69	169.44	171.21	170.89	170.33
18	175.91	174.69	174.22	173.34	---	173.23	172.43	171.95	169.46	171.50	170.74	170.96
19	175.37	174.42	174.06	173.33	---	173.01	172.34	171.96	169.46	171.69	170.73	170.78
20	175.73	174.62	173.78	173.18	---	172.83	172.37	171.88	169.47	171.20	170.87	170.81
21	175.93	174.62	173.75	172.81	---	172.85	172.30	171.79	169.58	171.13	170.23	170.68
22	175.88	174.49	173.88	172.73	---	172.85	172.45	171.76	169.58	171.08	170.17	170.57
23	175.81	174.81	174.13	---	---	172.83	172.45	171.80	169.68	170.98	170.22	170.68
24	175.78	174.81	174.11	---	---	172.84	172.56	171.70	169.97	170.91	170.23	170.52
25	175.52	174.69	173.99	---	---	172.84	172.56	171.60	170.09	170.89	170.34	170.33
26	176.23	174.77	173.94	---	---	172.66	172.54	171.66	170.09	170.94	170.34	170.16
27	176.29	174.70	173.52	---	172.46	172.50	172.48	171.70	169.98	171.14	170.34	170.14
28	176.00	174.26	173.74	---	172.20	172.69	172.09	171.65	170.05	171.21	170.35	170.19
29	174.71	174.13	173.79	---	---	172.94	172.13	171.32	170.07	171.24	170.37	170.20
30	174.76	174.16	173.96	---	---	172.94	172.14	171.15	170.08	171.17	170.42	170.24
31	174.69	---	173.86	---	---	172.73	---	170.95	---	171.05	170.38	---
LOW	176.29	175.22	174.47	173.99	173.22	173.23	173.16	172.40	170.62	171.69	171.11	170.96

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170.21	170.95	171.14	172.68	173.37	174.05	173.80	174.23	174.58	---	---	---
2	170.15	171.05	171.25	172.85	173.61	174.06	174.04	174.34	174.84	---	---	---
3	170.21	171.02	171.22	173.07	173.61	173.96	174.08	174.27	174.84	---	---	---
4	170.25	171.05	171.78	172.83	173.38	173.90	174.02	174.20	174.86	---	---	---
5	170.40	171.13	171.94	173.07	173.52	174.05	173.75	174.18	174.91	---	---	---
6	170.58	171.04	171.92	173.22	173.52	174.04	173.89	174.26	174.92	---	---	---
7	170.39	171.02	171.71	173.14	173.37	174.19	174.06	174.32	174.88	---	---	---
8	170.59	171.61	171.73	173.04	173.36	174.30	174.19	174.35	---	---	---	---
9	170.69	171.76	172.20	173.20	173.58	174.39	174.20	174.40	---	---	---	---
10	170.65	171.72	172.62	173.25	173.64	174.67	174.20	174.39	---	---	---	---
11	170.35	171.73	172.72	173.16	173.66	174.67	173.97	174.30	---	---	---	---
12	170.69	171.66	172.70	173.25	173.69	174.10	173.65	174.25	---	---	---	---
13	170.97	171.74	172.68	173.18	173.66	174.19	173.95	174.23	---	---	---	---
14	171.12	172.22	172.64	173.20	173.58	174.18	174.09	174.66	---	---	---	---
15	171.27	172.28	172.52	172.98	173.40	174.06	174.28	174.50	---	---	---	---
16	171.24	172.27	172.54	172.91	173.59	173.98	174.40	174.59	---	---	---	---
17	170.98	172.28	172.35	173.14	173.59	173.89	174.32	174.42	---	---	---	---
18	171.04	172.33	172.59	173.36	173.78	174.16	174.34	174.63	---	---	---	---
19	171.11	172.19	172.86	173.29	173.82	174.20	174.39	174.71	---	---	---	---
20	171.14	171.89	172.73	173.28	173.78	174.17	174.47	174.60	---	---	---	---
21	171.14	172.06	172.06	173.30	173.65	174.03	174.49	174.49	---	---	---	---
22	170.91	172.29	172.24	173.29	173.64	174.05	174.45	174.46	---	---	---	---
23	170.74	172.28	172.17	173.19	173.89	174.03	174.25	174.51	---	---	---	---
24	171.17	172.28	172.52	173.07	173.87	173.83	173.88	174.80	---	---	---	---
25	171.24	172.48	172.66	173.34	173.30	173.74	174.09	174.81	---	---	---	---
26	171.07	172.50	172.79	173.37	173.52	173.69	174.39	174.76	---	---	---	---
27	170.80	171.83	172.62	173.32	173.79	173.72	174.48	174.59	---	---	---	---
28	170.86	171.79	172.76	173.46	173.92	173.73	174.46	174.74	---	---	---	---
29	170.72	171.69	172.70	173.46	---	173.59	174.34	174.77	---	---	---	---
30	170.66	171.59	172.97	173.35	---	173.59	174.20	174.68	---	---	---	---
31	170.73	---	172.96	173.40	---	173.63	---	174.82	---	---	---	---
LOW	171.27	172.50	172.97	173.46	173.92	174.67	174.49	174.82	174.92	---	---	---

SITE NUMBER FROM LOCATION MAP.—44.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E3CBAA2.

SITE ID (STATION NUMBER).—440430103160202.

OTHER IDENTIFIERS.—PE-65A and Sioux Park Mdsn.

LOCATION.—Lat 44°04′27.2″, long 103°16′05.0″, in NE1/4NE1/4NW1/4SW1/4 sec. 3, T. 1 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,170 ft deep with 934 ft of 3-in. steel casing and 1,170 ft of 1.25-in. steel casing; perforated casing from 972 to 1,170 ft.

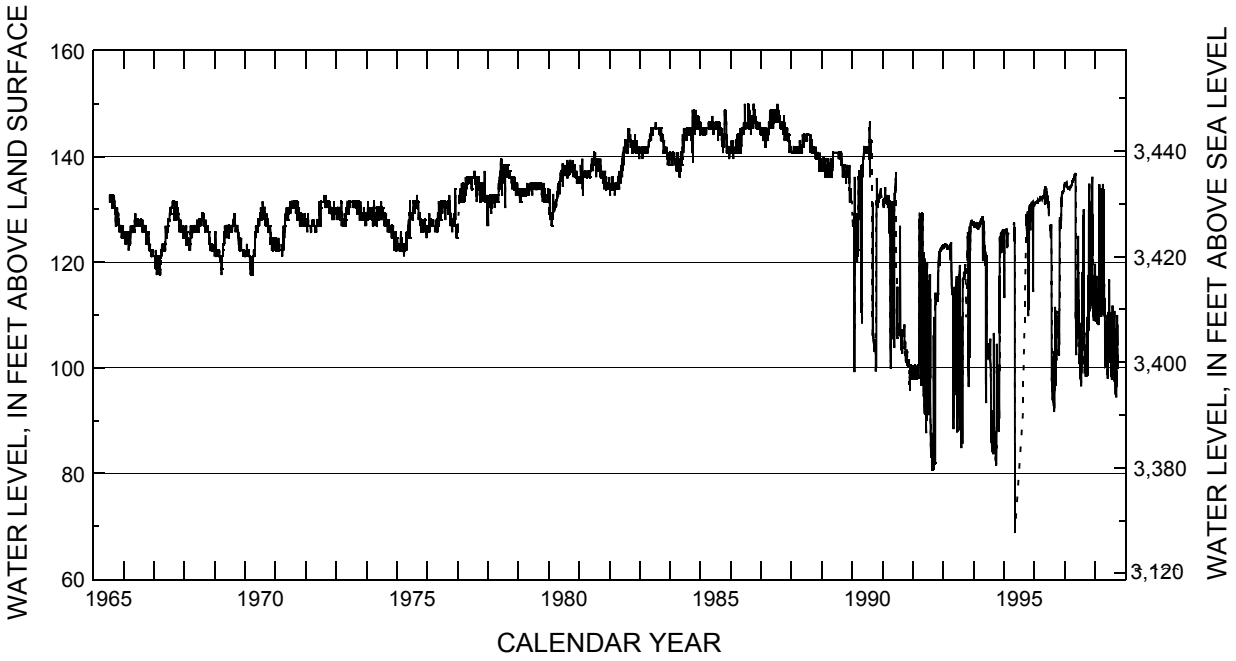
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval. Circular-chart pressure recorder utilized as backup system. Prior to 1991, circular-chart pressure recorder only.

DATUM.—Elevation of land-surface datum is 3,298.9 ft above sea level. Measuring point: Top of recorder platform, 2.3 ft above land-surface datum.

REMARKS.—Records fair. Water levels may be affected by amount of fluid used for antifreeze. Water levels since 1989 affected by pumping of nearby wells. Effects prior to 1989 unknown. To keep current records consistent with historical records, no antifreeze corrections are applied.

PERIOD OF RECORD.—July 1965 to September 1998.

EXTREMES.—Highest daily water level, 149.95 ft above land-surface datum, numerous days between June 19 and Oct. 4, 1986, plus July 16, 1987; lowest daily water level, 68.81 ft above land-surface datum, May 13, 1995. Note: Highest values published by Winter (1994) are in error. Record low may be because of equipment failure.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+83.16	+95.11	+121.76	+122.10	+126.37	---	---	---	---	---	---	---
2	+85.26	+96.26	+122.38	+122.26	+126.14	---	---	---	---	---	---	---
3	+84.91	+96.19	+122.79	+121.57	+125.91	---	---	---	---	---	---	---
4	+84.80	+91.35	+122.38	+124.11	+126.30	---	---	---	---	---	---	---
5	+91.70	+90.43	+124.87	+113.27	+126.02	---	---	+127.52	---	---	---	---
6	+93.31	+96.03	+125.22	+123.99	+125.84	---	---	+124.99	---	---	---	---
7	+104.52	+100.58	+125.33	+125.26	+124.52	---	---	+123.99	---	---	---	---
8	+98.99	+99.38	+124.22	+125.26	+122.68	---	---	+126.53	---	---	---	---
9	+100.26	+117.42	+124.69	+125.61	+125.72	---	---	+123.99	---	---	---	---
10	+91.28	+106.53	+125.26	+125.96	+125.61	---	---	+123.95	---	---	---	---
11	+89.83	+109.69	+125.56	+125.84	+122.91	---	---	+108.15	---	---	---	---
12	+89.80	+124.41	+124.57	+125.61	+124.69	---	---	+85.31	---	---	---	---
13	+95.96	+124.76	+125.56	+125.49	+125.10	---	---	e+68.81	---	---	---	---
14	+94.65	+124.52	+122.33	+125.72	---	---	---	---	---	---	---	---
15	+99.49	+122.79	+125.56	+125.91	---	---	---	---	---	---	e+90.9	---
16	+95.00	+121.57	+125.61	+126.14	---	---	---	---	---	---	---	---
17	+97.53	+124.92	+125.79	+125.91	---	---	---	---	---	---	---	---
18	+94.58	+124.52	+125.96	+125.96	---	---	---	---	---	---	---	---
19	+93.84	+124.69	+126.14	+125.96	---	---	---	---	---	---	---	---
20	+91.88	+124.99	+125.96	+126.07	---	---	---	---	---	---	---	---
21	+88.93	+124.92	+122.15	+125.91	---	---	---	---	---	---	---	---
22	+88.77	+124.80	+124.41	+125.72	---	---	---	---	---	---	---	---
23	+94.00	+123.42	+125.56	+125.72	---	---	---	---	---	---	---	---
24	+93.08	+124.87	+125.96	+125.72	---	---	---	---	---	---	---	---
25	+93.08	+125.26	+126.14	+125.72	---	---	---	---	---	---	---	---
26	+99.72	+125.49	+126.07	+126.14	---	---	---	---	---	---	---	---
27	+91.47	+125.56	+123.03	+126.07	---	---	---	---	---	---	---	+127.32
28	+87.96	---	+122.38	+125.96	---	---	---	---	---	---	---	+128.45
29	+90.38	---	+123.30	+125.68	---	---	---	---	---	---	---	+128.91
30	+91.12	---	+122.79	+125.96	---	---	---	---	---	---	---	+128.91
31	+95.11	---	+122.45	+126.26	---	---	---	---	---	---	---	---
LOW	+83.16	+90.43	+121.76	+113.27	+122.68	---	---	+68.81	---	---	+90.90	+127.32

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+128.70	+129.90	+131.28	+130.73	---	+131.86	+132.14	+132.99	+131.72	---	+96.17	+101.45
2	+128.70	+129.95	+131.08	+130.78	---	+131.82	+132.18	+133.22	+131.72	---	+95.64	+95.64
3	+128.79	+130.08	+131.01	+131.19	---	+131.86	+131.95	+133.52	+132.39	---	+95.41	+100.76
4	+126.42	+130.27	+131.19	+130.98	---	+131.84	+131.88	+133.64	+132.09	---	+99.22	+101.27
5	+125.40	+130.41	+127.71	+131.03	---	+131.68	+131.88	+133.64	+132.60	---	+97.21	+98.02
6	+124.99	+130.36	+131.08	+131.03	---	+131.63	+132.07	+133.57	+131.95	---	+95.76	+111.26
7	+124.62	+130.34	+131.19	+131.05	+131.42	+131.58	+132.16	+133.78	+132.60	---	+95.48	+111.54
8	+124.52	+130.45	+131.05	+131.28	+131.42	+131.63	+132.16	+131.19	+131.47	---	+93.98	+105.12
9	+124.32	+130.55	+131.10	+131.28	+131.42	+131.82	+132.09	+130.92	+131.31	+126.60	+93.93	+102.98
10	+124.50	+130.27	+131.15	+131.33	+131.24	+132.09	+132.21	+133.34	+131.12	+126.62	+102.17	+99.31
11	+127.69	+130.32	+131.31	+131.31	+131.24	+132.11	+132.11	+133.71	+131.84	+126.02	+98.64	+98.04
12	+128.72	+130.62	+131.42	+131.38	+131.28	+132.28	+132.16	+133.98	+131.24	+126.02	+94.67	+103.12
13	+129.00	+130.57	+131.49	+131.31	+131.52	+132.39	+132.23	+134.12	+131.01	+126.02	+93.63	+102.89
14	+129.28	+130.75	+131.40	+131.12	+131.49	+132.44	+132.21	+134.31	+131.01	+126.42	+93.52	+104.27
15	+129.55	+126.09	+118.23	+131.31	+131.35	+132.53	+132.37	+132.41	+130.32	+126.05	+93.52	+99.79
16	+117.17	+130.50	+115.39	+131.42	+131.52	+132.48	+132.37	+131.08	+131.52	+125.98	+94.10	+96.84
17	+114.51	+130.78	+114.72	+131.03	+131.54	+132.37	+132.48	+133.29	+130.75	+125.15	+94.81	+96.84
18	+110.84	+130.96	+114.42	+131.10	+131.75	+132.25	+132.48	+132.11	+130.62	+124.80	+94.10	+106.62
19	+109.81	+130.71	+114.60	+131.28	+131.77	+132.18	+132.48	+131.47	+131.03	+124.59	+93.63	+110.80
20	+113.64	+130.68	+129.32	+131.28	+131.70	+132.21	+132.48	+133.71	+130.38	+124.59	+93.98	+107.27
21	+113.73	+130.75	+130.59	+131.38	+131.70	+131.79	+132.41	+133.80	+131.54	+125.47	+93.89	+104.43
22	+113.94	+130.85	+130.71	+131.38	+131.79	+132.46	+132.35	+132.14	+130.08	+126.69	+92.94	+103.21
23	+112.81	+130.89	+130.89	+131.40	+131.72	+132.25	+132.41	+133.80	+129.25	+127.15	+92.71	+101.39
24	+112.69	+131.03	+130.89	+131.40	+131.84	+132.00	+132.65	+133.98	---	+125.40	+92.60	+103.00
25	+118.46	+131.03	+130.89	+131.38	+131.65	+132.00	+132.58	+131.38	---	+125.19	+92.20	+103.00
26	+114.44	+131.12	+130.89	+131.35	+131.70	+132.11	+132.62	+131.12	---	+115.80	+91.70	+106.16
27	+114.90	+131.01	+130.87	---	+131.45	+132.07	+132.71	+132.95	---	+115.78	+98.39	+105.63
28	+112.76	+131.08	+130.89	---	+131.42	+132.14	+132.74	+132.69	---	+116.45	+92.94	+106.81
29	+110.98	+131.22	+130.82	---	+131.61	+132.18	+132.74	+132.48	---	+103.16	+92.32	+108.93
30	+126.76	+131.24	+130.92	---	---	+132.07	+131.95	+132.69	---	+97.63	+103.07	---
31	+129.67	---	+130.87	---	---	+132.07	---	+133.43	---	+97.33	+101.02	---
LOW	+109.81	+126.09	+114.42	+130.73	+131.24	+131.58	+131.88	+130.92	+129.25	+97.33	+91.70	+95.64

e Estimated

SITE NUMBER 44—Continued

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	+127.02	+133.22	+134.79	+134.28	+134.05	+135.23	+136.68	+111.17	+102.15	+118.16	+100.28
2	---	+127.78	+133.20	+135.00	+134.24	+134.19	+135.25	+136.54	+116.57	+108.47	+117.56	+99.59
3	---	+128.52	+133.15	+135.11	+134.10	+133.94	+135.41	+136.57	+116.64	+105.54	+113.80	+99.59
4	---	+128.47	+133.20	+134.93	+133.91	+133.91	+135.51	+136.68	+115.62	+104.29	+113.17	+99.66
5	---	+128.45	+133.43	+134.84	+133.94	+133.96	+135.41	+136.68	+113.82	+104.96	+110.64	+104.36
6	---	+128.52	+133.27	+134.72	+133.98	+133.98	+135.37	+136.78	+109.55	+102.72	+115.69	+102.86
7	---	+128.08	+133.22	+134.72	+133.98	+134.12	+135.35	+136.73	+115.14	+99.98	+111.38	+103.07
8	---	+127.99	+133.31	+134.75	+134.01	+134.05	+135.30	+136.66	+109.23	+98.78	+107.94	+99.31
9	---	+128.26	+133.48	+134.61	+133.98	+134.05	+135.44	+136.66	+105.54	+98.11	+108.86	+98.32
10	---	+128.35	+133.50	+134.63	+133.94	+134.28	+135.51	+136.80	+106.21	+97.81	+128.93	+98.39
11	---	+128.08	+133.31	+134.65	+133.91	+134.24	+135.48	+136.87	+124.96	+98.57	+113.43	+98.39
12	---	+127.66	+133.36	+134.70	+134.01	+134.19	+135.58	+110.08	+114.31	+101.48	+115.99	+101.55
13	---	+126.56	+133.41	+134.84	+133.89	+134.10	+135.60	+109.23	+113.45	+101.94	+125.33	+99.17
14	---	+126.56	+133.29	+135.09	+133.91	+134.08	+135.78	+109.76	+118.02	+98.04	---	+99.17
15	---	+127.34	+133.27	+134.79	+133.96	+134.21	+135.62	+109.94	+118.02	+97.14	+108.45	+99.17
16	---	+127.36	+133.50	+134.81	+133.91	+134.58	+135.64	+106.12	+114.77	+96.68	+117.95	+98.66
17	---	+127.73	+133.41	+134.88	+134.01	+134.28	+135.78	+103.23	+109.07	+96.52	+129.97	+98.64
18	+110.68	+128.22	+133.48	+135.02	+133.89	+134.21	+135.83	+102.45	+107.34	+97.05	+114.70	+98.29
19	+108.68	+128.19	+133.64	+135.07	+133.98	+134.42	+135.90	+108.70	+109.55	+97.46	+114.24	+98.64
20	+109.97	+128.82	+133.91	+135.14	+133.98	+134.61	+136.04	+105.31	+109.00	+102.79	+107.94	+102.68
21	+107.45	+128.79	+133.91	+135.02	+134.03	+134.47	+136.01	+103.99	+112.87	+98.99	+107.34	+106.65
22	+106.60	+131.91	+134.01	+134.95	+133.91	+134.56	+135.92	+108.40	+110.24	+104.36	+106.65	+105.91
23	+106.60	+132.18	+134.03	+134.65	+133.91	+134.63	+135.94	+107.45	+108.17	+104.80	+105.56	+105.98
24	+102.86	+132.28	+134.10	+134.28	+133.89	+134.65	+135.99	+107.43	+106.95	+106.60	+103.49	+103.21
25	+102.33	+130.52	+134.24	+134.28	+134.19	+134.70	+135.99	+116.82	+101.89	+106.14	+103.49	+102.75
26	+106.58	+132.00	+134.35	+134.19	+134.21	+134.77	+136.20	+113.82	+101.46	+104.59	+100.92	+104.18
27	+104.41	+132.55	+134.63	+134.10	+134.33	+135.00	+136.27	+111.03	+100.72	+102.91	+100.65	+104.18
28	+104.78	+132.90	+134.65	+134.19	+134.12	+135.00	+136.41	+111.12	+100.79	+109.74	+102.22	+109.55
29	+108.81	+133.08	+134.51	+134.10	---	+135.00	+136.54	+113.08	+102.56	+111.47	+99.24	+102.31
30	+110.75	+133.08	+134.51	+134.38	---	+135.09	+136.68	+115.34	+101.73	+108.33	+99.26	+100.97
31	+126.39	---	+134.70	+134.42	---	+135.35	---	+114.33	---	+108.31	+99.79	---
LOW	+102.33	+126.56	+133.15	+134.10	+133.89	+133.91	+135.23	+102.45	+100.72	+96.52	+99.24	+98.29

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+101.20	+110.71	+129.12	+119.66	+111.79	+113.89	+114.37	+101.20	+98.36	+107.87	+108.51	+96.22
2	+100.46	+111.31	+117.00	+114.56	+108.47	+112.81	+113.11	+108.75	+97.95	+103.85	+102.47	+95.76
3	+99.19	+112.37	+111.28	+112.18	+108.35	+111.17	+111.42	+101.80	+98.25	+101.02	+103.28	+95.55
4	+98.59	+112.04	+111.19	+112.32	+111.12	+112.02	+111.12	+100.42	+102.84	+101.02	+101.36	+95.23
5	+98.59	+114.37	+115.11	+110.41	+108.49	+115.07	+134.75	+100.39	+103.09	+106.37	+101.36	+94.93
6	+98.64	+114.79	+115.46	+109.78	+108.49	+115.87	+125.52	+100.49	+104.64	+104.45	+104.41	+95.18
7	+98.71	+126.21	+113.50	+109.65	+110.59	+113.54	+112.92	+104.57	+110.50	+110.50	+100.81	+100.19
8	+100.88	+113.36	+110.52	+108.98	+109.28	+133.91	+112.67	+102.03	+103.28	+103.53	+102.72	+99.26
9	+117.49	+112.21	+109.69	+108.81	+108.88	+114.24	+112.48	+104.71	+103.07	+102.68	+101.11	+97.51
10	+109.65	+113.27	+113.96	+112.55	+110.68	+114.03	+111.19	+104.69	+102.63	+101.94	+98.04	+96.06
11	+111.51	+112.16	+115.34	+114.28	+108.21	+114.05	+110.43	+101.82	+101.78	+99.40	+98.04	+94.44
12	+111.51	+111.77	+114.58	+109.28	+108.10	+111.91	+116.13	+107.66	+104.55	+98.64	+104.13	+94.42
13	+108.93	+120.49	+116.50	+109.18	+113.61	+115.25	+115.25	+107.68	+104.87	+98.36	+106.65	+99.36
14	+107.02	+118.90	+113.13	+108.88	+111.79	+112.69	+116.52	+106.32	+104.27	+98.76	+99.03	+98.53
15	+107.27	+126.14	+109.65	+108.79	+112.14	+111.40	+133.75	+107.06	+107.80	+98.83	+99.26	+98.27
16	+112.48	+118.92	+108.95	+111.72	+111.68	+110.04	+118.64	+108.45	+106.42	+99.75	+101.46	+97.56
17	+115.37	+114.97	+109.00	+111.08	+110.31	+109.67	+113.50	+106.30	+105.75	+99.03	+98.29	+96.38
18	+120.76	+114.07	+112.11	+117.37	+112.71	+110.87	+116.24	+101.89	+105.75	+98.83	+97.46	+96.38
19	+129.65	+119.80	+109.16	+111.88	+111.40	+110.64	+114.26	+100.44	+107.36	+98.41	+106.51	+100.53
20	+130.22	+127.18	+109.02	+111.10	+117.28	+120.81	+115.87	+100.44	+107.36	+98.71	+105.01	+102.35
21	+132.99	+122.93	+109.32	+110.73	+123.49	+115.60	+113.20	+109.92	+116.70	+98.66	+110.04	+103.58
22	+134.42	+131.61	+110.50	+113.06	+134.70	+111.70	+113.01	+106.74	+105.12	+97.97	+110.73	+109.97
23	+134.84	+127.66	+112.32	+112.57	+113.77	+110.57	+111.44	+106.74	+104.64	+97.74	+106.99	+109.60
24	+117.19	+134.35	+115.60	+112.55	+112.53	+111.03	+109.99	+107.02	+105.56	+100.51	+105.12	+104.25
25	+123.26	+120.70	+114.47	+111.42	+113.22	+110.11	+109.76	+101.76	+109.83	+100.44	+104.34	+104.41
26	+131.24	+127.78	+114.49	+111.01	+111.93	+111.79	+112.39	+101.62	+108.08	+99.86	+102.79	+108.15
27	+117.81	+135.58	+114.19	+113.98	+113.96	+111.05	+113.17	+100.90	+108.84	+98.87	+103.62	+103.25
28	+111.14	+136.08	+113.06	+110.20	+113.96	+110.82	+105.91	+99.29	+106.12	+98.83	+99.96	+102.52
29	+113.75	+136.13	+112.85	+108.47	---	+114.28	+103.14	+98.89	+101.94	+99.70	+98.83	+102.35
30	+115.11	+121.27	+113.15	+108.38	---	+111.95	+101.32	+98.83	+101.18	+111.74	+97.63	+99.89
31	+111.65	---	+112.11	+110.73	---	+111.42	---	+98.76	---	+106.78	+96.98	---
LOW	+98.59	+110.71	+108.95	+108.38	+108.10	+109.67	+101.32	+98.76	+97.95	+97.74	+96.98	+94.42

SITE NUMBER FROM LOCATION MAP.—45.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E3CBAA.

SITE ID (STATION NUMBER).—440430103160201.

OTHER IDENTIFIERS.—PE-64B and Sioux Park Mnls.

LOCATION.—Lat 44°04′27.2″, long 103°16′05.1″, in NE1/4NE1/4NW1/4SW1/4 sec. 3, T. 1 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 570 ft deep with 100 ft of 6-in. steel casing, 404 ft of 3-in. steel casing, and 570 ft of 1.25-in. steel casing; perforated casing from 413 to 570 ft.

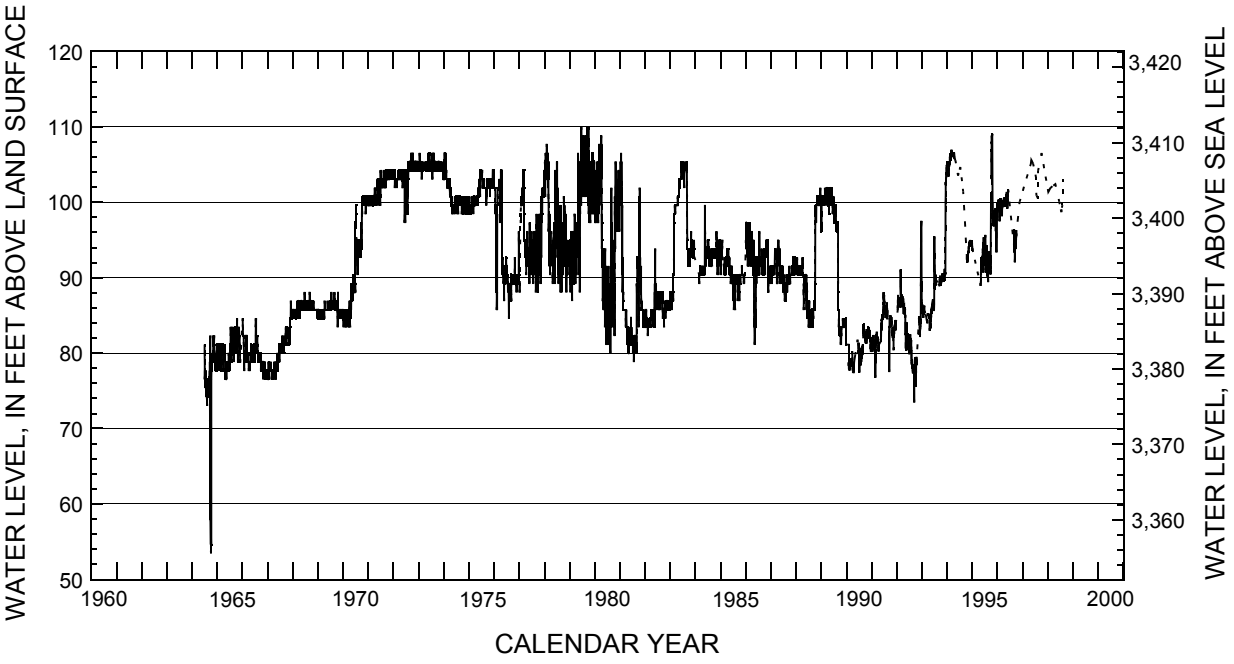
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval. Circular-chart pressure recorder prior to 1991.

DATUM.—Elevation of land-surface datum is 3,302 ft above sea level. Measuring point: Top of recorder platform, 2.7 ft above land-surface datum.

REMARKS.—Records poor because of numerous problems with well and instrumentation. Large errors are possible for numerous periods. Water levels may be affected by pumping of nearby wells. Data not corrected for antifreeze.

PERIOD OF RECORD.—July 1964 to September 1998.

EXTREMES.—Highest daily water level, 109.98 ft above land-surface datum, June 21, Sept. 16, 26, and Oct. 6, 1979; lowest daily water level, 53.45 ft above land-surface datum, Oct. 1, 1964. Extreme values published by Winter (1994) were based on values for every fifth day. Accuracy of extreme low value is questionable.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	+93.43	---	+93.87	---	---	---	---	+92.63	+92.49	+90.99	+92.19
2	---	+93.20	---	+93.76	---	---	---	---	+93.62	+93.04	+91.15	+93.02
3	---	+93.13	---	---	---	---	---	---	+93.85	+94.08	+91.68	+93.25
4	---	+93.48	---	---	---	---	---	+88.91	+93.41	+93.62	+91.73	+93.50
5	---	+93.32	---	---	---	---	---	+89.56	+93.83	+93.32	+91.27	+92.93
6	---	+93.32	---	---	---	---	---	+90.76	+93.71	+93.27	+91.47	+91.93
7	---	+93.55	---	---	---	---	---	+90.37	+92.03	+94.36	+92.12	+91.98
8	---	+93.32	---	---	---	---	---	+92.23	+91.40	+93.04	+91.93	+92.49
9	---	+93.48	---	---	---	---	---	+91.43	+90.76	+94.63	+90.16	+92.33
10	---	+93.90	---	---	---	---	---	+91.31	+90.71	+95.67	+91.54	+92.67
11	---	+94.01	---	---	---	---	---	+91.20	+91.31	+93.94	+92.23	+92.90
12	---	+94.17	---	---	---	---	---	+92.30	+92.19	+92.79	+92.17	+91.66
13	+92.79	+94.13	---	---	---	---	---	+90.97	+93.62	+92.90	+92.33	+92.35
14	+92.79	+93.83	---	---	---	---	---	+91.04	+94.31	+91.40	+90.53	+91.31
15	+92.44	+93.90	---	---	---	---	---	+91.40	+94.66	+91.06	+90.76	+91.73
16	+92.40	+94.75	---	---	---	---	---	+92.74	+95.35	+91.15	+90.97	+91.63
17	+92.05	+94.59	+94.75	---	---	---	---	+92.10	+95.19	+90.62	+92.12	+92.05
18	+92.28	+94.24	+94.86	---	---	---	---	+91.52	+94.82	+90.74	+91.31	+92.05
19	+92.10	+94.40	+94.98	---	---	---	---	+92.74	+94.06	+91.89	+89.44	+90.74
20	+91.98	+94.52	+94.98	---	---	---	---	+92.10	+95.05	+91.31	+91.47	+90.94
21	+92.05	+94.13	+94.98	---	---	---	---	+92.37	+94.75	+91.04	+91.91	+90.46
22	+92.17	+94.17	+94.75	---	---	---	---	+92.07	+94.01	+91.66	+92.33	+90.99
23	+92.28	+94.17	+94.75	---	---	---	---	+91.91	+93.25	+92.10	+92.05	+91.10
24	+92.21	+94.13	+94.91	---	---	---	---	+91.33	+93.09	+91.59	+92.53	+91.98
25	+92.17	+94.24	+94.75	---	---	---	---	+91.68	+92.88	+92.17	+92.77	+92.60
26	+92.21	+94.59	+94.75	---	---	---	---	+92.37	+93.23	+91.93	+91.63	+94.40
27	+93.09	+94.82	+94.29	---	---	---	---	+92.37	+93.87	+92.21	+91.52	+96.87
28	+92.97	+94.93	+94.29	---	---	---	---	+92.58	+93.18	+92.10	+91.89	+98.14
29	+92.44	+94.75	+94.86	---	---	---	---	+92.00	+92.53	+92.51	+92.10	+100.68
30	+92.86	+94.75	+93.87	---	---	---	---	+92.63	+91.61	+94.26	+92.12	+100.98
31	+92.97	---	+93.53	---	---	---	---	+92.81	---	+92.19	+91.15	---
LOW	+91.98	+93.13	+93.53	+93.76	---	---	---	+88.91	+90.71	+90.62	+89.44	+90.46

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	+97.98	+98.99	+99.36	+98.05	+100.03	+100.42	+99.82	+100.72	---	---	+96.32
2	+103.40	+96.83	+98.37	+99.36	+97.47	+99.99	+100.47	+99.76	+101.30	---	---	+95.67
3	+103.17	+97.06	+97.93	+99.59	+97.75	+99.99	+99.96	+100.06	+101.55	---	---	+93.55
4	+105.64	+97.73	+98.44	+98.97	+99.09	+100.03	+99.71	+100.08	+101.28	---	---	+93.32
5	+105.82	+98.07	+97.77	+98.90	+99.99	+99.55	+99.48	+100.15	+101.67	---	---	+93.48
6	+106.52	+98.14	+97.84	+99.25	+100.38	+99.16	+99.76	+100.72	---	---	---	+93.78
7	+106.63	+97.63	+97.29	+99.43	+100.38	+98.81	+100.17	+101.00	---	---	---	+94.70
8	+108.01	+97.66	+96.18	+100.12	+100.15	+98.16	+100.63	+100.89	---	---	---	+95.56
9	+107.78	+98.37	+96.29	+99.94	+100.33	+99.43	+100.17	+100.06	---	---	---	+94.17
10	+108.01	+97.33	+97.54	+100.12	+99.89	+100.08	+100.31	+100.17	---	---	---	+92.86
11	+108.25	+96.80	+97.82	+100.03	+99.66	+99.99	+99.57	+100.29	---	---	---	+92.05
12	+108.82	+98.33	+97.68	+100.03	+99.66	+99.87	+99.46	+100.70	---	---	---	+93.13
13	+108.13	+98.05	+98.76	+100.15	+100.01	+99.94	+99.50	+100.82	---	---	---	+94.63
14	+107.71	+98.00	+98.67	+99.80	+99.87	+99.82	+99.57	+101.14	---	---	---	+95.10
15	+108.59	+98.42	+98.63	+99.99	+99.25	+100.06	+99.71	+101.37	---	---	---	+95.90
16	+109.05	+98.09	+98.92	+100.36	+99.48	+100.26	+99.78	+101.37	---	---	---	+96.25
17	+108.50	+97.75	+98.56	+98.92	+99.82	+100.15	+100.12	+100.96	---	---	---	+95.97
18	+105.27	+97.91	+93.37	+99.27	+100.10	+99.85	+99.94	+100.61	---	---	---	+95.16
19	+102.69	+98.05	+97.86	+99.27	+100.33	+99.69	+100.03	+100.66	---	---	---	+94.93
20	+101.14	+97.38	+98.21	+99.62	+100.31	+99.50	+99.76	+100.24	---	---	---	+95.51
21	+100.91	+97.49	+98.16	+99.94	+100.15	+99.89	+99.87	+99.73	---	---	---	+94.40
22	+99.66	+97.98	+98.28	+99.59	+100.15	+99.89	+99.57	+99.43	---	---	---	+94.98
23	+98.97	+97.75	+98.67	+99.76	+99.96	+100.06	+99.57	+99.16	---	---	---	+94.59
24	+98.58	+98.16	+99.20	+99.82	+100.26	+99.36	+100.15	+99.25	---	---	---	+93.78
25	+98.65	+98.76	+99.25	+99.41	+99.59	+99.59	+99.78	+99.36	---	---	---	+94.40
26	+98.92	+98.44	+99.32	+99.50	+99.48	+99.99	+99.50	+99.82	---	---	---	+94.13
27	+98.72	+97.33	+99.20	+99.50	+99.43	+100.15	+99.39	+99.87	---	---	---	+94.75
28	+98.00	+97.17	+99.43	+99.39	+99.13	+100.22	+99.55	+99.99	---	---	---	+95.67
29	+98.28	+98.16	+99.36	+98.81	+99.48	+100.26	+99.55	+100.17	---	---	+94.17	+96.25
30	+98.23	+99.18	+99.55	+98.67	---	+100.15	+99.82	+100.84	---	---	+94.29	+95.51
31	+98.19	---	+99.82	+98.51	---	+100.12	---	+101.07	---	---	+95.79	---
LOW	+98.00	+96.80	+93.37	+98.51	+97.47	+98.16	+99.39	+99.16	+100.72	---	+94.17	+92.05

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	e+105.1	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	e+105.6	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	e+100.5	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	e+104.2	---
14	---	---	---	---	---	---	---	---	---	e+103.3	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	e+100.9	---	---
19	---	e+100.1	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	e+105.1	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+100.10	---	---	---	---	+105.10	+105.60	+105.10	+100.90	+100.50	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e+106.5	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	e+101.9	---	---	---	---	---	---	---
7	---	---	---	e+101.4	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	e+103.1	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	+98.7	---	---
16	---	---	---	---	---	---	---	---	e+100.1	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	e+102.4	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	+99.60	---	---
LOW	+106.50	---	---	+101.40	+101.90	---	+102.40	---	+100.10	+98.70	+103.10	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—46.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E3BBCC.

SITE ID (STATION NUMBER).—440446103161701.

OTHER IDENTIFIERS.—PE-89E and Lime Creek.

LOCATION.—Lat 44°04′44.6″, long 103°16′18.6″, in SW1/4SW1/4NW1/4NW1/4 sec. 3, T. 1 N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,390 ft deep with 1,040 ft of 6 3/8-in. steel casing; open hole from 1,035 to 1,391 ft.

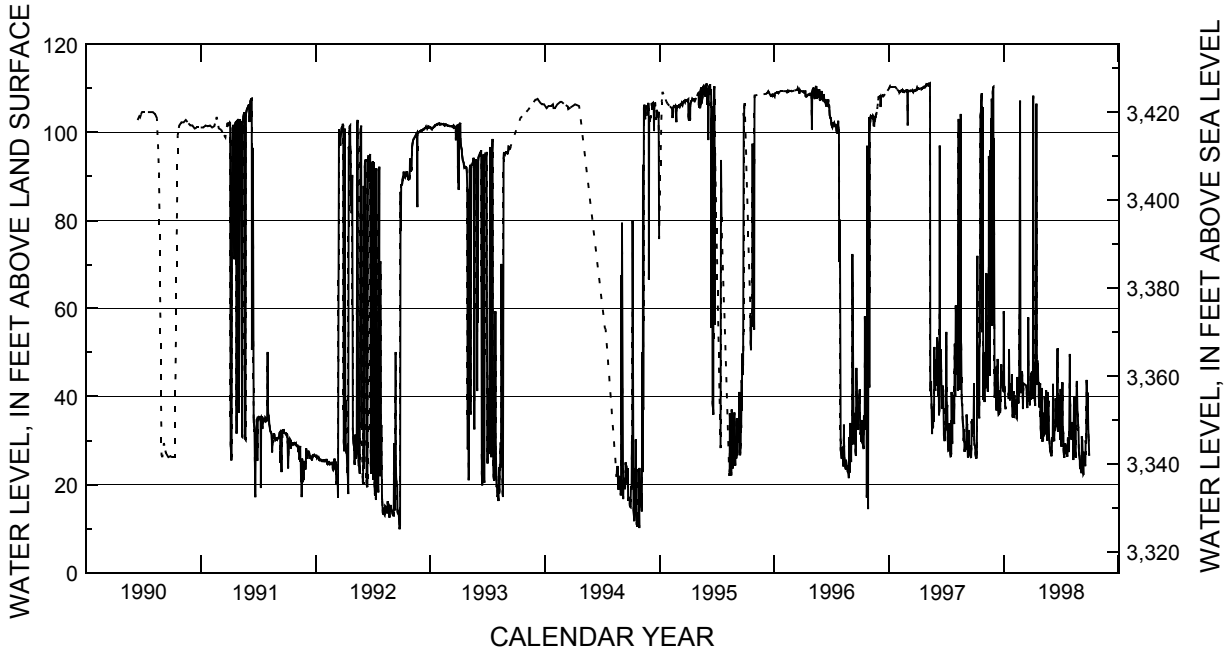
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 15-minute interval. Unpublished air temperature and barometric pressure also recorded at this site.

DATUM.—Elevation of land-surface datum is 3,315.4 ft above sea level. Measuring point: Base of gage 4.3 ft above land-surface datum.

REMARKS.—Records good. Water levels are affected by pumping of nearby well.

PERIOD OF RECORD.—June 1990 to September 1998.

EXTREMES.—Highest daily water level, 111.16 ft above land-surface datum, May 11, 1997; lowest daily water level, 10.14 ft above land-surface datum, Oct. 28, 1994.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	e+104.6	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	e+29.4
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	e+104.2	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	e+27.1
13	---	---	---	---	---	---	---	---	e+102.8	---	---	---
14	---	---	---	---	---	---	---	---	---	---	e+103.2	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	e+103.7	---	---	e+26.2
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	e+103.4	---	e+90.3	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	e+104.6	---	---
26	---	---	---	---	---	---	---	---	---	---	---	e+26.4
27	---	---	---	---	---	---	---	---	e+104.6	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	e+26.6	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	e+26.2	---
LOW	---	---	---	---	---	---	---	---	+102.80	+104.60	+26.20	+26.20

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e+26.17	---	---	---	---	---	+102.02	+37.89	+105.92	+35.35	+50.00	+30.71
2	---	---	---	---	---	---	+102.14	+36.34	+106.15	+35.19	+41.07	+30.35
3	---	---	---	---	---	---	+102.02	+43.70	+106.32	+34.94	+36.37	+30.46
4	---	---	---	---	---	---	+102.02	+80.98	+103.20	+35.17	+35.79	+30.53
5	---	---	e+101.6	---	---	---	+36.00	+102.44	+102.37	+35.08	+35.56	+30.55
6	---	---	---	---	e+101.1	e+100.6	+29.12	+102.95	+103.94	+35.51	+34.84	+30.71
7	---	e+102.3	---	---	---	---	+26.93	+100.18	+107.01	+35.24	+33.74	+30.88
8	---	---	---	---	---	---	+25.48	+99.19	+107.24	+35.14	+33.23	+31.41
9	---	---	---	e+101.1	---	---	+26.26	+98.93	+107.42	+35.17	+32.49	+31.78
10	e+26.17	---	---	---	---	---	+53.88	+102.44	+107.49	+34.91	+32.15	+31.89
11	---	---	---	---	---	---	+97.62	+37.96	+107.63	+19.25	+31.89	+24.95
12	---	---	e+100.9	---	---	---	+100.92	+30.85	+107.70	+35.05	+31.89	+27.48
13	---	---	---	---	e+101.4	---	+101.38	+30.76	+50.60	+35.17	+31.66	+27.90
14	---	e+102.8	---	---	---	---	+101.52	+100.27	+93.53	+34.87	+31.52	+26.52
15	---	---	---	---	---	---	+101.66	+102.76	+95.01	+35.40	+30.71	+22.82
16	---	---	---	e+101.6	---	---	+100.50	+103.43	+96.42	+32.65	+27.28	+32.35
17	---	---	---	---	---	---	+98.38	+103.89	+44.56	+34.36	+29.47	+30.55
18	---	---	e+101.1	---	---	---	+71.18	+104.22	+35.26	+34.84	+30.83	+32.08
19	e+99.30	---	---	---	---	---	+99.79	+104.56	+34.13	+34.75	+30.92	+32.45
20	---	---	---	---	e+103.5	e+98.84	+101.86	+39.16	+33.02	+34.75	+30.97	+31.91
21	---	---	---	---	---	---	+102.21	+32.03	+32.63	+34.61	+30.92	+32.54
22	---	---	---	---	---	---	+102.30	+30.35	+25.62	+34.48	+31.61	+32.03
23	---	---	---	e+101.4	---	---	+102.35	+30.18	+17.10	+34.66	+31.20	+31.71
24	e+101.6	---	---	---	---	---	+35.01	+100.69	+25.66	+34.54	+30.74	+31.68
25	---	---	---	---	---	---	+31.59	+104.19	+30.05	+34.98	+30.44	+31.64
26	---	---	---	---	---	e+101.8	+97.02	+104.86	+31.89	+34.75	+30.09	+31.61
27	---	---	---	---	e+100.9	e+101.8	+102.23	+105.12	+31.89	+34.15	+30.23	+31.57
28	---	e+101.6	---	---	---	e+102.2	+102.67	+105.28	+34.68	+34.78	+29.91	+31.55
29	---	---	---	---	---	+101.72	+102.85	+105.44	+34.84	+34.59	+30.11	+31.38
30	---	---	---	e+101.6	---	+101.84	+102.85	+105.74	+25.41	+34.52	+30.11	+31.18
31	e+102.3	---	---	---	---	+101.82	---	+105.81	---	+34.57	+30.23	---
LOW	+26.17	+101.60	+100.90	+101.10	+100.90	+98.84	+25.48	+30.18	+17.10	+19.25	+27.28	+22.82

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+31.52	+28.82	+24.56	+26.42	+25.27	+25.82	e+27.88	+29.35	+20.26	+93.33	+15.70	+13.67
2	+31.41	+28.75	+28.13	+26.45	+25.29	+25.64	e+27.53	+28.89	+87.81	+27.21	+13.69	+13.48
3	+31.20	+28.80	+27.85	+26.29	+25.39	+25.04	e+100.82	+28.15	+35.47	+21.12	+13.30	+13.23
4	+29.33	+28.85	+26.65	+26.17	+25.36	+24.99	e+42.34	+24.88	+23.61	+84.33	+13.32	+12.84
5	+24.81	+28.52	+26.42	+26.10	+25.75	e+23.22	e+34.29	+24.44	+60.87	+93.12	+14.38	+13.02
6	+23.66	+28.41	+25.80	+26.31	+25.25	e+25.13	e+39.20	+27.72	+91.97	+33.37	+14.64	+12.97
7	+27.09	+28.50	+27.05	+26.08	+24.65	e+20.17	e+28.43	+31.27	+93.42	+19.96	+13.25	+29.26
8	+28.52	+27.30	+26.89	+26.08	+24.62	e+20.54	e+27.44	+29.72	+93.74	+17.52	+13.07	+19.62
9	+30.07	+27.97	+27.67	+26.01	+24.72	e+20.63	e+27.48	+25.85	+93.81	+59.30	+13.80	+18.86
10	+29.91	+25.66	+27.25	+25.94	+24.81	e+21.03	e+27.07	+26.38	+29.40	+22.59	+15.03	+15.03
11	+29.82	+25.80	+27.23	+26.05	+24.88	e+22.18	e+22.66	+29.79	+21.99	+16.53	+14.87	+14.13
12	+30.18	+27.83	+27.16	+25.75	+25.11	e+19.76	e+23.79	+99.44	+20.38	+70.58	+13.92	+49.96
13	+30.00	+28.73	+26.42	+25.80	+25.09	e+17.01	e+22.57	+102.12	+19.55	+91.76	+14.20	+26.03
14	+29.93	+25.45	+25.99	+25.52	+24.56	e+48.46	e+17.84	+102.79	+19.60	+29.15	+14.45	+20.89
15	+28.15	+25.43	+26.01	+25.62	+24.53	e+97.18	e+72.17	+42.09	+21.76	+21.60	+14.50	+20.56
16	+29.58	+20.52	+26.22	+25.62	+24.56	e+100.71	e+96.70	+27.39	+93.65	+20.17	+13.46	+19.57
17	+29.24	+24.65	+26.29	+25.57	+24.86	e+99.92	e+96.07	+24.99	+94.43	+29.42	+14.66	+20.03
18	+29.15	+17.15	+26.49	+25.55	+24.88	e+100.11	e+99.92	+24.16	+94.36	+19.89	+16.13	+13.85
19	+29.10	+25.85	+25.85	+25.34	+24.86	e+99.03	e+101.38	+24.46	+88.78	+18.19	+15.44	+13.60
20	+29.05	+25.62	+25.62	+25.32	+24.79	e+97.04	e+101.52	+23.03	+94.57	+71.96	+14.87	+13.74
21	+29.26	+24.14	+25.66	+25.50	+24.76	e+99.44	e+96.37	+22.48	+94.55	+82.37	+15.03	+13.78
22	+29.28	+20.49	+26.01	+25.48	+24.86	e+99.58	e+95.61	+77.18	+94.66	+92.15	+13.62	+13.60
23	+29.26	+21.72	+26.49	+25.50	+24.90	e+100.09	e+83.34	+100.09	+95.10	+30.09	+12.47	+11.80
24	+29.19	+21.00	+26.40	+25.43	+24.92	e+100.85	e+87.17	+100.76	+33.02	+24.58	+12.81	+11.27
25	+29.40	+22.13	+26.47	+25.27	+23.42	e+101.15	e+81.65	+101.10	+24.53	+21.88	+13.99	+9.81
26	+29.35	+25.32	+26.65	+25.27	+23.36	e+101.24	e+83.61	+101.49	+22.43	+70.63	+14.93	+10.74
27	+29.35	+24.32	+26.72	+25.41	+23.70	e+101.10	e+90.28	+33.00	+22.85	+49.77	+14.93	+81.22
28	+29.22	+24.65	+26.75	+25.50	+25.06	e+101.93	e+43.29	---	+24.19	+28.13	+15.33	+86.45
29	+29.22	+24.07	+26.59	+25.43	+25.20	e+101.56	+32.31	---	+89.31	+33.46	+14.20	+77.57
30	+29.33	+23.38	+26.47	+25.64	---	e+37.47	+30.39	+21.93	+92.13	+20.59	+13.85	+88.07
31	+28.98	---	+26.49	+25.29	---	e+29.61	---	+20.26	---	+17.08	+14.17	---
LOW	+23.66	+17.15	+24.56	+25.27	+23.36	+17.01	+17.84	+20.26	+19.55	+16.53	+12.47	+9.81

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+88.04	+91.32	+100.39	+101.15	+101.91	+101.49	+87.01	+87.10	+56.78	+25.32	+19.69	+95.31
2	+88.09	+91.41	+100.41	+101.10	+101.95	+101.47	+101.15	+31.15	+91.80	+24.79	+18.30	+95.26
3	+88.32	+95.17	+100.39	+101.01	+101.79	+101.42	+101.63	+20.93	+94.16	+25.41	+17.10	+95.15
4	+89.13	+96.72	+100.41	+100.80	+101.79	+101.40	+101.84	+36.64	+94.57	+41.72	+17.70	+95.26
5	+89.57	+97.48	+100.50	+100.73	+101.84	+101.42	+102.00	+70.19	+94.60	+38.37	+17.10	+95.52
6	+89.47	+97.83	+100.41	+100.85	+101.89	+101.42	+101.98	+91.37	+94.87	+34.87	+16.25	+95.96
7	+90.03	+98.19	+100.46	+100.82	+101.91	+101.40	+98.10	+92.24	+95.15	+26.93	+23.82	+96.79
8	+91.07	+98.49	+100.62	+100.94	+101.91	+101.40	+97.13	+92.61	+95.08	+47.79	+17.93	+96.72
9	+90.21	+98.59	+100.59	+100.99	+101.91	+101.36	+96.81	+35.93	+95.31	+80.29	+18.46	+96.42
10	+90.21	+98.63	+100.59	+101.15	+101.79	+101.36	+96.33	+83.71	+95.50	+96.60	+24.62	+96.26
11	+89.94	+98.82	+100.78	+101.24	+101.84	+101.36	+96.05	+92.52	+95.47	+58.44	+23.12	+96.26
12	+89.84	+98.86	+100.80	+101.19	+101.91	+101.31	+94.92	+92.63	+95.93	+30.88	+27.60	+96.53
13	+90.05	+99.03	+100.82	+101.22	+101.79	+101.42	+94.18	+92.59	+33.92	+34.06	+29.54	+96.70
14	+90.51	+99.21	+100.87	+101.38	+101.72	+101.45	+93.63	+92.66	+22.41	+26.19	+23.91	---
15	+90.30	+99.32	+100.96	+101.54	+101.72	+101.26	+93.51	+92.75	+19.83	+80.94	+70.05	---
16	+90.33	+99.49	+101.03	+101.47	+101.56	+101.03	+93.17	+93.19	+28.08	+95.86	+31.91	---
17	+90.74	+99.60	+101.24	+101.54	+101.63	+101.08	+93.00	+93.60	+66.40	+96.69	+24.46	---
18	+91.04	+99.69	+101.10	+101.66	+101.68	+101.38	+92.54	+94.23	+93.63	+98.49	+20.77	---
19	+91.14	+99.83	+101.08	+101.72	+101.79	+101.19	+91.99	+93.97	+95.06	+30.85	+18.03	---
20	+90.19	+83.04	+101.17	+101.82	+101.79	+101.19	+92.03	+82.67	+28.64	+24.79	+17.20	---
21	+89.89	+99.74	+101.17	+101.77	+101.68	+101.22	+92.24	+32.49	+20.98	+21.81	+58.79	---
22	+89.38	+100.11	+101.17	+101.82	+101.68	+101.24	+92.13	+78.08	+20.43	+20.98	+93.97	---
23	+89.24	+99.99	+100.94	+101.75	+101.59	+98.24	+92.03	+92.45	+90.58	+20.98	+95.24	---
24	+89.29	+100.02	+101.10	+101.79	+101.59	+101.29	+92.06	+93.63	+94.25	+21.16	+95.50	---
25	+89.80	+100.02	+101.10	+101.91	+101.49	+101.26	+92.01	+93.60	+95.01	+29.61	+95.08	---
26	+89.77	+100.04	+101.31	+101.91	+101.49	+101.26	+91.90	+93.86	+94.90	+26.65	+94.94	---
27	+89.70	+100.09	+101.24	+102.16	+101.49	+101.49	+91.30	+93.49	+94.87	+59.28	+95.08	---
28	+94.02	+100.25	+101.22	+102.02	+101.52	+101.49	+87.03	+93.33	+94.83	+31.06	+95.33	---
29	+91.62	+100.22	+101.22	+102.07	---	+101.54	+36.34	+93.56	+95.52	+25.43	+95.36	---
30	+91.20	+100.34	+101.06	+101.91	---	+88.55	+27.95	+41.28	+30.41	+21.30	+95.50	---
31	+91.20	---	+101.03	+101.79	---	+101.26	---	+68.78	---	+19.39	+95.54	---
LOW	+88.04	+83.04	+100.39	+100.73	+101.49	+88.55	+27.95	+20.93	+19.83	+19.39	+16.25	+95.15

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e+107.4	---	---	---	---	---	---	---	---	+67.47
2	---	---	---	---	e+105.5	---	---	---	---	---	---	+32.03
3	---	---	e+107.4	---	---	---	---	---	---	---	---	+79.44
4	---	---	---	---	---	---	---	---	---	---	---	+63.04
5	---	---	---	---	---	---	---	---	---	---	---	+23.08
6	---	---	---	e+105.5	---	---	---	---	---	---	---	+19.02
7	---	---	---	---	---	---	e+106.40	---	---	---	---	+16.67
8	---	e+105.1	e+107.6	---	---	---	---	---	---	---	---	+21.00
9	---	---	---	---	e+106.4	---	---	---	---	---	---	+20.86
10	---	---	---	---	---	---	---	---	---	---	---	+21.16
11	---	---	---	---	---	---	---	---	---	e+55.5	---	+21.44
12	---	---	---	e+106.0	---	---	---	---	---	---	---	+18.93
13	---	---	---	---	---	---	---	---	---	e+55.2	---	+19.11
14	e+103.2	---	---	---	---	---	---	---	---	---	---	+23.22
15	---	---	---	---	---	e+105.8	---	---	---	---	---	+25.02
16	---	---	---	---	---	e+105.3	---	---	---	---	---	+23.70
17	---	---	e+106.7	---	---	---	---	---	---	---	+21.72	+23.79
18	---	---	---	---	e+106.9	---	---	---	---	---	+23.56	+22.43
19	---	---	---	e+106.0	---	---	---	---	---	---	+21.72	+20.52
20	---	---	---	e+106.0	---	---	e+106.0	---	---	---	+24.19	+20.84
21	---	---	---	---	---	---	---	---	---	---	+21.79	+20.08
22	---	---	e+106.4	---	---	---	---	---	---	---	+19.48	+23.56
23	---	---	---	---	e+106.9	---	---	---	---	---	+18.81	+16.27
24	---	---	---	---	---	---	---	---	---	---	+21.97	+16.57
25	---	---	---	---	---	---	---	---	---	---	+20.33	+16.83
26	---	---	---	e+106.4	---	---	---	---	---	---	+20.36	+16.99
27	---	---	---	---	---	---	---	---	---	---	+19.92	+16.83
28	---	---	---	e+105.5	---	---	---	---	---	---	+19.89	+15.26
29	---	---	e+106.4	---	---	---	---	---	---	---	+19.43	+14.98
30	---	---	---	---	---	e+106.0	---	---	---	---	+17.52	+14.82
31	---	---	---	---	---	---	---	---	---	---	+17.73	---
LOW	+103.20	+105.10	+106.40	+105.50	+105.50	+105.30	+106.00	---	---	+55.20	+17.52	+14.82

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+16.00	+16.50	+102.42	---	---	+105.83	+107.28	---	+109.20	---	---	+27.78
2	+19.57	+18.35	+103.11	---	---	+105.90	+107.33	---	+106.25	---	---	+25.94
3	+18.76	+18.14	+103.71	---	---	+106.13	+103.66	+108.85	+108.81	---	---	+26.40
4	+19.20	+15.21	+103.34	---	---	+106.13	+102.81	+108.78	+109.87	---	---	+34.94
5	+29.70	+13.87	---	---	---	+106.20	+102.79	+108.90	+98.33	---	---	+27.78
6	+26.93	+17.36	---	---	---	+106.08	+106.66	+106.36	+106.59	---	---	+26.63
7	+79.84	+49.96	+106.71	---	---	+105.97	+104.17	+105.69	+110.31	---	---	+34.48
8	+68.16	+22.85	+105.16	e+106.9	+105.46	+106.20	+102.92	+107.91	+110.35	---	---	+31.48
9	+25.29	+92.59	+105.62	---	+105.53	+106.34	+106.41	+105.76	+110.61	---	---	+29.86
10	+14.17	+36.94	+106.64	e+109.2	+105.69	+106.36	+106.82	+105.51	+110.72	---	---	+29.63
11	+13.27	+71.46	+106.71	---	+103.27	+106.48	+107.05	+106.32	+110.95	---	e+21.97	+34.48
12	+11.64	+105.60	+105.44	---	+104.79	+106.59	+107.08	+109.68	+108.48	---	+23.40	+40.93
13	+18.00	+106.27	+106.66	---	+105.62	+106.29	+107.21	+110.03	+109.15	---	+36.09	+27.32
14	+14.20	+106.18	+100.32	---	+105.88	+106.15	+107.31	+110.03	+109.82	e+28.27	+29.17	+26.63
15	+23.63	+104.31	+105.85	---	+105.76	+106.45	+107.56	+107.31	+55.63	+40.50	+24.09	+26.86
16	+14.64	+102.97	+106.08	---	+105.76	+106.71	+107.38	+107.12	+100.76	+93.58	+22.25	+28.71
17	+30.16	+105.37	+106.55	---	+105.92	+106.78	+107.35	+107.79	+105.85	e+80.15	+22.02	+35.86
18	+13.37	+105.44	+106.55	---	+105.88	+106.98	+107.47	+108.00	+65.90	---	+22.71	+32.86
19	+12.40	+105.67	---	---	+105.88	+107.08	+107.56	+109.59	+38.42	---	+37.01	+43.70
20	+10.83	+105.92	---	---	+106.02	+107.01	+107.56	+110.38	+37.24	---	+31.01	+36.78
21	+10.62	+105.92	+102.88	---	+105.92	+107.19	+107.31	+110.51	+35.86	---	+25.71	+49.70
22	+10.37	+105.92	+105.12	---	+104.40	+107.19	+107.15	+110.26	+104.05	---	+23.63	+44.86
23	+13.60	+104.08	---	e+106.9	+102.32	+106.96	+107.33	+110.38	+109.34	---	+25.71	+46.47
24	+12.26	+104.15	---	---	+105.35	+107.28	+107.24	+108.62	+110.08	---	+24.56	+47.16
25	+12.26	+105.21	---	---	+105.97	+107.17	---	+110.05	+110.44	---	+29.63	+54.55
26	+23.49	+106.71	---	e+106.5	+105.97	+107.31	---	+108.16	+56.35	---	+29.40	+104.38
27	+13.87	+105.48	+104.22	---	+105.74	+107.24	---	+109.71	e+95.29	---	+36.32	+102.49
28	+10.14	+66.61	+103.39	---	+105.83	+107.19	---	+110.72	---	---	+33.78	+105.95
29	+23.70	+102.76	+104.63	---	---	+107.31	---	+110.77	---	---	+26.63	e+106.66
30	+16.39	+102.76	e+75.84	---	---	+107.33	---	+110.88	---	---	+24.32	---
31	+16.50	---	---	---	---	+107.38	---	+111.09	---	---	+28.71	---
LOW	+10.14	+13.87	+75.84	+106.50	+102.32	+105.83	+102.79	+105.51	+35.86	+28.27	+21.97	+25.94

e Estimated

SITE NUMBER 46—Continued

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	+108.33	---	---	+109.27	+109.09	+107.66	+102.03	+27.21	+30.81
2	---	---	---	+108.28	---	---	+109.32	+109.41	+107.52	+101.57	+26.45	+25.09
3	---	---	---	+108.88	---	---	+109.29	+109.87	+108.46	+101.22	+25.87	+32.98
4	---	---	---	---	---	---	+109.11	+109.99	+107.89	+101.20	+28.18	+30.51
5	---	---	---	---	---	---	+108.99	+110.01	+108.07	+101.91	+28.30	+29.08
6	---	---	+108.74	---	---	---	+108.99	+108.37	+107.79	+102.30	+27.19	+72.27
7	---	---	+108.83	---	+109.34	---	+109.18	+110.08	+108.65	+102.05	+25.48	+48.46
8	---	---	---	+109.02	+109.34	---	+109.29	+108.00	+107.33	+102.12	+24.21	+40.66
9	---	---	---	+109.09	+109.32	---	+109.32	+107.56	+107.10	+102.05	+24.07	+36.02
10	---	---	+108.95	+109.11	+109.09	---	+108.26	+109.57	+106.85	+102.17	+33.56	+30.28
11	---	---	+109.09	+109.09	+109.09	---	+108.12	+109.85	+107.54	+101.40	+29.08	+29.15
12	---	---	+109.20	+109.09	+109.20	---	+108.14	+110.19	+107.01	+101.40	+25.55	+33.51
13	---	---	+109.29	+109.02	+109.39	+109.64	+108.26	+110.31	+106.62	+101.45	+24.37	+32.98
14	---	---	+109.18	+108.88	+109.20	---	+108.30	+110.54	+106.85	+101.89	+24.24	+36.23
15	---	---	---	+109.02	---	+109.94	+108.39	+109.48	+105.90	+101.47	+23.61	+32.59
16	---	---	---	+109.18	---	+110.01	+108.39	+107.66	+107.45	+101.34	+23.40	+27.53
17	+58.36	---	---	---	+109.32	+109.80	+108.53	+109.23	+106.53	+100.50	+25.55	+26.52
18	+52.15	---	---	---	+109.46	+109.55	+108.53	+108.93	+106.16	+100.11	+24.49	+40.52
19	+50.54	---	---	---	+109.46	+109.50	+108.60	+107.82	+106.80	+99.90	+23.77	+46.41
20	+57.32	---	---	---	+109.39	+109.34	+108.53	+109.55	+106.02	+99.88	+24.19	+39.67
21	+57.55	---	+108.21	+109.36	+109.39	+108.83	+108.53	+109.59	+107.49	+100.78	+24.17	+37.04
22	+57.92	---	+108.23	---	+109.39	---	+108.46	+108.37	+105.76	+102.14	+23.06	+34.76
23	+55.86	---	---	---	+109.41	+109.62	+108.53	+109.55	+106.16	+102.65	+22.78	+32.84
24	+97.39	---	+108.53	---	+109.43	+109.41	+108.69	+109.73	+106.04	+100.67	+22.69	+33.21
25	+65.58	---	+108.49	---	+109.29	---	+108.65	+107.54	+104.61	+100.48	+22.46	+32.40
26	+58.70	---	+108.56	---	---	---	+108.67	+107.17	+103.92	+70.54	+21.44	+38.26
27	+61.95	---	+108.39	---	---	---	+108.83	+109.41	+103.50	+76.12	+30.65	+37.69
28	+61.24	---	+108.42	---	---	---	+108.86	+108.81	+103.32	+80.11	+23.59	+40.04
29	+55.22	---	+108.39	---	---	---	+108.28	+108.46	+103.30	+38.72	+22.67	+41.56
30	+103.83	---	+108.53	---	---	---	+100.69	+108.79	+102.72	+29.82	+33.86	+35.82
31	+108.39	---	+108.49	---	---	---	---	+109.41	---	+27.83	+30.03	---
LOW	+50.54	---	+108.21	+108.28	+109.09	+108.83	+100.69	+107.17	+102.72	+27.83	+21.44	+25.09

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+33.12	+101.93	+108.16	+109.98	+109.29	+101.63	+109.82	+110.98	+42.48	+32.51	+60.59	+29.01
2	+31.31	+102.56	+108.11	+110.26	+109.29	+109.66	+109.87	+110.79	+49.17	+54.59	+57.82	+27.90
3	+31.73	+103.55	+108.07	+110.42	+109.06	+109.29	+110.03	+110.86	+53.37	+38.24	+51.13	+28.15
4	+29.72	+103.78	+108.18	+110.31	---	---	+110.01	+111.00	+52.01	+36.53	+50.69	+29.10
5	+30.32	+103.64	+105.81	---	---	---	+109.96	+111.00	+43.63	+38.07	+44.97	+35.84
6	+34.54	+103.87	+108.21	---	---	+109.36	+109.89	+111.07	+40.15	+34.48	+60.20	+33.32
7	+29.61	+103.45	+108.14	---	---	+109.41	---	+111.04	+51.50	+30.30	+46.96	+33.78
8	+29.61	+103.32	+108.25	---	+109.52	+109.36	---	+110.88	+41.42	+28.50	+41.33	+28.15
9	+29.10	+103.69	+108.35	---	+109.52	+109.36	---	+110.38	+35.74	+27.72	+64.31	+26.12
10	+28.89	+103.80	+108.39	---	+109.52	+109.48	---	+111.04	+37.06	+27.81	+102.97	+26.56
11	+28.48	+103.55	+108.21	---	+109.45	+109.41	---	+111.16	+96.95	+33.39	+47.81	+26.65
12	+28.04	+102.92	+108.28	---	+109.55	+109.38	---	+42.71	+44.67	+32.86	+54.96	+32.31
13	+35.49	+101.59	+108.37	---	+109.36	---	---	+41.21	+43.40	+33.90	+48.23	+28.09
14	+35.61	+101.56	+108.21	---	+109.45	---	+110.10	+42.99	+50.69	+27.95	+45.02	+28.36
15	+32.47	+102.46	---	---	+109.48	---	+109.85	+43.43	+50.35	+26.93	+41.53	+27.92
16	+58.12	+102.56	---	---	+109.25	+109.64	+109.94	+37.80	+45.55	+26.40	+84.33	+27.12
17	+51.92	+103.02	---	---	+109.31	+109.29	+110.08	+33.05	+40.57	+26.45	+104.12	+26.52
18	+50.30	+103.52	---	---	+109.25	+109.22	+110.08	+31.48	+37.22	+27.09	+52.26	+26.29
19	+57.08	+103.52	---	---	+109.34	+109.38	+110.17	+37.61	+41.30	+40.96	+51.04	+26.01
20	+57.31	+104.26	---	---	+109.38	+109.50	+110.33	+34.54	+39.44	+34.24	+39.94	+28.32
21	+57.45	+104.05	---	+110.31	+109.43	+109.34	+110.28	+32.79	+42.43	+29.24	+37.87	+34.36
22	+17.03	---	---	---	+109.36	+109.41	+110.19	+35.88	+41.07	+37.75	+38.35	+33.71
23	+96.93	---	---	---	---	+109.48	+110.21	+34.48	+39.83	+37.52	+34.96	+34.84
24	+65.11	---	---	---	---	+109.43	+110.24	+34.31	+36.69	+40.27	+33.67	+32.91
25	+58.24	+105.92	---	---	+109.59	+109.48	+110.24	+51.22	+31.13	+39.20	+33.55	+31.45
26	+14.38	---	---	---	+109.61	+109.50	+110.49	+46.29	+30.35	+36.23	+29.98	+33.92
27	+59.25	---	---	---	+109.78	+109.66	+110.58	+41.74	+29.86	+33.71	+29.88	+33.18
28	+54.75	+107.86	---	---	+109.50	+109.71	+110.70	+41.24	+30.90	+45.73	+32.56	+42.90
29	+103.36	+108.00	---	---	---	+109.68	+110.84	+44.44	+32.81	+51.92	+27.46	+30.35
30	+42.07	+108.02	---	---	---	+109.80	+111.00	+48.36	+32.28	+41.07	+27.81	+28.92
31	+100.87	---	---	---	---	+110.03	---	+47.56	---	+39.99	+28.87	---
LOW	+14.38	+101.56	+105.81	+109.98	+109.06	+101.63	+109.82	+31.48	+29.86	+26.40	+27.46	+26.01

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+28.75	+38.77	+98.68	+59.30	+41.05	+44.49	+45.62	+30.60	+26.63	+41.63	+37.73	+24.14
2	+28.71	+43.61	+48.76	+45.53	+35.38	+42.57	+43.15	+41.86	+26.40	+32.65	+30.44	+23.49
3	+26.82	+42.73	+39.71	+41.51	+35.33	+37.13	+39.99	+31.22	+27.25	+29.08	+31.18	+23.98
4	+26.17	+41.83	+39.99	+41.67	+40.27	+41.28	+39.48	+29.72	+30.69	+28.59	+30.78	+23.66
5	+26.22	+45.66	+45.71	+38.90	+35.84	+42.94	+108.30	+29.95	+29.72	+38.81	+30.21	+22.87
6	+25.94	+55.58	+46.68	+37.54	+36.04	---	+65.60	+30.12	+30.60	+35.93	+32.75	+22.57
7	+27.02	+67.95	+43.13	+37.11	+38.97	---	+42.46	+36.04	+42.80	+43.15	+30.14	+30.90
8	+28.98	+44.56	+38.12	---	+36.87	---	+42.04	+30.95	+32.58	+32.63	+34.15	+29.86
9	+71.92	+42.13	+36.83	---	+36.25	---	+41.74	+36.28	+31.75	+32.33	+31.48	+26.70
10	+39.39	+44.12	+44.67	---	+39.39	---	+39.16	+35.10	+30.32	+31.45	+26.38	+25.20
11	+43.82	+41.26	+46.93	---	+35.10	---	+37.82	+31.36	+29.84	+27.69	+25.59	+22.25
12	+44.14	+41.03	+46.17	---	+34.91	---	+47.83	+39.90	+33.30	+26.38	+36.16	+22.36
13	+38.97	+56.85	+48.48	---	+44.30	---	+46.29	+36.76	+32.12	+26.08	+39.94	+27.39
14	+35.72	+54.06	+42.69	---	+41.00	+42.46	+48.87	+34.84	+34.24	+27.30	+26.82	+24.83
15	+35.05	+94.55	+37.13	---	+41.21	+40.31	+106.48	+34.82	+39.53	+27.28	+26.47	+24.81
16	+51.20	+52.98	+35.95	+40.80	+40.45	+37.84	+52.17	+41.33	+36.81	+29.24	+27.62	+24.49
17	+52.49	+46.13	+36.07	+39.46	+38.40	+37.36	+42.69	+37.73	+33.60	+27.51	+27.12	+24.16
18	+90.10	+44.72	+41.33	+50.67	+42.37	+39.67	+48.16	+31.91	+33.41	+27.55	+26.15	+24.46
19	+103.75	+54.96	+36.53	+40.80	+40.22	+39.34	+44.74	+29.98	+35.49	+27.16	+39.87	+30.00
20	+104.52	+95.89	+36.23	+39.71	+51.13	+57.91	+47.58	+30.16	+34.80	+28.78	+36.04	+29.33
21	+106.87	+60.34	+36.78	+39.11	+89.36	+47.56	+42.83	+40.94	+50.83	+27.69	+42.73	+31.02
22	+108.37	+103.15	+39.30	+42.90	+107.19	+40.59	+43.15	+37.84	+32.86	+26.47	+43.45	+43.68
23	+108.88	+71.73	+42.43	+42.18	+43.77	+38.86	+39.92	+37.66	+32.03	+26.33	+39.83	+42.53
24	+54.64	+107.61	+47.26	+42.07	+41.56	+39.55	+37.66	+39.02	+34.04	+30.44	+36.00	+32.84
25	+93.33	+56.12	+45.16	+40.38	+42.39	+37.96	+37.47	+30.85	+40.24	+30.44	+35.86	+32.49
26	+105.58	+95.20	+45.27	+39.57	+40.75	+40.77	+42.13	+30.18	+37.59	+29.45	+33.09	+40.82
27	+51.99	+109.22	+45.06	+44.93	+44.60	+39.64	+42.94	+29.72	+38.84	+27.65	+32.84	+33.11
28	+39.25	+110.28	+42.41	+38.19	+45.69	+39.32	+35.95	+27.99	+35.95	+27.37	+28.48	+30.88
29	+48.57	+110.31	+42.57	+35.35	---	+45.32	+32.75	+27.51	+31.50	+31.57	+26.63	+30.35
30	+50.00	+56.83	+43.13	+35.12	---	+40.96	+30.39	+27.30	+30.14	+49.63	+26.45	+26.52
31	+40.36	---	+41.12	+39.30	---	+40.08	---	+27.21	---	+39.90	+25.69	---
LOW	+25.94	+38.77	+35.95	+35.12	+34.91	+37.13	+30.39	+27.21	+26.40	+26.08	+25.59	+22.25

SITE NUMBER FROM LOCATION MAP.—47.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N7E1DBBB.

SITE ID (STATION NUMBER).—440427103131701.

OTHER IDENTIFIER.—RC-7 and Star Village.

LOCATION.—Lat 44°04′′26.6″, long 103°13′18.0″, in NW1/4NW1/4NW1/4SE1/4 sec. 1, T. 1N., R. 7 E., Hydrologic Unit 10120110, at Rapid City. Owner: City of Rapid City.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled unused production well, 3,280 ft deep with 20-in. steel casing from 0 to 38 ft, 13.75-in. steel casing from -1 to 1,643 ft, and 12.25-in. steel casing from 1,643 to 2,792 ft; open hole from 2,792 to 3,280 ft.

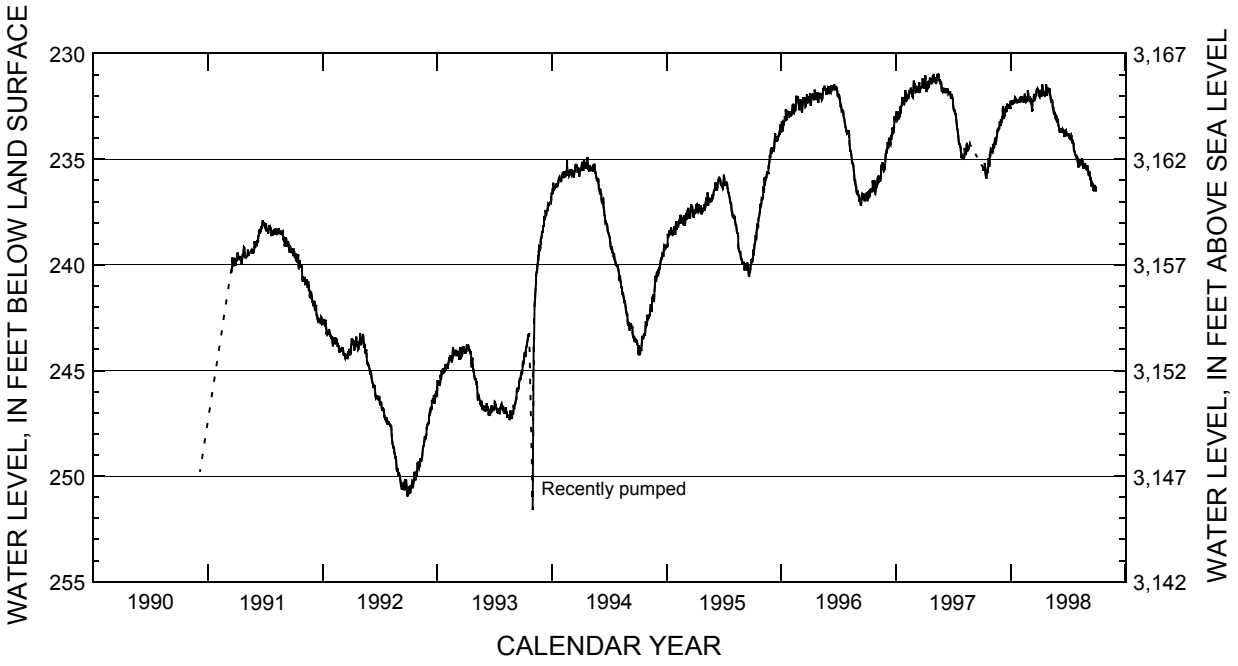
INSTRUMENTATION.—Electronic data logger with float.

DATUM.—Elevation of land-surface datum is 3,397.3 ft above sea level. Measuring point: Top of steel casing, 1.0 ft above land-surface datum.

REMARKS.—Records good. Sharp decrease in water level during October-November 1992 caused by recent pumping.

PERIOD OF RECORD.—December 1990 to September 1998.

EXTREMES.—Highest daily water level, 230.95 ft below land-surface datum, May 13, 1997; lowest water level, 251.59 ft below land-surface datum, Nov. 1, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	239.88	239.66	239.18	238.15	238.30	238.72
2	---	---	---	---	---	---	239.71	239.67	239.10	238.22	238.42	238.76
3	---	---	---	---	---	---	239.82	---	238.98	238.25	238.56	239.12
4	---	---	---	---	---	---	239.77	---	238.96	238.16	238.50	238.95
5	---	---	---	---	---	---	239.62	---	239.03	238.03	238.28	238.90
6	---	---	---	---	---	---	239.42	---	239.05	238.11	238.38	238.79
7	---	---	e249.8	---	---	---	239.63	239.58	238.94	238.41	238.45	238.69
8	---	---	---	---	---	---	239.70	239.51	238.82	238.36	238.58	238.85
9	---	---	---	---	---	---	239.76	239.28	238.88	238.33	238.47	239.10
10	---	---	---	---	---	---	239.57	239.49	238.94	238.27	238.37	239.10
11	---	---	---	---	---	---	239.63	239.57	238.65	238.37	238.43	238.95
12	---	---	---	---	---	---	239.65	239.41	238.62	238.52	238.47	238.98
13	---	---	---	---	---	---	239.66	239.46	238.43	238.47	238.46	238.94
14	---	---	---	---	---	---	239.58	---	238.34	238.27	238.30	238.87
15	---	---	---	---	---	---	239.66	---	238.53	238.22	238.27	239.02
16	---	---	---	---	---	240.29	239.82	---	238.36	238.25	238.36	239.12
17	---	---	---	---	---	240.31	239.79	---	238.29	238.24	238.47	239.27
18	---	---	---	---	---	240.27	239.82	---	238.45	238.20	238.54	239.36
19	---	---	---	---	---	240.11	239.95	---	238.34	238.28	238.42	239.35
20	---	---	---	---	---	239.65	239.82	---	238.17	238.26	238.41	239.06
21	---	---	---	---	---	239.80	239.62	239.27	238.29	238.31	238.53	239.19
22	---	---	---	---	---	239.88	239.53	239.33	238.22	238.58	238.54	239.39
23	---	---	---	---	---	240.07	239.54	239.42	238.19	238.63	238.54	239.40
24	---	---	---	---	---	239.99	239.47	239.47	238.06	238.56	238.47	239.40
25	---	---	---	---	---	239.77	239.35	239.33	237.90	238.47	238.49	239.34
26	---	---	---	---	---	239.66	239.15	239.26	238.01	238.36	238.43	239.36
27	---	---	---	---	---	239.70	239.19	239.41	238.14	238.45	238.41	239.25
28	---	---	---	---	---	239.76	239.42	239.36	238.01	238.50	238.62	239.27
29	---	---	---	---	---	239.96	239.43	239.23	238.06	238.41	238.77	239.45
30	---	---	---	---	---	239.95	239.64	238.88	237.99	238.38	238.82	239.58
31	---	---	---	---	---	240.03	---	239.11	---	238.41	238.84	---
LOW	---	---	---	---	---	240.31	239.95	239.67	239.18	238.63	238.84	239.58

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239.22	240.69	241.75	242.79	243.37	243.99	244.11	243.66	245.19	246.42	247.53	249.82
2	239.34	240.76	241.83	242.62	243.62	244.02	243.84	243.79	245.07	246.60	247.59	249.96
3	239.37	240.72	241.91	242.65	243.82	244.00	243.53	243.76	245.09	246.59	247.55	250.02
4	239.54	240.61	241.90	242.61	243.82	243.93	243.48	243.71	245.14	246.57	247.57	249.95
5	239.64	240.61	241.82	242.62	243.56	243.89	243.56	243.67	245.23	246.54	247.67	250.15
6	239.64	240.77	241.70	242.62	243.57	243.97	243.67	243.54	245.36	246.47	247.58	250.29
7	239.44	240.89	241.81	242.74	243.56	244.06	243.79	243.49	245.47	246.65	247.65	250.48
8	239.69	240.88	242.09	242.80	243.54	244.16	243.67	243.40	245.58	246.81	247.74	250.38
9	239.77	240.91	242.14	242.90	243.43	244.29	243.61	243.27	245.59	246.75	248.08	250.54
10	239.79	240.95	242.12	242.91	243.68	244.23	243.63	243.38	245.65	246.91	248.36	250.64
11	239.68	240.86	242.13	242.60	243.75	244.18	244.05	243.59	245.79	246.75	248.40	250.46
12	239.62	240.73	241.89	242.89	243.56	244.23	243.99	243.85	245.79	246.83	248.53	250.41
13	239.73	240.69	242.39	242.93	243.45	244.35	243.75	243.91	245.67	246.85	248.59	250.45
14	239.78	240.89	242.42	243.29	243.54	244.41	243.78	243.76	245.82	246.81	248.64	250.50
15	239.69	241.09	242.41	243.24	243.55	244.35	243.82	243.77	245.78	247.01	248.63	250.33
16	239.49	241.01	242.55	243.18	243.55	244.30	243.88	244.03	245.76	247.12	248.74	250.46
17	240.00	240.76	242.58	243.29	243.73	244.26	243.66	244.19	245.98	247.24	248.87	250.60
18	240.20	240.98	242.53	243.26	243.84	244.40	243.40	244.07	246.19	247.18	248.94	250.67
19	240.09	241.24	242.51	243.20	243.84	244.45	243.74	244.07	246.29	247.33	248.94	250.30
20	240.04	241.18	242.66	243.21	243.81	244.34	243.79	244.01	246.28	247.34	249.12	250.15
21	239.79	241.25	242.64	243.05	243.87	244.37	243.66	244.29	246.24	247.25	249.19	250.48
22	240.01	241.52	242.56	243.08	243.80	244.27	243.69	244.65	246.27	247.30	249.06	250.51
23	240.03	241.54	242.62	243.11	244.09	244.09	243.91	244.69	246.24	247.32	249.35	250.36
24	240.06	241.47	242.57	243.19	244.09	244.29	244.02	244.61	246.19	247.30	249.57	250.16
25	240.05	241.38	242.53	243.31	244.15	244.23	243.98	244.76	246.36	247.52	249.75	250.49
26	240.01	241.27	242.68	243.36	244.09	244.10	243.93	244.70	246.32	247.52	249.79	250.60
27	240.09	241.38	242.64	243.39	244.04	243.97	243.74	244.74	246.30	247.45	249.69	250.91
28	240.21	241.49	242.46	243.31	244.10	244.11	243.64	244.81	246.36	247.46	249.62	250.95
29	240.66	241.58	242.48	243.50	244.04	244.20	243.63	244.87	246.43	247.40	249.89	250.78
30	240.80	241.75	242.67	243.44	---	244.08	243.24	244.92	246.20	247.51	249.94	250.84
31	240.53	---	242.81	243.40	---	244.16	---	245.12	---	247.48	249.92	---
LOW	240.80	241.75	242.81	243.50	244.15	244.45	244.11	245.12	246.43	247.52	249.94	250.95

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250.78	249.55	247.51	245.87	244.73	244.02	244.12	245.45	246.67	246.84	247.01	246.63
2	250.68	249.32	247.51	245.46	244.69	244.09	244.02	245.41	246.84	246.82	246.91	246.80
3	250.53	249.63	247.49	245.64	244.91	244.27	244.13	245.38	246.91	246.47	247.05	246.80
4	250.51	249.65	247.51	245.60	244.84	244.26	244.04	245.37	246.91	246.49	247.00	246.66
5	250.79	249.52	247.45	245.70	244.72	244.20	243.76	245.63	246.74	246.64	246.96	246.61
6	250.78	249.51	247.13	245.67	244.60	244.18	243.88	245.62	246.82	246.75	246.94	246.60
7	250.77	249.46	247.12	245.50	244.49	244.13	244.00	245.51	246.59	246.71	246.74	246.52
8	250.61	249.15	246.96	245.66	244.49	244.15	243.94	245.74	246.59	246.76	246.81	246.40
9	250.49	249.24	246.91	245.67	244.36	244.27	243.76	246.17	246.85	246.82	246.97	246.34
10	250.49	249.28	246.93	245.59	244.52	244.33	243.85	246.37	246.84	246.91	247.00	246.34
11	250.52	249.28	246.77	245.20	244.49	244.37	243.91	246.36	246.74	247.01	247.01	245.88
12	250.53	249.22	246.78	245.35	244.27	244.50	244.02	246.33	246.77	246.83	247.24	245.83
13	250.28	249.20	246.86	245.37	244.36	244.24	244.03	246.28	246.97	246.96	247.12	245.99
14	250.31	249.04	246.80	245.23	244.42	243.96	244.11	246.25	247.12	247.05	247.12	245.96
15	250.44	248.92	246.41	245.00	244.46	243.89	244.10	246.38	246.95	246.85	247.20	245.81
16	250.46	248.66	246.51	245.17	244.61	244.46	244.16	246.43	246.86	246.81	247.15	245.84
17	250.23	248.62	246.41	245.08	244.57	244.37	244.21	246.47	247.10	246.96	247.20	245.85
18	250.24	248.56	246.32	245.11	244.38	243.92	244.07	246.59	247.09	246.95	247.28	245.73
19	249.90	248.54	246.39	245.02	244.15	244.34	244.57	246.62	246.96	247.06	247.31	245.49
20	249.92	248.36	246.35	244.88	243.92	244.32	244.81	246.55	246.92	246.90	247.31	245.43
21	249.79	248.35	246.16	244.99	244.09	244.22	244.82	246.44	246.88	246.72	247.14	245.35
22	250.15	248.10	246.24	244.95	244.22	244.21	244.54	246.47	246.66	246.68	246.90	245.43
23	250.20	248.16	246.57	245.08	244.26	244.00	244.39	246.59	246.71	246.63	247.01	245.41
24	250.16	248.22	246.30	245.06	244.23	244.03	244.80	246.82	246.83	246.58	246.95	245.21
25	249.98	248.22	246.29	244.88	244.23	244.05	245.03	246.81	246.92	246.69	247.08	245.07
26	249.98	248.16	246.14	244.85	244.22	244.04	244.92	246.65	246.89	246.71	247.19	245.23
27	249.86	248.09	246.11	244.70	244.21	243.85	245.08	246.72	246.78	246.70	247.28	245.03
28	249.89	247.68	246.15	245.00	244.11	243.99	245.27	246.80	246.79	246.88	246.98	245.15
29	249.70	247.75	245.96	244.94	---	244.00	245.24	246.73	246.74	246.84	246.92	245.07
30	249.46	247.61	246.10	244.80	---	244.11	245.36	246.92	246.89	246.81	247.08	244.65
31	249.49	---	246.14	244.83	---	244.21	---	246.89	---	246.92	247.00	---
LOW	250.79	249.65	247.51	245.87	244.91	244.50	245.36	246.92	247.12	247.06	247.31	246.80

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244.69	251.59	238.43	236.61	235.80	235.63	235.49	235.33	236.37	238.55	240.31	242.82
2	244.71	249.39	238.40	236.61	235.71	235.61	235.56	235.32	236.54	238.58	240.33	242.81
3	244.62	245.84	238.42	236.50	235.77	235.54	235.46	235.36	236.52	238.65	240.47	242.70
4	244.46	243.99	238.13	236.52	235.70	235.46	235.44	235.43	236.41	238.67	240.75	242.90
5	244.31	243.46	238.16	236.11	235.60	235.56	235.41	235.44	236.61	238.92	240.63	243.07
6	244.18	242.66	238.16	236.48	235.88	235.69	235.30	235.50	236.56	238.93	240.48	243.07
7	244.13	241.86	237.85	236.40	235.85	235.76	235.20	235.48	236.66	239.14	240.77	242.92
8	244.31	241.62	237.68	236.29	235.71	235.73	235.24	235.44	236.89	239.21	240.84	242.89
9	244.35	241.42	237.84	236.22	235.71	235.65	235.33	235.51	237.02	239.24	240.86	242.80
10	244.06	241.19	237.84	236.36	235.56	235.55	235.50	235.40	237.06	239.12	241.06	242.81
11	243.92	240.81	237.75	236.35	235.66	235.79	235.55	235.57	237.02	239.30	241.07	242.86
12	243.87	240.47	237.40	236.29	235.79	235.87	235.39	235.46	236.92	239.27	241.02	242.93
13	243.83	240.34	237.63	236.22	235.80	235.73	235.02	235.25	236.88	239.41	241.28	243.00
14	243.71	240.34	237.63	236.25	235.72	235.55	235.19	235.40	237.01	239.42	241.43	242.92
15	243.57	240.20	237.46	236.27	235.73	235.59	235.30	235.42	237.31	239.46	241.33	243.21
16	243.53	240.00	237.43	236.14	235.64	235.37	235.41	235.21	237.44	239.60	241.33	243.41
17	243.40	240.00	237.40	236.24	235.52	235.25	235.24	235.31	237.61	239.62	241.51	243.44
18	243.31	239.66	237.41	236.21	235.04	235.28	235.39	235.59	237.68	239.44	241.58	243.37
19	243.26	239.69	237.19	236.16	235.51	235.22	235.40	235.57	237.69	239.61	241.73	243.40
20	243.38	239.43	237.14	236.21	235.77	235.40	235.28	235.60	237.98	239.77	241.81	243.41
21	243.25	239.14	237.18	236.14	235.75	235.32	235.31	235.74	237.96	239.85	241.71	243.61
22	---	239.15	237.14	236.00	235.68	235.25	235.17	235.81	237.98	239.80	241.66	243.61
23	---	239.33	237.18	235.93	235.65	235.56	234.98	235.89	238.02	239.96	241.98	243.46
24	---	239.29	237.09	235.87	235.59	235.64	234.93	235.99	238.04	239.95	242.01	243.62
25	---	239.22	237.07	235.92	235.77	235.56	234.90	235.99	238.14	239.99	242.15	243.66
26	---	238.95	237.01	235.91	235.73	235.39	235.30	236.02	238.14	240.06	242.23	243.51
27	---	238.68	237.06	235.93	235.47	235.62	235.48	235.88	238.29	240.07	242.31	243.58
28	---	238.73	237.06	235.93	235.60	235.54	235.46	236.03	238.42	240.01	242.40	243.61
29	---	238.72	237.07	235.99	---	235.83	235.56	236.01	238.46	240.02	242.32	243.63
30	---	238.48	236.86	236.07	---	235.68	235.42	236.29	238.47	240.03	242.68	243.74
31	---	---	236.58	236.02	---	235.52	---	236.43	---	240.16	242.83	---
LOW	244.71	251.59	238.43	236.61	235.88	235.87	235.56	236.43	238.47	240.16	242.83	243.74

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243.80	242.36	240.38	239.11	237.94	238.11	237.41	237.41	236.50	236.19	237.66	239.90
2	243.84	242.59	240.35	239.14	238.24	237.94	237.36	237.11	236.47	235.96	237.61	239.88
3	244.22	242.59	240.33	239.14	238.34	237.65	237.54	237.25	236.43	235.74	237.79	239.88
4	244.23	242.53	240.50	239.12	238.15	237.61	237.52	237.31	236.37	235.91	237.80	239.98
5	244.04	242.52	240.50	238.54	238.15	237.63	237.21	237.24	236.16	236.07	237.74	239.89
6	243.80	242.55	240.35	238.57	238.10	237.78	237.22	237.03	236.10	236.19	237.68	240.19
7	244.18	242.36	240.25	238.60	238.22	237.85	237.15	236.94	236.40	236.19	237.78	240.25
8	244.21	242.43	240.29	238.62	238.11	237.74	237.13	236.80	236.47	236.24	237.99	240.07
9	244.18	242.36	240.13	238.56	237.94	237.43	237.41	237.09	236.39	236.15	238.14	240.11
10	244.01	242.10	240.22	238.43	237.90	237.39	237.46	237.16	236.49	236.21	238.10	240.05
11	243.91	241.96	239.92	238.36	237.97	237.30	237.36	236.97	236.45	236.10	238.11	239.93
12	244.02	241.86	239.94	238.52	238.01	237.39	237.47	236.57	236.34	236.10	238.31	239.97
13	244.07	242.05	239.87	238.59	238.01	237.71	237.45	236.98	236.15	236.17	238.41	240.19
14	243.73	242.22	239.70	238.52	237.64	237.81	237.14	237.19	236.06	236.36	238.53	240.25
15	243.36	242.19	239.68	238.31	237.67	237.78	237.32	236.96	235.96	236.39	238.47	239.87
16	243.49	241.64	239.63	238.24	237.83	237.78	237.51	236.94	235.94	236.51	238.51	240.12
17	243.49	241.51	239.70	238.40	237.77	237.78	237.37	236.94	235.98	236.57	238.62	240.02
18	243.49	241.69	239.66	238.50	237.97	237.61	237.35	236.91	235.99	236.58	239.11	240.16
19	243.49	241.69	239.46	238.53	237.97	237.31	237.29	237.03	235.99	236.69	239.27	240.31
20	243.41	241.39	239.47	238.57	238.00	237.32	237.18	236.99	235.93	236.76	239.27	240.46
21	243.28	241.63	239.57	238.55	237.79	237.13	237.56	236.84	235.98	236.81	239.35	240.55
22	243.28	241.65	239.61	238.45	237.80	237.34	237.56	236.99	236.06	236.93	239.41	240.35
23	243.30	241.52	239.40	238.36	238.01	237.40	237.45	236.98	236.20	236.99	239.46	240.31
24	243.36	241.15	239.12	238.43	237.90	237.23	237.41	236.97	236.22	237.10	239.34	240.31
25	243.27	241.08	239.14	238.37	237.66	237.50	237.40	236.96	236.20	237.15	239.59	240.18
26	242.98	240.63	239.11	238.18	237.85	237.55	237.46	236.74	236.16	237.13	239.65	240.00
27	242.68	240.52	239.17	238.30	238.11	237.72	237.38	236.68	236.16	237.29	239.69	239.95
28	242.77	240.71	239.09	238.53	238.11	237.74	237.29	236.85	236.35	237.52	239.77	239.93
29	242.87	240.74	239.11	238.53	---	237.74	237.42	236.82	236.39	237.46	239.71	239.73
30	242.85	240.59	239.19	238.28	---	237.61	237.34	236.70	236.37	237.62	239.86	239.82
31	242.75	---	239.17	238.07	---	237.48	---	236.54	---	237.75	239.95	---
LOW	244.23	242.59	240.50	239.14	238.34	238.11	237.56	237.41	236.50	237.75	239.95	240.55

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239.78	236.91	234.48	233.69	232.93	232.18	232.14	231.96	231.77	232.00	233.71	236.52
2	239.80	236.90	234.57	233.69	232.93	232.26	231.86	231.92	231.91	232.03	233.66	236.63
3	239.65	236.87	234.71	233.21	232.91	232.20	232.26	231.93	231.87	231.95	233.63	236.70
4	239.28	236.79	234.45	233.63	232.82	232.20	232.43	232.08	231.60	231.95	233.70	236.76
5	239.52	236.37	234.54	233.64	232.72	232.42	232.43	232.12	231.55	232.07	233.84	236.67
6	239.51	236.38	234.54	233.65	232.56	232.59	232.19	232.00	231.77	232.23	234.22	236.97
7	239.27	236.50	234.50	233.55	232.41	232.78	232.05	231.92	231.80	232.26	234.49	236.97
8	239.08	236.51	234.58	233.26	232.47	232.74	232.06	231.93	231.59	232.40	234.65	236.92
9	239.01	235.86	234.59	233.30	232.37	232.49	232.02	232.13	231.50	232.53	234.61	236.94
10	238.98	236.22	234.46	233.19	232.81	232.29	231.89	232.17	231.56	232.41	234.61	237.14
11	238.79	236.22	234.22	233.21	232.83	232.18	232.01	232.12	231.49	232.60	234.73	237.19
12	238.60	235.89	234.04	233.15	232.76	232.07	231.95	232.05	231.70	232.73	234.78	237.10
13	238.69	235.99	233.78	232.96	232.51	232.31	232.09	231.93	231.64	232.72	235.08	236.88
14	238.71	235.85	234.04	233.19	232.55	232.28	232.16	231.63	231.59	232.76	235.18	236.69
15	238.46	235.86	234.03	233.08	232.72	232.25	232.16	231.72	231.67	232.75	235.19	236.65
16	238.28	235.68	233.95	232.64	232.62	232.08	231.99	231.62	231.65	232.65	235.26	236.67
17	238.25	235.70	234.17	233.11	232.41	232.21	231.70	231.58	231.59	232.78	235.23	236.85
18	238.04	235.56	234.13	233.11	232.16	232.40	231.80	231.52	231.44	232.96	235.26	236.85
19	238.26	235.66	234.05	232.91	231.99	232.51	231.88	231.61	231.61	233.02	235.56	236.83
20	238.23	235.67	233.90	232.78	232.16	232.47	231.91	231.74	231.57	233.05	235.57	236.63
21	237.83	235.67	234.08	232.89	232.18	232.26	232.11	231.75	231.65	233.18	235.79	236.67
22	237.74	235.34	234.08	232.93	232.01	232.19	232.19	231.62	231.60	233.29	235.96	236.75
23	237.74	235.34	233.93	232.75	232.09	231.92	232.08	231.78	231.59	233.33	236.06	236.98
24	237.64	235.14	233.87	232.76	232.09	232.29	231.84	231.90	231.64	233.49	236.05	236.89
25	237.47	235.11	233.86	232.77	232.34	232.30	231.97	231.90	231.56	233.52	236.15	236.72
26	237.15	234.81	233.80	232.76	232.31	232.18	231.98	231.74	231.64	233.56	236.31	236.69
27	237.14	234.94	233.84	232.80	232.59	232.21	232.06	231.74	231.66	233.67	236.26	236.69
28	237.21	234.84	233.63	232.72	232.67	232.16	232.32	231.79	231.73	233.73	236.48	236.72
29	237.18	234.58	233.51	232.91	232.60	232.03	232.28	231.75	232.01	233.79	236.61	236.78
30	237.15	234.49	233.35	232.89	---	232.19	231.93	231.60	232.02	233.78	236.60	236.56
31	236.88	---	233.45	232.79	---	232.20	---	231.61	---	233.76	236.52	---
LOW	239.80	236.91	234.71	233.69	232.93	232.78	232.43	232.17	232.02	233.79	236.61	237.19

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236.80	236.19	234.61	232.97	231.94	231.50	231.58	230.96	231.61	232.16	234.89	---
2	236.98	236.21	234.62	232.81	231.96	231.42	231.66	231.26	231.74	232.45	234.86	---
3	236.75	235.95	234.64	232.73	232.08	231.54	231.54	231.34	231.86	232.62	234.90	---
4	236.55	235.84	234.56	232.98	232.22	231.71	231.03	231.26	231.83	232.65	234.99	---
5	236.54	235.81	234.19	233.13	232.20	231.82	231.10	231.34	231.67	232.71	234.96	---
6	236.72	235.80	234.22	233.11	232.11	231.79	231.48	231.22	231.78	232.63	234.92	---
7	236.66	236.06	234.46	232.89	232.11	231.52	231.73	231.14	231.70	232.75	234.82	---
8	236.57	236.05	234.43	232.83	232.04	231.71	231.81	231.43	231.71	232.88	234.46	---
9	236.75	235.94	234.14	232.72	231.98	231.72	231.63	231.36	231.86	232.82	234.69	---
10	236.72	235.92	233.98	232.79	232.02	231.59	231.69	231.12	231.80	232.84	234.78	---
11	236.40	236.02	234.10	232.96	231.90	231.60	231.66	231.28	231.64	232.97	234.67	---
12	236.53	236.02	234.10	232.99	231.87	231.55	231.53	231.13	231.70	233.09	234.70	---
13	236.53	235.94	234.15	232.94	231.74	231.81	231.40	230.95	231.77	233.31	234.60	---
14	236.46	235.71	234.30	232.50	231.78	231.82	231.29	231.08	231.77	233.49	234.31	---
15	236.46	235.39	234.32	232.77	231.90	231.63	231.60	231.10	231.74	233.55	234.22	---
16	236.36	235.43	233.85	232.78	231.82	231.35	231.58	230.99	231.79	233.59	234.53	---
17	236.52	235.45	234.06	232.59	231.61	231.73	231.44	230.95	231.87	233.70	234.62	---
18	236.52	235.39	233.96	232.49	231.82	231.84	231.26	231.22	231.83	233.83	234.43	---
19	236.01	235.15	233.81	232.45	231.81	231.68	231.19	231.25	231.82	234.06	234.47	---
20	236.32	235.37	233.54	232.23	231.76	231.56	231.20	231.32	231.85	234.15	234.51	---
21	236.49	235.34	233.50	232.05	231.80	231.61	231.15	231.23	231.86	234.28	234.46	---
22	236.41	235.25	233.56	232.15	232.03	231.61	231.29	231.34	231.77	234.28	234.40	---
23	236.33	235.57	233.73	232.07	232.07	231.60	231.29	231.45	231.91	234.28	234.36	---
24	236.29	235.56	233.71	232.33	232.09	231.59	231.41	231.35	232.01	234.35	234.27	---
25	236.01	235.45	233.57	232.35	231.76	231.59	231.41	231.38	232.13	234.37	234.29	---
26	236.63	235.45	233.49	232.22	231.50	231.43	231.43	231.60	232.07	234.49	---	---
27	236.64	235.41	232.97	232.40	231.28	231.18	231.28	231.79	231.91	234.73	---	---
28	236.48	234.98	233.17	232.29	231.38	231.31	231.05	231.74	232.01	234.89	---	---
29	236.16	234.79	233.17	232.23	---	231.54	231.08	231.72	232.05	234.95	---	---
30	236.27	234.81	233.19	231.93	---	231.49	231.07	231.78	232.11	234.85	---	---
31	236.31	---	233.12	231.74	---	231.28	---	231.74	---	234.83	---	---
LOW	236.98	236.21	234.64	233.13	232.22	231.84	231.81	231.79	232.13	234.95	234.99	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	234.63	233.12	232.24	232.05	232.22	231.83	231.66	233.08	233.86	234.95	235.49
2	---	234.65	233.20	232.28	232.27	232.24	232.00	231.70	233.42	233.77	235.05	235.28
3	235.35	234.66	233.20	232.42	232.23	232.10	232.03	231.65	233.45	233.86	235.15	235.35
4	235.37	234.57	233.11	232.23	232.02	232.08	231.96	231.74	233.49	233.87	235.35	235.46
5	235.39	234.61	233.15	232.31	232.22	232.16	231.71	231.71	233.61	233.77	235.35	235.53
6	235.53	234.50	232.97	232.40	232.19	232.11	231.77	231.88	233.72	233.91	235.20	235.74
7	235.33	234.27	232.60	232.32	232.07	232.30	231.89	231.95	233.68	234.00	235.08	235.75
8	235.41	234.45	232.47	232.22	232.04	232.40	231.99	232.05	233.58	234.02	235.10	235.63
9	235.55	234.50	232.79	232.34	232.25	232.42	232.00	232.16	233.74	233.99	235.22	235.57
10	235.49	234.38	233.06	232.32	232.28	232.69	232.00	232.22	233.55	233.98	235.16	235.74
11	235.17	234.21	233.04	232.28	232.28	232.69	231.81	232.15	233.59	233.86	235.15	235.92
12	235.43	234.09	233.01	232.31	232.28	232.20	231.46	232.22	233.72	233.93	235.20	235.94
13	235.64	233.98	232.92	232.31	232.16	232.24	231.72	232.16	233.65	233.87	235.19	235.92
14	235.78	234.27	232.84	232.19	232.11	232.24	231.76	232.29	233.75	233.92	235.15	236.11
15	235.88	234.27	232.68	232.06	231.89	232.15	231.82	232.51	233.71	234.15	235.04	236.24
16	235.88	234.14	232.70	232.09	232.04	232.04	231.87	232.62	233.59	234.20	234.96	236.23
17	235.59	233.97	232.49	232.15	232.05	231.91	231.83	232.53	233.62	234.19	235.16	236.19
18	235.56	233.89	232.57	232.24	232.20	232.12	231.83	232.78	233.63	234.08	235.15	236.13
19	235.64	233.84	232.75	232.18	232.24	232.15	231.91	232.89	233.68	234.23	235.31	236.18
20	235.60	233.64	232.66	232.18	232.19	232.09	231.99	232.86	233.75	234.24	235.44	236.40
21	235.58	233.57	232.37	232.23	232.08	232.01	231.98	232.78	233.90	234.47	235.35	236.46
22	235.25	233.67	232.55	232.19	232.08	231.99	231.95	232.80	233.95	234.62	235.25	236.47
23	234.94	233.62	232.46	232.24	232.24	231.97	231.77	232.85	233.76	234.64	235.20	236.39
24	235.29	233.48	232.53	232.15	232.22	231.84	231.45	233.06	233.66	234.64	235.28	236.33
25	235.35	233.54	232.56	232.29	231.73	231.70	231.57	233.09	233.64	234.71	235.31	236.21
26	235.16	233.54	232.56	232.29	231.87	231.66	231.79	232.93	233.61	234.79	235.18	236.37
27	234.81	233.22	232.45	232.27	232.05	231.74	231.98	232.96	233.69	234.80	235.37	236.44
28	234.82	233.34	232.41	232.27	232.12	231.75	231.92	233.18	233.77	234.84	235.43	236.29
29	234.70	233.38	232.39	232.27	---	231.74	231.75	233.17	233.81	234.87	235.45	236.32
30	234.49	233.38	232.58	232.06	---	231.83	231.61	233.10	233.90	234.99	235.34	236.52
31	234.51	---	232.58	232.10	---	231.75	---	233.26	---	234.99	235.47	---
LOW	235.88	234.66	233.20	232.42	232.28	232.69	232.03	233.26	233.95	234.99	235.47	236.52

SITE NUMBER FROM LOCATION MAP.—48.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1N6E35AADD.

SITE ID (STATION NUMBER).—440023103211001.

OTHER IDENTIFIERS.—PE-95D and Countryside West.

LOCATION.—Lat 44°00′22.9″, long 103°21′10.2″, in SE1/4SE1/4NE1/4NE1/4 sec. 35, T. 1 N., R. 6 E., Hydrologic Unit 10120110, 5.5 mi southwest of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Precambrian.

WELL CHARACTERISTICS.—Drilled observation well, 375 ft deep with 282 ft of 5-in. steel casing; open hole from 282 to 375 ft.

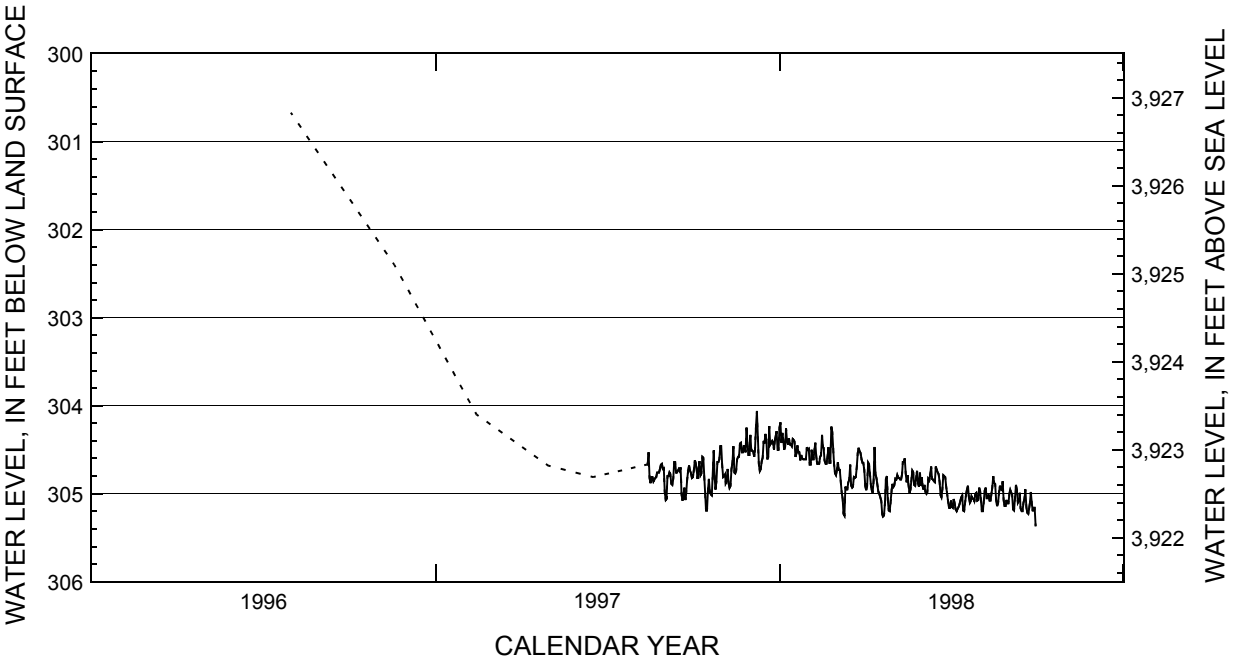
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 4,227.5 ft above sea level. Measuring point: Top of steel casing, 2.0 ft above land-surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—July 1996 to September 1998.

EXTREMES.—Highest daily water level, 300.67 ft (estimated) below land-surface datum, July 31, 1996; lowest daily water level, 305.08 ft below land-surface datum, Sept. 20, 1997.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	e300.67	---	---
LOW	---	---	---	---	---	---	---	---	---	300.67	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	304.98
2	---	---	---	---	---	---	---	---	---	---	---	305.07
3	---	---	---	---	---	---	---	---	---	---	---	305.06
4	---	---	---	---	---	---	---	---	---	---	---	304.80
5	---	---	---	---	---	---	---	---	---	---	---	304.80
6	---	---	---	---	---	---	---	---	---	---	---	304.76
7	---	---	---	---	---	---	---	---	---	---	---	304.78
8	---	---	---	---	---	---	---	---	---	---	---	304.89
9	---	---	---	---	---	---	---	---	---	---	---	304.90
10	---	---	---	---	---	---	---	---	---	---	---	304.83
11	---	---	---	---	---	---	---	---	---	---	---	304.64
12	---	---	---	---	---	---	---	---	---	---	---	304.64
13	---	---	---	---	e304.10	---	---	---	---	---	304.67	304.76
14	---	---	---	---	---	---	---	---	---	---	304.67	304.76
15	---	---	---	---	---	---	---	---	---	---	304.53	304.74
16	---	---	---	---	---	---	---	---	---	---	304.82	304.72
17	---	---	---	---	---	---	---	---	e304.81	---	304.88	304.74
18	---	e302.40	---	---	---	---	---	---	---	---	304.81	304.70
19	---	---	---	---	---	---	---	---	---	---	304.81	305.01
20	---	---	---	---	---	---	---	---	---	---	304.86	305.08
21	---	---	---	---	---	---	---	---	---	---	304.84	305.02
22	---	---	---	---	---	---	---	---	---	---	304.82	304.93
23	---	---	---	---	---	---	---	---	---	---	304.81	305.07
24	---	---	---	---	---	---	---	---	---	---	304.76	304.99
25	---	---	---	---	---	---	---	---	---	---	304.76	304.84
26	---	---	---	---	---	---	---	---	---	---	304.76	304.74
27	---	---	---	---	---	---	---	---	---	---	304.72	304.68
28	---	---	---	---	---	---	---	---	---	---	304.67	304.74
29	---	---	---	---	---	---	---	---	---	---	304.66	304.77
30	---	---	---	---	---	---	e304.68	---	---	---	304.72	304.82
31	---	---	---	---	---	---	---	---	---	---	304.71	---
LOW	---	302.40	---	---	304.10	---	304.68	---	304.81	---	304.88	305.08

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304.81	304.68	304.33	304.25	304.49	304.77	304.73	304.89	304.81	305.16	304.93	305.11
2	304.73	304.81	304.51	304.19	304.67	304.79	304.91	304.92	304.91	305.08	304.97	305.00
3	304.62	304.80	304.51	304.42	304.67	304.73	304.96	304.90	304.95	305.15	305.07	304.96
4	304.65	304.78	304.52	304.31	304.50	304.64	304.91	304.83	304.90	305.16	305.20	304.99
5	304.72	304.88	304.58	304.39	304.61	304.73	304.65	304.84	304.98	305.06	305.20	305.01
6	304.83	304.86	304.50	304.50	304.61	304.73	304.67	304.79	305.00	305.11	305.09	305.18
7	304.72	304.72	304.24	304.47	304.51	304.87	304.78	304.82	304.98	305.18	304.96	305.19
8	304.63	304.88	304.06	304.26	304.42	304.99	304.91	304.82	304.83	305.20	304.93	305.06
9	304.79	304.93	304.38	304.40	304.58	305.06	304.97	304.84	304.85	305.17	305.05	304.90
10	304.77	304.91	304.66	304.44	304.66	305.23	304.99	304.84	304.78	305.15	305.05	304.96
11	304.58	304.72	304.74	304.37	304.66	305.25	304.86	304.78	304.69	305.12	305.01	305.10
12	304.59	304.65	304.72	304.44	304.66	304.92	304.47	304.64	304.83	305.08	305.08	305.08
13	304.82	304.46	304.63	304.44	304.58	304.95	304.78	304.64	304.84	305.04	305.08	304.99
14	305.02	304.76	304.59	304.46	304.56	304.95	304.82	304.60	304.86	305.02	305.01	305.17
15	305.19	304.77	304.40	304.38	304.33	304.87	304.90	304.77	304.87	305.19	304.93	305.20
16	305.19	304.74	304.43	304.39	304.47	304.84	304.98	304.87	304.69	305.20	304.80	305.20
17	304.96	304.61	304.32	304.41	304.48	304.67	305.00	304.79	304.73	305.10	304.88	305.10
18	304.83	304.58	304.39	304.58	304.63	304.91	305.04	304.91	304.76	305.01	304.89	305.06
19	304.98	304.58	304.61	304.54	304.66	304.93	305.08	304.99	304.78	304.95	305.07	304.95
20	305.01	304.43	304.58	304.45	304.66	304.92	305.23	304.95	304.87	304.91	305.14	305.15
21	305.02	304.42	304.23	304.53	304.58	304.81	305.26	304.84	305.02	305.04	305.11	305.22
22	304.81	304.53	304.44	304.53	304.47	304.82	305.25	304.74	305.04	305.10	304.99	305.23
23	304.51	304.53	304.42	304.62	304.65	304.81	305.11	304.76	304.95	305.08	304.91	305.16
24	304.82	304.45	304.40	304.56	304.65	304.70	304.83	304.90	304.79	305.03	304.95	305.11
25	304.95	304.48	304.42	304.60	304.24	304.54	304.80	304.91	304.80	305.05	304.96	304.98
26	304.86	304.53	304.50	304.61	304.30	304.48	305.07	304.82	304.81	305.06	304.86	305.11
27	304.64	304.25	304.41	304.61	304.51	304.52	305.19	304.74	304.92	305.09	305.07	305.20
28	304.64	304.44	304.35	304.61	304.66	304.54	305.20	304.88	305.00	305.00	305.14	305.16
29	304.61	304.56	304.29	304.61	---	304.61	305.09	304.92	305.09	304.99	305.14	305.16
30	304.46	304.56	304.50	304.47	---	304.65	304.96	304.76	305.16	305.08	305.07	305.37
31	304.46	---	304.50	304.50	---	304.65	---	304.91	---	305.07	305.11	---
LOW	305.19	304.93	304.74	304.62	304.67	305.25	305.26	304.99	305.16	305.20	305.20	305.37

SITE NUMBER FROM LOCATION MAP.—C1.

COUNTY.—Pennington.

LOCAL NUMBER.—1N6E13DDD.

SITE ID (STATION NUMBER).—440228103195701.

LOCATION.—Lat 44°02′23″, long 103°19′57″, in SE1/4SE1/4SE1/4 sec. 13, T. 1 N., R. 6 E., Hydrologic Unit 10120110. Owner: private.

AQUIFER.—Madison.

SITE CHARACTERISTICS.—Pool of water in cave about 100 ft below cave entrance.

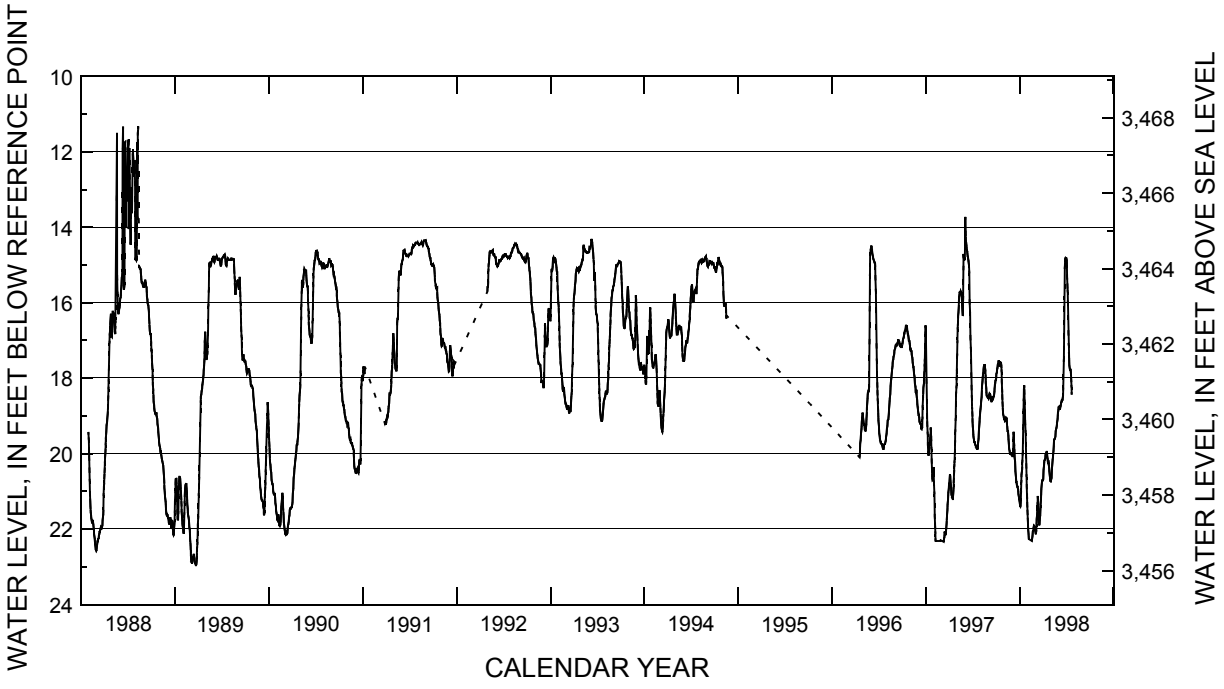
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land surface at cave entrance is about 3,550 ft above sea level. Measuring point: Staff gage with 0.0 being 21.71 ft below a brass cap reference point with elevation of about 3,479.2 ft above sea level.

REMARKS.—Current records good.

PERIOD OF RECORD.—January 1988 to September 1998.

EXTREMES.—Highest daily water level, 11.33 ft below reference point, Aug. 10, 1988; lowest daily water level, 22.96 ft below reference point, Mar. 22-23, 1989.



WATER LEVEL, IN FEET BELOW REFERENCE POINT, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.09	15.07	---	---	---	---	---	---	---	---	---	---
2	15.04	15.21	---	---	---	---	---	---	---	---	---	---
3	15.07	15.31	---	---	---	---	---	---	---	---	---	---
4	15.07	15.49	---	---	---	---	---	---	---	---	---	---
5	15.07	15.76	---	---	---	---	---	---	---	---	---	---
6	15.17	15.89	---	---	---	---	---	---	---	---	---	---
7	15.21	16.04	---	---	---	---	---	---	---	---	---	---
8	15.16	16.09	---	---	---	---	---	---	---	---	---	---
9	15.09	16.09	---	---	---	---	---	---	---	---	---	---
10	15.06	16.07	---	---	---	---	---	---	---	---	---	---
11	15.01	16.06	---	---	---	---	---	---	---	---	---	---
12	14.97	16.05	---	---	---	---	---	---	---	---	---	---
13	14.98	16.02	---	---	---	---	---	---	---	---	---	---
14	14.90	16.04	---	---	---	---	---	---	---	---	---	---
15	14.88	16.19	---	---	---	---	---	---	---	---	---	---
16	14.84	16.40	---	---	---	---	---	---	---	---	---	---
17	14.79	16.40	---	---	---	---	---	---	---	---	---	---
18	14.82	16.35	---	---	---	---	---	---	---	---	---	---
19	14.86	---	---	---	---	---	---	---	---	---	---	---
20	14.90	---	---	---	---	---	---	---	---	---	---	---
21	14.93	---	---	---	---	---	---	---	---	---	---	---
22	14.96	---	---	---	---	---	---	---	---	---	---	---
23	14.98	---	---	---	---	---	---	---	---	---	---	---
24	15.00	---	---	---	---	---	---	---	---	---	---	---
25	14.98	---	---	---	---	---	---	---	---	---	---	---
26	14.99	---	---	---	---	---	---	---	---	---	---	---
27	15.00	---	---	---	---	---	---	---	---	---	---	---
28	15.03	---	---	---	---	---	---	---	---	---	---	---
29	15.04	---	---	---	---	---	---	---	---	---	---	---
30	15.04	---	---	---	---	---	---	---	---	---	---	---
31	15.05	---	---	---	---	---	---	---	---	---	---	---
LOW	15.21	16.40	---	---	---	---	---	---	---	---	---	---

WATER LEVEL, IN FEET BELOW REFERENCE POINT, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	18.97	14.59	19.13	19.48	17.26
2	---	---	---	---	---	---	---	19.05	14.50	19.26	19.42	17.24
3	---	---	---	---	---	---	---	19.13	14.49	19.38	19.34	17.22
4	---	---	---	---	---	---	---	19.20	14.53	19.47	19.27	17.20
5	---	---	---	---	---	---	---	19.23	14.60	19.54	19.20	17.15
6	---	---	---	---	---	---	---	19.24	14.67	19.60	19.12	17.12
7	e18.68	---	---	---	---	---	---	19.24	14.71	19.63	19.11	17.11
8	---	---	---	---	---	---	---	19.31	14.74	19.67	19.09	17.10
9	---	---	---	---	---	---	---	19.38	14.78	19.70	19.05	17.11
10	---	---	---	---	---	---	---	19.40	14.82	19.70	18.95	17.14
11	---	---	---	---	---	---	---	19.40	14.85	19.74	18.84	17.14
12	---	---	---	---	---	---	---	19.39	14.87	19.75	18.72	17.13
13	---	---	---	---	---	---	---	19.33	14.89	19.76	18.61	17.08
14	---	---	---	---	---	---	---	19.23	14.91	19.76	18.53	17.03
15	---	---	---	---	---	---	---	19.09	14.92	19.76	18.42	16.99
16	---	---	---	---	---	---	---	18.97	14.95	19.79	18.31	16.97
17	---	---	---	---	---	---	---	18.78	14.96	19.84	18.21	17.02
18	---	---	---	---	---	---	20.10	18.66	15.05	19.87	18.10	17.03
19	---	---	---	---	---	---	20.01	18.54	15.34	19.88	18.02	17.03
20	---	---	---	---	---	---	19.86	18.44	15.70	19.88	17.96	17.05
21	---	---	---	---	---	---	19.73	18.39	16.20	19.84	17.86	17.09
22	---	---	---	---	---	---	19.64	18.37	16.65	19.82	17.82	17.13
23	---	---	---	---	---	---	19.55	18.34	17.15	19.76	17.75	17.16
24	---	---	---	---	---	---	19.47	18.34	17.55	19.75	17.69	17.16
25	---	---	---	---	---	---	19.35	18.23	17.90	19.75	17.60	17.12
26	---	---	---	---	---	---	19.28	17.90	18.18	19.75	17.55	17.11
27	---	---	---	---	---	---	19.16	17.47	18.39	19.73	17.50	17.13
28	---	---	---	---	---	---	19.04	15.29	18.61	19.69	17.45	17.18
29	---	---	---	---	---	---	19.00	14.69	18.82	19.65	17.42	17.18
30	---	---	---	---	---	---	18.92	14.69	18.98	19.60	17.38	17.16
31	---	---	---	---	---	---	---	14.68	---	19.55	17.33	---
LOW	18.68	---	---	---	---	---	20.10	19.40	18.98	19.88	19.48	17.26

e Estimated

WATER LEVEL, IN FEET BELOW REFERENCE POINT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	17.22	18.79	16.66	20.55	---	20.81	17.99	14.82	18.95	18.89	18.53
2	17.10	17.25	18.89	17.04	20.79	---	20.80	17.81	14.86	19.14	18.82	18.54
3	17.04	17.24	18.94	17.50	21.08	---	20.76	17.42	13.99	19.29	18.74	18.52
4	16.98	17.25	18.98	18.08	21.38	---	20.63	17.00	13.73	19.40	18.69	18.45
5	16.95	17.27	18.98	18.62	21.67	---	20.55	16.71	14.16	19.50	18.61	18.42
6	16.94	17.28	19.04	19.01	21.90	---	20.61	16.54	14.33	19.56	18.50	18.41
7	16.92	17.36	19.14	19.22	22.13	---	20.72	16.35	14.40	19.63	18.39	18.42
8	16.86	17.40	19.17	19.49	22.32	---	20.81	16.26	14.48	19.68	18.22	18.44
9	16.82	17.47	19.19	19.77	---	---	20.89	16.13	14.54	19.70	18.10	18.45
10	16.82	17.51	19.19	20.00	---	---	21.00	15.95	14.58	19.70	18.05	18.50
11	16.75	17.59	19.22	20.04	---	---	21.08	15.85	14.65	19.73	17.97	18.52
12	16.75	17.64	19.23	20.04	---	22.34	21.14	15.78	14.71	19.75	17.90	18.59
13	16.75	17.71	19.25	19.95	---	22.25	21.15	15.71	14.77	19.78	17.85	18.62
14	16.69	17.71	19.34	19.80	---	22.23	21.17	15.74	14.80	19.79	17.77	18.62
15	16.65	17.79	19.35	19.75	---	22.18	21.21	15.74	14.85	19.80	17.68	18.60
16	16.59	17.86	19.28	19.76	---	22.07	21.21	15.72	14.90	19.84	17.67	18.54
17	16.62	17.93	19.32	19.68	---	22.13	21.15	15.70	14.94	19.85	17.67	18.52
18	16.62	17.98	19.31	19.62	---	22.16	21.03	15.72	15.01	19.87	17.63	18.49
19	16.62	18.05	19.09	19.48	---	22.15	20.89	15.74	15.22	19.87	17.66	18.52
20	16.68	18.15	18.78	19.31	---	22.11	20.71	15.78	15.58	19.88	17.72	18.53
21	16.74	18.22	18.51	19.36	---	22.01	20.51	15.86	15.98	19.88	17.82	18.51
22	16.77	18.26	18.35	19.60	---	21.97	20.35	16.01	16.27	19.87	17.98	18.48
23	16.84	18.38	18.25	19.89	---	21.86	20.18	16.13	16.61	19.80	18.13	18.47
24	16.84	18.39	18.16	20.20	---	21.70	19.96	16.26	16.93	19.71	18.27	18.43
25	16.86	18.31	18.01	20.44	---	21.61	19.72	16.35	17.24	19.61	18.38	18.36
26	16.95	18.43	17.89	20.61	22.32	21.50	19.43	16.34	17.56	19.50	18.45	18.28
27	17.00	18.51	17.69	20.69	22.30	21.36	19.06	15.46	17.92	19.39	18.48	18.19
28	17.00	18.58	17.49	20.68	---	21.22	18.69	14.71	18.25	19.28	18.49	18.13
29	17.02	18.69	17.16	20.62	---	21.11	18.43	14.82	18.52	19.16	18.49	18.08
30	17.07	18.76	16.83	20.52	---	21.03	18.20	14.86	18.75	19.06	18.51	18.06
31	17.14	---	16.61	20.37	---	20.93	---	14.86	---	18.96	18.51	---
LOW	17.14	18.76	19.35	20.69	22.32	22.34	21.21	17.99	18.75	19.88	18.89	18.62

WATER LEVEL, IN FEET BELOW REFERENCE POINT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.04	19.05	19.98	21.26	21.56	21.96	20.71	20.73	18.85	14.82	---	---
2	17.98	19.08	20.00	21.32	21.77	21.99	20.71	20.74	18.79	14.82	---	---
3	17.88	19.08	20.00	21.39	21.89	22.03	20.68	20.74	18.76	14.87	---	---
4	17.85	19.13	20.05	21.40	22.03	22.10	20.57	20.69	18.75	15.00	---	---
5	17.80	19.14	20.09	21.38	22.17	22.12	20.43	20.65	18.78	15.32	---	---
6	17.76	19.13	20.07	21.25	22.27	22.12	20.32	20.53	18.82	15.56	---	---
7	17.73	19.08	19.93	21.00	---	22.04	20.24	20.42	18.82	15.72	---	---
8	17.64	19.07	19.63	20.77	---	21.88	20.18	20.31	18.79	16.01	---	---
9	17.64	19.07	19.43	20.56	---	21.74	20.17	20.21	18.76	16.40	---	---
10	17.61	19.05	19.61	20.47	---	21.60	20.16	20.16	18.73	16.80	---	---
11	17.57	19.06	19.80	20.42	---	21.53	20.13	20.09	18.68	17.14	---	---
12	17.53	19.07	19.96	20.24	---	21.36	20.04	20.01	18.65	17.38	---	---
13	17.58	19.19	20.10	19.98	---	21.13	20.01	19.93	18.64	17.54	---	---
14	17.64	19.34	20.20	19.66	---	21.23	20.00	19.80	18.60	17.66	---	---
15	17.67	19.41	20.34	19.29	---	21.45	19.97	19.68	18.60	17.75	---	---
16	17.67	19.41	20.46	18.88	---	21.64	19.96	19.63	18.58	17.78	---	---
17	17.63	19.43	20.55	18.54	---	21.79	19.96	19.62	18.58	17.78	---	---
18	17.58	19.53	20.65	18.30	22.32	21.88	20.00	19.60	18.56	17.78	---	---
19	17.59	19.62	20.75	18.19	22.27	21.88	20.08	19.59	18.46	17.81	---	---
20	17.60	19.73	20.75	18.37	22.19	21.86	20.15	19.55	18.26	17.87	---	---
21	17.60	19.82	20.80	18.64	22.13	21.77	20.22	19.48	17.97	18.04	---	---
22	17.66	19.91	20.85	18.90	22.06	21.64	20.26	19.41	17.50	18.25	---	---
23	17.84	19.94	20.88	19.18	22.05	21.51	20.26	19.36	16.89	18.44	---	---
24	18.10	19.97	20.88	19.45	22.04	21.37	20.25	19.32	16.17	---	---	---
25	18.31	20.01	20.89	19.76	21.97	21.23	20.31	19.31	15.57	---	---	---
26	18.50	20.02	20.96	20.06	21.91	21.08	20.38	19.26	15.04	---	---	---
27	18.69	19.99	21.01	20.33	21.92	20.94	20.46	19.19	14.85	---	---	---
28	18.86	20.01	21.08	20.62	21.95	20.84	20.55	19.14	14.82	---	---	---
29	18.94	20.01	21.15	20.88	---	20.75	20.63	19.08	14.81	---	---	---
30	18.98	20.01	21.22	21.13	---	20.71	20.69	18.98	14.82	---	---	---
31	19.02	---	21.24	21.36	---	20.71	---	18.92	---	---	---	---
LOW	19.02	20.02	21.24	21.40	22.32	22.12	20.71	20.74	18.85	18.44	---	---

SITE NUMBER FROM LOCATION MAP.—49.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1S2E35ADCA.

SITE ID (STATION NUMBER).—435517103501801.

OTHER IDENTIFIERS.—PE-96C and Four Corners.

LOCATION.—Lat 43°55′15.6″, long 103°50′18.5″, in NE1/4SW1/4SE1/4NE1/4 sec. 35, T. 1 S., R. 2 E., Hydrologic Unit 10120110, 7 mi south of Deerfield Reservoir. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 380 ft deep with 223 ft of 5-in. steel casing; open hole from 223 to 380 ft.

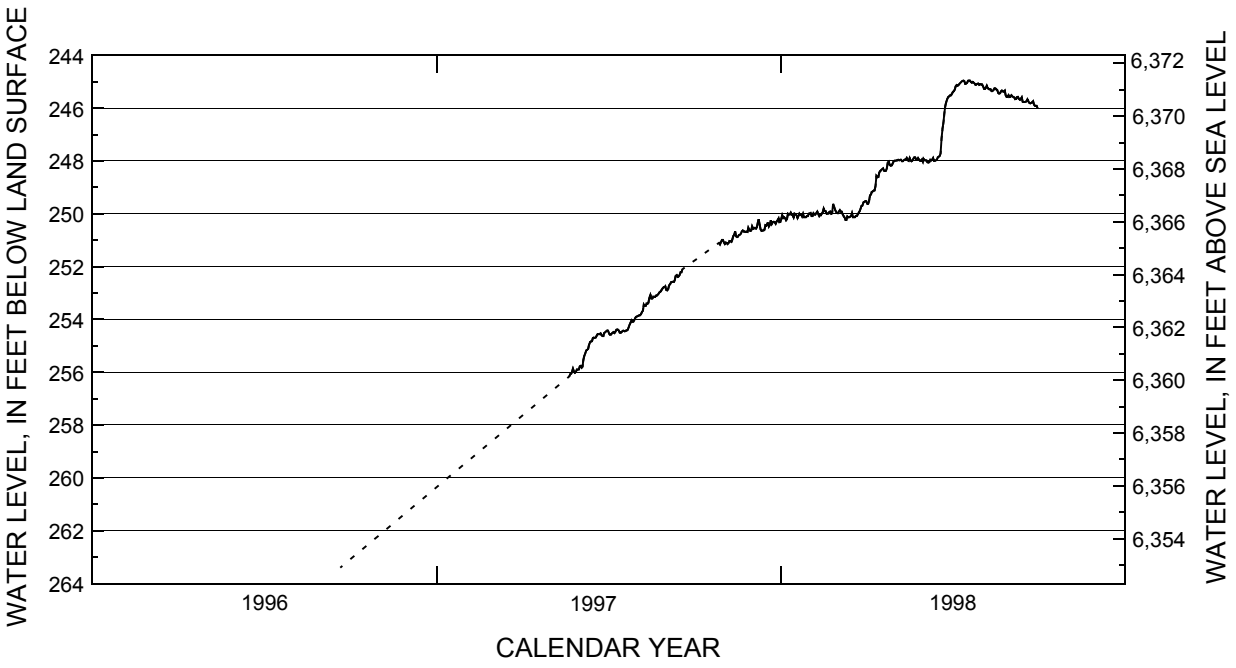
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 6,616.3 ft above sea level. Measuring point: Top of steel casing, 1.3 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1996 to September 1998.

EXTREMES.—Highest daily water level, 244.95 ft below land-surface datum, July 13, 19, 20, 1998; lowest daily water level, 263.4 ft (estimated) below land-surface datum, Sept. 20, 1996, from driller's log.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	e263.4
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	---	263.40

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	255.78	254.43	253.89	252.88
2	---	---	---	---	---	---	---	---	255.76	254.53	253.86	252.90
3	---	---	---	---	---	---	---	---	255.83	254.58	253.85	252.86
4	---	---	---	---	---	---	---	---	255.80	254.58	253.85	252.71
5	---	---	---	---	---	---	---	---	255.54	254.53	253.80	252.66
6	---	---	---	---	---	---	---	---	255.38	254.50	253.72	252.59
7	---	---	---	---	---	---	---	---	255.28	254.48	253.68	252.58
8	---	---	---	---	---	---	---	---	255.17	254.52	253.44	252.58
9	---	---	---	---	---	---	---	---	255.16	254.47	253.49	252.58
10	---	---	---	---	---	---	---	---	255.12	254.39	253.49	252.50
11	---	---	---	---	---	---	---	---	254.95	254.38	253.40	252.36
12	---	---	---	---	---	---	---	---	254.86	254.39	253.41	252.33
13	---	---	---	---	---	---	---	---	254.84	254.45	253.37	252.39
14	---	---	---	---	---	---	---	---	254.83	254.51	253.17	252.37
15	---	---	---	---	---	---	---	---	254.70	254.50	253.07	252.33
16	---	---	---	---	---	---	---	---	254.69	254.46	253.21	252.22
17	---	---	---	---	---	---	---	---	254.70	254.43	253.21	252.22
18	---	---	---	---	---	---	---	---	254.69	254.44	253.14	252.10
19	---	---	---	---	---	---	---	---	254.62	254.45	253.15	---
20	---	---	---	---	---	---	---	---	254.56	254.43	253.15	---
21	---	---	---	---	---	---	---	256.16	254.56	254.42	253.10	---
22	---	---	---	---	---	---	---	256.07	254.56	254.40	253.10	---
23	---	---	---	---	---	---	---	256.05	254.53	254.30	253.06	---
24	---	---	---	---	---	---	---	255.97	254.60	254.20	253.01	---
25	---	---	---	---	---	---	---	255.87	254.63	254.12	252.95	---
26	---	---	---	---	---	---	---	255.97	254.63	254.04	252.94	---
27	---	---	---	---	---	---	---	256.02	254.52	254.09	252.87	---
28	---	---	---	---	---	---	---	255.99	254.49	254.09	252.82	---
29	---	---	---	---	---	---	---	255.90	254.46	254.04	252.78	---
30	---	---	---	---	---	---	---	255.90	254.42	253.95	252.77	---
31	---	---	---	---	---	---	---	255.90	---	253.90	252.74	---
LOW	---	---	---	---	---	---	---	256.16	255.83	254.58	253.89	252.90

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	251.08	250.48	250.19	249.97	249.97	249.53	247.99	247.92	245.45	245.10	245.57
2	---	251.14	250.57	250.06	250.09	249.98	249.62	247.99	247.97	245.38	245.10	245.51
3	---	251.09	250.55	250.16	250.09	249.92	249.62	247.98	247.97	245.35	245.17	245.56
4	---	251.10	250.53	250.13	249.98	249.86	249.51	247.98	247.98	245.31	245.27	245.57
5	---	251.15	250.56	250.17	250.03	249.92	249.30	247.96	248.04	245.17	245.27	245.59
6	---	251.11	250.51	250.25	250.04	249.92	249.27	247.97	248.06	245.13	245.23	245.66
7	---	251.03	250.33	250.20	249.97	250.01	249.18	247.96	248.04	245.15	245.15	245.65
8	---	251.04	250.21	250.00	249.92	250.08	249.16	247.96	247.96	245.12	245.24	245.58
9	---	251.06	250.41	250.03	250.01	250.13	249.13	248.01	247.98	245.08	245.27	245.57
10	---	250.98	250.59	250.03	250.09	250.23	249.12	248.01	247.95	245.04	245.29	245.64
11	---	250.84	250.65	249.96	250.04	250.23	248.95	247.97	247.89	245.00	245.28	245.68
12	---	250.80	250.63	250.04	250.05	250.10	248.57	247.95	247.99	244.97	245.35	245.65
13	---	250.67	250.63	250.06	250.00	250.14	248.62	247.95	247.99	244.95	245.35	245.59
14	---	250.86	250.61	250.14	249.95	250.13	248.61	247.89	247.97	244.98	245.32	245.75
15	---	250.88	250.44	250.00	249.81	250.11	248.44	247.97	247.96	245.08	245.25	245.77
16	---	250.87	250.45	250.02	249.90	250.09	248.37	248.00	247.86	245.07	245.25	245.77
17	---	250.81	250.36	250.06	249.90	249.97	248.34	247.89	247.84	245.04	245.29	245.75
18	---	250.80	250.36	250.16	250.00	250.13	248.31	247.98	247.81	244.96	245.30	245.74
19	---	250.76	250.48	250.08	250.00	250.13	248.28	248.01	247.71	244.95	245.42	245.67
20	---	250.67	250.42	249.99	249.99	250.13	248.37	247.98	247.14	244.95	245.45	245.74
21	---	250.63	250.25	250.04	249.93	250.08	248.38	247.92	246.77	245.00	245.43	245.80
22	---	250.68	250.38	250.03	249.91	250.08	248.37	247.86	246.53	245.03	245.36	245.82
23	---	250.67	250.31	250.10	250.00	250.03	248.27	247.86	246.22	245.00	245.33	245.80
24	---	250.69	250.30	250.00	249.98	249.96	248.06	247.95	245.93	245.03	245.37	245.78
25	---	250.68	250.32	250.13	249.63	249.90	248.02	247.95	245.77	245.07	245.38	245.74
26	---	250.69	250.37	250.13	249.73	249.80	248.15	247.89	245.65	245.11	245.34	245.86
27	251.10	250.54	250.29	250.13	249.85	249.70	248.18	247.94	245.58	245.11	245.52	245.91
28	251.16	250.62	250.25	250.09	249.92	249.69	248.17	247.99	245.56	245.08	245.57	245.91
29	251.07	250.65	250.18	250.09	---	249.57	248.11	248.00	245.51	245.06	245.57	245.91
30	250.99	250.63	250.32	250.00	---	249.55	248.02	247.95	245.51	245.11	245.51	246.01
31	250.99	---	250.31	250.00	---	249.52	---	248.03	---	245.09	245.58	---
LOW	251.16	251.15	250.65	250.25	250.09	250.23	249.62	248.03	248.06	245.45	245.58	246.01

SITE NUMBER FROM LOCATION MAP.—50.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1S7E20CACD.

SITE ID (STATION NUMBER).—435644103183801.

OTHER IDENTIFIERS.—Kieffer.

LOCATION.—Lat 43°56′41.3″, long 103°18′43.4″, in SE1/4SW1/4NE1/4SW1/4 sec. 20, T. 1 S., R. 7 E., Hydrologic Unit 10120109, 6 mi northeast of Keystone. Owner: R. Kieffer.

AQUIFER.—Deadwood.

WELL CHARACTERISTICS.—Drilled unused domestic well, 1,030 ft deep with 519 ft of 5-in. steel casing; 4.5 in. metal liner (believed to be in poor condition) from 519 to 985 ft; open hole from 985 to 1,030 ft.

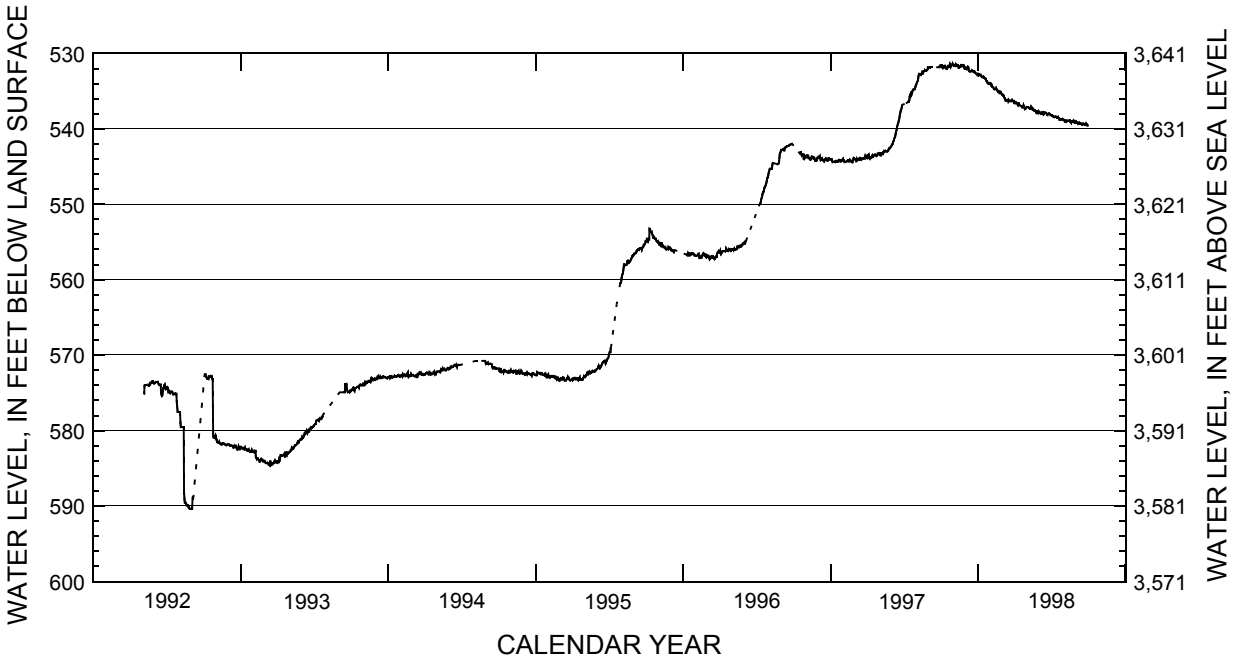
INSTRUMENTATION.—Electronic data logger with float -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 4,171.0 ft above sea level. Measuring point: Top of steel casing, 1.00 ft above land-surface datum.

REMARKS.—Current records good. Records poor for 1992, and fair for 1993-97 (±0.5 ft).

PERIOD OF RECORD.—May 1992 to September 1998.

EXTREMES.—Highest daily water level, 531.51 ft below land-surface datum, Sept. 30, 1997; lowest daily water level, 590.36 ft below land-surface datum, Aug. 26 to Sept. 2, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	573.72	574.36	577.55	590.36
2	---	---	---	---	---	---	---	---	573.64	574.25	577.55	590.36
3	---	---	---	---	---	---	---	---	573.62	574.26	577.68	588.89
4	---	---	---	---	---	---	---	---	573.60	574.47	579.06	588.89
5	---	---	---	---	---	---	---	575.14	573.57	574.79	579.57	588.87
6	---	---	---	---	---	---	---	575.14	573.56	574.75	579.57	---
7	---	---	---	---	---	---	---	574.00	573.56	574.90	579.57	---
8	---	---	---	---	---	---	---	573.99	573.56	574.99	579.57	---
9	---	---	---	---	---	---	---	573.99	573.56	574.91	579.57	---
10	---	---	---	---	---	---	---	573.99	573.72	575.04	579.57	---
11	---	---	---	---	---	---	---	573.99	573.93	574.90	579.57	---
12	---	---	---	---	---	---	---	573.99	573.91	574.86	579.57	---
13	---	---	---	---	---	---	---	573.99	573.91	574.86	588.20	---
14	---	---	---	---	---	---	---	573.93	573.91	574.86	589.12	---
15	---	---	---	---	---	---	---	573.93	573.91	574.92	589.59	---
16	---	---	---	---	---	---	---	573.98	573.90	575.07	589.59	---
17	---	---	---	---	---	---	---	574.08	574.94	575.21	589.59	---
18	---	---	---	---	---	---	---	574.08	575.30	575.19	589.59	---
19	---	---	---	---	---	---	---	573.92	575.43	575.19	589.91	---
20	---	---	---	---	---	---	---	573.92	575.39	575.19	589.91	---
21	---	---	---	---	---	---	---	573.92	574.83	575.17	589.91	---
22	---	---	---	---	---	---	---	573.69	574.36	575.08	589.91	---
23	---	---	---	---	---	---	---	573.70	574.29	575.10	589.92	---
24	---	---	---	---	---	---	---	573.68	574.24	575.10	590.18	---
25	---	---	---	---	---	---	---	573.63	573.99	575.12	590.18	---
26	---	---	---	---	---	---	---	573.63	573.91	576.31	590.36	---
27	---	---	---	---	---	---	---	573.34	574.41	576.78	590.36	---
28	---	---	---	---	---	---	---	573.59	574.50	577.54	590.36	---
29	---	---	---	---	---	---	---	573.66	574.42	577.55	590.36	---
30	---	---	---	---	---	---	---	573.70	574.15	577.55	590.36	---
31	---	---	---	---	---	---	---	573.76	---	577.55	590.36	---
LOW	---	---	---	---	---	---	---	575.14	575.43	577.55	590.36	590.36

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	581.18	581.83	582.06	582.76	584.05	584.20	582.88	580.91	579.27	---	---
2	---	581.25	581.83	582.27	582.73	584.16	584.00	582.81	581.00	579.22	---	e574.96
3	572.56	581.55	581.91	582.29	582.94	584.31	584.17	582.73	580.97	579.19	---	---
4	572.53	581.56	582.01	582.42	582.94	584.32	584.09	582.52	580.94	579.15	---	---
5	572.54	581.53	582.01	---	582.73	584.33	583.89	582.71	580.71	579.14	---	---
6	572.81	581.62	581.95	---	582.60	584.33	584.03	582.57	580.72	578.75	---	---
7	572.98	581.62	581.95	582.31	583.59	584.29	583.94	582.23	580.62	578.67	---	---
8	573.00	581.52	581.95	582.49	583.61	584.28	583.63	582.25	580.34	578.63	---	---
9	573.15	581.71	581.98	582.51	583.63	584.33	583.31	582.44	580.39	578.63	---	---
10	573.15	581.76	582.04	582.47	583.82	584.46	583.32	582.41	580.31	578.61	---	---
11	573.18	581.78	582.06	582.27	583.77	584.46	583.31	582.26	580.18	578.66	---	574.93
12	573.19	581.83	582.11	582.42	583.72	584.54	583.33	582.21	580.08	578.49	---	574.93
13	572.88	581.86	582.26	582.50	583.82	584.32	583.28	582.14	580.28	578.50	---	574.92
14	572.93	581.82	582.20	582.44	583.88	584.10	583.31	581.99	580.37	578.63	---	574.92
15	572.83	581.85	582.06	582.46	583.98	584.08	583.30	581.98	580.16	578.43	---	574.92
16	572.87	581.67	582.18	582.61	584.13	584.63	583.25	581.98	580.03	578.34	---	573.89
17	572.78	581.70	582.13	582.58	584.13	584.58	583.23	581.94	580.19	578.41	---	573.88
18	572.87	581.72	582.02	582.67	584.02	584.20	583.11	581.92	580.18	578.34	---	573.88
19	572.86	581.72	582.01	582.64	583.87	584.49	583.32	581.83	580.04	578.42	---	573.87
20	572.96	581.79	582.25	582.55	583.74	584.49	583.49	581.66	579.98	578.23	---	574.45
21	572.89	581.79	582.36	582.73	583.78	584.34	583.43	581.50	579.87	578.19	---	574.67
22	573.19	581.79	582.45	582.73	583.90	584.34	583.11	581.42	579.65	578.19	---	574.85
23	573.20	581.87	582.53	582.84	584.00	584.20	582.78	581.45	579.59	577.92	---	574.90
24	580.47	581.93	582.52	582.84	583.94	584.26	582.98	581.54	579.63	---	---	574.88
25	580.90	581.98	582.36	582.73	584.09	584.26	583.15	581.46	579.71	---	---	574.85
26	580.90	581.94	582.14	582.73	584.06	584.17	583.00	581.24	579.64	---	---	574.91
27	580.86	581.88	582.32	582.60	584.05	583.99	583.04	581.22	579.54	---	---	574.82
28	580.90	581.85	582.19	582.79	584.08	584.10	583.01	581.19	579.50	---	---	574.92
29	580.78	581.84	582.21	582.78	---	584.10	582.95	581.13	579.44	---	---	574.88
30	580.66	581.84	582.37	582.70	---	584.18	582.84	581.20	579.44	---	---	574.65
31	580.86	---	582.27	582.77	---	584.26	---	581.17	---	---	---	---
LOW	580.90	581.98	582.53	582.84	584.13	584.63	584.20	582.88	581.00	579.27	---	574.96

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	574.68	573.86	573.13	572.96	572.71	572.70	572.50	572.21	571.77	---	---	571.16
2	574.68	573.91	573.13	572.95	572.67	572.71	572.55	572.21	571.82	---	---	571.07
3	574.60	573.66	573.17	572.91	572.68	572.69	572.47	572.19	571.80	---	---	571.06
4	574.48	573.75	572.98	572.92	572.64	572.63	572.43	572.21	571.63	---	570.77	570.97
5	574.34	573.84	573.06	572.72	572.55	572.71	572.39	572.20	571.70	---	---	571.19
6	574.28	573.66	573.07	573.01	572.80	572.78	572.32	572.21	571.60	---	---	571.20
7	574.39	573.54	572.89	572.94	572.65	572.83	572.32	572.20	571.50	---	---	571.15
8	574.67	573.63	572.82	572.90	572.67	572.83	572.36	572.19	571.57	---	---	571.15
9	574.76	573.70	573.08	572.85	572.55	572.77	572.43	572.22	571.60	---	---	571.15
10	574.45	573.68	573.08	573.00	572.56	572.69	572.57	572.06	571.59	---	---	571.15
11	574.39	573.58	573.07	573.00	572.70	572.86	572.58	572.22	571.55	---	---	571.15
12	574.37	573.47	572.90	572.98	572.79	572.91	572.45	572.05	571.46	---	---	571.16
13	574.37	573.55	573.07	572.89	572.75	572.79	572.25	571.94	571.37	---	---	571.21
14	574.30	573.58	573.08	572.88	572.74	572.62	572.32	572.03	571.28	---	---	571.22
15	574.24	573.54	572.95	572.88	572.74	572.68	572.49	571.93	571.27	---	---	571.43
16	574.25	573.49	572.96	572.73	572.54	572.48	572.56	571.78	571.37	---	---	571.69
17	574.19	573.54	572.92	572.82	572.42	572.39	572.47	571.85	571.47	---	---	571.75
18	574.17	573.33	572.97	572.80	572.28	572.40	572.57	572.00	571.47	---	---	571.65
19	574.14	573.46	572.81	572.77	572.68	572.34	572.57	572.00	571.34	---	---	571.59
20	574.29	573.27	572.81	572.86	572.87	572.49	572.51	571.86	571.56	---	---	571.59
21	574.10	573.04	572.90	572.86	572.80	572.42	572.49	571.98	571.39	---	---	571.77
22	574.00	573.13	572.88	572.80	572.74	572.36	572.45	571.99	571.32	---	---	571.80
23	573.92	573.36	572.94	572.78	572.72	572.57	572.25	571.98	571.32	---	---	571.70
24	573.89	573.36	572.98	572.70	572.67	572.62	572.22	572.02	571.32	---	---	571.72
25	574.00	573.36	572.98	572.70	572.78	572.59	572.18	571.93	571.32	---	---	571.83
26	574.00	573.16	573.01	572.64	572.76	572.39	572.37	571.89	571.32	---	570.77	571.81
27	573.98	573.11	573.03	572.71	572.53	572.61	572.56	571.73	571.32	---	570.77	571.79
28	573.95	573.25	573.08	572.73	572.70	572.45	572.46	571.77	571.31	---	570.77	571.79
29	574.02	573.27	573.10	572.87	---	572.73	572.48	571.74	---	---	570.77	571.79
30	574.02	573.13	572.96	572.90	---	572.56	572.32	571.78	---	---	570.99	571.79
31	573.81	---	572.91	572.86	---	572.51	---	571.85	---	---	571.18	---
LOW	574.76	573.91	573.17	573.01	572.87	572.91	572.58	572.22	571.82	---	571.18	571.83

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571.79	572.05	572.42	572.62	572.56	573.40	573.15	573.01	571.90	570.17	560.17	556.64
2	571.79	572.20	572.45	572.68	572.81	573.28	573.21	572.71	571.84	569.93	559.76	556.54
3	572.16	572.20	572.47	572.69	572.91	573.13	573.34	572.86	571.79	569.62	559.40	556.54
4	572.17	572.15	572.59	572.69	572.78	573.06	573.24	572.91	571.69	569.62	559.26	556.54
5	571.97	572.20	572.61	572.26	572.79	573.07	573.08	572.82	571.52	569.62	559.18	556.54
6	571.73	572.28	572.52	572.30	572.79	573.20	573.08	572.62	571.41	569.00	558.80	556.45
7	572.20	572.17	572.43	572.35	572.94	573.25	573.02	572.55	571.63	568.86	558.49	556.45
8	572.29	572.28	572.52	572.44	572.87	573.21	573.01	572.42	571.71	---	557.87	556.19
9	572.22	572.22	572.44	572.42	572.77	572.99	573.22	572.54	571.62	---	558.11	556.13
10	572.15	572.09	572.54	572.38	572.79	573.04	573.21	572.59	571.70	---	558.11	556.12
11	572.12	572.07	572.35	572.35	572.85	573.00	573.15	572.42	571.62	---	558.10	555.99
12	572.18	572.04	572.47	572.52	572.92	573.10	573.23	572.09	571.50	---	558.06	555.98
13	572.30	572.29	572.45	572.57	572.92	573.32	573.23	572.30	571.32	---	558.06	555.98
14	572.07	572.48	572.42	572.57	572.76	573.37	572.96	572.54	571.20	---	558.06	556.03
15	571.84	572.48	572.43	572.41	572.79	573.37	573.18	572.26	571.06	---	557.80	555.86
16	572.07	572.13	572.50	572.38	572.94	573.37	573.31	572.36	570.97	---	557.54	555.82
17	572.07	572.11	572.56	572.54	572.89	573.37	573.15	572.30	570.96	---	557.50	555.82
18	572.18	572.30	572.56	572.60	573.06	573.21	573.15	572.26	570.91	---	557.71	555.82
19	572.19	572.30	572.50	572.62	573.08	573.09	573.08	572.32	570.91	---	557.82	555.88
20	572.18	572.16	572.53	572.65	573.13	573.10	572.94	572.22	570.76	---	557.80	555.89
21	572.15	572.45	572.64	572.62	572.98	572.97	573.28	572.10	570.73	e563.28	557.72	556.04
22	572.27	572.49	572.73	572.61	573.05	573.14	573.26	572.19	570.73	---	557.57	555.83
23	572.34	572.46	572.59	572.56	573.22	573.13	573.21	572.20	571.08	---	557.55	555.68
24	572.38	572.27	572.41	572.70	573.15	573.05	573.19	572.20	571.01	---	557.42	555.68
25	572.37	572.24	572.39	572.65	573.02	573.23	573.21	572.20	570.86	---	557.31	555.66
26	572.21	572.05	572.39	572.53	573.16	573.26	573.28	572.07	570.73	---	557.20	555.38
27	572.09	572.10	572.51	572.75	573.30	573.37	573.27	572.05	570.56	---	557.08	555.33
28	572.18	572.35	572.48	572.97	573.40	573.37	573.13	572.17	570.52	---	556.92	555.33
29	572.30	572.45	572.54	572.97	---	573.36	573.03	572.13	570.47	560.64	556.92	555.19
30	572.31	572.44	572.63	572.77	---	573.27	572.86	572.06	570.38	560.42	556.78	554.91
31	572.26	---	572.63	572.63	---	573.20	---	571.92	---	560.38	556.77	---
LOW	572.38	572.49	572.73	572.97	573.40	573.40	573.34	573.01	571.90	570.17	560.17	556.64

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554.91	555.12	555.80	---	556.85	556.79	556.37	556.00	555.21	---	545.65	542.81
2	554.92	555.27	556.12	---	556.85	556.82	556.15	555.99	555.25	---	545.53	542.81
3	554.83	555.35	556.12	---	556.85	556.82	556.36	555.96	555.17	---	545.28	542.81
4	554.47	555.35	556.04	---	556.83	556.82	556.61	556.03	554.90	---	---	542.81
5	554.87	555.23	556.14	---	556.81	557.00	556.56	556.11	554.86	---	---	542.74
6	554.95	555.39	556.15	---	556.75	557.12	556.34	556.01	554.74	---	---	542.83
7	554.81	555.56	556.15	---	556.66	557.29	556.27	555.87	---	---	---	542.89
8	554.66	555.59	556.27	---	556.72	557.22	556.25	555.94	---	---	545.36	542.89
9	554.67	555.04	556.34	556.68	556.65	557.02	556.25	556.03	---	549.95	544.94	542.51
10	553.26	555.40	556.28	556.68	557.06	556.99	556.24	556.02	---	549.95	544.55	542.48
11	553.31	555.45	556.11	556.72	557.13	556.90	556.20	555.99	---	549.78	544.52	542.48
12	553.43	555.45	556.07	556.67	557.10	556.88	556.20	555.96	---	549.71	---	542.44
13	553.66	555.66	---	556.55	556.93	557.09	556.18	555.88	---	549.27	---	542.40
14	553.75	555.60	---	556.79	556.98	557.09	556.25	555.69	---	549.15	---	542.31
15	553.78	555.70	---	556.71	557.11	557.08	556.27	555.78	---	548.93	---	542.31
16	553.73	555.70	---	556.42	557.08	556.95	556.13	555.65	---	548.73	---	542.29
17	553.99	555.73	---	556.81	556.92	557.07	555.88	555.63	---	548.48	---	542.26
18	554.10	555.68	---	556.81	556.73	557.18	556.02	555.56	---	548.33	---	542.25
19	554.44	555.93	---	556.68	556.60	557.32	556.07	555.62	---	548.33	---	542.25
20	554.46	556.02	---	556.58	556.68	557.27	556.07	555.69	---	547.93	---	542.19
21	554.22	556.02	---	556.63	556.72	557.17	556.18	555.66	---	547.77	---	542.18
22	554.49	555.94	---	556.66	556.54	557.05	556.22	555.54	---	547.74	544.71	542.16
23	554.61	555.95	---	556.50	556.65	556.82	556.12	555.57	---	547.58	544.69	542.07
24	554.62	555.88	---	556.51	556.64	557.12	555.93	555.64	---	547.44	544.64	542.07
25	554.62	555.95	---	556.52	556.83	556.58	556.02	555.59	---	547.28	544.57	542.07
26	554.48	555.73	---	556.56	556.83	556.45	556.02	555.44	---	547.12	544.54	542.01
27	554.79	555.88	---	556.56	557.05	556.40	556.04	555.30	---	546.79	543.64	541.97
28	554.94	555.84	---	556.61	557.08	556.40	556.22	555.35	---	546.50	543.24	---
29	555.00	555.73	---	556.78	557.06	556.27	556.22	555.30	---	546.46	543.16	---
30	555.03	555.79	---	556.78	---	556.42	555.97	555.16	---	546.22	543.04	---
31	554.94	---	---	556.78	---	556.43	---	555.08	---	545.92	542.81	---
LOW	555.03	556.02	556.34	556.81	557.13	557.32	556.61	556.11	555.25	549.95	545.65	542.89

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	543.69	543.77	544.08	544.14	544.02	543.90	543.23	542.12	---	534.15	531.87
2	---	543.73	543.84	544.02	544.16	543.97	543.93	543.36	542.13	---	533.96	531.87
3	---	543.55	543.87	543.92	544.32	544.06	543.89	543.45	542.09	---	533.80	531.87
4	---	543.52	543.85	544.23	544.43	544.19	543.51	543.33	541.94	---	533.75	531.90
5	---	543.55	543.69	544.43	544.43	544.31	543.43	543.43	541.69	---	533.62	531.86
6	---	543.58	543.89	---	544.41	544.28	543.73	543.28	541.60	---	533.18	---
7	---	543.90	544.14	---	544.41	544.02	543.85	543.16	541.36	---	532.84	---
8	---	543.90	544.09	---	544.35	544.14	543.96	543.37	541.16	---	532.74	---
9	---	543.92	543.95	---	544.32	544.14	543.79	543.24	541.11	---	532.81	---
10	---	543.94	543.91	544.30	544.34	544.00	543.85	543.16	540.98	---	532.81	---
11	---	544.09	544.10	544.40	544.23	544.03	543.79	543.23	540.63	---	532.82	---
12	---	544.09	544.16	544.47	544.22	543.95	543.72	543.11	540.37	536.46	532.88	---
13	---	544.06	544.19	544.42	544.14	544.11	543.62	542.95	540.19	536.36	532.78	---
14	---	543.88	544.29	544.15	544.16	544.11	543.55	543.03	540.01	536.38	532.67	---
15	---	543.68	544.33	544.37	544.31	544.05	543.78	543.03	539.65	536.21	532.52	---
16	---	543.70	543.97	544.38	544.28	543.79	543.78	542.98	539.46	535.79	532.68	---
17	543.30	543.77	544.18	544.33	544.15	544.02	543.68	542.92	539.23	535.46	532.68	---
18	543.33	543.76	544.14	544.35	544.31	544.10	543.52	542.97	539.09	535.34	532.68	---
19	542.99	543.64	544.01	544.35	544.31	544.08	543.48	543.02	538.86	535.58	532.33	---
20	543.29	543.89	543.92	544.21	544.24	543.97	543.47	543.04	538.56	535.51	532.33	---
21	543.50	543.86	543.97	544.11	544.27	543.96	543.42	542.95	538.27	535.31	532.32	---
22	543.42	543.87	544.07	544.13	544.43	543.96	543.50	542.95	538.03	535.16	532.24	---
23	543.45	544.22	544.23	544.13	544.45	543.96	543.47	542.95	537.75	534.94	532.32	---
24	543.43	544.22	544.23	544.33	544.47	543.93	543.60	542.79	537.51	534.87	532.32	---
25	543.41	544.19	544.15	544.33	544.22	543.94	543.56	542.61	537.36	534.76	532.33	---
26	544.01	544.22	544.14	544.26	544.01	543.83	543.57	542.60	537.24	534.78	532.29	531.85
27	544.02	544.22	543.78	544.34	543.85	543.62	543.46	542.64	536.82	534.77	532.22	531.76
28	543.91	543.93	543.98	544.33	543.88	543.74	543.29	542.57	---	534.76	532.22	531.84
29	543.64	543.86	543.99	544.25	---	543.90	543.29	542.42	---	534.62	532.16	531.84
30	543.74	543.88	544.07	544.11	---	543.87	543.28	542.38	---	534.43	531.86	531.51
31	543.78	---	544.08	543.97	---	543.70	---	542.32	---	534.20	531.86	---
LOW	544.02	544.22	544.33	544.47	544.47	544.31	543.96	543.45	542.13	536.46	534.15	531.90

SITE NUMBER 50—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	531.74	531.63	531.90	532.70	533.98	535.47	536.51	537.09	537.62	538.18	538.78	539.24
2	531.75	531.68	532.00	532.73	534.25	535.55	536.57	537.14	537.83	538.16	538.85	539.09
3	531.46	531.69	532.02	532.88	534.25	535.44	536.62	537.10	537.83	538.25	538.89	539.17
4	531.78	531.57	531.98	532.78	534.21	535.50	536.59	537.14	537.83	538.29	539.05	539.25
5	531.91	531.64	532.08	532.80	534.42	535.63	536.47	537.14	537.97	538.25	539.05	539.26
6	531.87	531.53	531.98	532.91	534.45	535.63	536.51	537.17	538.03	538.36	538.96	539.37
7	531.70	531.43	531.76	532.89	534.45	535.83	536.59	537.21	537.98	538.45	538.88	539.34
8	531.72	531.53	531.77	532.87	534.52	535.94	536.69	537.26	537.87	538.47	538.89	539.20
9	531.88	531.66	532.09	533.03	534.70	536.02	536.83	537.35	537.98	538.48	539.00	539.15
10	531.83	531.63	532.36	533.06	534.76	536.26	536.87	537.36	537.85	538.48	538.96	539.21
11	531.55	531.53	532.43	533.08	534.79	536.26	536.70	537.25	537.86	538.38	538.93	539.34
12	531.69	531.52	532.43	533.18	534.79	536.09	536.52	537.25	538.01	538.43	538.95	539.32
13	531.88	531.63	532.41	533.18	534.75	536.23	536.83	537.08	537.91	538.38	538.96	539.28
14	532.01	531.91	532.38	533.17	534.73	536.23	536.85	537.14	538.01	538.40	538.94	539.37
15	532.08	531.91	532.33	533.07	534.62	536.21	536.89	537.35	537.92	538.56	538.87	539.47
16	532.08	531.83	532.35	533.15	534.76	536.15	536.96	537.47	537.85	538.57	538.86	539.44
17	531.87	531.78	532.23	533.26	534.82	536.12	536.97	537.38	537.88	538.57	539.01	539.37
18	531.75	531.74	532.28	533.34	534.99	536.38	536.97	537.49	537.86	538.47	538.99	539.28
19	531.86	531.75	532.39	533.34	535.08	536.29	537.07	537.58	537.95	538.58	539.09	539.29
20	531.81	531.54	532.38	533.37	535.07	536.27	537.19	537.55	538.02	538.57	539.22	539.43
21	531.80	531.49	532.23	533.62	535.03	536.29	537.19	537.49	538.13	538.69	539.09	539.45
22	531.61	531.59	532.42	533.66	535.14	536.29	537.19	537.52	538.18	538.80	539.03	539.46
23	531.42	531.57	532.40	533.74	535.29	536.33	537.13	537.58	538.02	538.78	538.98	539.39
24	531.66	531.56	532.51	533.73	535.29	536.30	536.89	537.75	537.99	538.72	539.03	539.36
25	531.77	531.72	532.63	533.96	534.96	536.25	536.99	537.83	537.99	538.77	539.03	539.28
26	531.66	531.72	532.65	533.99	535.12	536.18	537.23	537.70	537.98	538.79	538.94	539.39
27	531.49	531.65	532.65	533.99	535.28	536.28	537.41	537.75	538.04	538.76	539.07	539.49
28	531.53	531.96	532.68	534.07	535.35	536.28	537.37	537.86	538.07	538.75	539.16	539.42
29	531.53	532.04	532.71	534.07	---	536.31	537.25	537.79	538.13	538.70	539.18	539.48
30	531.41	532.04	532.89	533.95	---	536.46	537.16	537.68	538.19	538.79	539.10	539.67
31	531.53	---	532.90	534.00	---	536.42	---	537.82	---	538.79	539.23	---
LOW	532.08	532.04	532.90	534.07	535.35	536.46	537.41	537.86	538.19	538.80	539.23	539.67

SITE NUMBER FROM LOCATION MAP.—51.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1S7E3CDBD.

SITE ID (STATION NUMBER).—435916103161801.

OTHER IDENTIFIERS.—PE-86A and Reptile Gardens Mdsn.

LOCATION.—Lat 43°59′15.1″, long 103°16′20.6″, in SE1/4NW1/4SE1/4SW1/4 sec. 3, T. 1 S., R. 7 E., Hydrologic Unit 10120111, 5 mi south of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,220 ft deep with 1,194 ft of 5-in. steel casing; open hole from 1,194 to 1,220 ft.

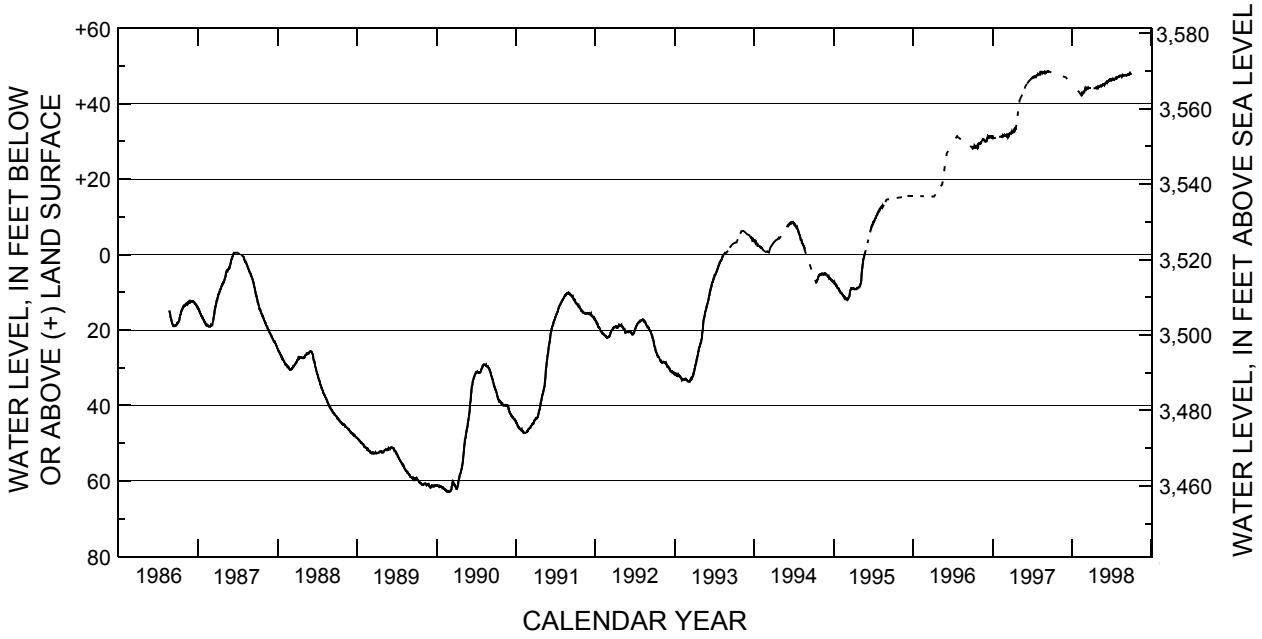
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,521.3 ft above sea level. Measuring point: Top of steel casing, 0.50 ft above land-surface datum. Also base of gage 1.3 ft above land-surface datum when gage used.

REMARKS.—Records fair.

PERIOD OF RECORD.—August 1986 to September 1998.

EXTREMES.—Highest daily water level, 48.62 ft above land-surface datum, Sept. 11-12, 17, 1997; lowest daily water level, 62.92 ft below land-surface datum, Feb. 27, 1990.



WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	5.11	5.33	7.32	9.72	11.87	8.85	8.53	---	+8.22	+11.84	---
2	---	5.20	5.38	7.47	9.99	11.81	9.02	8.33	---	+8.49	+12.10	e+14.60
3	---	5.20	5.46	7.53	10.08	11.67	9.15	8.18	---	+8.70	+12.10	---
4	---	5.17	5.64	7.55	10.07	11.69	9.12	8.09	---	+8.72	+12.18	---
5	---	5.17	5.67	7.35	10.12	11.69	9.12	7.92	---	+8.79	+12.36	---
6	---	5.20	5.69	7.56	10.19	11.78	9.13	7.67	---	+8.76	+12.42	---
7	---	5.13	5.80	7.72	10.33	11.82	9.05	7.44	---	+8.86	+12.43	---
8	---	5.16	5.84	7.82	10.31	11.76	9.06	7.23	---	+8.96	+12.50	---
9	---	5.16	5.92	7.87	10.31	11.59	9.17	6.77	---	+9.15	+12.51	---
10	---	5.09	6.02	7.88	10.39	11.54	9.17	6.12	---	+9.23	+12.67	---
11	---	5.02	5.95	7.98	10.52	11.50	9.13	5.25	---	+9.47	+12.82	---
12	---	4.99	6.08	8.13	10.68	11.34	9.12	4.29	---	+9.53	+12.84	---
13	7.41	5.12	6.08	8.27	10.69	11.33	9.12	3.58	---	+9.68	+12.94	---
14	7.34	5.24	6.15	8.27	10.69	11.25	9.07	3.41	---	+9.68	---	---
15	7.09	5.24	6.23	8.24	10.80	11.00	9.09	2.86	---	+9.86	e+12.61	---
16	7.10	5.01	6.31	8.33	10.95	10.56	9.12	2.29	---	+10.01	---	---
17	7.07	4.93	6.44	8.48	10.99	10.45	9.08	1.90	---	+10.14	---	---
18	6.80	5.12	6.42	8.61	11.28	10.10	8.99	1.48	---	+10.34	---	---
19	6.72	5.10	6.47	8.72	11.30	9.61	8.95	1.15	---	+10.48	---	---
20	6.52	5.01	6.58	8.81	11.42	9.46	8.81	.97	---	+10.53	---	---
21	6.28	5.21	6.69	8.83	11.34	9.21	8.93	.69	+6.62	+10.65	---	---
22	6.02	5.24	6.77	8.90	11.46	9.03	8.93	.41	+6.73	+10.77	---	---
23	5.94	5.23	6.74	8.93	11.63	9.02	8.84	.21	+6.90	+10.95	---	---
24	5.83	5.14	6.72	9.09	11.60	8.82	8.82	.04	+7.11	+11.11	---	---
25	5.73	5.14	6.84	9.11	11.54	8.84	8.77	+.18	+7.32	+11.24	---	---
26	5.55	5.00	6.86	9.10	11.69	8.84	8.75	+.50	+7.54	+11.41	---	---
27	5.37	5.04	7.01	9.33	11.85	8.90	8.70	+.52	+7.71	+11.50	---	---
28	5.33	5.25	7.01	9.58	11.87	8.91	8.64	---	+7.78	+11.45	---	---
29	5.35	5.32	7.14	9.61	---	8.91	8.64	---	+7.83	+11.51	---	---
30	5.34	5.29	7.25	9.58	---	8.85	8.55	---	+7.98	+11.64	---	---
31	5.30	---	7.31	9.62	---	8.84	---	---	---	+11.63	---	---
LOW	7.41	5.32	7.31	9.62	11.87	11.87	9.17	8.53	+6.62	+8.22	+11.84	+14.60

WATER LEVEL,IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	e+26.85	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	e+15.38	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	e+18.71	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	e+15.62	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	e+31.44	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	e+31.13	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	e+31.00	---	---
31	e+15.17	---	---	---	---	---	---	---	---	---	---	---
LOW	+15.17	---	+15.62	---	---	---	+15.38	+18.71	+26.85	+31.00	---	---

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+28.38	+29.54	e+29.95	+31.43	---	+31.49	+32.76	---	---	---	+47.74	+48.34
2	+28.22	+29.56	---	+31.24	---	---	---	---	e+44.66	+46.86	+47.76	+48.16
3	+28.36	+29.54	+30.35	+31.50	---	+31.58	---	---	---	+46.82	+47.79	+48.20
4	+28.57	+29.42	---	---	---	---	+32.13	---	---	+46.86	+47.76	+48.34
5	+28.61	+29.42	---	+30.81	---	+31.68	---	---	---	+46.98	+47.90	+48.27
6	+28.50	+29.47	e+30.59	---	---	+31.59	+32.59	---	---	+46.98	+47.86	+48.46
7	+28.50	+29.47	+30.60	---	---	+31.75	+32.38	e+41.08	---	+47.05	+47.90	+48.46
8	+28.50	e+29.54	+30.46	---	---	+31.37	+32.50	---	---	+47.05	+48.13	+48.48
9	+28.41	+29.56	+30.85	---	---	+31.88	+32.70	---	---	+47.05	+48.04	+48.50
10	+28.38	+29.84	+31.11	---	---	---	+32.93	---	---	+47.07	+48.16	+48.57
11	+28.68	e+29.93	+30.97	---	---	---	+33.22	---	---	+47.21	+48.22	+48.62
12	+28.64	+29.95	+31.45	---	---	+31.88	+33.28	---	---	+47.23	+48.11	+48.62
13	+28.64	---	e+31.40	---	+31.38	+31.71	+33.18	e+41.78	---	+47.09	+48.22	+48.55
14	+28.52	---	+31.29	---	+31.17	+31.60	+33.02	---	---	+47.09	+48.39	+48.46
15	+28.50	---	+31.04	---	+31.17	+31.31	+33.22	---	---	+47.16	+48.46	+48.46
16	+28.66	+30.46	---	---	+31.29	+31.40	+33.11	---	---	+47.09	+48.25	+48.59
17	+28.50	---	e+31.08	---	+31.42	+31.67	+33.30	---	e+45.93	+47.19	+48.22	+48.62
18	+28.50	e+30.43	+31.08	---	+31.22	+31.60	+33.23	---	---	+47.16	+48.25	+48.59
19	+28.87	e+30.54	+30.88	---	+31.67	+31.69	+33.49	---	---	+47.12	+48.25	---
20	+28.59	+30.62	+31.18	---	+31.49	+32.17	+33.72	---	---	+47.23	+48.20	---
21	---	e+30.60	+31.34	---	+31.43	+32.01	---	---	---	+47.32	+48.22	---
22	+28.68	+30.51	+31.38	---	---	+31.77	---	---	---	+47.39	+48.11	---
23	+28.68	e+30.49	+31.61	---	---	+32.07	---	---	---	+47.46	+48.13	---
24	+28.85	+30.37	+31.20	---	+31.58	+32.43	---	---	---	+47.56	+48.27	---
25	+28.55	+30.25	---	---	+31.78	+32.09	---	---	---	+47.62	+48.27	---
26	+28.31	+30.21	+31.15	---	+31.84	+31.86	---	---	---	+47.58	+48.34	---
27	+28.45	e+30.13	+31.08	---	+31.82	+32.44	---	---	---	+47.56	+48.39	---
28	+28.80	e+30.04	+31.34	---	---	+32.29	---	---	---	+47.62	+48.34	---
29	---	+30.02	+30.94	---	---	+32.07	---	---	---	+47.69	+48.43	---
30	+29.19	+30.02	+31.54	---	---	+32.31	---	---	---	+47.79	+48.34	---
31	+29.49	---	+31.41	---	---	+32.65	---	---	---	+47.74	+48.43	---
LOW	+28.22	+29.42	+29.95	+30.81	+31.17	+31.31	+32.13	+41.08	+44.66	+46.82	+47.74	+48.16

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	+44.42	+45.23	+46.31	+47.07	+47.60
2	---	---	---	---	---	+43.52	---	+44.28	+45.23	+46.38	+47.14	+47.65
3	---	---	e+47.08	---	---	+43.59	---	+44.35	+45.23	+46.38	+47.19	+47.65
4	---	---	---	---	---	+43.82	---	+44.46	+45.34	+46.52	+47.09	+47.62
5	---	---	---	---	---	+43.70	---	+44.49	+45.23	+46.49	+47.09	+47.58
6	---	---	---	---	e+42.93	---	---	+44.58	+45.27	+46.56	+47.23	+47.51
7	---	---	---	---	---	+43.68	---	+44.49	+45.46	+46.45	+47.30	+47.60
8	---	---	---	---	---	+43.93	---	+44.58	+45.64	+46.47	+47.30	+47.72
9	---	---	---	---	---	+44.19	---	+44.51	+45.46	+46.47	+47.28	+47.81
10	---	---	---	---	---	+44.00	---	+44.58	+45.62	+46.47	+47.35	+47.65
11	---	---	---	---	---	+44.07	---	+44.74	+45.66	+46.52	+47.42	+47.51
12	---	---	---	---	---	+44.14	---	+44.74	+45.57	+46.47	+47.39	+47.60
13	---	---	---	---	---	+44.03	---	+44.76	+45.78	+46.52	+47.39	+47.67
14	---	---	---	---	+42.27	+44.09	---	+44.79	+45.73	+46.56	+47.49	+47.67
15	---	---	---	---	+42.39	+44.12	---	+44.83	+45.76	+46.42	+47.49	+47.65
16	---	---	---	---	+42.43	+44.21	---	+44.74	+45.87	+46.45	+47.46	+47.65
17	---	---	---	---	+42.66	+44.07	---	+44.83	+46.01	+46.49	+47.37	+47.62
18	---	---	---	---	+42.55	+44.09	---	+44.79	+46.01	+46.56	+47.39	+47.74
19	---	---	---	---	+42.64	+44.12	---	+44.76	+46.03	+46.59	+47.28	+47.86
20	---	---	---	---	+42.66	---	---	+44.79	+46.15	+46.61	+47.23	+47.86
21	---	---	---	---	+42.78	---	---	+44.95	+46.15	+46.68	+47.42	+47.81
22	---	---	---	---	+42.99	---	---	+45.04	+46.19	+46.68	+47.53	+47.76
23	---	---	---	---	+43.08	---	+44.14	+45.06	+46.38	+46.79	+47.62	+47.88
24	---	---	---	---	+42.99	---	+44.39	+44.97	+46.45	+46.70	+47.72	+47.97
25	---	---	---	---	+43.01	---	+44.39	+44.97	+46.36	+46.68	+47.74	+48.11
26	---	---	---	---	+42.96	---	+44.28	+45.11	+46.47	+46.77	+47.83	+47.99
27	---	---	---	---	+42.96	---	+44.14	+45.16	+46.45	+46.77	+47.65	+47.92
28	---	---	---	---	+43.01	---	+44.07	+45.04	+46.36	+46.84	+47.46	+47.97
29	---	---	---	---	---	---	+44.12	+45.11	+46.26	+47.00	+47.46	+47.92
30	---	---	---	---	---	---	+44.28	+45.20	+46.19	+47.00	+47.65	+47.72
31	---	---	---	---	---	---	---	+45.04	---	+47.05	+47.62	---
LOW	---	---	+47.08	---	+42.27	+43.52	+44.07	+44.28	+45.23	+46.31	+47.07	+47.51

e Estimated

SITE NUMBER FROM LOCATION MAP.—52.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—1S7E3CDBD2.

SITE ID (STATION NUMBER).—435916103161802.

OTHER IDENTIFIERS.—PE-94A and Reptile Gardens Mnls.

LOCATION.—Lat 43°59′15.1″, long 103°16′20.6″, in SE1/4NW1/4SE1/4SW1/4 sec. 3, T. 1 S., R. 7 E., Hydrologic Unit 10120111, 5 mi south of Rapid City. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 660 ft deep with 604 ft of 5-in. steel casing; open hole from 604 to 660 ft.

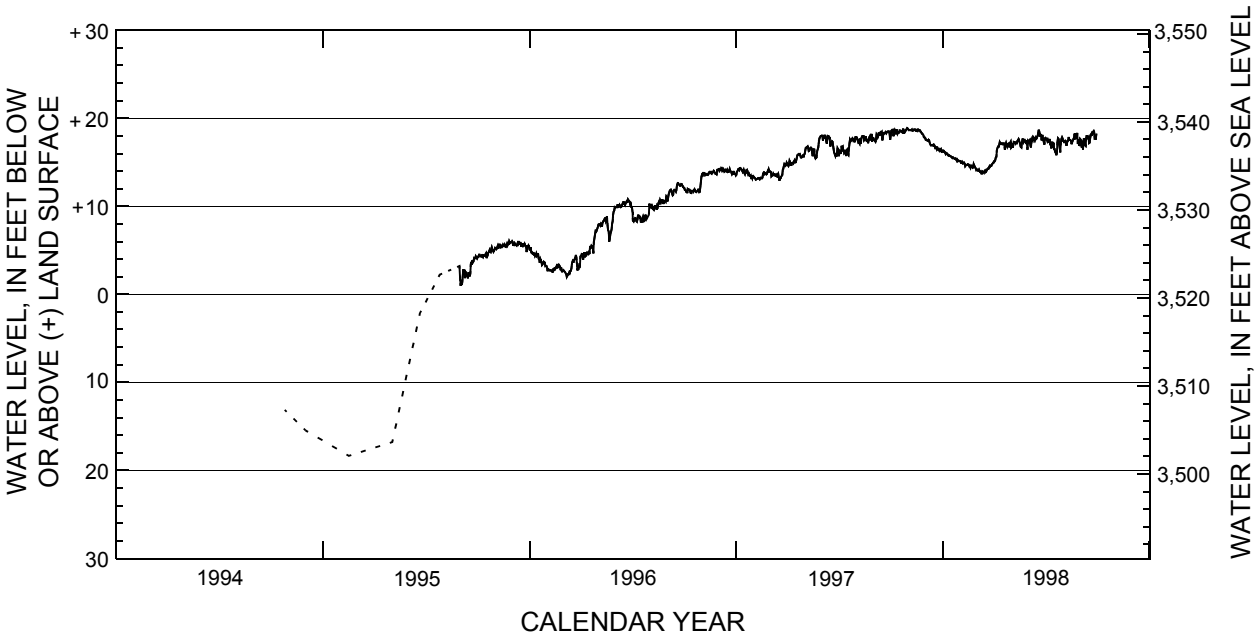
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,520.4 ft above sea level. Measuring point: Top of steel casing, 1.8 ft above land-surface datum and base of gage 2.85 ft above land-surface datum when gage is used.

REMARKS.—Records good.

PERIOD OF RECORD.—October 1994 to September 1998.

EXTREMES.—Highest daily water level, 18.90 ft above land-surface datum, Oct. 30, 1997; lowest daily water level, 18.35 ft (estimated) below land-surface datum, Feb. 15, 1995.



WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e15.46	---	---	---	---	---	---	---	---	+.98
2	---	---	---	---	---	---	---	---	---	---	---	+1.57
3	---	---	---	---	---	---	---	e16.78	---	---	---	+1.08
4	---	---	---	---	---	---	---	---	---	---	---	+1.45
5	---	---	---	---	---	---	---	---	---	---	---	+2.11
6	---	---	---	---	---	---	---	---	---	---	---	+2.84
7	---	---	---	---	---	---	---	---	---	---	---	+2.40
8	---	---	---	---	---	---	---	---	---	---	---	+2.79
9	---	---	---	---	---	---	---	---	---	---	---	+1.86
10	---	---	---	---	---	---	---	---	---	---	---	+2.51
11	---	---	---	---	---	---	---	---	---	---	---	+2.46
12	---	---	---	---	---	---	---	---	---	---	---	+1.98
13	---	---	---	---	---	---	---	---	---	---	---	+2.27
14	---	---	---	---	---	---	---	---	---	---	---	+1.83
15	---	---	---	---	e18.35	---	---	---	---	---	---	+2.53
16	---	---	---	---	---	---	---	---	---	---	---	+2.34
17	---	---	---	---	---	---	---	---	---	---	---	+2.05
18	---	---	---	---	---	---	---	---	---	---	---	+2.36
19	---	---	---	---	---	---	---	---	---	---	---	+3.42
20	---	---	---	---	---	---	---	---	---	---	---	+3.69
21	---	---	---	---	---	---	---	---	e2.14	---	---	+3.38
22	---	---	---	---	---	---	---	---	---	---	---	+3.88
23	---	---	---	---	---	---	---	---	---	---	---	+3.65
24	---	---	---	---	---	---	---	---	---	---	---	+3.76
25	e13.14	---	---	---	---	---	---	---	---	---	---	+4.13
26	---	---	---	---	---	---	---	---	---	e+2.24	---	+4.07
27	---	---	---	---	---	---	---	---	---	---	---	+4.11
28	---	---	---	---	---	---	---	---	---	---	---	+4.31
29	---	---	---	---	---	---	---	---	---	---	---	+4.18
30	---	---	---	---	---	---	---	---	---	---	+3.22	+4.07
31	---	---	---	---	---	---	---	---	---	---	+1.83	---
LOW	13.14	---	15.46	---	18.35	---	---	16.78	2.14	+2.24	+1.83	+.98

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+4.20	+5.27	+6.05	+5.08	+2.98	+2.74	+4.37	+7.75	+9.88	+9.34	+10.06	+10.55
2	+4.29	+5.21	+5.93	+5.04	+2.64	+2.67	+4.61	+7.94	+9.93	+8.37	+9.86	+10.95
3	+4.29	+5.13	+5.55	+5.36	+2.85	+2.59	+4.58	+7.99	+9.90	+8.30	+10.20	+11.30
4	+4.61	+5.19	+5.78	+4.77	+2.84	+2.53	+4.15	+7.93	+10.00	+8.48	+9.71	+11.61
5	+4.35	+5.41	+5.49	+4.78	+2.74	+2.41	+3.93	+7.80	+10.23	+8.58	+9.97	+11.81
6	+4.35	+5.57	+5.79	+4.63	+2.70	+2.26	+4.61	+8.04	+9.95	+8.67	+9.79	+11.88
7	+4.30	+5.30	+5.62	+4.61	+2.75	+2.01	+4.75	+7.94	+9.96	+8.64	+9.67	+11.91
8	+4.41	+5.34	+5.61	+4.80	+2.76	+2.17	+4.20	+7.71	+10.16	+8.31	+9.59	+11.72
9	+4.32	+5.74	+5.55	+4.43	+2.72	+2.28	+4.41	+8.13	+10.00	+8.25	+9.81	+11.42
10	+4.24	+5.44	+5.68	+4.68	+2.55	+2.29	+4.78	+8.28	+9.91	+8.58	+10.12	+11.26
11	+4.46	+5.36	+5.86	+4.37	+2.55	+2.51	+4.59	+8.31	+9.95	+8.97	+9.84	+11.35
12	+4.43	+5.49	+5.74	+4.49	+2.82	+2.43	+4.75	+8.47	+10.12	+8.96	+10.06	+11.81
13	+4.39	+5.57	+6.05	+4.64	+2.77	+2.67	+4.70	+8.65	+10.24	+8.92	+9.62	+11.88
14	+4.36	+5.47	+5.66	+4.37	+3.00	+2.69	+4.61	+8.65	+10.46	+8.72	+10.08	+11.85
15	+4.54	+5.62	+5.85	+4.45	+2.74	+2.96	+4.76	+8.34	+10.42	+8.73	+9.96	+11.81
16	+4.67	+5.53	+5.84	+4.70	+3.02	+3.60	+4.61	+8.54	+10.48	+8.19	+10.40	+11.68
17	+4.13	+5.53	+5.42	+4.09	+3.04	+3.78	+5.37	+8.88	+10.25	+8.56	+10.53	+11.86
18	+4.32	+5.66	+5.59	+4.07	+3.27	+3.67	+5.33	+7.81	+10.14	+8.18	+10.41	+12.46
19	+4.47	+5.44	+5.58	+3.59	+3.43	+3.66	+5.53	+7.28	+10.31	+8.63	+10.68	+12.66
20	+4.73	+5.40	+5.80	+3.98	+3.07	+3.93	+5.44	+7.15	+10.49	+8.84	+10.50	+12.63
21	+4.82	+5.55	+5.54	+3.83	+3.10	+3.99	+5.28	+6.01	+10.60	+8.66	+10.79	+12.49
22	+5.04	+5.76	+5.60	+3.65	+3.34	+4.13	+5.36	+6.36	+10.53	+8.34	+10.39	+12.44
23	+4.86	+5.59	+5.76	+3.34	+3.23	+4.48	+4.67	+6.94	+10.81	+8.41	+10.77	+12.35
24	+4.80	+5.80	+5.55	+3.42	+3.14	+4.17	+5.94	+7.09	+10.72	+9.06	+10.60	+12.37
25	+5.08	+5.76	+5.47	+3.55	+2.76	+3.40	+6.42	+7.39	+10.53	+8.82	+10.28	+12.55
26	+5.34	+6.03	+5.47	+3.71	+3.03	+2.73	+6.87	+8.01	+10.51	+8.56	+10.53	+12.53
27	+5.08	+5.82	+4.83	+3.60	+2.62	+3.14	+7.22	+8.34	+10.25	---	+10.59	+12.40
28	+5.05	+5.91	+5.42	+3.60	+2.59	+3.03	+7.15	+8.98	+10.31	---	+10.64	+12.24
29	+4.85	+5.91	+5.43	+3.20	+2.64	+3.31	+7.29	+9.43	+9.92	---	+10.56	+12.24
30	+4.95	+5.94	+5.57	+3.26	---	+3.23	+7.50	+9.57	+9.92	+9.07	+11.15	+12.13
31	e+5.10	---	+5.41	+3.21	---	+4.29	---	+9.92	---	+10.29	+11.06	---
LOW	+4.13	+5.13	+4.83	+3.20	+2.55	+2.01	+3.93	+6.01	+9.88	+8.18	+9.59	+10.55

e Estimated

SITE NUMBER 52—Continued

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+12.07	+13.61	+14.24	+13.60	+13.31	+13.96	+14.77	+15.87	+18.05	+15.72	+17.67	+17.64
2	+11.84	+13.55	+14.04	+13.94	+13.27	+13.98	+14.71	+15.98	+17.95	+15.98	+17.92	+17.49
3	+11.83	+13.79	+14.17	+14.03	+13.22	+13.89	+14.60	+16.41	+17.47	+16.24	+17.58	+17.47
4	+11.69	+13.80	+14.16	+14.22	+13.02	+13.45	+14.79	+16.66	+17.87	+16.10	+17.35	+17.36
5	+11.72	+13.80	+14.36	+14.24	+13.08	+13.52	+15.16	+16.72	+18.10	+16.08	+17.45	+17.58
6	+11.49	+13.77	+14.31	+14.13	+13.11	+13.58	+14.98	+16.73	+17.69	+16.88	+17.24	+18.17
7	+11.95	+13.55	+14.01	+14.33	+13.14	+13.73	+14.93	+16.82	+18.10	+16.62	+17.13	+18.05
8	+11.89	+13.58	+14.08	+14.36	+13.19	+13.61	+14.65	+16.60	+17.89	+16.73	+17.71	+17.88
9	+11.92	+13.65	+14.24	+14.30	+13.22	+13.55	+14.95	+16.29	+17.27	+16.24	+17.15	+18.10
10	+11.89	+13.68	+14.13	+14.16	+13.14	+13.61	+14.96	+16.37	+17.13	+16.41	+17.75	+18.36
11	+11.65	+13.56	+13.95	+14.06	+13.07	+13.52	+14.97	+16.58	+17.73	+16.05	+17.96	+18.02
12	+11.53	+13.60	+14.00	+13.92	+13.24	+13.61	+14.91	+16.66	+18.00	+16.15	+17.96	+18.34
13	+11.50	+13.75	+14.12	+14.03	+13.26	+13.41	+15.13	+16.66	+17.98	+16.41	+17.97	+18.43
14	+11.77	+13.93	+13.98	+14.16	+13.21	+13.38	+15.23	+16.59	+17.67	+15.74	+18.06	+18.36
15	+11.75	+13.94	+13.95	+13.78	+13.17	+13.61	+14.99	+15.98	+17.90	+16.39	+17.53	+18.46
16	+11.75	+13.89	+14.12	+13.65	+13.27	+13.70	+15.01	+15.70	+16.83	+16.46	+17.63	+17.50
17	+11.70	+13.76	+13.91	+13.86	+13.74	+13.28	+15.23	+16.01	+17.21	+15.90	+17.76	+17.87
18	+11.85	+13.70	+13.98	+14.02	+13.82	+12.91	+15.54	+16.47	+17.15	+15.81	+17.96	+18.44
19	+11.93	+13.89	+13.97	+13.91	+13.68	+13.18	+15.81	+16.46	+17.40	+16.51	+17.47	+18.31
20	+11.80	+13.85	+14.23	+14.10	+13.84	+13.19	+15.88	+15.57	+17.34	+17.17	+17.41	+18.26
21	+11.68	+13.92	+14.05	+13.89	+13.76	+13.38	+15.94	+15.45	+16.79	+17.59	+17.67	+18.34
22	+11.60	+14.03	+13.99	+13.63	+13.71	+13.46	+15.89	+15.55	+16.58	+17.43	+17.17	+18.44
23	+11.69	+13.89	+13.78	+13.73	+13.61	+13.57	+15.94	+15.58	+16.07	+17.59	+17.53	+18.31
24	+11.77	+13.85	+13.64	+13.49	+13.69	+14.18	+15.81	+16.32	+15.96	+17.58	+17.83	+18.45
25	+11.86	+13.68	+13.77	+13.44	+13.95	+14.28	+15.55	+16.54	+15.73	+17.73	+17.95	+18.49
26	+11.76	+13.68	+13.61	+13.52	+14.07	+14.54	+15.53	+16.74	+16.03	+17.68	+17.50	+18.50
27	+11.61	+13.64	+14.00	+13.24	+14.23	+14.84	+15.61	+17.38	+15.65	+17.48	+17.70	+18.53
28	+11.65	+14.13	+13.72	+13.28	+13.95	+14.80	+15.75	+17.74	+16.14	+17.52	+18.24	+18.51
29	+12.10	+14.13	+13.70	+13.16	---	+14.63	+15.70	+17.86	+16.61	+17.28	+17.34	+18.22
30	+12.75	+14.23	+13.67	+13.54	---	+14.73	+15.66	+18.00	+16.46	+17.61	+17.80	+17.58
31	+13.33	---	+13.50	+13.45	---	+14.95	---	+18.03	---	+17.94	+17.76	---
LOW	+11.49	+13.55	+13.50	+13.16	+13.02	+12.91	+14.60	+15.45	+15.65	+15.72	+17.13	+17.36

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+18.06	+18.75	+17.78	+16.34	+15.16	+14.14	+15.08	+17.34	+17.39	+17.72	+17.69	+17.67
2	+18.58	+18.65	+17.58	+16.32	+14.94	+14.22	+15.03	+16.67	+17.30	+17.79	+17.44	+17.58
3	+18.67	+18.68	+17.57	+16.22	+14.94	+14.17	+15.11	+16.76	+17.50	+17.66	+17.41	+17.09
4	+18.53	+18.68	+17.50	+16.22	+15.06	+14.07	+15.28	+17.14	+17.58	+17.64	+17.28	+16.66
5	+18.58	+18.65	+17.45	+16.15	+14.88	+14.06	+15.53	+16.67	+16.95	+17.41	+17.27	+17.45
6	+17.97	+18.65	+17.43	+15.97	+14.94	+14.18	+15.62	+17.15	+16.71	+17.57	+17.45	+16.48
7	+18.46	+18.75	+17.57	+16.07	+14.88	+14.03	+16.42	+17.32	+17.40	+17.34	+17.38	+17.48
8	+18.65	+18.58	+17.47	+16.05	+14.96	+13.93	+16.67	+17.31	+17.68	+17.31	+16.88	+17.74
9	+18.48	+18.58	+17.20	+15.91	+14.85	+13.95	+16.80	+17.28	+17.52	+17.65	+17.24	+17.45
10	+18.19	+18.63	+17.01	+15.91	+14.57	+13.74	+16.78	+17.13	+17.89	+17.12	+17.41	+16.94
11	+18.68	+18.71	+16.92	+15.78	+14.68	+13.73	+17.05	+17.21	+17.80	+17.18	+17.50	+16.85
12	+18.67	+18.73	+16.96	+15.81	+14.71	+13.96	+17.27	+17.18	+17.66	+16.60	+17.88	+17.73
13	+18.31	+18.75	+16.96	+15.78	+14.71	+13.89	+17.15	+17.43	+17.47	+17.20	+17.55	+18.09
14	+18.43	+18.58	+16.94	+15.70	+14.76	+13.90	+17.09	+17.49	+17.63	+17.34	+17.55	+17.74
15	+18.35	+18.56	+17.00	+15.68	+14.74	+13.84	+17.15	+17.65	+17.85	+16.67	+17.52	+17.72
16	+18.42	+18.63	+16.90	+15.64	+14.72	+14.01	+17.07	+17.52	+17.74	+17.24	+17.40	+17.84
17	+18.61	+18.69	+16.98	+15.59	+14.54	+14.10	+17.15	+17.25	+17.89	+16.57	+17.07	+17.19
18	+18.59	+18.58	+16.85	+15.48	+14.60	+13.90	+17.13	+17.02	+18.00	+16.54	+17.34	+17.26
19	+18.53	+18.70	+16.60	+15.55	+14.41	+13.98	+17.15	+16.76	+18.33	+16.20	+17.43	+17.89
20	+18.46	+18.67	+16.60	+15.49	+14.59	+14.12	+17.14	+16.68	+18.70	+16.11	+17.68	+18.12
21	+18.41	+18.68	+16.80	+15.45	+14.63	+14.24	+16.46	+17.17	+18.42	+15.81	+17.68	+18.27
22	+18.68	+18.53	+16.49	+15.40	+14.57	+14.32	+16.98	+17.61	+17.93	+16.03	+18.12	+18.03
23	+18.82	+18.51	+16.61	+15.38	+14.40	+14.28	+17.22	+17.61	+18.16	+17.24	+18.11	+18.36
24	+18.34	+18.36	+16.48	+15.42	+14.45	+14.46	+17.00	+17.36	+18.10	+17.74	+18.31	+18.49
25	+18.34	+18.26	+16.46	+15.29	+14.76	+14.59	+16.79	+17.50	+17.49	+17.66	+17.73	+18.56
26	+18.41	+18.23	+16.34	+15.17	+14.61	+14.52	+17.08	+17.55	+18.14	+17.21	+17.78	+18.43
27	+18.64	+18.17	+16.49	+15.29	+14.49	+14.63	+17.13	+17.34	+17.80	+16.62	+18.34	+17.77
28	+18.63	+17.99	+16.39	+15.15	+14.36	+14.65	+16.87	+17.21	+17.53	+16.14	+17.11	+17.83
29	+18.79	+17.85	+16.48	+15.18	---	+14.79	+16.72	+17.14	+17.35	+17.24	+17.61	+17.59
30	+18.90	+17.83	+16.18	+15.15	---	+14.88	+17.19	+17.49	+17.04	+17.71	+16.97	+18.27
31	+18.84	---	+16.22	+15.18	---	+14.90	---	+16.46	---	+17.84	+16.96	---
LOW	+17.97	+17.83	+16.18	+15.15	+14.36	+13.73	+15.03	+16.46	+16.71	+15.81	+16.88	+16.48

SITE NUMBER FROM LOCATION MAP.—53.

COUNTY.—Pennington.

LOCAL WELL NUMBER.—2S7E17CCAA.

SITE ID (STATION NUMBER).—435227103185301.

OTHER IDENTIFIERS.—PE-95A and Hayward.

LOCATION.—Lat 43°52′27.3″, long 103°18′52.7″, in NE1/4NE1/4SW1/4SW1/4 sec. 17, T. 2 S., R. 7 E., Hydrologic Unit 10120109, 1 mi east of Hayward. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 540 ft deep with 400 ft of 5-in. steel casing; open hole from 400 to 540 ft.

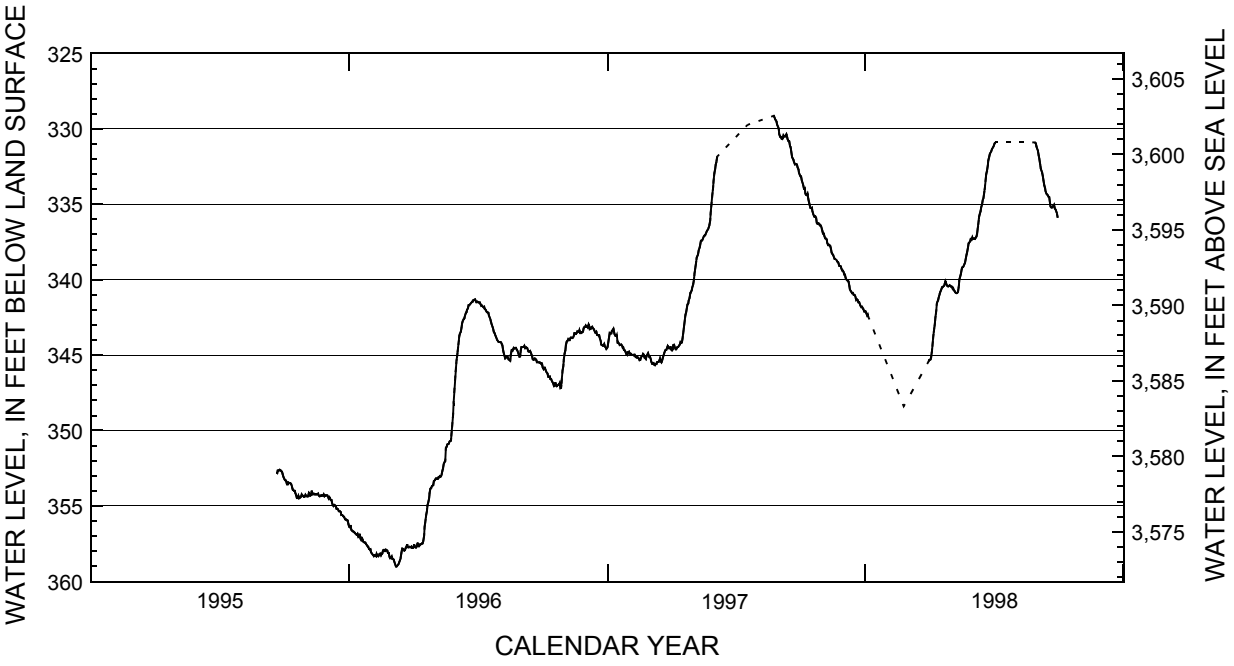
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,931.7 ft above sea level. Measuring point: Top of steel casing, 2.4 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1995 to September 1998.

EXTREMES.—Highest daily water level, 329.14 ft below land-surface datum, Aug. 24, 1997; lowest daily water level, 359.02 ft below land-surface datum, Mar. 8, 1996.



SITE NUMBER 53—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	352.80
21	---	---	---	---	---	---	---	---	---	---	---	352.82
22	---	---	---	---	---	---	---	---	---	---	---	352.66
23	---	---	---	---	---	---	---	---	---	---	---	352.64
24	---	---	---	---	---	---	---	---	---	---	---	352.64
25	---	---	---	---	---	---	---	---	---	---	---	352.60
26	---	---	---	---	---	---	---	---	---	---	---	352.63
27	---	---	---	---	---	---	---	---	---	---	---	352.71
28	---	---	---	---	---	---	---	---	---	---	---	352.75
29	---	---	---	---	---	---	---	---	---	---	---	352.88
30	---	---	---	---	---	---	---	---	---	---	---	353.09
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	---	---	---	---	353.09

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353.19	354.33	354.30	356.39	358.06	358.36	357.75	353.30	345.42	341.45	344.14	344.47
2	353.29	354.36	354.37	356.42	358.14	358.50	357.54	353.21	345.01	341.48	344.13	344.47
3	353.29	354.37	354.51	356.27	358.22	358.50	357.70	353.16	344.62	341.54	344.16	344.47
4	353.36	354.36	354.42	356.59	358.26	358.55	357.76	353.21	344.15	341.52	344.25	344.47
5	353.57	354.13	354.52	356.65	358.32	358.73	357.76	353.22	343.72	341.62	344.35	344.40
6	353.57	354.19	354.60	356.69	358.27	358.86	357.59	353.13	343.57	341.73	344.69	344.55
7	353.45	354.32	354.60	356.69	358.30	359.01	357.44	353.13	343.47	341.71	344.93	344.53
8	353.47	354.29	354.86	356.73	358.35	359.02	357.67	353.04	343.17	341.79	345.04	344.49
9	353.49	353.99	354.94	356.79	358.19	358.95	357.67	353.07	342.91	341.82	345.23	344.54
10	353.50	354.24	355.00	356.83	358.31	358.90	357.56	353.05	342.72	341.79	345.17	344.70
11	353.56	354.24	354.94	356.90	358.35	358.85	357.54	352.89	342.60	341.94	345.08	344.76
12	353.72	354.19	354.97	356.92	358.30	358.70	357.53	352.68	342.56	341.99	345.07	344.76
13	353.92	354.24	355.00	356.85	358.17	358.56	357.48	352.52	342.39	342.08	345.24	344.73
14	353.93	354.22	355.17	357.05	358.15	358.46	357.48	352.19	342.22	342.15	345.30	344.83
15	354.01	354.23	355.18	357.01	358.27	358.11	357.31	352.10	342.15	342.16	345.35	344.95
16	354.00	354.22	355.21	356.86	358.18	357.83	356.99	352.03	342.01	342.19	345.37	345.08
17	354.18	354.24	355.36	357.17	358.16	357.84	356.40	351.16	341.93	342.39	344.98	345.29
18	354.27	354.18	355.35	357.25	357.95	357.89	356.01	351.08	341.69	342.53	344.68	345.31
19	354.48	354.32	355.35	357.14	357.91	357.96	355.60	350.91	341.68	342.66	344.72	345.29
20	354.48	354.36	355.40	357.22	357.98	357.93	355.31	350.90	341.63	342.79	344.61	345.22
21	354.34	354.35	355.59	357.36	357.99	357.78	354.92	350.88	341.57	343.01	344.51	345.26
22	354.49	354.30	355.61	357.42	357.90	357.74	354.77	350.74	341.53	343.15	344.56	345.34
23	354.48	354.33	355.63	357.40	357.94	357.53	354.51	350.68	341.45	343.29	344.54	345.48
24	354.42	354.30	355.70	357.42	357.96	357.74	354.16	350.67	341.45	343.47	344.52	345.48
25	354.36	354.31	355.74	357.53	358.12	357.75	353.85	350.21	341.35	343.54	344.62	345.48
26	354.24	354.24	355.88	357.60	358.12	357.71	353.83	349.61	341.34	343.70	344.69	345.49
27	354.31	354.36	355.92	357.67	358.40	357.75	353.69	348.99	341.30	343.82	344.80	345.49
28	354.34	354.31	355.90	357.70	358.47	357.74	353.66	348.21	341.38	343.95	344.98	345.56
29	354.40	354.28	355.95	357.85	358.46	357.70	353.64	347.34	341.49	344.02	345.11	345.61
30	354.39	354.30	355.97	357.89	---	357.78	353.35	346.54	341.50	344.10	345.09	345.50
31	354.26	---	356.19	357.86	---	357.78	---	345.95	---	344.14	344.70	---
LOW	354.49	354.37	356.19	357.89	358.47	359.02	357.76	353.30	345.42	344.14	345.37	345.61

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345.82	344.89	343.04	344.44	344.91	345.14	344.64	340.47	332.95	---	---	330.39
2	345.92	344.67	343.12	344.10	344.90	345.13	344.69	340.28	332.67	---	---	330.53
3	345.84	344.34	343.13	343.82	344.92	345.30	344.61	340.03	332.40	---	---	330.54
4	345.84	344.10	343.16	343.53	345.00	345.45	344.33	339.59	332.18	---	---	330.65
5	346.00	344.04	342.98	343.57	344.99	345.58	344.31	339.21	331.83	---	---	330.68
6	346.12	343.95	343.12	343.57	344.98	345.57	344.50	338.93	---	---	---	330.62
7	346.16	344.02	343.28	343.40	345.02	345.54	344.61	338.50	---	---	---	330.44
8	346.25	344.01	343.26	343.34	344.98	345.65	344.61	338.41	---	---	---	330.51
9	346.44	343.89	343.15	343.26	345.10	345.68	344.49	338.31	---	---	---	330.51
10	346.43	343.83	343.12	343.42	345.14	345.58	344.47	338.01	---	---	---	330.45
11	346.42	343.88	343.21	343.65	345.17	345.59	344.47	337.87	---	---	---	330.36
12	346.58	343.87	343.26	343.74	345.14	345.47	344.37	337.73	---	---	---	330.55
13	346.60	343.84	343.34	343.73	345.17	345.45	344.29	337.42	---	---	---	330.70
14	346.75	343.70	343.51	343.64	345.23	345.45	344.16	337.42	---	---	---	330.81
15	346.77	343.54	343.51	344.17	345.34	345.35	344.21	337.40	---	---	---	330.83
16	346.88	343.56	343.46	344.17	345.31	345.23	344.17	337.25	---	---	---	331.16
17	347.05	343.59	343.66	344.23	345.19	345.40	343.91	337.12	---	---	---	331.19
18	347.03	343.57	343.69	344.34	345.07	345.48	343.51	337.07	---	e329.74	---	331.54
19	346.81	343.43	343.70	344.33	345.04	345.34	343.15	337.07	---	---	---	331.88
20	346.99	343.47	343.69	344.30	344.92	345.23	342.80	336.92	---	---	---	331.97
21	347.05	343.46	343.92	344.36	344.96	345.02	342.35	336.82	---	---	---	332.04
22	347.02	343.34	344.09	344.49	345.14	344.86	342.14	336.72	---	---	---	332.26
23	346.97	343.55	344.31	344.47	345.20	344.75	341.95	336.69	---	---	---	332.37
24	346.97	343.55	344.35	344.66	345.26	344.66	341.64	336.54	---	---	329.14	332.33
25	346.85	343.48	344.38	344.68	345.06	344.65	341.58	336.39	---	---	329.26	332.36
26	347.19	343.49	344.38	344.76	344.98	344.53	341.35	336.08	---	---	329.35	332.37
27	347.16	343.46	344.27	344.91	344.87	344.40	341.21	335.57	---	---	329.43	332.59
28	346.71	343.21	344.43	344.85	345.03	344.49	340.87	335.03	---	---	329.53	332.70
29	346.04	343.14	344.48	344.94	---	344.55	340.81	334.39	---	---	329.72	332.93
30	345.74	343.14	344.60	344.80	---	344.55	340.73	333.92	---	---	329.85	333.08
31	345.30	---	344.54	344.77	---	344.42	---	333.45	---	---	329.97	---
LOW	347.19	344.89	344.60	344.94	345.34	345.68	344.69	340.47	332.95	329.74	329.97	333.08

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333.17	336.80	339.50	342.09	---	---	345.33	340.44	337.20	331.18	---	331.31
2	333.16	336.95	339.66	342.22	---	---	345.32	340.47	337.30	331.02	---	331.45
3	333.46	336.95	339.66	342.37	---	---	345.30	340.46	337.30	330.95	---	331.76
4	333.63	337.17	339.91	342.31	---	---	345.12	340.56	337.28	330.91	---	331.99
5	333.77	337.25	340.01	342.48	---	---	344.74	340.54	337.29	---	---	332.27
6	333.97	337.27	340.04	---	---	---	344.26	340.70	337.23	---	---	332.62
7	333.94	337.32	340.03	---	---	---	343.77	340.75	337.15	---	---	332.78
8	334.31	337.60	340.14	---	---	---	343.33	340.84	336.96	---	---	332.93
9	334.39	337.70	340.42	---	---	---	342.93	340.88	336.62	---	---	333.14
10	334.41	337.67	340.65	---	---	---	342.57	340.90	336.20	---	---	333.43
11	334.31	337.77	340.75	---	---	---	342.14	340.87	335.81	---	---	333.75
12	334.64	337.75	340.82	---	---	---	341.54	340.79	335.60	---	---	333.92
13	334.88	337.92	340.89	---	---	---	341.45	340.44	335.45	---	---	334.16
14	335.05	338.22	340.88	---	---	---	341.33	340.01	335.13	---	---	334.31
15	335.25	338.30	341.00	---	---	---	341.10	339.80	335.02	---	---	334.35
16	335.26	338.37	341.01	---	---	---	340.96	339.61	334.68	---	---	334.39
17	335.23	338.49	341.03	---	---	---	340.80	339.30	334.58	---	---	334.50
18	335.50	338.62	341.19	---	---	---	340.68	339.19	334.29	---	---	334.52
19	335.66	338.62	341.35	---	---	---	340.51	339.17	333.88	---	---	334.86
20	335.82	---	341.30	---	---	---	340.50	339.07	333.33	---	---	335.16
21	335.83	338.69	341.36	---	---	---	340.45	338.98	333.02	---	---	335.22
22	335.80	338.81	341.50	---	---	---	340.41	338.86	332.78	---	---	335.22
23	335.89	338.84	341.50	---	---	---	340.30	338.57	332.44	---	---	335.14
24	336.22	338.91	341.66	---	e348.4	---	340.12	338.35	332.10	---	---	335.12
25	336.29	339.09	341.74	---	---	---	340.23	338.17	331.89	---	---	335.04
26	336.26	339.09	341.81	---	---	---	340.38	337.88	331.66	---	---	335.28
27	336.28	339.12	341.80	---	---	---	340.44	337.59	331.58	---	---	335.36
28	336.39	339.27	341.89	---	---	---	340.45	337.52	331.46	---	---	335.50
29	336.37	339.40	341.95	---	---	---	340.43	337.47	331.32	---	330.91	335.62
30	336.44	339.40	342.12	---	---	---	340.38	337.32	331.28	---	330.97	335.89
31	336.61	---	342.12	---	---	345.44	---	337.36	---	---	331.16	---
LOW	336.61	339.40	342.12	342.48	348.40	345.44	345.33	340.90	337.30	331.18	331.16	335.89

e Estimated

SITE NUMBER FROM LOCATION MAP.—54.

COUNTY.—Custer.

LOCAL WELL NUMBER.—2S7E34ABBA.

SITE ID (STATION NUMBER).—435018103155801.

OTHER IDENTIFIER.—CU-83A and Hermosa West Mnls.

LOCATION.—Lat 43°50′20.3″, long 103°16′00.3″, in NE1/4NW1/4NW1/4NE1/4 sec. 34, T. 2 S., R. 7 E., Hydrologic Unit 10120109, 4 mi west of Hermosa. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 510 ft deep with 464 ft of 5-in. diameter steel casing; open hole from 464 to 510 ft.

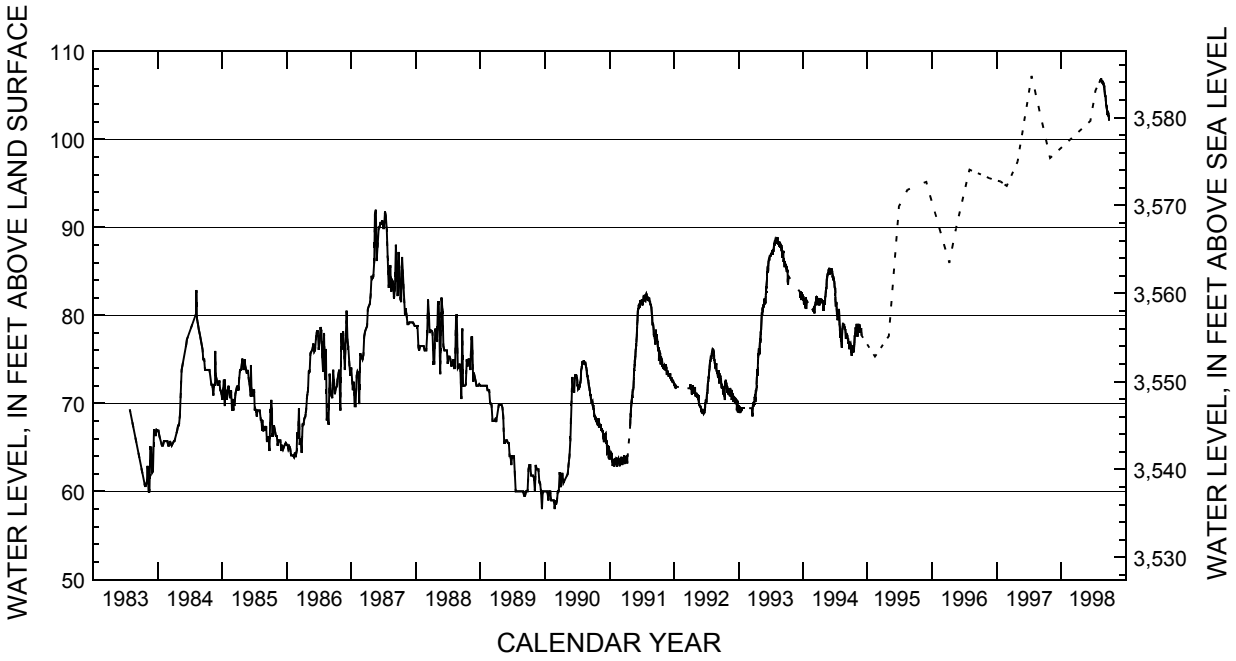
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval (24-hour interval prior to Nov. 21, 1992). Prior to June 20, 1990, circular-chart pressure recorder.

DATUM.—Elevation of land-surface datum is 3,477.5 ft above sea level. Measuring point: Base of gage, 2.9 ft above land-surface datum (before June 20, 1990, 2.15 ft above land-surface datum).

REMARKS.—Current records poor. Records prior to June 1990 were fair. Data stored as noon readings.

PERIOD OF RECORD.—October 1983 to September 1998.

EXTREMES.—Highest daily water level, 107.2 ft (estimated) above land-surface datum, July 18, 1997; lowest daily water level, 58.0 ft above land-surface datum, Dec. 15, 1989, Feb. 25, 1990.



WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	+75.82	+79.03	---	---	---	---	---	---	---	---	---	---
2	+76.22	+78.27	---	---	---	---	---	e+77.65	---	---	---	---
3	+75.48	+78.18	---	---	---	---	---	---	---	---	---	---
4	+75.48	+77.99	---	---	---	---	---	---	---	---	---	---
5	+76.29	+77.58	---	---	---	---	---	---	---	---	---	---
6	+76.19	+77.79	---	---	---	---	---	---	---	---	---	---
7	+75.96	+78.18	---	---	---	---	---	---	---	---	---	---
8	+76.01	+78.09	---	---	---	---	---	---	---	---	---	---
9	+76.19	+78.52	---	---	---	---	---	---	---	---	---	---
10	+76.42	+78.71	---	---	---	---	---	---	---	---	---	---
11	+76.56	+78.92	---	---	---	---	---	---	---	---	---	---
12	+76.10	+79.05	---	---	---	---	---	---	---	---	---	---
13	+75.76	+78.68	---	---	e+75.34	---	---	---	---	---	---	---
14	+76.47	+78.55	---	---	---	---	---	---	---	---	---	---
15	+76.01	+78.73	---	---	---	---	---	---	---	---	e+94.26	---
16	+76.05	+78.98	---	---	---	---	---	---	---	---	---	---
17	+76.03	+78.73	---	---	---	---	---	---	---	---	---	---
18	+76.70	+78.25	---	---	---	---	---	---	---	---	---	---
19	+76.95	+78.64	---	---	---	---	---	---	---	---	---	---
20	+77.37	+78.78	---	---	---	---	---	---	---	---	---	---
21	+77.74	+78.04	---	---	---	---	---	---	---	---	---	---
22	+77.60	+78.18	---	---	---	---	---	---	---	---	---	---
23	+77.99	+78.50	---	---	---	---	---	---	---	---	---	---
24	+77.97	+78.20	---	---	---	---	---	---	---	---	---	---
25	+78.13	+78.34	---	---	---	---	---	---	---	---	---	---
26	+78.57	+78.57	---	---	---	---	---	---	---	---	---	---
27	+78.55	+78.04	---	---	---	---	---	---	---	---	---	---
28	+78.48	+77.95	---	---	---	---	---	---	e+92.40	---	---	---
29	+78.50	+77.72	---	---	---	---	---	---	---	---	---	---
30	+78.55	---	---	---	---	---	---	---	---	---	---	---
31	+78.66	---	---	---	---	---	---	---	---	---	---	---
LOW	+75.48	+77.58	---	---	+75.34	---	---	+77.65	+92.40	---	+94.26	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	e+85.95	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	e+89.87	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	e+95.18	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	e+96.56	---	---
LOW	---	+95.18	---	---	---	---	+85.95	+89.87	---	+96.56	---	---

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	e+107.2	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	e+95.6	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	e+95.2	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	e+94.7	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	e+97.5	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+95.60	---	+95.20	+94.70	---	+97.50	---	---	+107.20	---	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	+105.93
2	---	---	---	---	---	---	---	---	---	---	---	+106.12
3	---	---	---	---	---	---	---	---	---	---	---	+105.98
4	---	---	---	---	---	---	---	---	---	---	---	+105.75
5	---	---	---	---	---	---	---	---	---	---	---	+105.45
6	---	---	---	---	---	---	---	---	---	---	---	+105.15
7	---	---	---	---	---	---	---	---	---	---	---	+104.92
8	---	---	---	---	---	---	---	---	---	---	---	+104.92
9	---	---	---	---	---	---	---	---	---	---	---	+104.98
10	---	---	---	---	---	---	---	---	---	---	---	+104.82
11	---	---	---	---	---	---	---	---	---	---	e+106.7	+104.45
12	---	---	---	---	---	---	---	---	---	---	+106.69	+104.22
13	---	---	---	---	---	---	---	---	---	---	+106.74	+103.92
14	---	---	---	---	---	---	---	---	---	---	+106.74	+103.85
15	---	---	---	---	---	---	---	---	---	e+105.6	+106.78	+103.62
16	---	---	---	---	---	---	---	---	e+102.1	---	+106.92	+103.62
17	---	---	---	---	---	---	---	---	---	---	+106.78	+103.67
18	---	---	---	---	---	---	---	---	---	---	+106.62	+103.60
19	---	---	---	---	---	---	---	---	---	---	+106.62	+103.30
20	---	---	---	---	---	---	---	---	---	---	+106.44	+102.86
21	---	---	---	---	---	---	---	---	---	---	+106.44	+102.86
22	---	---	---	---	---	---	---	---	---	---	+106.67	+102.79
23	---	---	---	---	---	---	---	---	---	---	+106.65	+102.77
24	---	---	---	---	---	---	---	---	---	---	+106.48	+102.98
25	---	---	---	---	---	---	---	---	---	---	+106.42	+103.02
26	---	---	---	---	---	---	---	---	---	---	+106.46	+102.89
27	---	---	---	---	---	---	---	---	---	---	+106.46	+102.59
28	---	---	---	---	---	---	---	---	---	---	+106.37	+102.72
29	---	---	---	---	---	---	---	---	---	---	+106.37	+102.56
30	---	---	---	---	---	---	---	---	---	---	+106.30	+102.12
31	e+97.9	---	---	---	---	---	---	---	---	---	+106.07	---
LOW	+97.90	---	---	---	---	---	---	---	+102.10	+105.60	+106.07	+102.12

e Estimated

SITE NUMBER FROM LOCATION MAP.—55.

COUNTY.—Custer.

LOCAL WELL NUMBER.—2S7E36CBCB.

SITE ID (STATION NUMBER).—434946103140501.

OTHER IDENTIFIER.—CU-83B and Hermosa West Lkot.

LOCATION.—Lat 43°49′48.7″, long 103°14′17.3″, in NW1/4SW1/4NW1/4SW1/4 sec. 36, T. 2 S., R. 7 E., Hydrologic Unit 10120109, 2 mi west of Hermosa. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Lakota (Inyan Kara).

WELL CHARACTERISTICS.—Drilled observation well, 80 ft deep with 42 ft of 5-in. steel casing; open hole from 42 to 80 ft.

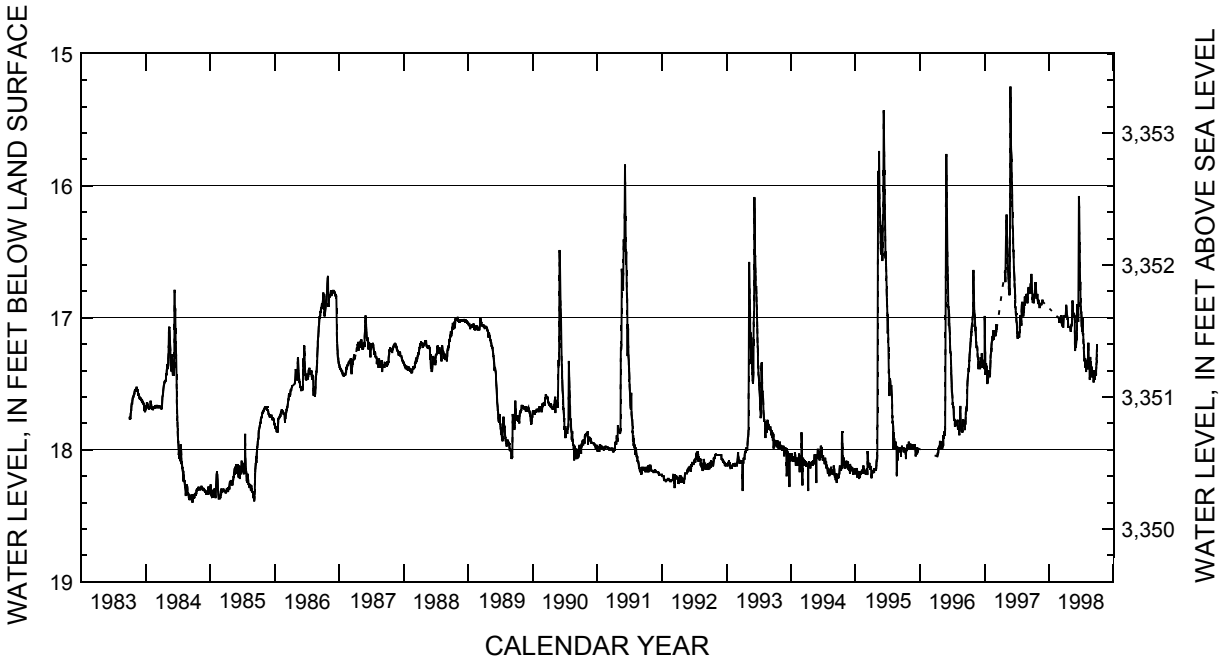
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,368.6 ft above sea level. Measuring point: Top of steel casing, 1.25 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—October 1983 to September 1998.

EXTREMES.—Highest daily water level, 15.25 ft below land-surface datum, May 28, 1997; lowest daily water level, 18.40 ft below land-surface datum, Sept. 21, 1984.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.19	18.13	18.18	18.18	18.17	18.16	18.20	18.09	16.47	16.98	17.79	17.98
2	18.18	18.14	18.11	18.18	18.16	18.19	18.21	18.07	16.51	16.98	17.79	17.99
3	18.18	18.09	18.15	18.17	18.17	18.16	18.21	18.08	16.57	17.12	17.82	17.99
4	18.15	18.10	18.13	18.16	18.18	18.16	18.20	18.08	16.53	17.02	17.86	18.00
5	18.14	18.10	18.13	18.14	18.18	18.16	18.18	18.07	16.45	16.98	17.99	17.99
6	18.12	18.14	18.13	18.17	18.17	18.17	18.17	18.04	16.22	17.08	17.87	17.99
7	18.13	18.09	18.14	18.16	18.18	18.15	18.17	17.83	16.26	17.17	17.92	17.99
8	18.16	18.12	18.13	18.14	18.17	18.14	18.18	17.43	16.25	17.24	17.92	17.98
9	18.15	18.12	18.13	18.19	18.17	18.16	18.17	16.21	16.14	17.29	17.92	17.99
10	18.15	18.12	18.14	18.16	18.15	18.19	18.16	15.89	15.79	17.42	17.94	17.99
11	18.14	18.10	18.14	18.17	18.18	18.01	18.16	15.96	15.43	17.39	17.95	18.02
12	18.16	18.09	18.16	18.21	18.16	18.03	18.16	16.08	15.49	17.51	17.95	18.00
13	18.14	18.09	18.14	18.18	18.16	18.04	18.16	16.09	15.59	17.59	17.94	18.00
14	18.14	18.10	18.14	18.17	18.15	18.07	18.16	15.82	15.76	17.49	17.99	18.00
15	18.14	18.12	18.14	18.16	18.12	18.08	18.17	15.74	15.90	17.52	17.94	18.00
16	18.09	18.10	18.16	18.17	18.15	18.13	18.17	15.86	16.05	17.49	17.96	18.05
17	17.96	18.13	18.16	18.17	18.14	18.10	18.17	15.97	16.16	17.46	17.94	18.01
18	17.87	18.12	18.16	18.17	18.17	18.13	18.15	16.08	16.32	17.48	17.97	18.01
19	17.87	18.13	18.19	18.18	18.16	18.13	18.14	16.18	16.40	17.51	18.00	17.99
20	17.95	18.09	18.16	18.18	18.16	18.11	18.15	16.18	16.52	17.53	17.97	17.99
21	17.98	18.10	18.16	18.17	18.16	18.10	18.14	16.22	16.55	17.53	17.98	17.99
22	18.06	18.13	18.17	18.17	18.18	18.11	18.15	16.29	16.50	17.54	18.00	17.97
23	18.04	18.13	18.18	18.22	18.17	18.13	18.15	16.34	16.53	17.51	17.98	17.99
24	18.07	18.15	18.18	18.18	18.17	18.13	18.15	16.44	16.58	17.54	18.19	18.00
25	18.09	18.12	18.18	18.19	18.16	18.15	18.15	16.49	16.63	17.56	18.20	17.99
26	18.07	18.16	18.16	18.17	18.17	18.13	18.16	16.52	16.70	17.58	17.98	17.99
27	18.12	18.14	18.18	18.19	18.17	18.15	18.14	16.43	16.78	17.59	17.98	17.99
28	18.12	18.14	18.14	18.21	18.16	18.13	18.14	16.40	16.82	17.67	17.99	17.99
29	18.06	18.13	18.17	18.18	---	18.14	18.14	16.42	16.87	17.76	17.99	17.99
30	18.09	18.13	18.16	18.19	---	18.13	18.12	16.30	16.90	17.74	18.08	17.99
31	18.11	---	18.16	18.17	---	18.13	---	16.37	---	17.80	17.99	---
LOW	18.19	18.16	18.19	18.22	18.18	18.19	18.21	18.09	16.90	17.80	18.20	18.05

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	17.96	17.96	---	---	---	---	17.99	15.94	17.56	17.78	17.78
2	18.02	17.99	17.99	---	---	---	---	17.95	16.07	17.56	17.78	17.81
3	18.00	17.97	17.99	---	---	---	---	17.99	16.19	17.58	17.81	17.77
4	18.00	17.99	17.96	---	---	---	---	17.99	16.30	17.59	17.85	17.79
5	17.99	17.96	17.99	---	---	---	---	17.99	16.44	17.66	17.82	17.80
6	17.99	17.98	17.99	---	---	---	---	17.98	16.52	17.65	17.82	17.79
7	18.00	17.97	17.99	---	---	---	---	17.99	16.63	17.65	17.83	17.80
8	18.00	17.96	18.00	---	---	---	18.05	17.98	16.69	17.68	17.84	17.81
9	18.01	17.96	18.05	---	---	---	18.05	17.97	16.76	17.67	17.83	17.81
10	18.00	17.99	17.99	---	---	---	18.04	17.97	16.86	17.69	17.83	17.82
11	18.00	17.98	18.00	---	---	---	18.03	17.96	16.92	17.72	17.87	17.85
12	18.00	17.98	17.99	---	---	---	18.03	17.92	16.92	17.73	17.89	17.83
13	18.03	17.97	17.99	---	---	---	18.04	17.97	17.06	17.77	17.84	17.83
14	18.03	17.99	17.99	---	---	---	18.02	17.90	16.94	17.76	17.85	17.78
15	18.07	17.96	18.00	---	---	---	18.00	17.90	16.99	17.78	17.83	17.81
16	18.00	17.99	18.03	---	---	---	17.99	17.91	17.00	17.77	17.81	17.78
17	17.99	17.99	18.03	---	---	---	18.00	17.91	17.06	17.78	17.67	17.77
18	18.00	17.99	18.02	---	---	---	17.98	17.87	17.07	17.82	17.74	17.72
19	18.00	17.98	18.00	---	---	---	17.99	17.88	17.11	17.82	17.77	17.69
20	18.01	17.97	18.02	---	---	---	17.99	17.86	17.17	17.80	17.78	17.69
21	17.99	17.96	17.99	---	---	---	17.97	17.89	17.23	17.79	17.80	17.71
22	17.99	17.98	17.99	---	---	---	17.98	17.89	17.26	17.80	17.82	17.68
23	17.96	17.98	---	---	---	---	17.98	17.88	17.26	17.82	17.82	17.68
24	17.96	17.99	---	---	---	---	17.94	17.84	17.27	17.81	17.84	17.65
25	17.97	17.96	---	---	---	---	17.94	17.39	17.34	17.81	17.86	17.64
26	17.99	17.98	---	---	---	---	17.99	17.00	17.39	17.79	17.86	17.56
27	17.99	17.97	---	---	---	---	17.99	16.70	17.43	17.79	17.86	17.50
28	17.99	17.96	---	---	---	---	17.99	16.03	17.46	17.79	17.85	17.48
29	17.99	18.00	---	---	---	---	17.99	15.82	17.50	17.79	17.87	17.47
30	17.97	17.96	---	---	---	---	17.98	15.76	17.52	17.80	17.83	17.43
31	17.94	---	---	---	---	---	---	15.78	---	17.79	17.78	---
LOW	18.07	18.00	18.05	---	---	---	18.05	17.99	17.52	17.82	17.89	17.85

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	16.70	17.36	17.35	17.45	17.13	---	16.64	15.72	17.02	16.89	16.89
2	17.41	16.81	17.33	17.00	17.42	17.13	---	16.57	15.75	17.03	16.88	16.87
3	17.39	16.86	17.37	16.99	17.37	17.10	---	16.40	15.77	17.04	16.90	16.85
4	17.38	16.89	17.35	17.15	17.34	17.14	---	16.31	15.80	17.07	16.94	16.86
5	17.41	16.96	17.34	17.26	17.29	17.11	---	16.28	15.92	17.12	16.94	16.80
6	17.37	16.97	17.35	17.27	17.27	17.10	---	16.22	15.99	17.11	16.93	16.80
7	17.32	16.98	17.39	17.43	17.25	17.11	---	16.27	16.08	17.14	16.94	16.77
8	17.33	16.99	17.37	17.37	17.23	17.08	---	16.32	16.14	17.16	16.92	16.82
9	17.30	17.05	17.34	17.35	17.26	17.11	---	16.35	16.22	17.14	16.99	16.79
10	17.28	17.10	17.33	17.35	17.23	17.05	---	16.40	16.32	17.13	16.96	16.80
11	17.25	17.07	17.30	17.38	17.20	17.08	---	16.44	16.33	17.13	16.92	16.82
12	17.23	17.11	17.31	17.37	17.18	17.09	---	16.49	16.41	17.12	16.89	16.78
13	17.22	17.14	17.31	17.37	17.17	17.07	---	16.52	16.42	17.12	16.94	16.82
14	17.20	17.14	17.35	17.38	17.17	---	---	16.62	16.50	17.15	16.88	16.78
15	17.16	17.19	17.32	17.38	17.17	---	---	16.65	16.49	17.12	16.88	16.79
16	17.16	17.18	17.33	17.40	17.14	---	---	16.67	16.53	17.14	16.91	16.80
17	17.12	17.22	17.27	17.43	17.17	---	---	16.70	16.63	17.15	16.87	16.79
18	17.14	17.23	17.31	17.50	17.12	---	---	16.72	16.66	17.11	16.84	16.76
19	17.10	17.22	17.32	17.44	17.10	---	---	16.74	16.68	17.11	16.86	16.75
20	17.11	17.22	17.33	17.49	17.10	---	---	16.78	16.70	17.06	16.88	16.74
21	17.09	17.22	17.37	17.44	17.13	---	---	16.80	16.76	17.06	16.85	16.74
22	17.06	17.23	17.38	17.46	17.14	---	---	16.83	16.78	16.98	16.85	16.75
23	17.04	17.29	17.37	17.41	17.16	---	---	16.82	16.82	16.99	16.88	16.70
24	17.05	17.30	17.36	17.40	17.16	---	---	16.82	16.84	17.00	16.83	16.67
25	17.07	17.30	17.32	17.42	17.13	---	---	16.80	16.89	17.00	16.83	16.71
26	17.00	17.32	17.34	17.42	17.14	---	---	16.19	16.92	17.02	16.83	16.75
27	16.99	17.30	17.34	17.41	17.12	---	---	15.39	16.92	17.04	16.87	16.78
28	16.98	17.35	17.35	17.40	17.13	---	16.64	15.25	16.97	17.02	16.85	16.80
29	16.90	17.39	17.37	17.41	---	---	16.73	15.35	16.97	17.06	16.82	16.86
30	16.71	17.35	17.35	17.41	---	---	16.69	15.45	16.97	16.94	16.88	16.85
31	16.64	---	17.39	17.40	---	---	---	15.59	---	16.91	16.84	---
LOW	17.41	17.39	17.39	17.50	17.45	17.14	16.73	16.83	16.97	17.16	16.99	16.89

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.88	16.89	---	---	---	17.04	16.99	17.07	17.23	16.93	17.37	17.45
2	16.88	16.89	---	---	---	17.04	16.99	17.08	17.20	16.96	17.34	17.38
3	16.88	16.87	---	---	---	17.03	16.99	17.08	17.22	16.96	17.37	17.45
4	16.87	16.87	---	---	---	17.01	16.99	17.10	17.21	16.99	17.32	17.42
5	16.82	16.89	---	---	---	17.01	16.99	17.10	17.17	17.02	17.34	17.43
6	16.83	16.89	---	---	---	17.01	16.98	17.10	17.15	17.06	17.35	17.40
7	16.89	16.89	---	---	---	17.00	16.95	17.08	17.17	17.06	17.34	17.44
8	16.84	16.92	---	---	---	17.00	16.91	17.06	17.13	17.10	17.39	17.40
9	16.85	16.92	---	---	---	17.00	16.91	17.06	17.08	17.10	17.34	17.42
10	16.85	16.92	---	---	---	17.00	16.91	17.05	16.93	17.05	17.39	17.40
11	16.83	16.92	---	---	---	17.00	16.92	17.05	16.90	17.00	17.33	17.49
12	16.83	16.92	---	---	---	16.98	16.96	17.00	16.95	17.12	17.21	17.44
13	16.82	16.90	---	---	---	16.99	16.98	16.96	16.97	17.13	17.19	17.40
14	16.79	16.90	---	---	---	17.03	16.98	16.87	16.98	17.12	17.23	17.42
15	16.77	16.90	---	---	---	17.04	16.99	16.89	16.99	17.18	17.35	17.40
16	16.75	16.90	---	---	---	17.05	17.01	16.91	17.03	17.20	17.34	17.42
17	16.73	16.90	---	---	---	17.06	17.01	16.95	16.97	17.22	17.37	17.42
18	16.74	16.90	---	---	---	17.06	17.01	16.96	16.90	17.22	17.36	17.44
19	16.74	16.90	---	---	---	17.06	17.03	16.98	16.26	17.27	17.34	17.47
20	16.78	16.90	---	---	---	17.06	17.06	16.99	16.08	17.30	17.47	17.44
21	16.82	16.89	---	---	---	17.06	17.07	16.99	16.17	17.32	17.32	17.41
22	16.83	16.88	---	---	---	17.07	17.07	16.97	16.29	17.33	17.36	17.40
23	16.85	16.88	---	---	---	17.07	17.07	16.97	16.37	17.32	17.30	17.41
24	16.85	16.87	---	---	17.00	17.04	17.07	16.97	16.45	17.31	17.39	17.42
25	16.85	16.87	---	---	17.00	17.01	17.07	16.99	16.49	17.35	17.33	17.44
26	16.83	16.87	---	---	17.00	16.99	17.07	16.99	16.60	17.31	17.38	17.39
27	16.82	16.87	---	---	17.01	16.99	17.07	17.01	16.79	17.38	17.36	17.34
28	16.84	16.88	---	---	17.03	16.99	17.07	17.02	16.73	17.35	17.36	17.30
29	16.85	---	---	---	---	16.99	17.07	17.20	16.87	17.37	17.44	17.24
30	16.86	---	---	---	---	16.99	17.07	17.25	16.87	17.33	17.37	17.20
31	16.88	---	---	---	---	16.99	---	17.17	---	17.41	17.39	---
LOW	16.89	16.92	---	---	17.03	17.07	17.07	17.25	17.23	17.41	17.47	17.49

SITE NUMBER FROM LOCATION MAP.—56.

COUNTY.—Custer.

LOCAL WELL NUMBER.—3S1E18DDDB.

SITE ID (STATION NUMBER).—434700104021401.

OTHER IDENTIFIER.—CU-93C and Boles Canyon Mdsn.

LOCATION.—Lat 43°47′01.7″, long 104°02′15.5″, in NW1/4SE1/4SE1/4SE1/4 sec. 18, T. 3 S., R. 1 E., Hydrologic Unit 10120107, about 10 mi west of Jewel Cave. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,054 ft deep with 900 ft of 5-in. steel casing; open hole from 900 to 1,054 ft.

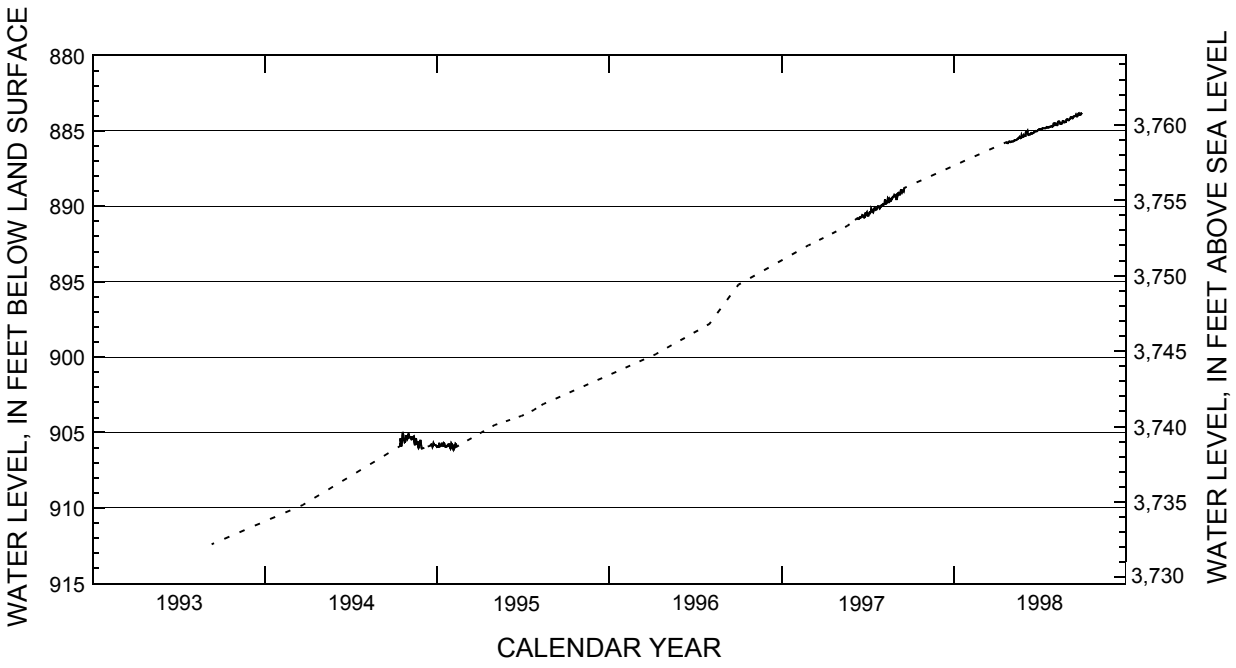
INSTRUMENTATION.—Intermittent taped measurements and an electronic data logger.

DATUM.—Elevation of land-surface datum is 4,644.6 ft above sea level. Measuring point: Top of steel casing, 2.60 ft above land-surface datum.

REMARKS.—Available record good.

PERIOD OF RECORD.—September 1993 to September 1998.

EXTREMES.—Highest daily water level, 883.82 ft below land-surface datum, Sept. 30, 1998; lowest daily water level, 912.4 ft below land-surface datum, Sept. 9, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	905.07	---	905.92	905.80	---	---	---	---	---	---	---
2	---	905.24	---	905.95	905.98	---	---	---	---	---	---	---
3	---	905.32	---	905.97	906.09	---	---	e904.5	---	---	---	---
4	---	905.29	---	905.97	905.95	---	---	---	---	---	---	---
5	---	905.33	---	905.68	905.86	---	---	---	---	---	---	---
6	---	905.39	---	905.83	905.81	---	---	---	---	---	---	---
7	---	905.27	---	905.83	905.98	---	---	---	---	---	---	---
8	---	905.42	---	905.90	905.89	---	---	---	---	---	---	---
9	---	905.43	---	905.87	905.76	---	---	---	---	---	---	---
10	---	905.32	---	905.78	905.81	---	---	---	---	---	---	---
11	---	905.28	---	905.69	905.94	---	---	---	---	---	---	---
12	---	905.27	---	905.86	---	---	---	---	---	---	---	---
13	---	905.58	---	905.89	---	---	---	---	---	---	---	---
14	905.9	905.79	---	905.86	---	---	---	---	---	---	---	---
15	905.39	905.78	---	905.71	---	---	---	---	---	---	e903.1	---
16	905.87	905.43	---	905.74	---	---	---	---	---	---	---	---
17	905.87	905.38	905.87	905.89	---	---	---	---	---	---	---	---
18	905.57	905.75	905.83	905.95	---	---	---	---	---	---	---	---
19	905.21	905.75	905.79	905.95	---	---	---	---	---	---	---	---
20	904.96	905.58	905.82	905.95	---	---	---	---	---	---	---	---
21	905.21	905.91	905.83	905.92	---	---	---	---	---	---	---	---
22	905.46	906.02	905.93	905.87	---	---	---	---	---	---	---	---
23	905.53	905.95	905.83	905.84	---	---	---	---	---	---	---	---
24	905.65	905.73	905.72	905.87	---	---	---	---	---	---	---	---
25	905.60	905.73	905.80	905.85	---	---	---	---	---	e903.5	---	---
26	905.42	905.49	905.81	905.73	---	---	---	---	---	---	---	---
27	905.19	905.68	905.84	905.86	---	---	---	---	---	---	---	---
28	905.31	905.91	905.84	906.02	---	---	---	---	e903.9	---	---	---
29	905.43	906.07	905.85	906.05	---	---	---	---	---	---	---	---
30	905.38	---	905.89	905.89	---	---	---	---	---	---	---	---
31	905.34	---	905.95	905.72	---	---	---	---	---	---	---	---
LOW	905.90	906.07	905.95	906.05	906.09	---	---	904.50	903.90	903.50	903.10	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	e899.8	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	e897.8	---	---
LOW	---	---	---	---	---	---	899.80	---	---	897.80	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e895.2	---	---	---	---	---	---	---	---	890.59	889.98	889.53
2	---	---	---	---	---	---	---	---	---	890.63	889.92	889.53
3	---	---	---	---	---	---	---	---	---	890.63	889.96	889.42
4	---	---	---	---	---	---	---	---	---	890.63	889.96	889.19
5	---	---	---	---	---	---	---	---	---	890.47	889.92	889.21
6	---	---	---	---	---	---	---	---	---	890.43	889.86	889.12
7	---	---	---	---	---	---	---	---	---	890.39	889.85	889.16
8	---	---	---	---	---	---	---	---	---	890.43	889.53	889.23
9	---	---	---	---	---	---	---	---	---	890.34	889.82	889.23
10	---	---	---	---	---	---	---	---	890.81	890.18	889.82	889.06
11	---	---	---	---	---	---	---	---	890.81	890.27	889.73	888.90
12	---	---	---	---	---	---	---	---	890.82	890.30	889.76	888.99
13	---	---	---	---	---	---	---	---	890.85	890.35	889.71	889.08
14	---	---	---	---	---	---	---	---	890.83	890.39	889.47	888.99
15	---	---	---	---	---	---	---	---	890.75	890.28	889.50	888.95
16	---	---	---	---	---	---	---	---	890.77	890.17	889.74	888.97
17	---	---	---	---	---	---	---	---	890.77	890.12	889.74	889.00
18	---	---	---	---	---	---	---	---	890.74	890.18	889.57	888.78
19	---	---	---	---	---	---	---	---	890.69	890.22	889.63	---
20	---	---	---	---	---	---	---	e891.3	890.63	890.18	889.65	---
21	---	---	---	---	---	---	---	---	890.67	890.20	889.54	---
22	---	---	---	---	---	---	---	---	890.61	890.12	889.54	---
23	---	---	---	---	---	---	---	---	890.63	890.04	889.46	---
24	---	---	---	---	---	---	---	---	890.74	890.01	889.39	---
25	---	---	---	---	---	---	---	---	890.75	890.01	889.42	---
26	---	---	---	---	e892.6	---	---	---	890.71	890.00	889.39	---
27	---	---	---	---	---	---	---	---	890.49	890.12	889.33	---
28	---	---	---	---	---	---	---	---	890.49	890.14	889.27	---
29	---	---	---	---	---	---	---	---	890.50	890.07	889.33	---
30	---	---	---	---	---	---	---	---	890.42	889.99	889.32	---
31	---	---	---	---	---	---	---	---	---	889.94	889.26	---
LOW	895.20	---	---	---	892.60	---	---	891.30	890.85	890.63	889.98	889.53

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	885.74	885.35	884.90	884.52	884.30
2	---	---	---	---	---	---	---	885.73	885.35	884.90	884.51	884.30
3	---	---	---	---	---	---	---	885.72	885.10	884.91	884.49	884.24
4	---	---	---	---	---	---	---	885.72	885.11	884.89	884.62	884.22
5	---	---	---	---	---	---	---	885.71	885.08	884.89	884.61	884.18
6	---	---	---	---	---	---	---	885.71	885.02	884.89	884.56	884.11
7	---	---	---	---	---	---	---	885.70	885.22	884.87	884.61	884.11
8	---	---	---	---	---	---	---	885.69	885.27	884.84	884.63	884.10
9	---	---	---	---	---	---	---	885.65	885.26	884.84	884.61	884.17
10	---	---	---	---	---	---	---	885.61	885.26	884.84	884.40	884.17
11	---	---	---	---	---	---	---	885.62	885.26	884.84	884.39	884.09
12	---	---	---	---	---	---	---	885.62	885.23	884.84	884.39	884.06
13	---	---	---	---	---	---	---	885.61	885.18	884.84	884.39	884.04
14	---	---	---	---	---	---	---	885.60	885.18	884.84	884.48	884.03
15	---	---	---	---	---	---	---	885.57	885.16	884.82	884.54	884.04
16	---	---	---	---	---	---	---	885.55	885.18	884.77	884.53	884.01
17	---	---	---	---	---	---	---	885.51	885.17	884.75	884.53	883.95
18	---	---	---	---	---	---	---	885.49	885.16	884.77	884.52	884.02
19	---	---	---	---	---	---	---	885.46	885.13	884.78	884.51	884.05
20	---	---	---	---	---	---	---	885.41	885.11	884.78	884.35	884.04
21	---	---	---	---	---	---	---	885.46	885.07	884.78	884.34	883.95
22	---	---	---	---	---	---	885.75	885.48	885.03	884.75	884.35	883.87
23	---	---	---	---	---	---	885.76	885.47	885.02	884.74	884.44	883.84
24	---	---	---	---	---	---	885.78	885.46	885.04	884.73	884.44	883.94
25	---	---	---	---	---	---	885.81	885.29	885.03	884.73	884.43	883.94
26	---	---	---	---	---	---	885.81	885.40	885.03	884.72	884.42	883.94
27	---	---	---	---	---	---	885.77	885.40	885.02	884.69	884.42	883.92
28	---	---	---	---	---	---	885.72	885.38	884.98	884.70	884.26	883.85
29	---	---	---	---	---	---	885.72	885.30	884.94	884.72	884.24	883.84
30	---	---	---	---	---	---	885.73	885.36	884.92	884.70	884.23	883.82
31	---	---	---	---	---	---	---	885.35	---	884.67	884.26	---
LOW	---	---	---	---	---	---	885.81	885.74	885.35	884.91	884.63	884.30

SITE NUMBER FROM LOCATION MAP.—57.

COUNTY.—Custer.

LOCAL WELL NUMBER.—3S1E18DDDB2.

SITE ID (STATION NUMBER).—434700104021402.

OTHER IDENTIFIER.—CU-93D and Boles Canyon Mnls.

LOCATION.—Lat 43°47′01.7″, long 104°02′15.5″, in NW1/4SE1/4SE1/4SE1/4 sec. 18, T. 3 S., R. 1 E., Hydrologic Unit 10120107, about 10 mi west of Jewel Cave. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 450 ft deep with 365 ft of 5-in. steel casing; 3-in. PVC screen from 320 to 415 ft; open hole completion prior to May 23, 1994.

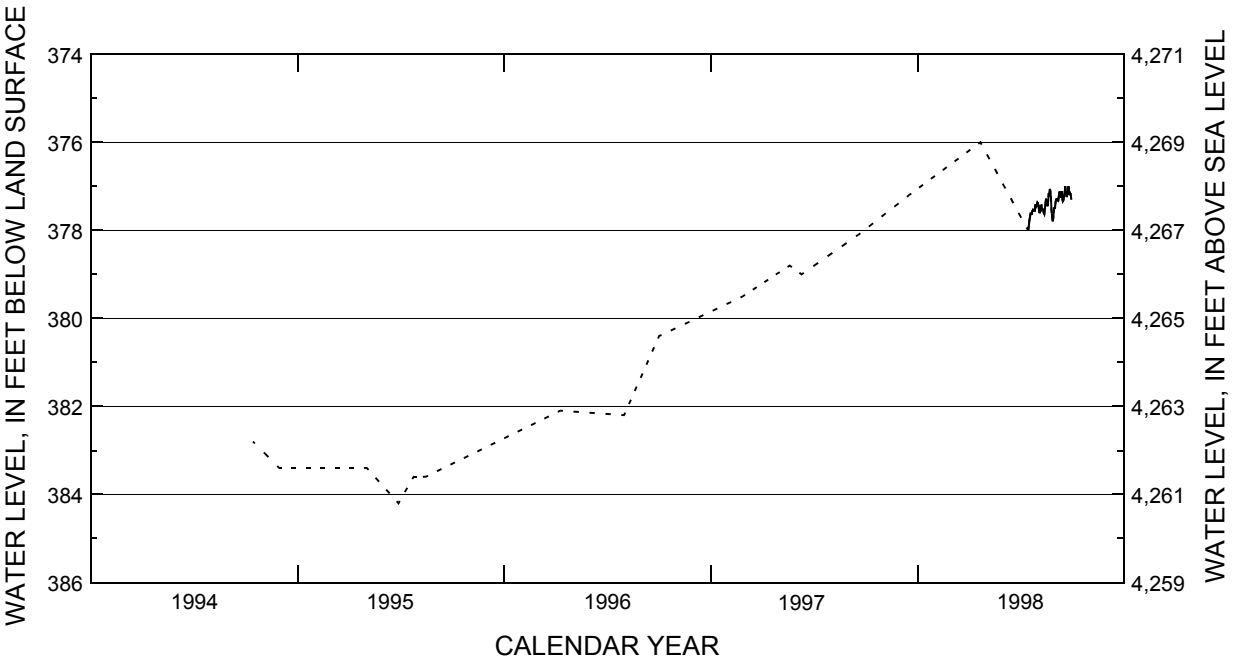
INSTRUMENTATION.—Intermittent taped measurements**;** electronic data logger since July 15, 1998.

DATUM.—Elevation of land-surface datum is 4,645.0 ft above sea level. Measuring point: Top of steel casing, 2.20 ft above land-surface datum.

REMARKS.—Two previously reported water levels on Sept. 16, 1993, and May 23, 1994, were made while the well openings were plugged, so not used. Well was reconstructed on May 23, 1994.

PERIOD OF RECORD.—September 1993 to September 1998.

EXTREMES.—Highest daily water level, 376.0 ft below land-surface datum, Apr. 22, 1998; lowest daily water level, 384.2 ft below land-surface datum, June 28, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	e383.4	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	e382.8	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	e383.6	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	e383.6	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	e384.2	---	---	---
29	---	e383.4	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	382.80	383.40	---	---	---	---	---	383.40	384.20	383.60	383.60	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	e382.1	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	e382.2	---	---
LOW	---	---	---	---	---	---	382.10	---	---	382.20	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e380.4	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	e379.0	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	e378.1
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	e378.8	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	e379.5	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	380.40	---	---	---	379.50	---	---	378.80	379.00	---	---	378.10

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	377.37	377.49
2	---	---	---	---	---	---	---	---	---	---	377.38	377.35
3	---	---	---	---	---	---	---	---	---	---	377.44	377.30
4	---	---	---	---	---	---	---	---	---	---	377.53	377.30
5	---	---	---	---	---	---	---	---	---	---	377.61	377.29
6	---	---	---	---	---	---	---	---	---	---	377.55	377.32
7	---	---	---	---	---	---	---	---	---	---	377.44	377.33
8	---	---	---	---	---	---	---	---	---	---	377.43	377.22
9	---	---	---	---	---	---	---	---	---	---	377.53	377.12
10	---	---	---	---	---	---	---	---	---	---	377.52	377.15
11	---	---	---	---	---	---	---	---	---	---	377.53	377.25
12	---	---	---	---	---	---	---	---	---	---	377.60	377.20
13	---	---	---	---	---	---	---	---	---	---	377.63	377.11
14	---	---	---	---	---	---	---	---	---	---	377.53	377.29
15	---	---	---	---	---	---	---	---	---	377.99	377.40	377.34
16	---	---	---	---	---	---	---	---	---	377.99	377.28	377.31
17	---	---	e377.2	---	---	---	---	---	---	377.88	377.36	377.22
18	---	---	---	---	---	---	---	---	---	377.77	377.37	377.16
19	---	---	---	---	---	---	---	---	---	377.69	377.45	377.00
20	---	---	---	---	---	---	---	---	---	377.60	377.35	377.11
21	---	---	---	---	---	---	---	---	---	377.63	377.18	377.18
22	---	---	---	---	---	---	e376.0	---	---	377.63	377.19	377.24
23	---	---	---	---	---	---	---	---	---	377.56	377.06	377.18
24	---	---	---	---	---	---	---	---	---	377.53	377.11	377.12
25	---	---	---	---	---	---	---	---	---	377.55	377.28	377.00
26	---	---	---	---	---	---	---	---	---	377.56	377.54	377.11
27	---	---	---	---	---	---	---	---	---	377.56	377.70	377.20
28	---	---	---	---	---	---	---	---	---	377.47	377.79	377.16
29	---	---	---	---	---	---	---	---	---	377.41	377.73	377.18
30	---	---	---	---	---	---	---	---	---	377.46	377.54	377.30
31	---	---	---	---	---	---	---	---	---	377.43	377.49	---
LOW	---	---	377.20	---	---	---	376.00	---	---	377.99	377.79	377.49

e Estimated

SITE NUMBER FROM LOCATION MAP.—58.

COUNTY.—Custer.

LOCAL WELL NUMBER.—3S4E24BCDD.

SITE ID (STATION NUMBER).—434634103351801.

OTHER IDENTIFIER.—CU-86A and Custer Test.

LOCATION.—Lat 43°46′27.1″, long 103°35′33.4″, in SE1/4SE1/4SW1/4NW1/4 sec. 24, T. 3 S., R. 4 E., Hydrologic Unit 10120109, at Custer. Owner: City of Custer.

AQUIFER.—Precambrian.

WELL CHARACTERISTICS.—Drilled observation well, 160 ft deep with 18 ft of 6-in. PVC casing; open hole from 18 to 160 ft.

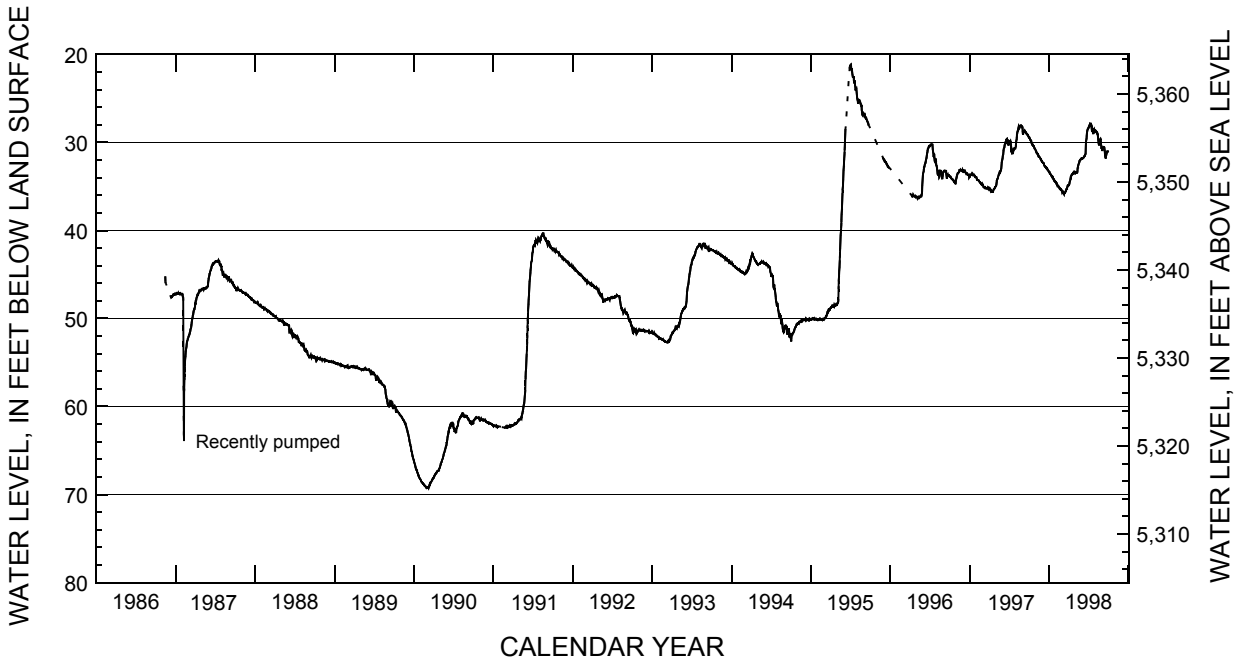
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 5,384.5 ft above sea level. Measuring point: Top of PVC casing, 1.00 ft above land-surface datum.

REMARKS.—Records good. Drawdown during February 1987 from aquifer test.

PERIOD OF RECORD.—November 1986 to September 1998.

EXTREMES.—Highest daily water level, 21.20 ft below land-surface datum, July 1, 1995; lowest daily water level, 69.27 ft below land-surface datum, Mar. 9, 1990.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.20	50.59	50.17	50.15	50.11	50.16	48.83	48.52	33.19	21.20	24.53	26.73
2	52.48	50.59	50.17	50.17	50.11	50.08	48.82	48.36	32.76	21.31	24.73	26.81
3	52.61	50.59	50.17	50.17	50.15	50.02	48.82	48.36	32.32	21.24	25.10	26.87
4	52.22	50.57	50.18	50.16	50.11	49.99	48.78	48.34	31.93	21.31	25.14	26.90
5	52.01	50.54	50.19	50.04	50.11	49.98	48.77	48.29	31.38	21.24	25.22	26.98
6	51.86	50.56	50.15	50.03	50.10	49.99	48.69	48.18	30.58	21.64	25.46	27.03
7	51.86	50.48	50.13	50.03	50.14	50.08	48.66	48.07	29.99	21.70	25.59	26.96
8	51.85	50.51	50.18	50.06	50.11	50.00	48.62	47.85	29.47	21.55	25.18	27.10
9	51.79	50.48	50.12	50.05	50.08	49.95	48.67	46.65	28.93	21.88	25.17	27.13
10	51.71	50.44	50.14	50.02	50.07	49.92	48.66	45.80	28.48	21.74	25.15	27.15
11	51.66	50.38	50.09	50.01	50.10	49.85	48.63	45.17	---	22.02	25.16	27.21
12	51.65	50.35	50.16	50.05	50.12	49.77	48.69	44.62	---	22.31	25.20	27.28
13	51.62	50.39	50.14	50.08	50.11	49.75	48.70	44.16	---	22.54	25.21	27.27
14	51.56	50.44	50.09	50.06	50.05	49.72	48.57	43.69	---	22.63	25.28	27.37
15	51.46	50.44	50.09	50.02	50.07	49.67	48.62	42.79	---	22.57	25.38	27.42
16	51.41	50.33	50.11	50.01	50.12	49.54	48.64	42.04	---	22.60	25.41	27.51
17	51.37	50.28	50.19	50.06	50.12	49.53	48.58	41.47	---	22.51	25.47	27.54
18	51.23	50.34	50.14	50.08	50.16	49.43	48.57	40.99	---	22.61	25.56	27.57
19	51.19	50.34	50.14	50.14	50.17	49.30	48.60	40.54	---	22.98	25.64	27.61
20	51.12	50.28	50.20	50.11	50.18	49.32	48.49	40.10	---	23.21	25.71	27.76
21	51.04	50.34	50.23	50.08	50.11	49.16	48.58	39.41	---	23.23	25.78	27.82
22	50.98	50.34	50.25	50.07	50.10	49.12	48.57	38.76	---	22.96	25.88	27.82
23	50.95	50.33	50.18	50.07	50.14	49.11	48.55	38.20	---	23.07	25.90	27.89
24	50.93	50.26	50.12	50.11	50.11	49.01	48.53	37.66	---	23.51	26.30	28.00
25	50.89	50.24	50.13	50.10	50.06	49.01	48.50	37.18	---	23.70	26.60	28.07
26	50.81	50.13	50.11	50.04	50.08	48.99	48.58	36.63	---	23.95	26.67	28.10
27	50.75	50.13	50.16	50.09	50.14	49.03	48.50	36.06	---	24.10	26.87	---
28	50.70	50.19	50.12	50.15	50.13	48.98	48.46	35.43	21.59	23.90	26.91	---
29	50.71	50.20	50.15	50.15	---	49.00	48.48	34.86	21.47	23.86	26.71	---
30	50.69	50.19	50.16	50.12	---	48.89	48.44	34.25	21.40	24.10	26.68	---
31	50.67	---	50.16	50.11	---	48.86	---	33.68	---	24.29	26.71	---
LOW	52.61	50.59	50.25	50.17	50.18	50.16	48.83	48.52	33.19	24.29	26.91	28.10

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	31.82	---	---	---	---	36.19	33.59	30.41	32.62	33.45
2	---	---	31.91	---	---	---	---	36.21	33.44	30.39	32.67	33.38
3	---	---	31.97	---	---	---	---	36.22	33.29	30.40	32.85	33.34
4	---	---	31.97	---	---	---	---	36.24	33.09	30.36	33.04	33.31
5	---	---	32.05	---	---	---	---	36.30	32.92	30.28	33.15	33.24
6	---	---	32.09	---	---	---	---	36.37	32.81	30.27	33.36	33.23
7	---	---	32.09	---	---	---	---	36.27	32.77	30.27	33.54	33.24
8	---	---	32.22	---	---	---	---	36.34	32.64	30.24	33.67	33.22
9	---	---	32.24	---	---	---	36.02	36.37	32.51	30.24	33.70	33.22
10	---	---	32.24	---	---	---	35.98	36.37	32.42	30.23	33.40	33.35
11	---	---	32.23	---	---	---	35.98	36.37	32.38	30.25	33.18	33.32
12	---	---	32.23	---	---	---	36.06	36.32	32.27	30.26	33.46	33.30
13	---	---	32.25	---	---	---	36.05	36.30	32.18	30.26	33.71	33.26
14	---	---	32.38	---	---	---	36.14	36.24	32.04	30.29	33.92	33.24
15	---	---	32.41	---	---	---	36.13	36.25	31.91	30.56	33.87	33.25
16	---	---	32.43	---	---	---	36.09	36.23	31.82	30.80	33.56	33.56
17	---	---	32.51	---	---	---	35.99	36.24	31.71	31.11	33.41	33.94
18	---	---	32.55	---	---	---	36.05	36.16	31.46	31.27	33.28	34.11
19	---	---	32.58	---	---	---	36.06	36.13	31.26	31.60	33.31	33.99
20	---	---	32.62	---	---	---	36.09	36.14	31.16	31.63	33.23	33.77
21	---	---	32.71	---	---	---	36.18	36.22	30.97	31.30	33.22	33.72
22	---	---	32.73	---	---	---	36.15	36.12	30.90	31.42	33.25	33.69
23	---	---	32.75	---	---	---	36.15	36.14	30.74	31.73	33.46	33.76
24	---	---	32.80	---	---	---	36.12	36.14	30.71	31.93	33.73	33.75
25	---	---	32.82	---	---	---	36.12	36.03	30.60	32.12	33.60	33.76
26	---	---	32.88	---	---	---	36.16	35.81	30.54	32.24	33.75	33.72
27	---	---	32.89	---	---	---	36.14	35.52	30.48	32.04	34.09	33.73
28	---	---	32.89	---	---	---	36.24	34.92	30.43	31.82	34.19	33.78
29	---	---	32.89	---	---	---	36.24	34.41	30.46	32.02	33.96	33.80
30	---	31.81	---	---	---	---	36.16	34.09	30.43	32.26	33.80	33.82
31	---	---	---	---	---	---	---	33.79	---	32.43	33.61	---
LOW	---	31.81	32.89	---	---	---	36.24	36.37	33.59	32.43	34.19	34.11

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.84	34.06	33.17	33.90	34.05	34.83	35.27	35.00	31.82	30.03	30.45	28.34
2	33.89	33.97	33.17	33.89	34.10	34.83	35.32	34.92	31.65	30.03	30.13	28.77
3	33.89	33.86	33.22	33.80	34.15	34.91	35.32	34.88	31.50	29.93	29.92	29.04
4	33.93	33.71	33.21	33.70	34.22	34.99	35.24	34.72	31.36	29.93	29.78	29.12
5	33.92	33.65	33.19	33.72	34.22	35.05	35.26	34.58	31.14	29.93	29.66	28.91
6	33.99	33.57	33.21	33.72	34.25	35.05	35.38	34.40	30.95	29.90	29.45	28.77
7	34.01	33.53	33.33	33.66	34.28	35.07	35.48	34.26	30.82	29.92	29.16	28.73
8	34.04	33.53	33.33	33.64	34.29	35.12	35.52	34.20	30.69	29.89	28.92	28.73
9	34.12	33.46	33.31	33.62	34.31	35.14	35.49	34.15	30.58	30.24	28.72	28.71
10	34.12	33.44	33.29	33.58	34.34	35.13	35.58	34.06	30.50	30.52	28.71	28.71
11	34.13	33.41	33.37	33.64	34.34	35.14	35.55	33.99	30.34	30.78	28.63	28.67
12	34.18	33.42	33.39	33.67	34.34	35.12	35.55	33.88	30.25	30.73	28.56	28.70
13	34.18	33.37	33.42	33.68	34.39	35.20	35.55	33.76	30.12	30.88	28.46	28.78
14	34.23	33.32	33.47	33.62	34.43	35.20	35.56	33.72	30.09	30.86	28.34	28.80
15	34.24	33.16	33.50	33.65	34.51	35.20	35.64	33.68	29.96	31.14	28.22	28.82
16	34.28	33.16	33.46	33.72	34.52	35.16	35.64	33.61	29.90	31.23	28.31	28.86
17	34.32	33.16	33.50	33.70	34.52	35.23	35.64	33.53	29.82	31.22	28.25	28.87
18	34.34	33.15	33.50	33.75	34.59	35.26	35.58	33.45	29.76	31.21	28.18	28.92
19	34.30	33.11	33.51	33.75	34.61	35.26	35.52	33.49	29.75	31.32	28.16	29.02
20	34.37	33.15	33.51	33.72	34.63	35.25	35.44	33.43	29.64	31.06	28.16	29.06
21	34.46	33.15	33.52	33.71	34.67	35.21	35.34	33.36	29.61	30.98	28.13	29.06
22	34.52	33.15	33.58	33.75	34.73	35.21	35.31	33.34	29.57	30.84	28.10	29.08
23	34.54	33.21	33.70	33.76	34.77	35.19	35.29	33.29	29.83	30.82	28.09	29.15
24	34.54	33.21	33.70	33.83	34.79	35.18	35.26	33.22	30.18	30.72	28.09	29.15
25	34.47	33.22	33.71	33.84	34.76	35.19	35.24	33.16	29.89	30.74	28.15	29.18
26	34.67	33.24	33.72	33.85	34.76	35.24	35.20	32.97	29.76	30.72	28.09	29.18
27	34.68	33.27	33.70	33.94	34.69	35.12	35.18	32.73	29.70	30.68	28.09	29.25
28	34.68	33.18	33.76	33.96	34.73	35.15	35.08	32.49	30.15	30.78	28.12	29.30
29	34.56	33.11	33.79	34.06	---	35.23	35.07	32.29	30.34	30.71	28.13	29.37
30	34.40	33.18	33.94	33.97	---	35.23	35.06	32.13	30.20	30.68	28.19	29.42
31	34.19	---	33.90	33.97	---	35.23	---	31.98	---	30.63	28.24	---
LOW	34.68	34.06	33.94	34.06	34.79	35.26	35.64	35.00	31.82	31.32	30.45	29.42

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.44	30.97	32.21	33.32	34.52	35.51	34.85	33.35	31.86	28.37	28.66	30.59
2	29.44	31.01	32.26	33.33	34.62	35.59	34.85	33.36	31.82	28.26	28.66	30.85
3	29.51	31.02	32.28	33.40	34.63	35.53	34.85	33.38	31.82	28.23	28.68	30.98
4	29.53	31.09	32.31	33.41	34.70	35.55	34.80	33.45	31.82	28.20	28.69	30.77
5	29.58	31.15	32.34	33.48	34.74	35.59	34.67	33.42	31.81	28.11	28.73	30.69
6	29.66	31.18	32.34	33.56	34.81	35.60	34.54	33.41	31.81	28.04	28.80	30.63
7	29.66	31.19	32.34	33.61	34.78	35.69	34.44	33.41	31.79	28.03	28.78	30.64
8	29.72	31.28	32.37	33.61	34.84	35.72	34.31	33.41	31.73	28.06	28.79	30.63
9	29.79	31.34	32.50	33.64	34.91	35.81	34.20	33.43	31.70	27.97	28.87	30.54
10	29.85	31.34	32.62	33.67	34.99	35.84	34.11	33.43	31.65	28.01	28.90	30.56
11	29.84	31.40	32.67	33.73	34.98	35.89	34.01	33.41	31.66	27.88	28.92	30.60
12	29.95	31.40	32.70	33.78	34.99	35.78	33.84	33.30	31.61	27.87	29.07	30.60
13	30.06	31.44	32.74	33.80	35.01	35.80	33.88	32.95	31.58	27.88	29.02	30.60
14	30.14	31.58	32.75	33.82	35.02	35.78	33.74	32.78	31.49	27.99	29.44	31.02
15	30.24	31.61	32.77	33.83	35.07	35.74	33.71	32.62	31.49	28.05	29.67	31.33
16	30.24	31.62	32.79	33.93	35.08	35.72	33.66	32.55	31.40	28.35	29.81	31.47
17	30.23	31.64	32.78	33.93	35.10	35.63	33.63	32.46	31.39	28.58	30.02	31.51
18	30.31	31.67	32.81	34.02	35.21	35.53	33.61	32.38	31.28	28.75	30.14	31.71
19	30.35	31.70	32.89	34.02	35.26	35.53	33.56	32.34	30.68	28.56	30.34	31.83
20	30.40	31.72	32.90	34.09	35.25	35.50	33.60	32.29	30.14	28.45	30.21	31.56
21	30.42	31.76	32.90	34.13	35.25	35.41	33.56	32.21	29.84	28.48	29.97	31.43
22	30.42	31.84	32.98	34.16	35.29	35.34	33.53	32.08	29.57	28.80	29.85	31.32
23	30.42	31.87	32.98	34.22	35.36	35.31	33.47	32.03	29.27	29.06	29.72	31.20
24	30.55	31.93	33.06	34.24	35.36	35.26	33.40	32.02	29.03	28.71	29.67	31.15
25	30.61	31.99	33.10	34.33	35.27	35.17	33.38	31.96	28.86	28.68	29.67	31.05
26	30.63	31.99	33.16	34.38	35.33	35.11	33.44	31.93	28.73	28.60	29.63	31.05
27	30.68	32.04	33.17	34.38	35.40	34.99	33.47	31.92	28.58	28.59	29.68	31.06
28	30.75	32.12	33.20	34.44	35.45	34.96	33.49	31.87	28.51	28.67	30.04	31.06
29	30.75	32.18	33.23	34.49	---	34.89	33.39	31.84	28.49	28.60	30.33	31.05
30	30.79	32.18	33.33	34.47	---	34.88	33.43	31.83	28.42	28.70	30.57	31.09
31	30.87	---	---	34.50	---	34.87	---	31.86	---	28.66	30.73	---
LOW	30.87	32.18	33.33	34.50	35.45	35.89	34.85	33.45	31.86	29.06	30.73	31.83

SITE NUMBER FROM LOCATION MAP.—59.

COUNTY.—Custer.

LOCAL WELL NUMBER.—3S8E19BBBB.

SITE ID (STATION NUMBER).—434652103130501.

OTHER IDENTIFIER.—CU-83C and Hermosa South.

LOCATION.—Lat 43°46′53.7″, long 103°13′07.2″, in NW1/4NW1/4NW1/4NW1/4 sec. 19, T. 3 S., R. 8 E., Hydrologic Unit 10120109, 4 mi south of Hermosa. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Lakota (Inyan Kara).

WELL CHARACTERISTICS.—Drilled observation well, 760 ft deep with 676 ft of 5-in. steel casing; open hole from 676 to 760 ft.

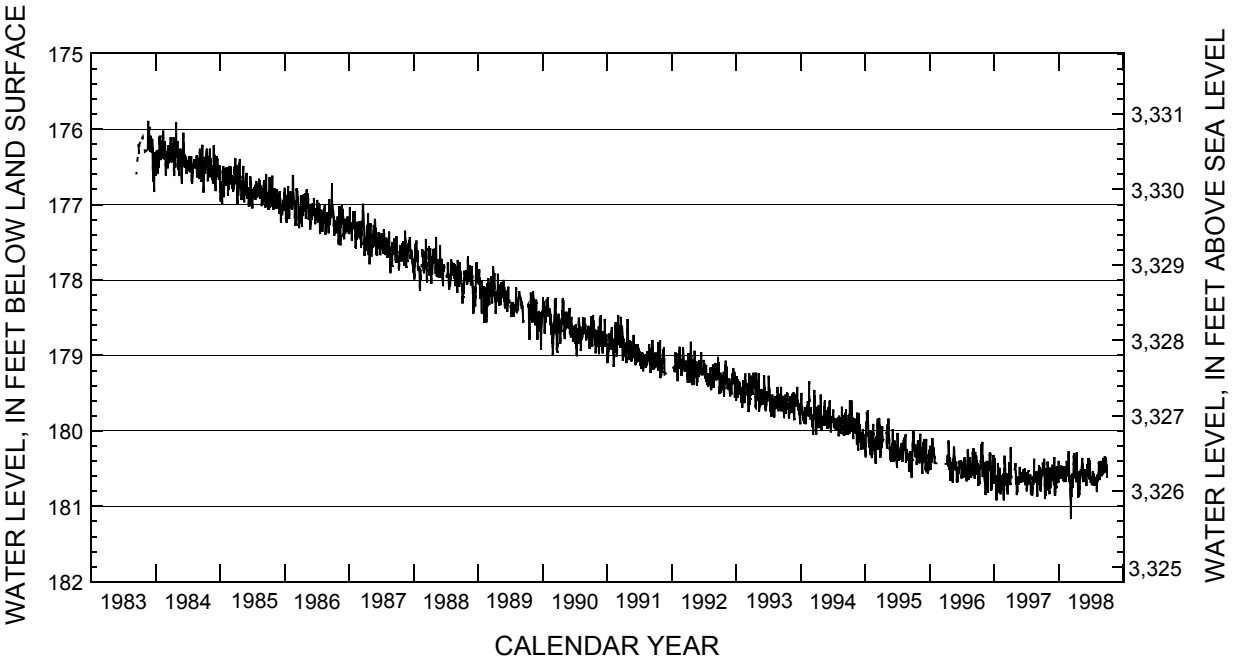
INSTRUMENTATION.—Digital water-level recorder -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,506.8 ft above sea level. Measuring point: Top of steel casing, 2.00 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—September 1983 to September 1998.

EXTREMES.—Highest daily water level, 175.89 ft below land-surface datum, Nov. 20, 1983; lowest daily water level, 181.15 ft below land-surface datum, Mar. 10-11, 1998.



SITE NUMBER 59—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179.85	179.85	179.92	180.26	180.00	180.42	180.16	---	180.25	180.40	180.36	180.36
2	179.78	179.88	179.92	180.28	180.15	180.35	180.10	180.01	180.23	180.27	180.24	180.33
3	180.03	179.89	179.91	180.33	180.32	180.14	180.22	180.15	180.22	180.03	180.32	180.31
4	180.04	179.91	180.13	180.35	180.24	180.10	180.22	180.22	180.20	180.08	180.30	180.38
5	179.93	179.93	180.15	180.03	180.24	180.07	180.00	180.22	180.09	180.24	180.24	180.31
6	179.60	179.99	180.13	179.89	180.24	180.16	180.02	180.10	179.98	180.34	180.15	180.51
7	179.90	179.90	180.12	179.89	180.35	180.23	179.94	179.95	180.22	180.37	180.12	180.54
8	179.96	180.01	180.18	179.93	180.35	180.23	179.94	179.91	180.29	180.39	180.17	180.44
9	179.98	180.04	180.17	179.93	180.24	180.04	180.10	180.06	180.28	180.38	180.26	180.42
10	179.90	179.95	180.25	179.87	180.08	179.93	180.14	180.14	180.39	180.38	180.17	180.39
11	179.82	179.87	180.15	179.75	180.16	179.89	180.14	180.10	180.41	180.29	180.09	180.27
12	179.95	179.84	180.14	179.86	180.21	179.84	---	179.84	180.37	180.26	180.16	180.28
13	180.01	179.94	180.14	179.96	180.21	180.08	---	179.97	180.26	180.26	180.13	180.42
14	179.89	180.17	180.03	179.96	180.01	180.21	---	180.17	180.19	180.35	180.22	180.47
15	179.60	180.17	180.03	179.82	179.91	180.21	---	180.06	180.14	180.34	180.14	180.27
16	179.68	180.00	180.02	179.73	180.05	180.24	---	180.08	180.13	180.37	180.06	180.36
17	179.69	179.76	180.12	179.85	180.03	180.25	---	180.11	180.18	180.38	180.05	180.35
18	179.79	180.03	180.12	179.94	180.18	180.17	---	180.13	180.21	180.35	180.31	180.35
19	179.84	180.04	179.98	180.05	180.20	179.93	---	180.24	180.21	180.29	180.42	180.45
20	179.84	179.93	180.06	180.15	180.26	179.92	---	180.25	180.18	180.29	180.38	180.52
21	179.82	180.18	180.13	180.15	180.19	179.83	---	180.21	180.24	180.21	180.39	180.62
22	179.95	180.22	180.24	180.15	180.14	179.89	---	180.30	180.25	180.24	180.39	180.52
23	179.99	180.26	180.22	180.15	180.31	179.96	---	180.34	180.35	180.19	180.37	180.38
24	180.09	180.09	180.07	180.21	180.31	179.92	---	180.38	180.39	180.22	180.24	180.38
25	180.11	180.09	180.06	180.21	180.10	180.01	---	180.39	180.35	180.20	180.33	180.30
26	180.02	179.87	180.06	180.11	180.17	180.10	---	180.31	180.33	180.16	180.35	180.18
27	179.84	179.77	180.13	180.11	180.37	180.26	---	180.23	180.30	180.20	180.29	180.15
28	179.87	179.94	180.13	180.29	180.42	180.34	---	180.37	180.40	180.33	180.34	180.14
29	179.99	180.02	180.14	180.32	---	180.34	---	180.41	180.46	180.31	180.30	180.00
30	180.03	179.97	180.21	180.24	---	180.29	---	180.38	180.49	180.29	180.32	180.13
31	180.02	---	180.25	180.09	---	180.22	---	180.29	---	180.41	180.39	---
LOW	180.11	180.26	180.25	180.35	180.42	180.42	180.22	180.41	180.49	180.41	180.42	180.62

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180.15	180.32	180.11	180.42	---	---	---	180.44	180.54	180.59	180.48	180.28
2	180.22	180.41	180.21	180.42	---	---	---	180.42	180.66	180.58	180.42	180.32
3	180.18	180.42	180.35	180.20	---	---	---	180.43	180.69	180.50	180.27	180.32
4	179.99	180.42	180.24	180.44	---	---	---	180.53	180.55	180.44	180.24	180.35
5	180.27	180.26	180.33	180.50	---	---	---	180.59	180.48	180.41	180.28	180.23
6	180.27	180.22	180.38	180.51	---	---	---	180.53	180.63	180.51	180.39	180.42
7	180.22	180.39	180.38	180.51	---	---	---	180.51	180.67	180.51	180.56	180.44
8	180.20	180.41	180.51	180.35	---	---	---	180.49	180.67	180.57	180.65	180.41
9	180.24	180.04	180.52	180.39	---	---	180.44	180.63	180.53	180.62	180.58	180.42
10	180.27	180.30	180.51	180.34	---	---	180.38	180.69	180.52	180.56	180.51	180.56
11	180.23	180.33	180.44	180.37	---	---	180.33	180.69	180.50	180.56	180.51	180.63
12	180.18	180.22	180.30	180.36	---	---	180.33	180.66	180.57	180.61	180.47	180.59
13	180.32	180.30	180.11	180.30	---	---	180.35	180.61	180.56	180.57	180.59	180.47
14	180.35	180.33	180.32	180.41	---	---	180.44	180.38	180.52	180.55	180.61	180.34
15	180.29	180.37	180.32	180.41	---	---	180.47	180.38	180.57	180.51	180.55	180.28
16	180.27	180.34	180.33	180.10	---	---	180.37	180.32	180.56	180.39	180.52	180.29
17	180.26	180.39	180.51	180.33	---	---	180.13	180.22	180.52	180.35	180.48	180.39
18	180.22	180.36	180.51	180.36	---	---	180.18	180.21	180.40	180.46	180.35	180.41
19	180.44	180.47	180.50	180.32	---	---	180.23	180.25	180.49	180.46	180.49	180.42
20	180.45	180.56	180.42	180.16	---	---	180.26	180.36	180.48	180.45	180.49	180.32
21	180.32	180.57	180.56	180.22	---	---	180.41	180.38	180.49	180.47	180.48	180.34
22	180.25	180.41	180.57	180.28	---	---	180.50	180.35	180.49	180.56	180.60	180.39
23	180.27	180.42	180.52	180.23	---	---	180.50	180.37	180.42	180.55	180.62	180.58
24	180.29	180.38	180.49	180.23	---	---	180.40	180.50	180.47	180.63	180.58	180.56
25	180.26	180.36	180.51	180.27	---	---	180.35	180.52	180.39	180.62	180.54	180.46
26	180.14	180.15	180.49	180.29	---	---	180.38	180.50	180.42	180.59	180.59	180.45
27	180.14	180.32	180.53	180.35	---	---	180.44	180.42	180.42	180.64	180.49	180.47
28	180.22	180.32	180.44	180.34	---	---	180.65	180.47	180.44	180.66	180.53	180.47
29	180.32	180.15	180.34	180.43	---	---	180.65	180.49	180.61	180.67	180.57	180.55
30	180.33	180.11	180.27	---	---	---	180.48	180.41	180.63	180.63	180.54	180.43
31	180.21	---	180.25	---	---	---	---	180.42	---	180.58	180.44	---
LOW	180.45	180.57	180.57	180.51	---	---	180.65	180.69	180.69	180.67	180.65	180.63

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180.55	180.58	180.42	180.45	180.58	180.43	180.71	180.43	180.55	180.55	180.76	180.87
2	180.73	180.61	180.41	180.36	180.61	180.43	180.71	180.56	180.58	180.69	180.79	180.84
3	180.68	180.55	180.45	180.36	180.68	180.44	180.39	180.66	180.67	180.79	180.85	180.68
4	180.54	180.43	180.46	180.49	180.83	180.62	180.22	180.64	180.67	180.79	180.85	180.63
5	180.51	180.43	180.33	180.68	180.83	180.73	180.53	180.71	180.56	180.77	180.83	180.59
6	180.65	180.45	180.29	180.70	180.79	180.73	180.63	180.67	180.62	180.71	180.78	180.57
7	180.63	180.63	180.52	180.64	180.82	180.56	---	180.62	180.56	180.67	180.60	180.66
8	180.57	180.66	180.52	180.63	180.79	180.67	---	180.84	180.57	180.69	180.66	180.71
9	180.70	180.69	180.41	180.59	180.74	180.70	---	180.84	180.68	180.65	180.72	180.65
10	180.71	180.69	180.30	180.65	180.78	180.59	---	180.74	180.66	180.56	180.68	180.51
11	180.46	180.83	180.43	180.83	180.71	180.62	---	180.82	180.60	180.54	180.69	180.46
12	180.49	180.85	180.47	180.88	180.71	180.59	---	180.77	180.54	180.54	180.68	180.55
13	180.51	180.84	180.54	180.92	180.59	180.79	---	180.60	180.56	180.61	180.52	180.56
14	180.45	180.76	180.74	180.73	180.63	180.81	---	180.67	180.56	180.71	180.37	180.52
15	180.47	180.44	180.79	180.82	180.70	180.71	---	180.69	180.51	180.69	180.59	180.51
16	180.39	180.50	180.58	180.86	180.70	180.57	---	180.67	180.52	180.65	180.69	180.54
17	180.49	180.54	180.75	180.80	180.60	180.84	---	180.60	180.56	180.64	180.59	180.48
18	180.49	180.54	180.75	180.76	180.63	180.82	---	180.66	180.53	180.68	180.63	180.72
19	180.18	180.40	180.73	180.76	180.63	180.71	---	180.71	180.52	180.68	180.69	180.79
20	180.28	180.51	180.58	180.62	180.57	180.66	---	180.71	180.54	180.69	180.67	180.75
21	180.45	180.52	180.47	180.43	180.62	180.69	---	180.64	180.56	180.67	180.67	180.70
22	180.45	180.52	180.54	180.51	180.80	180.69	---	180.63	180.50	180.60	180.66	180.80
23	180.39	180.74	180.69	180.51	180.87	180.57	---	180.66	180.56	180.59	180.62	180.75
24	180.39	180.75	180.69	180.66	180.92	180.65	---	180.55	180.64	180.59	180.64	180.64
25	180.15	180.73	180.67	180.69	180.79	180.64	---	180.48	180.72	180.62	180.65	180.56
26	180.55	180.81	180.65	180.61	180.53	180.55	---	180.55	180.72	180.72	180.61	180.51
27	180.61	180.81	180.32	180.82	180.41	180.42	---	180.68	180.59	180.83	180.59	180.56
28	180.59	180.61	180.44	180.78	180.33	180.56	180.49	180.68	180.59	180.85	180.54	180.56
29	180.32	180.42	180.47	180.78	---	180.59	180.47	180.68	180.60	180.78	180.62	180.60
30	180.50	180.46	180.53	180.63	---	180.58	180.46	180.69	180.58	180.75	180.56	180.58
31	180.56	---	180.53	180.49	---	180.43	---	180.66	---	180.78	180.77	---
LOW	180.73	180.85	180.79	180.92	180.92	180.84	180.71	180.84	180.72	180.85	180.85	180.87

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180.51	180.64	180.62	180.40	180.67	180.61	180.42	180.61	180.52	180.69	180.61	180.59
2	180.42	180.68	180.66	180.57	180.67	180.68	180.56	180.64	180.65	180.64	180.62	180.48
3	180.45	180.66	180.67	180.53	180.61	180.67	180.62	180.64	180.66	180.64	180.66	180.42
4	180.47	180.74	180.72	180.54	180.63	180.59	180.62	180.55	180.62	180.66	180.78	180.47
5	180.54	180.74	180.72	180.62	180.63	180.67	180.46	180.55	180.69	180.60	180.81	180.47
6	180.49	180.64	180.51	180.62	180.59	180.67	180.44	180.51	180.73	180.65	180.70	180.56
7	180.42	180.76	180.35	180.51	180.47	180.79	180.52	180.54	180.68	180.71	180.60	180.58
8	180.54	180.83	180.57	180.59	180.58	180.86	180.61	180.57	180.57	180.72	180.58	180.48
9	180.52	180.83	180.80	180.61	180.63	180.92	180.66	180.60	180.61	180.70	180.67	180.39
10	180.37	180.69	180.85	180.57	180.66	181.15	180.68	180.58	180.50	180.69	180.63	180.36
11	180.42	180.67	180.85	180.61	180.66	181.15	180.56	180.49	180.44	180.62	180.60	180.47
12	180.60	180.49	180.82	180.63	180.58	180.87	180.29	180.41	180.51	180.62	180.63	180.46
13	180.73	180.70	180.79	180.55	180.57	180.86	180.47	180.37	180.50	180.55	180.64	180.38
14	180.88	180.76	180.62	180.51	180.40	180.86	180.49	180.36	180.49	180.54	180.59	180.49
15	180.90	180.73	180.68	180.46	180.41	180.79	180.56	180.46	180.49	180.69	180.54	180.56
16	180.76	180.66	180.56	180.48	180.42	180.75	180.64	180.55	180.38	180.72	180.41	180.54
17	180.70	180.63	180.56	180.59	180.53	180.57	180.64	180.47	180.38	180.69	180.51	180.47
18	180.80	180.62	180.75	180.59	180.58	180.70	180.66	180.59	180.36	180.63	180.47	180.42
19	180.83	180.51	180.75	180.49	180.58	180.74	180.74	180.67	180.39	180.61	180.55	180.34
20	180.86	180.50	180.47	180.58	180.56	180.74	180.84	180.67	180.45	180.57	180.65	180.46
21	180.72	180.60	180.63	180.58	180.46	180.67	180.87	180.59	180.57	180.66	180.61	180.51
22	180.50	180.60	180.63	180.61	180.58	180.66	180.87	180.55	180.64	180.73	180.54	180.54
23	180.69	180.53	180.60	180.61	180.60	180.63	180.77	180.55	180.53	180.71	180.45	180.49
24	180.79	180.61	180.63	180.63	180.33	180.61	180.55	180.66	180.43	180.69	180.46	180.44
25	180.74	180.63	180.67	180.66	180.28	180.42	180.55	180.67	180.43	180.68	180.48	180.35
26	180.60	180.45	180.67	180.65	180.27	180.33	180.71	180.56	180.39	180.68	180.40	180.42
27	180.56	180.54	180.55	180.61	180.42	180.35	180.85	180.51	180.48	180.68	180.50	180.50
28	180.55	180.63	180.53	180.66	180.52	180.35	180.84	180.63	180.54	180.64	180.56	180.45
29	180.41	180.66	180.65	180.47	---	180.30	180.75	180.62	180.61	180.63	180.59	180.47
30	180.42	180.51	180.69	180.53	---	180.39	180.67	180.52	180.68	180.68	180.53	180.63
31	180.56	---	180.49	180.52	---	180.36	---	180.64	---	180.68	180.59	---
LOW	180.90	180.83	180.85	180.66	180.67	181.15	180.87	180.67	180.73	180.73	180.81	180.63

SITE NUMBER FROM LOCATION MAP.—60.

COUNTY.—Custer.

LOCAL WELL NUMBER.—4S6E1DAAA.

SITE ID (STATION NUMBER).—434350103201901.

OTHER IDENTIFIER.—CU-93A and CSP Airport Mdsn.

LOCATION.—Lat 43°43′50.9″, long 103°20′20.2″, in NE1/4NE1/4NE1/4SE1/4 sec. 1, T. 4 S., R. 6 E., Hydrologic Unit 10120109, 0.6 mi east of Custer State Park airport. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 680 ft deep with 632 ft of 5-in. steel casing; open hole from 632 to 680 ft.

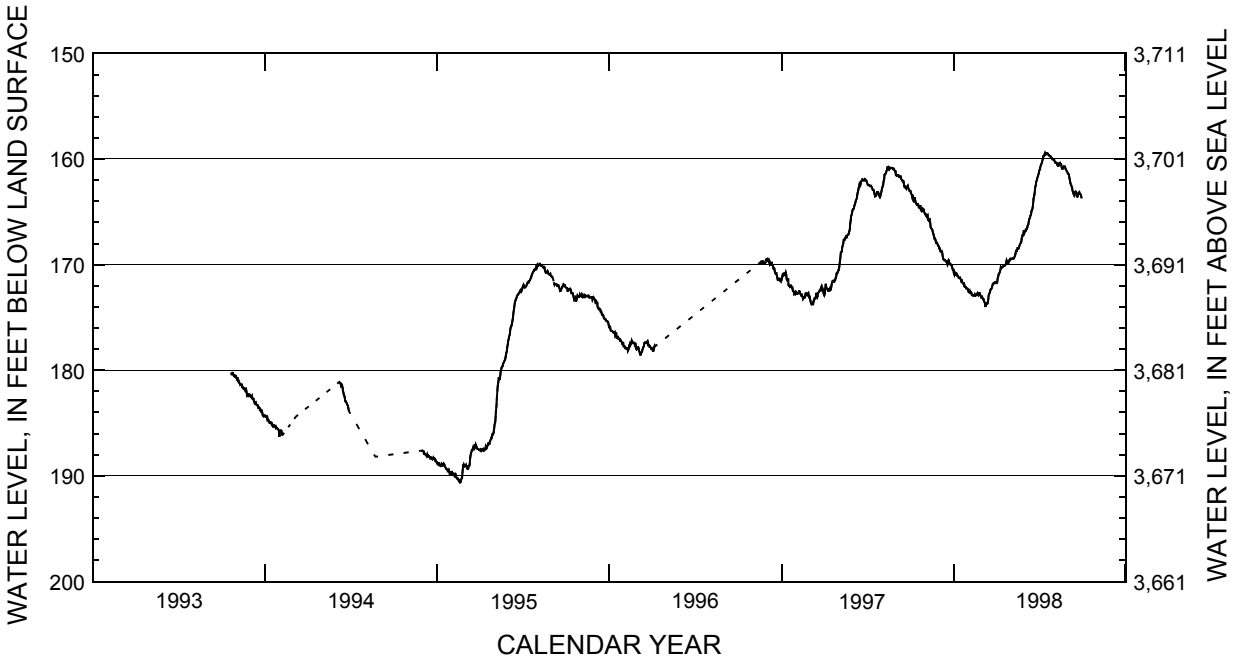
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,860.8 ft above sea level. Measuring point: Top of steel casing, 1.65 ft above land-surface datum.

REMARKS.—Records fair.

PERIOD OF RECORD.—August 1993 to September 1998.

EXTREMES.—Highest daily water level, 159.46 ft below land-surface datum, July 14, 1998; lowest daily water level, 190.63 ft below land-surface datum, Feb. 18, 19, 1995.



SITE NUMBER 60—Continued

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	187.62	188.75	189.62	189.12	187.56	185.89	177.22	172.24	170.23	171.09
2	---	---	187.65	188.90	189.86	189.06	187.50	185.43	177.00	172.08	170.05	171.14
3	---	---	187.68	188.95	189.90	188.97	187.66	185.09	176.79	171.93	170.15	171.24
4	---	---	187.91	188.97	189.79	189.10	187.67	184.92	176.61	172.01	170.09	171.33
5	---	---	187.91	188.71	189.79	189.12	187.52	184.52	176.29	172.10	170.01	---
6	---	---	187.91	188.93	189.91	189.32	187.55	183.95	175.91	172.17	169.93	---
7	---	---	188.01	189.04	190.04	189.35	187.48	183.30	175.83	172.14	169.93	171.91
8	---	---	188.03	189.07	189.96	189.27	187.44	182.66	175.80	172.09	170.08	171.82
9	---	---	188.07	189.05	189.88	189.06	187.61	181.78	175.54	172.01	170.11	171.88
10	---	---	188.14	188.98	190.01	189.04	187.61	181.45	175.30	171.92	170.05	171.88
11	---	---	187.99	188.87	190.17	188.97	187.49	181.08	175.00	171.78	170.04	171.87
12	---	---	188.12	188.96	190.28	188.25	187.51	180.68	174.55	171.69	170.14	171.89
13	---	---	188.09	189.02	190.27	188.08	187.51	180.86	174.23	171.64	170.23	172.03
14	---	---	188.16	188.99	190.28	187.88	187.22	180.86	173.89	171.69	170.30	172.06
15	---	---	188.16	188.85	190.35	187.69	187.28	180.45	173.59	171.56	170.22	171.89
16	---	---	188.22	188.92	190.50	187.56	187.37	180.07	173.38	171.54	170.22	172.08
17	---	---	188.33	189.11	190.46	187.56	187.25	179.92	173.27	171.47	170.28	172.16
18	---	---	188.25	189.19	190.63	187.40	187.11	179.74	173.18	171.33	170.65	172.35
19	---	---	188.25	189.26	190.63	187.20	187.06	179.70	173.07	171.27	170.73	172.49
20	---	---	188.31	189.32	190.55	187.21	186.86	179.63	172.90	171.19	170.66	172.46
21	---	---	188.41	189.36	190.35	187.06	187.00	179.37	172.86	170.94	170.70	172.46
22	---	---	188.45	189.38	190.21	187.36	186.98	179.33	172.80	170.88	170.76	172.25
23	---	---	188.36	189.41	190.14	187.25	186.73	179.20	172.78	170.72	170.79	172.11
24	---	---	188.27	189.57	189.59	187.07	186.61	179.08	172.70	170.67	170.70	172.11
25	---	---	188.39	189.54	189.01	187.20	186.48	179.04	172.60	170.61	170.88	171.99
26	---	---	188.38	189.47	188.93	187.27	186.47	178.82	172.55	170.49	170.91	171.88
27	---	---	188.50	189.69	189.12	187.43	186.33	178.57	172.43	170.43	170.89	171.91
28	---	---	188.47	189.85	189.12	187.47	186.10	178.39	172.52	170.47	170.93	171.94
29	---	187.61	188.58	189.85	---	187.47	186.13	178.16	172.46	170.38	170.88	171.94
30	---	187.63	188.67	189.69	---	187.51	186.01	177.84	172.44	170.28	171.03	172.13
31	---	---	188.74	189.64	---	187.55	---	177.50	---	170.36	171.10	---
LOW	---	187.63	188.74	189.85	190.63	189.35	187.67	185.89	177.22	172.24	171.10	172.49

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172.16	172.93	173.26	175.94	177.74	177.78	177.98	---	---	---	---	---
2	172.22	172.98	173.39	175.94	177.74	177.93	177.88	---	---	---	---	---
3	172.21	173.04	173.52	175.80	177.74	177.88	178.16	---	---	---	---	---
4	172.24	173.02	173.43	176.22	177.92	177.99	178.16	---	---	---	---	---
5	172.50	172.83	173.49	176.28	177.94	178.23	178.08	---	---	---	---	---
6	172.50	172.94	173.65	176.30	177.90	178.37	177.78	---	---	---	---	---
7	172.36	173.09	173.64	176.30	177.93	178.52	177.66	---	---	---	---	---
8	172.32	173.07	174.05	176.33	177.98	178.52	177.72	---	---	---	---	---
9	172.39	172.79	174.12	176.35	177.84	178.37	---	---	---	---	---	---
10	172.40	173.09	174.21	176.44	178.14	178.29	---	---	---	---	---	---
11	172.35	173.09	174.16	176.46	178.04	178.23	---	---	---	---	---	---
12	172.53	172.95	174.16	176.47	177.94	178.03	---	---	---	---	---	---
13	172.70	172.98	174.24	176.41	177.61	177.86	---	---	---	---	---	---
14	172.71	172.98	174.44	176.71	177.50	177.82	---	---	---	---	---	---
15	172.70	173.00	174.44	176.61	177.62	177.68	---	---	---	---	---	---
16	172.70	172.98	174.52	176.44	177.48	177.42	---	---	---	---	---	---
17	172.94	173.00	174.75	176.93	177.44	177.37	---	---	---	---	---	---
18	173.08	172.88	174.76	176.97	177.21	177.41	---	---	---	---	---	---
19	173.34	173.10	174.76	176.87	177.30	177.44	---	---	---	---	---	---
20	173.33	173.15	174.86	176.86	177.43	177.44	---	---	---	---	---	---
21	173.18	173.13	175.10	177.03	177.44	177.32	---	---	---	---	---	---
22	173.43	173.10	175.10	177.07	177.40	177.32	---	---	---	---	---	---
23	173.43	173.09	175.13	177.04	177.45	177.28	---	---	---	---	---	---
24	173.31	173.13	175.21	177.05	177.45	177.64	---	---	---	---	---	---
25	173.14	173.13	175.22	177.24	177.61	177.69	---	---	---	---	---	---
26	172.94	173.10	175.35	177.21	177.56	177.64	---	---	---	---	---	---
27	173.02	173.31	175.36	177.29	177.93	177.75	---	---	---	---	---	---
28	173.07	173.17	175.35	177.37	178.03	177.73	---	---	---	---	---	---
29	173.07	173.11	175.40	177.52	177.98	177.83	---	---	---	---	---	---
30	173.02	173.24	175.44	177.52	---	177.98	---	---	---	---	---	---
31	172.83	---	175.70	177.48	---	178.00	---	---	---	---	---	---
LOW	173.43	173.31	175.70	177.52	178.14	178.52	178.16	---	---	---	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	169.50	171.48	172.58	173.13	172.84	170.57	164.80	162.17	163.15	161.52
2	---	---	169.46	171.32	172.78	173.08	172.91	170.59	164.76	162.33	162.89	161.60
3	---	---	169.61	171.03	172.78	173.35	172.72	170.50	164.72	162.47	162.67	161.56
4	---	---	169.60	170.87	172.78	173.54	172.32	170.12	164.63	162.48	162.59	161.52
5	---	---	169.73	170.86	172.74	173.71	171.82	169.71	164.39	162.50	162.42	161.55
6	---	---	169.61	171.01	172.66	173.65	172.10	169.39	164.27	162.47	162.12	161.53
7	---	---	169.76	170.99	172.52	173.61	172.29	168.88	164.12	162.53	161.89	161.56
8	---	---	170.02	170.83	172.55	173.76	172.33	168.84	163.91	162.57	161.47	161.70
9	---	---	169.97	170.81	172.57	173.77	172.32	168.72	163.81	162.52	161.44	161.72
10	---	---	169.86	170.72	172.78	173.46	172.49	168.33	163.67	162.52	161.41	161.67
11	---	---	169.83	170.99	172.81	173.43	172.50	168.19	163.37	162.63	161.25	161.65
12	---	---	170.05	171.36	172.90	173.21	172.40	168.00	163.14	162.72	161.14	161.86
13	---	---	170.05	171.49	172.88	173.21	172.32	167.68	162.96	162.84	160.99	161.97
14	---	---	170.07	171.48	172.98	173.22	172.24	167.69	162.78	162.94	160.78	162.03
15	---	---	170.37	171.31	173.12	173.02	172.41	167.67	162.52	162.95	160.74	162.05
16	---	---	170.37	171.96	173.26	172.69	172.36	167.50	162.39	163.06	160.93	162.14
17	---	169.78	170.37	172.02	173.18	172.93	172.05	167.38	162.51	163.14	160.98	162.15
18	---	169.84	170.71	172.03	173.10	173.06	171.72	167.43	162.41	163.39	160.83	162.36
19	---	169.82	170.82	172.12	173.15	172.80	171.59	167.43	162.11	163.53	160.90	162.64
20	---	169.64	170.86	172.08	173.11	172.67	171.55	167.31	162.07	163.51	160.91	162.69
21	---	169.83	170.73	171.99	172.72	172.60	171.63	167.20	162.05	163.45	160.84	162.63
22	---	169.78	171.06	172.06	172.70	172.53	171.63	167.16	161.95	163.32	160.84	162.74
23	---	169.63	171.19	172.20	172.83	172.42	171.62	167.14	161.96	163.14	160.85	162.82
24	---	169.92	171.45	172.19	172.90	172.44	171.48	167.02	162.02	163.12	160.85	162.71
25	---	169.91	171.48	172.48	172.93	172.46	171.46	166.89	162.06	163.15	160.94	162.62
26	---	169.88	171.45	172.48	172.73	172.17	171.26	166.69	162.01	163.25	160.91	162.54
27	---	169.86	171.45	172.61	172.69	172.04	171.14	166.23	161.91	163.42	160.91	162.76
28	---	169.81	171.26	172.77	172.95	172.15	170.85	165.79	161.97	163.55	160.98	162.82
29	---	169.55	171.51	172.68	---	172.27	170.83	165.42	162.03	163.61	161.07	162.95
30	---	169.49	171.47	172.74	---	172.39	170.78	165.26	162.06	163.53	161.16	163.02
31	---	---	171.59	172.55	---	172.54	---	165.08	---	163.30	161.17	---
LOW	---	169.92	171.59	172.77	173.26	173.77	172.91	170.59	164.80	163.61	163.15	163.02

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163.03	165.12	168.28	170.51	172.35	173.13	171.69	169.50	166.77	161.35	160.01	161.38
2	163.03	165.23	168.47	170.82	172.56	173.14	171.77	169.54	166.85	161.13	160.07	161.40
3	163.27	165.23	168.47	170.97	172.55	173.07	171.77	169.47	166.85	161.03	160.11	161.50
4	163.32	165.39	168.71	170.77	172.49	173.18	171.61	169.44	166.69	160.89	160.24	161.77
5	163.45	165.46	168.78	170.88	172.68	173.29	171.28	169.43	166.67	160.68	160.32	161.96
6	163.64	165.44	168.78	170.92	172.66	173.29	171.13	169.43	166.59	160.52	160.31	162.24
7	163.57	165.35	168.72	170.83	172.60	173.49	170.89	169.44	166.48	160.43	160.34	162.36
8	163.94	165.70	168.82	170.88	172.68	173.58	170.81	169.40	166.29	160.28	160.37	162.49
9	164.00	165.80	169.15	171.05	172.87	173.62	170.76	169.41	166.20	160.12	160.49	162.61
10	163.90	165.74	169.43	171.05	172.91	173.93	170.65	169.34	165.98	159.92	160.60	162.78
11	163.62	165.83	169.52	171.13	172.94	173.91	170.46	169.22	165.68	159.72	160.65	163.01
12	163.94	165.79	169.52	171.26	172.94	173.57	170.22	169.12	165.59	159.72	160.65	163.15
13	164.12	166.09	169.57	171.26	172.91	173.71	170.30	168.97	165.50	159.58	160.50	163.31
14	164.21	166.50	169.57	171.26	172.89	173.71	170.30	168.69	165.30	159.46	160.36	163.44
15	164.35	166.57	169.69	171.24	172.84	173.61	170.26	168.65	165.21	159.60	160.34	163.34
16	164.35	166.62	169.70	171.35	172.96	173.32	170.23	168.69	164.90	159.59	160.45	163.17
17	164.19	166.70	169.70	171.47	172.95	172.81	170.13	168.44	164.83	159.55	160.51	163.10
18	164.38	166.86	169.86	171.59	172.87	172.76	170.13	168.46	164.68	159.48	160.50	163.10
19	164.47	167.03	170.02	171.53	172.86	172.68	170.07	168.50	164.39	159.49	160.88	163.24
20	164.60	167.20	169.90	171.71	172.81	172.52	170.10	168.36	163.81	159.47	160.95	163.54
21	164.61	167.37	169.69	171.77	172.71	172.34	170.08	168.22	163.59	159.59	160.92	163.59
22	164.46	167.54	169.78	171.79	172.81	172.32	170.00	168.13	163.37	159.66	160.85	163.49
23	164.47	167.54	169.71	171.91	172.90	172.26	169.84	168.02	163.01	159.66	160.71	163.29
24	164.85	167.65	169.90	171.87	172.88	172.10	169.61	167.94	162.65	159.67	160.72	163.19
25	164.92	167.89	169.96	172.10	172.62	171.94	169.74	167.81	162.44	159.75	160.75	163.14
26	164.81	167.88	170.03	172.13	172.79	171.80	169.82	167.56	162.15	159.75	160.73	163.28
27	164.73	167.93	170.00	172.12	172.86	171.79	169.89	167.28	162.03	159.81	160.95	163.33
28	164.85	168.06	170.10	172.25	172.99	171.78	169.83	167.29	161.84	159.88	161.02	163.37
29	164.80	168.21	170.14	172.26	---	171.71	169.69	167.19	161.64	159.93	161.10	163.44
30	164.80	168.21	170.37	172.28	---	171.74	169.55	166.95	161.54	160.02	161.17	163.72
31	165.00	---	170.50	172.28	---	171.67	---	167.03	---	160.00	161.29	---
LOW	165.00	168.21	170.50	172.28	172.99	173.93	171.77	169.54	166.85	161.35	161.29	163.72

SITE NUMBER FROM LOCATION MAP.—61.

COUNTY.—Custer.

LOCAL WELL NUMBER.—4S6E1DAAA2.

SITE ID (STATION NUMBER).—434350103201902.

OTHER IDENTIFIERS.—CU-93B and CSP Airport Mnls.

LOCATION.—Lat 43°43′50.9″, long 103°20′20.2″, in NE1/4NE1/4NE1/4SE1/4 sec. 1, T. 4 S., R. 6 E., Hydrologic Unit 10120109, 0.6 mi east of Custer State Park airport. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 270 ft deep with 210 ft of 5-in. steel casing; open hole from 210 to 270 ft.

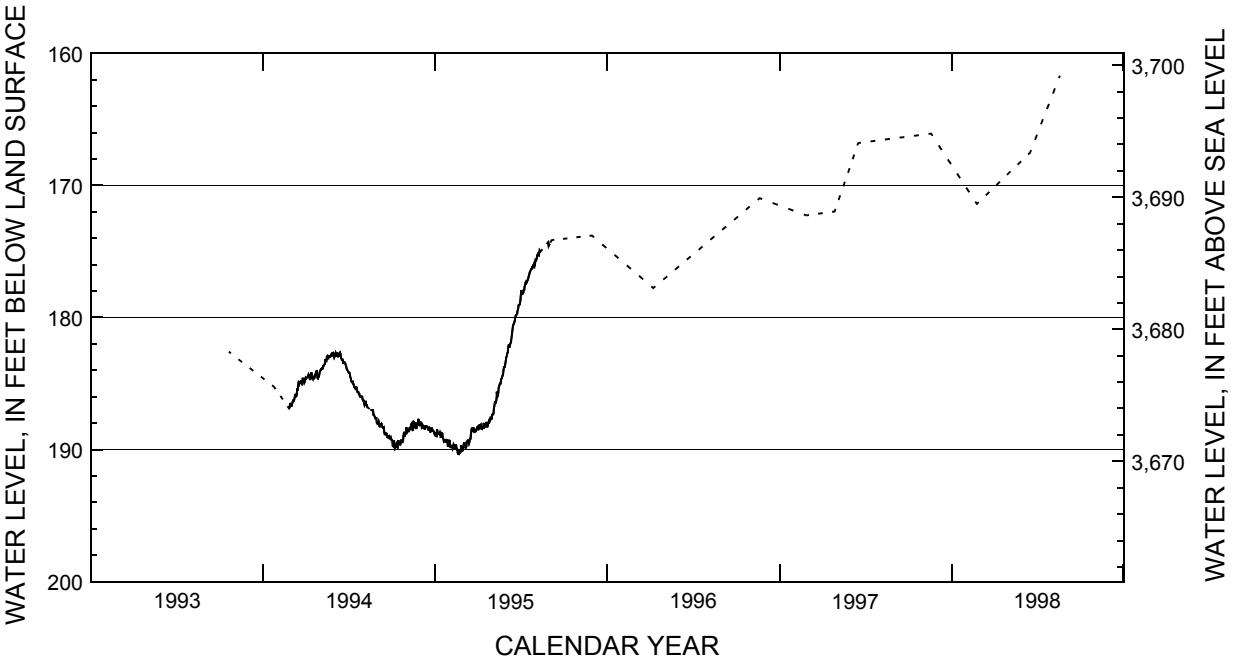
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,860.9 ft above sea level. Measuring point: Top of steel casing, 2.2 ft above land-surface datum.

REMARKS.—Records poor. Taped down measurements are good.

PERIOD OF RECORD.—August 1993 to September 1998.

EXTREMES.—Highest daily water level, 161.69 ft (estimated) below land-surface datum, Aug. 19, 1998; lowest daily water level, 190.34 ft below land-surface datum, Feb. 20, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189.30	188.34	187.94	188.81	189.37	190.01	188.28	187.65	183.04	178.70	175.93	---
2	189.35	188.61	187.96	188.97	189.74	189.81	188.26	187.36	182.89	178.36	175.65	---
3	189.75	188.67	188.03	188.99	189.89	189.47	188.48	187.34	182.74	177.94	175.70	---
4	189.79	188.56	188.36	189.00	189.73	189.59	188.47	187.34	182.63	178.06	175.63	---
5	189.53	188.59	188.32	188.48	189.73	189.59	188.22	187.24	182.33	178.17	175.43	e174.15
6	189.29	188.61	188.22	188.72	189.76	189.86	188.25	186.90	182.06	178.19	175.26	---
7	189.81	188.45	188.32	188.82	189.90	189.89	188.16	186.66	182.25	178.14	175.18	---
8	189.91	188.50	188.35	188.84	189.79	189.80	188.12	186.44	182.25	177.95	175.29	---
9	189.80	188.50	188.37	188.84	189.64	189.42	188.43	186.48	182.06	177.90	175.32	---
10	189.63	188.24	188.50	188.78	189.73	189.38	188.45	186.48	181.94	177.67	175.08	---
11	189.54	188.11	188.19	188.73	189.85	189.33	188.35	186.24	181.85	177.53	174.93	---
12	189.83	188.06	188.33	188.95	189.94	189.33	188.38	185.63	181.50	177.35	175.01	---
13	189.86	188.35	188.30	189.06	189.94	189.47	188.37	185.84	181.20	177.28	175.00	---
14	189.63	188.53	188.26	189.04	189.65	189.55	188.00	185.91	180.93	177.36	---	---
15	189.29	188.51	188.26	188.78	189.79	189.40	188.19	185.71	180.68	177.28	---	---
16	189.58	187.90	188.32	188.82	190.05	189.21	188.31	185.29	180.53	177.22	---	---
17	189.61	187.92	188.55	189.09	189.97	189.20	188.25	185.22	180.44	177.17	---	---
18	189.58	188.29	188.40	189.24	190.33	188.91	188.12	185.08	180.36	176.97	---	---
19	189.61	188.26	188.36	189.31	190.32	188.52	188.12	185.02	180.29	176.81	---	---
20	189.50	187.95	188.47	189.41	190.34	188.55	187.93	185.02	179.99	176.76	---	---
21	189.33	188.39	188.59	189.38	190.13	188.34	188.28	184.69	179.88	176.54	---	---
22	189.36	188.40	188.71	189.32	190.13	188.57	188.28	184.64	179.81	176.50	---	---
23	189.36	188.31	188.53	189.29	190.30	188.63	188.10	184.57	179.77	176.39	---	---
24	189.39	188.07	188.34	189.42	190.18	188.36	188.00	184.39	179.69	176.33	---	---
25	189.28	188.06	188.50	189.42	189.70	188.48	187.86	184.33	179.47	176.31	---	---
26	188.97	187.69	188.50	189.23	189.82	188.51	187.92	184.01	179.32	176.20	---	---
27	188.67	187.78	188.60	189.43	190.09	188.66	187.83	183.76	179.08	176.12	---	---
28	188.83	188.11	188.60	189.73	190.09	188.66	187.65	183.77	179.07	176.22	---	---
29	188.91	188.23	188.63	189.75	---	188.61	187.71	183.74	179.03	176.18	e174.29	---
30	188.86	188.06	188.78	189.48	---	188.45	187.63	183.54	179.00	176.02	e174.61	---
31	188.76	---	188.88	189.34	---	188.33	---	183.26	---	176.10	---	---
LOW	189.91	188.67	188.88	189.75	190.34	190.01	188.48	187.65	183.04	178.70	175.93	174.15

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	e177.78	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	e173.81	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	173.81	---	---	---	---	177.78	---	---	---	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	e166.8	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	e170.97	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	e172.27	---	---	---	---	---	---	---
28	---	---	---	---	---	---	e171.99	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	170.97	---	---	172.27	---	171.99	---	166.80	---	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	e167.52	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	e166.08	---	---	---	---	---	---	---	---	e161.69	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	e171.4	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	166.08	---	---	171.40	---	---	---	167.52	---	161.69	---

e Estimated

SITE NUMBER FROM LOCATION MAP.—62.

COUNTY.—Custer.

LOCAL WELL NUMBER.—5S2E28BCCB.

SITE ID (STATION NUMBER).—433517103534201.

OTHER IDENTIFIERS.—CU-95A and Hell Canyon Mdsn.

LOCATION.—Lat 43°35′17.4″, long 103°53′42.3″, in NW1/4SW1/4SW1/4NW1/4 sec. 28, T. 5 S., R. 2 E., Hydrologic Unit 10120107, about 11 mi south of Jewel Cave. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,075 ft deep with 1,020 ft of 5-in. steel casing; open hole from 1,020 to 1,075 ft.

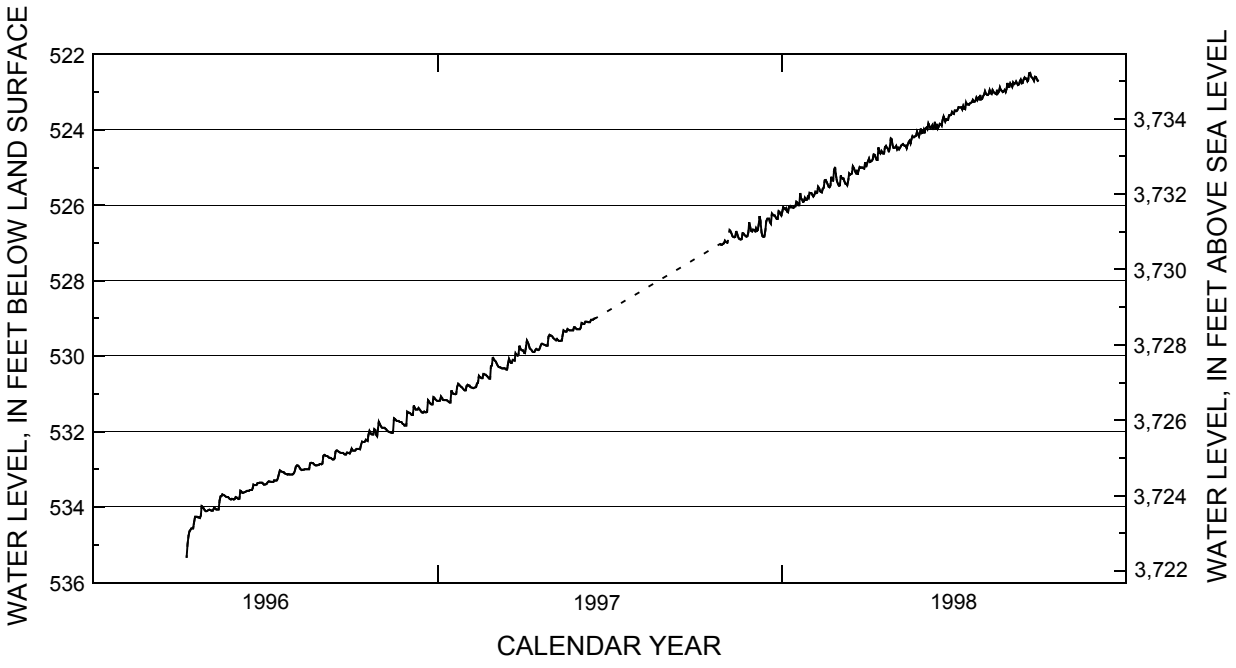
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 4,257.7 ft above sea level. Measuring point: Top of steel casing, 1.4 ft above land-surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—April 1996 to September 1998.

EXTREMES.—Highest daily water level, 522.49 ft below land-surface datum, Sept. 21, 1998; lowest daily water level, 535.35 ft below land-surface datum, Apr. 9, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	534.10	533.75	533.41	533.09	532.64
2	---	---	---	---	---	---	---	534.08	533.77	533.40	533.03	532.62
3	---	---	---	---	---	---	---	534.07	533.79	533.39	532.93	532.63
4	---	---	---	---	---	---	---	534.08	533.78	533.35	532.90	532.65
5	---	---	---	---	---	---	---	534.10	533.57	533.32	532.90	532.65
6	---	---	---	---	---	---	---	534.10	533.59	533.32	532.92	532.66
7	---	---	---	---	---	---	---	534.10	533.62	533.33	532.96	532.69
8	---	---	---	---	---	---	---	534.03	533.62	533.34	533.00	532.70
9	---	---	---	---	---	---	e535.35	534.03	533.61	533.34	533.02	532.70
10	---	---	---	---	---	---	534.98	534.06	533.60	533.34	533.01	532.72
11	---	---	---	---	---	---	534.77	534.07	533.59	533.29	533.01	532.74
12	---	---	---	---	---	---	534.64	534.07	533.57	533.30	533.00	532.74
13	---	---	---	---	---	---	534.61	534.07	533.57	533.30	533.00	532.71
14	---	---	---	---	---	---	534.57	533.83	533.57	533.29	533.00	532.53
15	---	---	---	---	---	---	534.57	533.72	533.55	533.22	533.00	532.50
16	---	---	---	---	---	---	534.57	533.71	533.55	533.13	533.00	532.50
17	---	---	---	---	---	---	534.40	533.67	533.55	533.03	533.00	532.53
18	---	---	---	---	---	---	534.26	533.68	533.50	533.05	532.84	532.55
19	---	---	---	---	---	---	534.26	533.69	533.41	533.06	532.83	532.56
20	---	---	---	---	---	---	534.26	533.71	533.42	533.08	532.84	532.57
21	---	---	---	---	---	---	534.28	533.73	533.42	533.08	532.84	532.57
22	---	---	---	---	---	---	534.28	533.74	533.42	533.11	532.87	532.57
23	---	---	---	---	---	---	534.29	533.74	533.37	533.12	532.89	532.60
24	---	---	---	---	---	---	534.23	533.77	533.37	533.13	532.90	532.61
25	---	---	---	---	---	---	533.98	533.79	533.36	533.14	532.90	532.61
26	---	---	---	---	---	---	534.00	533.80	533.36	533.13	532.89	532.56
27	---	---	---	---	---	---	534.03	533.78	533.36	533.14	532.89	532.56
28	---	---	---	---	---	---	534.08	533.79	533.36	533.14	532.86	532.57
29	---	---	---	---	---	---	534.11	533.80	533.39	533.14	532.86	532.58
30	---	---	---	---	---	---	534.11	533.79	533.41	533.14	532.87	532.53
31	---	---	---	---	---	---	---	533.74	---	533.13	532.85	---
LOW	---	---	---	---	---	---	535.35	534.10	533.79	533.41	533.09	532.74

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	532.45	531.85	531.50	531.19	530.76	530.09	529.85	529.46	529.25	---	---	---
2	532.50	531.89	531.51	531.18	530.78	530.12	529.91	529.48	529.12	---	---	---
3	532.51	531.90	531.54	531.18	530.78	530.14	529.92	529.52	529.14	---	---	---
4	532.51	531.90	531.56	531.07	530.82	530.20	529.77	529.54	529.15	---	---	---
5	532.50	531.90	531.56	531.11	530.83	530.25	529.59	529.56	529.15	---	---	---
6	532.46	531.93	531.31	531.16	530.84	530.29	529.64	529.58	529.09	---	---	---
7	532.46	531.95	531.38	531.17	530.85	530.30	529.71	529.55	529.09	---	---	---
8	532.46	531.99	531.42	531.17	530.84	530.30	529.80	529.58	529.09	---	---	---
9	532.46	532.00	531.42	531.17	530.83	530.32	529.82	529.60	529.10	---	---	---
10	532.47	532.01	531.42	531.17	530.82	530.33	529.85	529.60	529.10	---	---	---
11	532.35	532.02	531.38	531.19	530.72	530.33	529.88	529.59	529.10	---	---	---
12	532.27	532.03	531.41	531.21	530.71	530.32	529.89	529.59	529.04	---	---	---
13	532.28	532.04	531.44	531.23	530.52	530.33	529.89	529.43	529.04	---	---	---
14	532.28	532.03	531.48	531.23	530.56	530.36	529.84	529.32	529.04	---	---	---
15	532.27	531.65	531.50	530.91	530.57	530.36	529.81	529.34	529.01	---	---	---
16	532.22	531.67	531.50	530.97	530.59	530.20	529.83	529.35	529.00	---	---	---
17	532.24	531.70	531.47	531.00	530.59	530.08	529.84	529.35	529.00	---	---	---
18	532.25	531.72	531.49	531.00	530.47	530.14	529.83	529.28	---	---	---	---
19	532.08	531.72	531.49	531.01	530.48	530.18	529.77	529.30	---	---	---	---
20	531.99	531.72	531.48	531.00	530.49	530.18	529.69	529.32	---	---	---	---
21	532.04	531.75	531.17	530.81	530.51	530.10	529.67	529.32	---	---	---	---
22	532.07	531.75	531.19	530.73	530.53	530.11	529.68	529.32	---	---	---	---
23	532.08	531.75	531.24	530.75	530.57	530.12	529.69	529.32	---	---	---	---
24	532.08	531.79	531.27	530.78	530.60	529.93	529.70	529.32	---	---	---	---
25	531.94	531.80	531.28	530.81	530.60	529.97	529.72	529.24	---	---	---	---
26	531.96	531.84	531.28	530.82	530.27	529.99	529.73	529.24	---	---	---	---
27	532.09	531.84	531.09	530.86	530.25	529.98	529.73	529.27	---	---	---	---
28	532.12	531.84	531.11	530.89	530.03	529.73	529.48	529.29	---	---	---	---
29	531.96	531.48	531.15	530.91	---	529.80	529.44	529.29	---	---	---	---
30	531.74	531.50	531.17	530.91	---	529.84	529.46	529.29	---	---	---	---
31	531.80	---	531.19	530.79	---	529.85	---	529.29	---	---	---	---
LOW	532.51	532.04	531.56	531.23	530.85	530.36	529.92	529.60	529.25	---	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	526.94	526.65	526.17	525.68	525.44	524.89	524.47	524.09	523.57	523.18	522.81
2	---	526.97	526.66	526.05	525.73	525.48	524.82	524.43	523.97	523.58	523.11	522.86
3	---	526.99	526.69	526.08	525.77	525.47	524.76	524.52	523.94	523.49	523.07	522.75
4	---	526.99	526.61	526.11	525.73	525.21	524.85	524.48	523.98	523.49	522.98	522.79
5	---	---	526.68	526.08	525.65	525.28	524.84	524.52	523.84	523.50	523.05	522.77
6	---	e526.66	526.66	526.17	525.68	525.30	524.82	524.48	523.90	523.47	523.07	522.72
7	---	526.69	526.50	526.19	525.67	525.29	524.79	524.42	523.96	523.40	523.08	522.77
8	---	526.75	526.29	526.04	525.51	525.37	524.65	524.40	523.93	523.41	523.05	522.81
9	---	526.82	526.42	526.02	525.55	525.43	524.66	524.38	523.88	523.41	522.95	522.80
10	---	526.84	526.71	526.06	525.63	525.43	524.74	524.41	524.00	523.40	523.03	522.72
11	---	526.85	526.82	526.06	525.65	525.47	524.80	524.43	523.92	523.46	523.05	522.67
12	---	526.84	526.84	526.06	525.66	525.35	524.80	524.42	523.79	523.37	522.95	522.77
13	---	526.69	526.83	526.07	525.56	525.16	524.47	524.49	523.98	523.44	523.00	522.76
14	---	526.76	526.68	526.03	525.54	525.19	524.60	524.40	523.85	523.45	523.03	522.66
15	---	526.84	526.42	526.03	525.34	525.17	524.63	524.33	523.96	523.27	523.04	522.61
16	---	526.88	526.36	525.91	525.33	525.16	524.56	524.29	523.91	523.33	523.06	522.65
17	---	526.90	526.36	525.93	525.38	524.97	524.60	524.36	523.84	523.32	522.94	522.64
18	---	526.91	526.36	526.00	525.44	525.01	524.63	524.25	523.85	523.34	523.03	522.72
19	---	526.90	526.45	526.00	525.51	525.09	524.63	524.17	523.89	523.30	522.99	522.68
20	---	526.74	526.49	525.68	525.53	525.14	524.46	524.20	523.74	523.29	522.88	522.50
21	---	526.75	526.22	525.82	525.48	525.10	524.43	524.20	523.65	523.27	522.95	522.49
22	---	526.79	526.25	525.85	525.25	525.19	524.48	524.17	523.73	523.21	522.96	522.59
23	---	526.82	526.27	525.91	525.34	525.07	524.51	524.16	523.78	523.26	523.00	522.62
24	---	526.83	526.27	525.90	525.35	524.99	524.59	524.05	523.72	523.26	522.98	522.65
25	---	526.82	526.32	525.81	525.05	525.01	524.47	524.12	523.74	523.22	522.94	522.70
26	---	526.72	526.37	525.86	524.99	525.00	524.23	524.18	523.74	523.15	523.00	522.59
27	527.03	526.45	526.37	525.86	525.21	525.00	524.25	524.08	523.62	523.21	522.91	522.60
28	527.05	526.57	526.16	525.77	525.37	525.02	524.43	523.97	523.62	523.15	522.76	522.66
29	527.05	526.68	526.18	525.81	---	525.03	524.48	524.08	523.61	523.18	522.86	522.70
30	527.02	526.70	526.24	525.67	---	524.86	524.48	524.07	523.52	523.08	522.86	522.68
31	527.01	---	526.27	525.68	---	524.99	---	524.00	---	523.19	522.77	---
LOW	527.05	526.99	526.84	526.19	525.77	525.48	524.89	524.52	524.09	523.58	523.18	522.86

e Estimated

SITE NUMBER FROM LOCATION MAP.—63.

COUNTY.—Custer.

LOCAL WELL NUMBER.—5S2E28BCCB2.

SITE ID (STATION NUMBER).—433517103534202.

OTHER IDENTIFIERS.—CU-95B and Hell Canyon Mnls.

LOCATION.—Lat 43°35′17.4″, long 103°53′42.3″, in NW1/4SW1/4SW1/4NW1/4 sec. 28, T. 5 S., R. 2 E., Hydrologic Unit 10120107, about 11 mi south of Jewel Cave. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 642 ft deep with 575 ft of 5-in. steel casing; open hole from 575 to 642 ft.

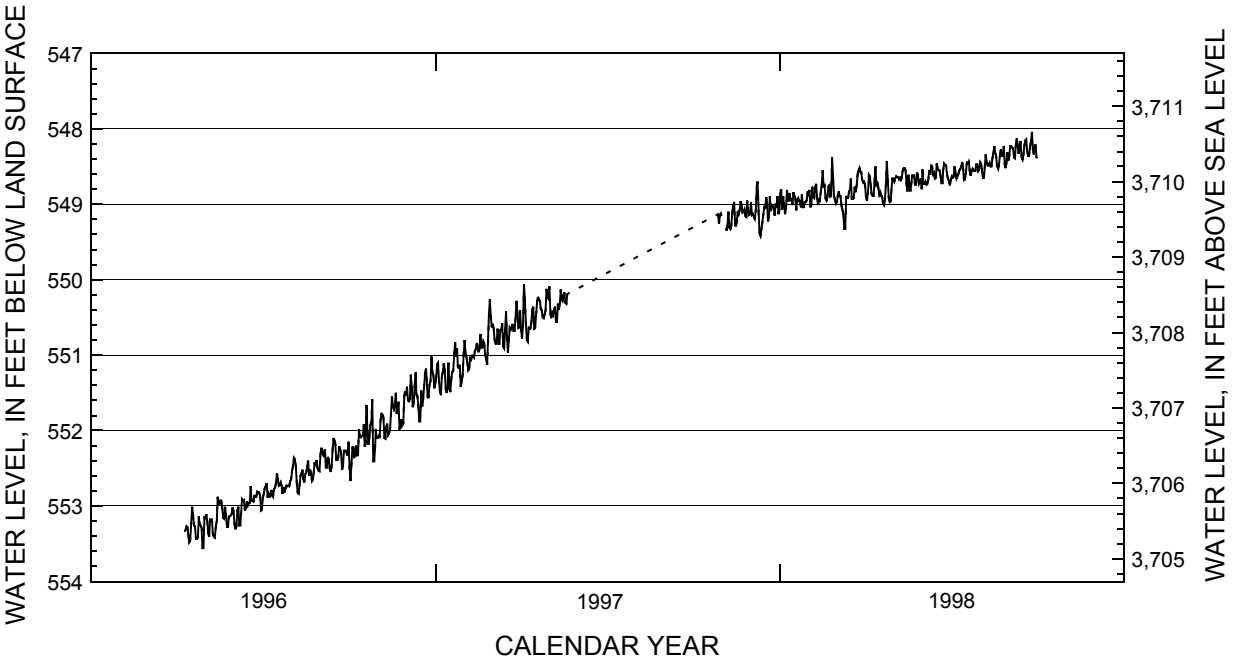
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 4,258.7 ft above sea level. Measuring point: Top of steel casing, 1.2 ft above land-surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—April 1996 to September 1998.

EXTREMES.—Highest daily water level, 548.04 ft below land-surface datum, Sept. 25, 1998; lowest daily water level, 553.56 ft below land-surface datum, Apr. 28-29, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	553.16	553.25	552.89	552.53	552.23
2	---	---	---	---	---	---	---	553.11	553.31	552.84	552.48	552.27
3	---	---	---	---	---	---	---	553.21	553.27	552.76	552.36	552.33
4	---	---	---	---	---	---	---	553.36	553.05	552.73	552.38	552.35
5	---	---	---	---	---	---	---	553.41	553.01	552.70	552.47	552.25
6	---	---	---	---	---	---	---	553.18	553.26	552.89	552.69	552.49
7	---	---	---	---	---	---	---	553.18	553.26	552.84	552.83	552.49
8	---	---	---	---	---	---	---	553.18	553.11	552.88	552.84	552.35
9	---	---	---	---	---	---	553.34	553.38	552.91	552.87	552.71	552.38
10	---	---	---	---	---	---	553.32	553.41	552.93	552.79	552.59	552.51
11	---	---	---	---	---	---	553.27	553.42	552.92	552.85	552.56	552.55
12	---	---	---	---	---	---	553.28	553.28	553.06	552.88	552.52	552.47
13	---	---	---	---	---	---	553.40	553.20	553.03	552.77	552.65	552.25
14	---	---	---	---	---	---	553.48	552.88	552.94	552.76	552.69	552.10
15	---	---	---	---	---	---	553.46	552.98	552.99	552.70	552.58	552.13
16	---	---	---	---	---	---	553.25	552.97	552.96	552.57	552.56	552.17
17	---	---	---	---	---	---	553.01	552.93	552.96	552.65	552.49	552.39
18	---	---	---	---	---	---	553.12	552.93	552.74	552.73	552.40	552.39
19	---	---	---	---	---	---	553.26	553.02	552.93	552.72	552.60	552.36
20	---	---	---	---	---	---	553.27	553.16	552.93	552.69	552.52	552.21
21	---	---	---	---	---	---	553.44	553.17	552.94	552.74	552.56	552.25
22	---	---	---	---	---	---	553.44	553.01	552.87	552.84	552.67	552.29
23	---	---	---	---	---	---	553.42	553.13	552.88	552.75	552.65	552.52
24	---	---	---	---	---	---	553.14	553.28	552.88	552.82	552.56	552.47
25	---	---	---	---	---	---	553.24	553.28	552.81	552.77	552.42	552.27
26	---	---	---	---	---	---	553.26	553.14	552.82	552.73	552.47	552.27
27	---	---	---	---	---	---	553.29	553.14	552.82	552.74	552.39	552.27
28	---	---	---	---	---	---	553.56	553.13	552.87	552.73	552.50	552.30
29	---	---	---	---	---	---	553.56	553.11	553.06	552.74	552.53	552.33
30	---	---	---	---	---	---	553.15	553.02	553.05	552.67	552.54	552.15
31	---	---	---	---	---	---	---	553.07	---	552.64	552.32	---
LOW	---	---	---	---	---	---	553.56	553.42	553.31	552.89	552.84	552.55

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552.49	552.07	551.42	551.29	550.98	550.63	550.66	550.09	---	---	---	---
2	552.67	552.08	551.60	551.12	551.03	550.59	550.78	550.45	---	---	---	---
3	552.45	551.86	551.61	551.10	551.11	550.65	550.61	550.51	---	---	---	---
4	552.22	551.78	551.58	551.34	551.20	550.81	550.06	550.44	---	---	---	---
5	552.22	551.79	551.26	551.49	551.18	550.85	550.26	550.47	---	---	---	---
6	552.35	551.83	551.44	551.53	551.04	550.85	550.58	550.39	---	---	---	---
7	552.34	552.10	551.69	551.28	551.06	550.65	550.80	550.36	---	---	---	---
8	552.20	552.11	551.63	551.22	551.01	550.78	550.82	550.56	---	---	---	---
9	552.33	551.95	551.40	551.11	551.01	550.86	550.64	550.56	---	---	---	---
10	552.33	551.91	551.23	551.20	551.03	550.67	550.65	550.32	---	---	---	---
11	551.98	552.06	551.53	551.46	550.94	550.67	550.65	550.40	---	---	---	---
12	552.08	552.04	551.54	551.50	550.92	550.58	550.57	550.32	---	---	---	---
13	552.09	551.99	551.68	551.45	550.84	550.89	550.39	550.13	---	---	---	---
14	552.07	551.78	551.88	551.10	550.91	550.91	550.36	550.26	---	---	---	---
15	552.07	551.55	551.88	551.45	550.96	550.67	550.65	550.28	---	---	---	---
16	551.92	551.68	551.47	551.49	550.92	550.42	550.64	550.20	---	---	---	---
17	552.21	551.72	551.68	551.31	550.72	550.77	550.45	550.17	---	---	---	---
18	552.17	551.67	551.59	551.22	550.90	550.97	550.29	550.31	---	---	---	---
19	551.66	551.50	551.42	551.21	550.90	550.79	550.23	550.32	---	---	---	---
20	552.02	551.77	551.24	550.98	550.82	550.64	550.27	550.19	---	---	---	---
21	552.19	551.77	551.18	550.83	550.85	550.66	550.28	---	---	---	---	---
22	552.09	551.62	551.32	551.02	551.01	550.62	550.39	---	---	---	---	---
23	551.92	551.98	551.56	550.91	551.05	550.59	550.40	---	---	---	---	---
24	551.91	551.97	551.56	551.16	551.13	550.68	550.50	---	---	---	---	---
25	551.59	551.85	551.38	551.17	550.83	550.68	550.51	---	---	---	---	---
26	552.41	551.93	551.35	551.13	550.46	550.53	550.46	---	---	---	---	---
27	552.41	551.91	551.02	551.42	550.26	550.28	550.41	---	---	---	---	---
28	552.22	551.54	551.23	551.35	550.50	550.43	550.12	---	---	---	---	---
29	551.98	551.48	551.27	551.27	---	550.64	550.23	---	---	---	---	---
30	552.10	551.54	551.44	550.99	---	550.63	550.25	---	---	---	---	---
31	552.10	---	551.37	550.80	---	550.41	---	---	---	---	---	---
LOW	552.67	552.11	551.88	551.53	551.20	550.97	550.82	550.56	---	---	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	548.97	548.86	548.81	548.99	548.75	548.66	548.54	548.67	548.44	548.37
2	---	---	549.14	548.80	549.04	548.97	548.92	548.70	548.73	548.63	548.46	548.23
3	---	---	549.13	549.07	549.01	548.87	548.95	548.66	548.73	548.65	548.56	548.23
4	---	---	549.17	548.89	548.77	548.83	548.84	548.63	548.70	548.64	548.65	548.25
5	---	549.35	549.20	549.01	548.91	548.89	548.61	548.64	548.74	548.50	548.65	548.26
6	---	549.29	549.08	549.13	548.92	548.89	548.63	548.64	548.73	548.58	548.50	548.38
7	---	549.10	548.76	549.04	548.78	549.01	548.75	548.67	548.67	548.66	548.34	548.39
8	---	549.31	548.70	548.81	548.73	549.07	548.87	548.65	548.55	548.63	548.45	548.22
9	---	549.33	549.11	548.95	548.91	549.13	548.89	548.68	548.61	548.60	548.49	548.13
10	---	549.28	549.39	548.95	549.01	549.33	548.89	548.66	548.49	548.55	548.48	548.22
11	---	549.11	549.42	548.85	548.94	549.33	548.69	548.55	548.50	548.53	548.45	548.33
12	---	549.02	549.34	548.96	548.95	548.89	548.50	548.52	548.60	548.51	548.50	548.25
13	---	548.97	549.25	548.92	548.84	548.92	548.74	548.52	548.58	548.44	548.50	548.16
14	---	549.28	549.15	549.01	548.75	548.92	548.72	548.55	548.66	548.53	548.39	548.38
15	---	549.28	549.04	548.84	548.55	548.83	548.78	548.74	548.65	548.68	548.32	548.41
16	---	549.23	549.05	548.89	548.76	548.81	548.87	548.83	548.46	548.67	548.23	548.34
17	---	549.09	548.91	548.93	548.75	548.66	548.84	548.61	548.53	548.58	548.32	548.22
18	---	549.13	548.99	549.08	548.93	548.93	548.89	548.76	548.55	548.45	548.36	548.15
19	---	549.08	549.23	548.94	548.95	548.93	548.89	548.83	548.55	548.46	548.50	548.14
20	---	548.96	549.16	548.92	548.89	548.92	548.99	548.73	548.63	548.43	548.53	548.29
21	---	549.01	548.89	548.96	548.76	548.77	549.01	548.62	548.72	548.56	548.48	548.36
22	---	549.11	549.09	548.96	548.75	548.84	548.94	548.62	548.72	548.62	548.35	548.36
23	---	549.10	549.01	549.04	548.90	548.76	548.74	548.62	548.55	548.55	548.27	548.24
24	---	549.07	549.02	548.87	548.89	548.61	548.43	548.74	548.46	548.53	548.36	548.17
25	---	549.16	549.06	549.04	548.38	548.55	548.69	548.74	548.48	548.56	548.36	548.04
26	---	549.17	549.15	549.04	548.66	548.52	548.92	548.58	548.48	548.56	548.23	548.28
27	549.13	548.95	548.99	548.97	548.89	548.57	548.97	548.61	548.60	548.56	548.48	548.34
28	549.26	549.08	549.04	548.97	548.94	548.57	548.96	548.73	548.66	548.47	548.52	548.22
29	549.14	549.14	548.89	548.95	---	548.68	548.83	548.70	548.69	548.47	548.46	548.22
30	549.12	549.13	549.13	548.83	---	548.71	548.66	548.66	548.75	548.56	548.31	548.39
31	---	---	549.09	548.86	---	548.70	---	548.80	---	548.54	548.42	---
LOW	549.26	549.35	549.42	549.13	549.04	549.33	549.01	548.83	548.75	548.68	548.65	548.41

SITE NUMBER FROM LOCATION MAP.—C2.

COUNTY.—Custer.

LOCAL NUMBER.—6S5E12DBAB.

SITE ID (STATION NUMBER).—433302103281501.

OTHER IDENTIFIER.—Windy City Lake.

LOCATION.—Lat 43°32′57″, long 103°28′27″, in NW1/4NE1/4NW1/4SE1/4 sec. 12, T. 6 S., R. 5 E., Hydrologic Unit 10120109, at Wind Cave National Park near Hot Springs. Owner: National Park Service.

AQUIFER.—Madison.

SITE CHARACTERISTICS.—Pool of water, approximately 450 ft below land surface in Wind Cave, called Windy City Lake.

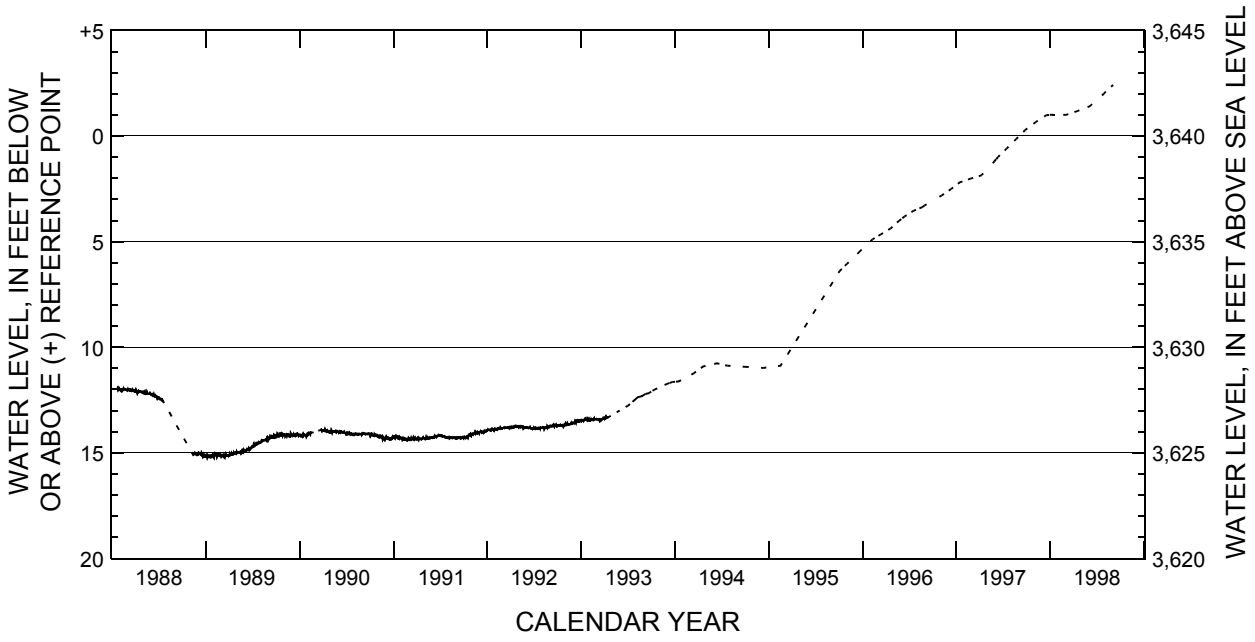
INSTRUMENTATION.—Electronic data logger with pressure transducer until June 12, 1996.

DATUM.—Elevation of land surface is about 4,094 ft above sea level at visitor center. Measuring point: Staff gage with 0.0 being 12.84 ft below a brass cap reference point with elevation of about 3,640 ft above sea level. Calcite gage with "0" being 13.00 ft below brass cap reference point.

REMARKS.—Records good. Trip reports indicate that Calcite Lake and Windy City Lake were visibly merged by the Feb. 8, 1996, trip, but they may have been connected by Nov. 1, 1995.

PERIOD OF RECORD.—January 1988 to September 1998.

EXTREMES.—Highest daily water level, 2.42 ft (estimated) above reference point, Sept. 3, 1998; lowest daily water level, 15.24 ft below reference point, Mar. 14, 1989.



WATER LEVEL, IN FEET BELOW OR ABOVE (+) REFERENCE POINT, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	e10.98	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	e10.88	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	10.98	---	10.88	---	---	---	---	---	---	---

WATER LEVEL, IN FEET BELOW OR ABOVE (+) REFERENCE POINT, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e6.06	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	e6.38	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	e4.90	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	e4.66	---	---	e3.82	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	e3.54	---	---
19	---	---	---	---	---	---	e4.38	---	---	---	e3.38	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	e4.02	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	e3.30	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	6.38	6.06	---	---	4.90	4.66	4.38	4.02	3.82	3.54	3.38	---

e Estimated

WATER LEVEL, IN FEET BELOW OR ABOVE (+) REFERENCE POINT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	e2.82	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	e1.86	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	e2.52	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	e1.00	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	e2.19	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	e.60	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	e.15	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	e2.02	---	---	---	---	---	---	e+.28
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	e1.20	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	2.82	2.52	2.19	2.02	---	1.86	1.20	1.00	.60	.15	+.28

WATER LEVEL, IN FEET BELOW OR ABOVE (+) REFERENCE POINT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	e+1.00	---	---	---	---	---	e+2.42
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	e+.65	---	---	---	---	---	---	e+1.42	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	e+1.01	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	e+1.17	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	e+.98	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	e+2.01	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	+.65	+.98	+1.01	---	+1.00	+1.17	---	+1.42	+2.01	---	+2.42

e Estimated

SITE NUMBER FROM LOCATION MAP.—64.

COUNTY.—Custer.

LOCAL WELL NUMBER.—6S6E21BBBB.

SITE ID (STATION NUMBER).—433115103251401.

OTHER IDENTIFIERS.—CU-91A and 7-11 Ranch Mdsn.

LOCATION.—Lat 43°31′15.4″, long 103°25′16.1″, in NW1/4NW1/4NW1/4NW1/4 sec. 21, T. 6 S., R. 6 E., Hydrologic Unit 10120109, 5 mi northeast of Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,165 ft deep with 1,135 ft of 5-in. steel casing; open hole from 1,135 to 1,165 ft.

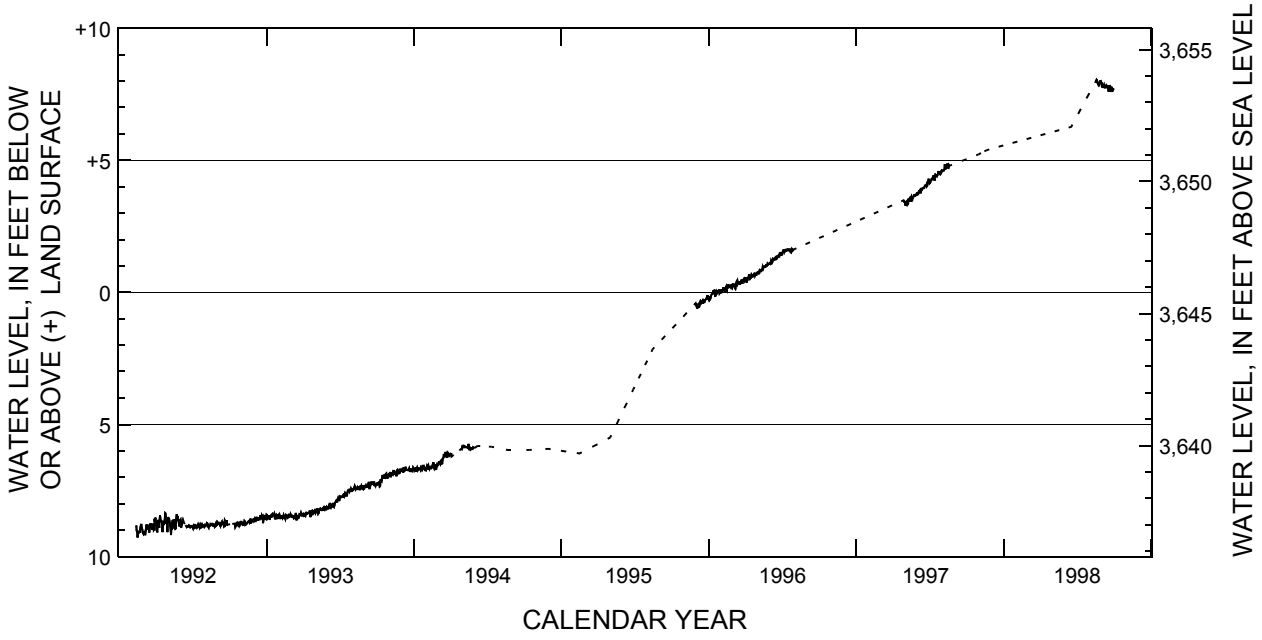
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,645.8 ft above sea level. Measuring point: Top of steel casing, 1.7 ft above land-surface datum. Base of gage 2.3 ft above land-surface datum since Apr. 28, 1997.

REMARKS.—Current records fair. Records prior to June 17, 1992, poor because of unexplained fluctuations in water level that may be a result of instrumentation problems. Data is corrected for antifreeze density difference.

PERIOD OF RECORD.—February 1992 to September 1998.

EXTREMES.—Highest daily water level, 8.05 ft above land-surface datum, Aug. 19, 1998; lowest daily water level, 9.28 ft below land-surface datum, Feb. 16, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	e5.50	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	e5.97	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	e6.10	---	---	---	---	---	e2.16	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	e3.68	---	---	---
29	---	e5.93	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	5.97	5.93	---	---	6.10	---	---	5.50	3.68	---	2.16	---

WATER LEVEL, IN FEET BELOW OR ABOVE (+) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	.49	.27	.03	+.33	+.57	+.76	+1.08	+1.51	---	---
2	---	---	.51	.22	+.02	+.21	+.50	+.76	+1.07	+1.52	---	---
3	---	---	.58	.16	+.02	+.30	+.41	+.71	+1.11	+1.53	---	---
4	---	---	.59	.28	+.09	+.30	+.40	+.71	+1.19	+1.59	---	---
5	---	---	.58	.24	+.11	+.21	+.45	+.72	+1.15	+1.59	---	---
6	---	---	.46	.18	+.18	+.16	+.54	+.84	+1.13	+1.53	---	---
7	---	---	.44	.12	+.13	+.14	+.55	+.85	+1.15	+1.56	---	---
8	---	---	.58	.08	+.14	+.23	+.56	+.84	+1.21	+1.54	---	---
9	---	---	.52	.06	+.11	+.33	+.57	+.80	+1.27	+1.57	---	---
10	---	---	.44	.06	+.01	+.40	+.68	+.80	+1.25	+1.64	---	---
11	---	---	.36	.06	+.10	+.42	+.54	+.82	+1.25	+1.58	---	---
12	---	---	.32	.00	+.16	+.45	+.58	+.86	+1.24	+1.58	---	---
13	---	---	.35	+.07	+.22	+.32	+.52	+.89	+1.29	+1.62	---	---
14	---	---	.40	.04	+.11	+.37	+.55	+.96	+1.31	+1.63	---	---
15	---	---	.37	+.07	+.07	+.42	+.59	+.92	+1.29	+1.63	---	---
16	---	---	.35	+.10	+.21	+.36	+.68	+.96	+1.32	+1.62	---	---
17	---	---	.43	.16	+.15	+.36	+.66	+.98	+1.33	+1.62	---	---
18	---	---	.37	.11	+.30	+.33	+.63	+.98	+1.39	+1.60	---	---
19	---	---	.29	.02	+.20	+.32	+.61	+.96	+1.30	+1.62	---	---
20	---	---	.31	+.02	+.20	+.37	+.63	+.96	+1.34	+1.63	---	---
21	---	---	.40	.05	+.23	+.40	+.62	+.97	+1.35	+1.59	---	---
22	---	---	.35	.04	+.20	+.45	+.63	+1.06	+1.41	+1.54	---	---
23	---	---	.30	+.07	+.20	+.45	+.69	+1.01	+1.41	+1.57	---	---
24	---	---	.29	+.04	+.28	+.33	+.74	+1.00	+1.39	+1.54	---	---
25	---	---	.28	+.02	+.24	+.38	+.65	+1.02	+1.47	+1.62	---	---
26	---	---	.24	+.08	+.28	+.47	+.69	+1.08	+1.47	+1.60	---	---
27	---	---	.24	+.07	+.16	+.47	+.73	+1.05	+1.48	+1.62	---	---
28	---	---	.16	.03	+.15	+.50	+.63	+1.06	+1.46	+1.60	---	---
29	---	---	.16	.00	+.30	+.46	+.71	+1.08	+1.39	+1.62	---	---
30	---	e.41	.10	+.03	---	+.43	+.74	+1.10	+1.45	+1.63	---	---
31	---	---	.23	+.10	---	+.48	---	+1.11	---	---	---	---
LOW	---	.41	.59	.28	.03	+.14	+.40	+.71	+1.07	+1.51	---	---

e Estimated

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	+3.46	+3.74	+4.18	+4.59	---
2	---	---	---	---	---	---	---	+3.31	+3.72	+4.14	+4.61	---
3	---	---	---	---	---	---	---	+3.31	+3.72	+4.16	+4.61	---
4	---	---	---	---	---	---	---	+3.43	+3.76	+4.20	+4.61	---
5	---	---	---	---	---	---	---	+3.37	+3.85	+4.23	+4.61	---
6	---	---	---	---	---	---	---	+3.43	+3.82	+4.28	+4.63	---
7	---	---	---	---	---	---	---	+3.42	+3.86	+4.30	+4.66	---
8	---	---	---	---	---	---	---	+3.33	+3.79	+4.29	+4.85	---
9	---	---	---	---	---	---	---	+3.37	+3.78	+4.35	+4.68	---
10	---	---	---	---	---	---	---	+3.55	+3.82	+4.41	+4.68	---
11	---	---	---	---	---	---	---	+3.46	+3.95	+4.41	+4.77	---
12	---	---	---	---	---	---	---	+3.51	+3.89	+4.40	+4.75	---
13	---	---	---	---	---	---	---	+3.55	+3.91	+4.37	+4.79	---
14	---	---	---	---	---	---	---	+3.51	+3.95	+4.23	+4.87	---
15	---	---	---	---	---	---	---	+3.43	+3.95	+4.38	+4.81	---
16	---	---	---	---	---	---	---	+3.60	+3.94	+4.46	+4.72	---
17	---	---	---	---	---	---	---	+3.62	+3.94	+4.44	+4.71	---
18	---	---	---	---	---	---	---	+3.48	+3.97	+4.43	+4.83	---
19	---	---	---	---	---	---	---	+3.48	+4.02	+4.41	+4.81	---
20	---	---	---	---	---	---	---	+3.56	+4.04	+4.44	+4.80	---
21	---	---	---	---	---	---	---	+3.61	+4.05	+4.44	---	---
22	---	---	---	---	---	---	---	+3.64	+4.06	+4.50	---	---
23	---	---	---	---	---	---	---	+3.64	+4.06	+4.56	---	---
24	---	---	---	---	---	---	---	+3.69	+4.09	+4.56	---	---
25	---	---	---	---	---	---	---	+3.69	+4.02	+4.55	---	---
26	---	---	---	---	---	---	---	+3.65	+4.05	+4.55	---	---
27	---	---	---	---	---	---	---	+3.65	+4.16	+4.49	---	---
28	---	---	---	---	---	---	+3.49	+3.69	+4.23	+4.47	---	---
29	---	---	---	---	---	---	+3.43	+3.71	+4.21	+4.50	---	---
30	---	---	---	---	---	---	+3.40	+3.70	+4.23	+4.59	---	---
31	---	---	---	---	---	---	---	+3.78	---	+4.61	---	---
LOW	---	---	---	---	---	---	+3.40	+3.31	+3.72	+4.14	+4.59	---

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	+7.87
2	---	---	---	---	---	---	---	---	---	---	---	+7.76
3	---	---	---	---	---	---	---	---	---	---	---	+7.83
4	---	---	---	---	---	---	---	---	---	---	---	+7.80
5	---	---	---	---	---	---	---	---	---	---	---	+7.82
6	---	---	---	---	---	---	---	---	---	---	---	+7.86
7	---	---	---	---	---	---	---	---	---	---	---	+7.79
8	---	---	---	---	---	---	---	---	---	---	---	+7.76
9	---	---	---	---	---	---	---	---	---	---	---	+7.76
10	---	---	---	---	---	---	---	---	---	---	---	+7.81
11	---	---	---	---	---	---	---	---	---	---	---	+7.84
12	---	---	---	---	---	---	---	---	---	---	---	+7.77
13	---	---	---	---	---	---	---	---	---	---	---	+7.77
14	---	---	---	---	---	---	---	---	---	---	---	+7.85
15	---	---	---	---	---	---	---	---	---	---	---	+7.81
16	---	---	---	---	---	---	---	---	---	---	---	+7.74
17	---	---	---	---	---	---	---	---	e+6.27	---	---	+7.72
18	---	---	---	---	---	---	---	---	---	---	+8.03	+7.61
19	---	---	---	---	---	---	---	---	---	---	+8.05	+7.66
20	---	e+5.39	---	---	---	---	---	---	---	---	+8.03	+7.81
21	---	---	---	---	---	---	---	---	---	---	+7.95	+7.82
22	---	---	---	---	---	---	---	---	---	---	+7.93	+7.75
23	---	---	---	---	---	---	---	---	---	---	+7.88	+7.73
24	---	---	---	---	---	---	---	---	---	---	+7.92	+7.69
25	---	---	---	---	---	---	---	---	---	---	+7.91	+7.59
26	---	---	---	---	---	---	---	---	---	---	+7.89	+7.68
27	---	---	---	---	---	---	---	---	---	---	+7.99	+7.73
28	---	---	---	---	---	---	---	---	---	---	+8.00	+7.70
29	---	---	---	---	---	---	---	---	---	---	+7.93	+7.67
30	---	---	---	---	---	---	---	---	---	---	+7.92	+7.72
31	e+5.23	---	---	---	---	---	---	---	---	---	+7.95	---
LOW	+5.23	+5.39	---	---	---	---	---	---	+6.27	---	+7.88	+7.59

e Estimated

SITE NUMBER FROM LOCATION MAP.—65.

COUNTY.—Custer.

LOCAL WELL NUMBER.—6S6E21BBBB2.

SITE ID (STATION NUMBER).—433115103251402.

OTHER IDENTIFIERS.—CU-91B and 7-11 Ranch Mnls.

LOCATION.—Lat 43°31′15.4″, long 103°25′16.1″, in NW1/4NW1/4NW1/4NW1/4 sec. 21, T. 6 S., R. 6 E., Hydrologic Unit 10120109, 5 mi northeast of Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 480 ft deep with 443 ft of 5-in. steel casing; open hole from 443 to 480 ft.

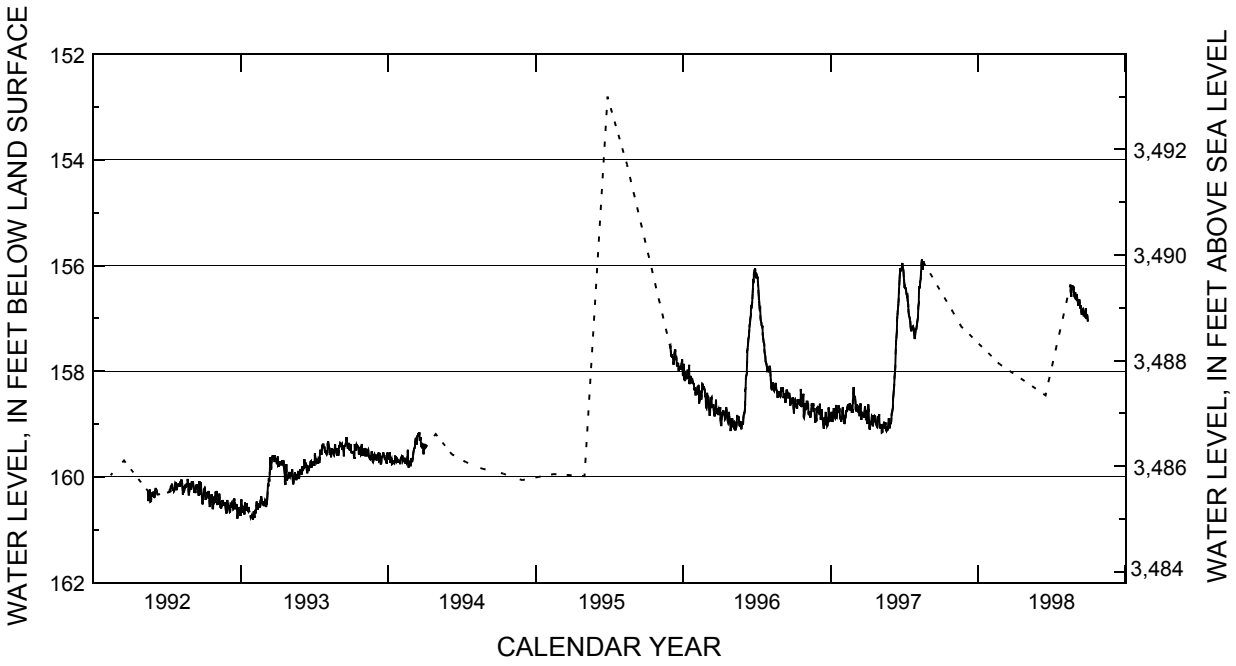
INSTRUMENTATION.—Electronic data logger with pressure transducer -- 60-minute interval. Digital water-level recorder with 60-minute interval prior to June 8, 1992.

DATUM.—Elevation of land-surface datum is 3,645.8 ft above sea level. Measuring point: Top of steel casing, 1.70 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—February 1992 to September 1998.

EXTREMES.—Highest daily water level, 152.80 ft (estimated) below land-surface datum, June 28, 1995; lowest daily water level, 160.81 ft below land-surface datum, Jan. 31, 1993.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	e159.99	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	e159.94	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	e159.95	---	---	---	---	---	e154.08	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	e152.80	---	---	---
29	---	e160.06	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	159.94	160.06	---	---	159.95	---	---	159.99	152.80	---	154.08	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	157.52	158.09	158.44	158.41	158.79	158.91	158.80	156.17	157.95	158.31
2	---	---	157.65	158.07	158.44	158.51	158.68	158.91	158.75	156.20	157.96	158.35
3	---	---	157.72	157.86	158.44	158.47	158.92	158.96	158.63	156.24	157.90	158.36
4	---	---	157.68	158.15	158.42	158.51	159.02	159.04	158.35	156.21	157.95	158.38
5	---	---	157.73	158.17	158.36	158.66	159.02	159.06	158.11	156.34	158.05	158.30
6	---	---	157.73	158.17	158.30	158.74	158.87	158.97	158.09	156.51	158.19	158.51
7	---	---	157.73	158.15	158.29	158.84	158.77	158.96	158.05	156.60	158.32	158.48
8	---	---	157.86	158.05	158.32	158.82	158.82	158.97	157.86	156.72	158.36	158.42
9	---	---	157.86	158.07	158.31	158.66	158.82	159.08	157.61	156.82	158.29	158.45
10	---	---	157.79	158.07	158.61	158.55	158.74	159.12	157.48	156.81	158.21	158.55
11	---	---	157.67	158.09	158.57	158.51	158.83	159.09	157.39	156.99	158.24	158.60
12	---	---	157.61	158.07	158.54	158.50	158.77	159.05	157.35	157.05	158.22	158.55
13	---	---	157.59	157.97	158.37	158.68	158.85	159.00	157.26	157.08	158.36	158.43
14	---	---	157.76	158.15	158.44	158.68	158.90	158.83	157.12	157.14	158.37	158.35
15	---	---	157.76	158.09	158.54	158.66	158.89	158.90	157.10	157.16	158.32	158.37
16	---	---	157.75	157.88	158.49	158.63	158.81	158.87	157.01	157.14	158.30	158.41
17	---	---	157.91	158.23	158.36	158.70	158.68	158.87	156.96	157.31	158.30	158.50
18	---	---	157.88	158.23	158.24	158.82	158.74	158.87	156.78	157.39	158.22	158.50
19	---	---	157.86	158.12	158.25	158.84	158.83	158.94	156.79	157.46	158.34	158.50
20	---	---	157.84	158.09	158.34	158.84	158.83	159.03	156.74	157.48	158.37	158.41
21	---	---	157.98	158.19	158.34	158.72	158.94	159.04	156.58	157.63	158.38	158.45
22	---	---	157.98	158.23	158.29	158.68	158.97	158.95	156.47	157.69	158.49	158.49
23	---	---	157.95	158.13	158.35	158.54	158.94	159.01	156.29	157.72	158.49	158.65
24	---	---	157.93	158.16	158.36	158.79	158.77	159.10	156.30	157.82	158.43	158.61
25	---	---	157.95	158.19	158.49	158.80	158.90	159.08	156.13	157.84	158.38	158.51
26	---	---	157.95	158.23	158.47	158.73	158.94	159.00	156.10	157.86	158.47	158.53
27	---	---	157.97	158.24	158.68	158.76	158.96	158.96	156.07	157.92	158.38	158.53
28	---	---	157.86	158.24	158.70	158.72	159.13	159.01	156.05	157.99	158.47	158.56
29	---	---	157.84	158.36	158.64	158.71	159.10	158.99	156.20	157.98	158.48	158.62
30	---	157.53	157.77	158.34	---	158.83	158.91	158.88	156.19	158.00	158.46	158.50
31	---	---	157.95	158.31	---	158.81	---	158.80	---	157.99	158.36	---
LOW	---	157.53	157.98	158.36	158.70	158.84	159.13	159.12	158.80	158.00	158.49	158.65

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158.68	158.69	158.66	158.85	158.83	158.53	158.96	158.82	158.80	156.17	157.22	---
2	158.80	158.72	158.77	158.81	158.85	158.47	159.00	159.04	158.79	156.31	157.16	---
3	158.66	158.58	158.80	158.77	158.91	158.58	158.92	159.08	158.75	156.42	157.11	---
4	158.55	158.58	158.79	158.89	159.00	158.72	158.63	159.04	158.70	156.40	157.06	---
5	158.54	158.61	158.62	158.96	158.97	158.76	158.72	159.08	158.51	156.44	156.99	---
6	158.68	158.63	158.76	158.94	158.89	158.74	158.95	159.02	158.41	156.42	156.79	---
7	158.64	158.81	158.92	158.81	158.87	158.63	159.08	159.02	158.29	156.51	156.72	---
8	158.61	158.82	158.90	158.77	158.81	158.74	159.11	159.16	158.10	156.55	156.41	---
9	158.70	158.79	158.79	158.70	158.74	158.75	159.00	159.15	158.03	156.58	156.40	---
10	158.70	158.80	158.72	158.77	158.77	158.68	159.00	159.01	157.93	156.57	156.43	---
11	158.53	158.87	158.89	158.87	158.68	158.70	158.97	159.08	157.63	156.66	156.29	---
12	158.61	158.87	158.91	158.89	158.66	158.67	158.93	159.03	157.45	156.74	156.26	---
13	158.61	158.84	158.96	158.87	158.63	158.83	158.85	158.96	157.33	156.87	156.15	---
14	158.61	158.74	159.06	158.64	158.66	158.85	158.86	159.05	157.26	156.95	155.96	---
15	158.61	158.61	159.09	158.86	158.74	158.74	159.04	159.06	157.01	156.97	155.88	---
16	158.53	158.64	158.88	158.87	158.70	158.61	159.03	159.01	156.89	156.99	156.02	---
17	158.64	158.70	159.02	158.76	158.61	158.84	158.94	158.97	156.77	157.07	156.08	---
18	158.65	158.70	158.96	158.79	158.74	158.92	158.85	159.11	156.66	157.15	155.93	---
19	158.34	158.61	158.87	158.76	158.72	158.83	158.84	159.13	156.48	157.24	155.93	---
20	158.55	158.77	158.77	158.66	158.66	158.77	158.85	159.11	156.32	157.17	155.95	---
21	158.67	158.75	158.85	158.66	158.68	158.83	158.87	159.04	156.21	157.20	---	---
22	158.63	158.70	158.91	158.72	158.77	158.83	158.96	159.07	156.11	157.18	---	---
23	158.57	158.96	159.04	158.72	158.77	158.83	158.96	159.08	156.05	157.16	---	---
24	158.57	158.96	159.02	158.89	158.77	158.87	159.02	159.01	156.08	157.15	---	---
25	158.43	158.91	158.96	158.90	158.57	158.87	159.04	158.89	156.09	157.18	---	---
26	158.87	158.93	158.94	158.86	158.41	158.77	159.05	159.00	156.08	157.22	---	---
27	158.88	158.93	158.69	158.96	158.30	158.66	158.96	159.08	155.95	157.31	---	---
28	158.79	158.70	158.89	158.91	158.44	158.74	158.85	159.04	156.00	157.39	---	---
29	158.61	158.69	158.90	158.89	---	158.88	158.89	158.97	156.05	157.33	---	---
30	158.70	158.72	158.94	158.75	---	158.87	158.89	159.00	156.09	157.26	---	---
31	158.74	---	158.93	158.68	---	158.74	---	158.94	---	157.20	---	---
LOW	158.88	158.96	159.09	158.96	159.00	158.92	159.11	159.16	158.80	157.39	157.22	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	156.64
2	---	---	---	---	---	---	---	---	---	---	---	156.54
3	---	---	---	---	---	---	---	---	---	---	---	156.58
4	---	---	---	---	---	---	---	---	---	---	---	156.65
5	---	---	---	---	---	---	---	---	---	---	---	156.68
6	---	---	---	---	---	---	---	---	---	---	---	156.74
7	---	---	---	---	---	---	---	---	---	---	---	156.76
8	---	---	---	---	---	---	---	---	---	---	---	156.68
9	---	---	---	---	---	---	---	---	---	---	---	156.64
10	---	---	---	---	---	---	---	---	---	---	---	156.68
11	---	---	---	---	---	---	---	---	---	---	---	156.81
12	---	---	---	---	---	---	---	---	---	---	---	156.77
13	---	---	---	---	---	---	---	---	---	---	---	156.77
14	---	---	---	---	---	---	---	---	---	---	---	156.88
15	---	---	---	---	---	---	---	---	---	---	---	156.93
16	---	---	---	---	---	---	---	---	---	---	---	156.90
17	---	---	---	---	---	---	---	---	e158.46	---	---	156.84
18	---	---	---	---	---	---	---	---	---	---	156.36	156.83
19	---	---	---	---	---	---	---	---	---	---	156.50	156.85
20	---	e157.15	---	---	---	---	---	---	---	---	156.59	156.96
21	---	---	---	---	---	---	---	---	---	---	156.47	156.93
22	---	---	---	---	---	---	---	---	---	---	156.40	156.95
23	---	---	---	---	---	---	---	---	---	---	156.38	156.90
24	---	---	---	---	e157.87	---	---	---	---	---	156.42	156.87
25	---	---	---	---	---	---	---	---	---	---	156.45	156.81
26	---	---	---	---	---	---	---	---	---	---	156.40	156.92
27	---	---	---	---	---	---	---	---	---	---	156.53	157.01
28	---	---	---	---	---	---	---	---	---	---	156.59	156.92
29	---	---	---	---	---	---	---	---	---	---	156.60	156.96
30	---	---	---	---	---	---	---	---	---	---	156.51	157.06
31	e156.88	---	---	---	---	---	---	---	---	---	156.63	---
LOW	156.88	157.15	---	---	157.87	---	---	---	158.46	---	156.63	157.06

e Estimated

SITE NUMBER FROM LOCATION MAP.—66.

COUNTY.—Custer.

LOCAL WELL NUMBER.—6S 6E21BBBB3.

SITE ID (STATION NUMBER).—433115103251403.

OTHER IDENTIFIER.—CU-96A and 7-11 Ranch Mnkt.

LOCATION.—Lat 43°31′15.3″, long 103°25′16.2″, in NW1/4NW1/4NW1/4NW1/4 sec. 21, T. 6 S., R. 6 E., Hydrologic Unit 10120109, 5 mi northeast of Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnekahta.

WELL CHARACTERISTICS.—Drilled observation well, 281 ft deep with 245 ft of 5-in. steel casing; open hole from 245 to 281 ft.

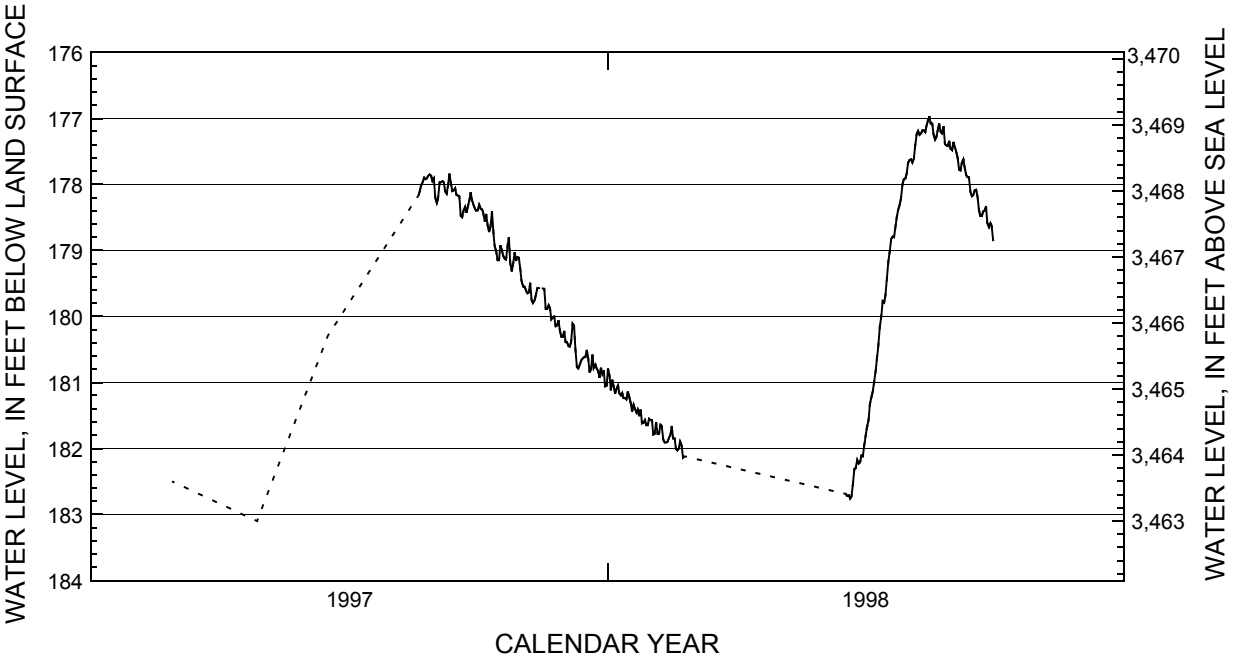
INSTRUMENTATION.—Electronic data logger with submersible pressure transducer -- 60-minute interval.

DATUM.—Elevation of land-surface datum is 3,646.1 ft above sea level. Measuring point: Top of steel casing, 1.4 ft above land-surface datum.

REMARKS.—Records good.

PERIOD OF RECORD.—February 1997 to September 1998.

EXTREMES.—Highest daily water level, 176.97 ft below land-surface datum, Aug. 16, 1998; lowest daily water level, 183.1 ft below land-surface datum, Apr. 28, 1997.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	178.21
2	---	---	---	---	---	---	---	---	---	---	---	178.28
3	---	---	---	---	---	---	---	---	---	---	---	178.21
4	---	---	---	---	---	---	---	---	---	---	---	177.97
5	---	---	---	---	---	---	---	---	---	---	---	177.97
6	---	---	---	---	---	---	---	---	---	---	---	177.95
7	---	---	---	---	---	---	---	---	---	---	---	177.97
8	---	---	---	---	---	---	---	---	---	---	---	178.11
9	---	---	---	---	---	---	---	---	---	---	---	178.14
10	---	---	---	---	---	---	---	---	---	---	---	178.01
11	---	---	---	---	---	---	---	---	---	---	---	177.84
12	---	---	---	---	---	---	---	---	---	---	---	177.99
13	---	---	---	---	---	---	---	---	---	---	---	178.10
14	---	---	---	---	---	---	---	---	---	---	---	178.09
15	---	---	---	---	---	---	---	---	---	---	---	178.06
16	---	---	---	---	---	---	---	---	---	---	---	178.16
17	---	---	---	---	---	---	---	---	e180.3	---	---	178.17
18	---	---	---	---	---	---	---	---	---	---	---	178.18
19	---	---	---	---	---	---	---	---	---	---	---	178.48
20	---	---	---	---	---	---	---	---	---	---	178.17	178.50
21	---	---	---	---	---	---	---	---	---	---	178.10	178.39
22	---	---	---	---	---	---	---	---	---	---	178.01	178.34
23	---	---	---	---	---	---	---	---	---	---	177.97	178.43
24	---	---	---	---	---	---	---	---	---	---	177.90	178.34
25	---	---	---	---	---	---	---	---	---	---	177.92	178.24
26	---	---	---	---	---	---	---	---	---	---	177.91	178.12
27	---	---	---	---	e182.5	---	---	---	---	---	177.87	178.25
28	---	---	---	---	---	---	e183.1	---	---	---	177.85	178.32
29	---	---	---	---	---	---	---	---	---	---	177.87	178.37
30	---	---	---	---	---	---	---	---	---	---	177.95	178.40
31	---	---	---	---	---	---	---	---	---	---	177.91	---
LOW	---	---	---	---	182.50	---	183.10	---	180.30	---	178.17	178.50

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178.39	179.47	180.22	180.79	181.57	---	---	---	---	181.95	177.67	177.48
2	178.31	179.55	180.39	180.90	181.79	---	---	---	---	181.80	177.63	177.36
3	178.37	179.55	180.39	181.12	181.78	---	---	---	---	181.68	177.62	177.45
4	178.38	179.61	180.45	180.96	181.60	---	---	---	---	181.57	177.67	177.51
5	178.44	179.65	180.46	181.07	181.78	---	---	---	---	181.33	177.61	177.59
6	178.57	179.64	180.38	181.17	181.78	---	---	---	---	181.22	177.42	177.78
7	178.45	179.49	180.11	181.10	181.64	---	---	---	---	181.14	177.23	177.79
8	178.62	179.76	180.14	181.04	181.66	---	---	---	---	181.01	177.19	177.67
9	178.72	179.80	180.51	181.17	181.87	---	---	---	---	180.83	177.25	177.62
10	178.64	179.76	180.77	181.20	181.91	---	---	---	---	180.63	177.23	177.75
11	178.41	179.68	180.79	181.16	181.91	---	---	---	---	180.44	177.18	177.86
12	178.72	179.57	180.73	181.24	181.90	---	---	---	---	180.16	177.18	177.89
13	178.94	---	180.67	181.24	181.84	---	---	---	---	180.01	177.21	177.89
14	179.02	---	180.64	181.26	181.80	---	---	---	---	179.77	177.11	178.12
15	179.15	---	180.62	181.14	181.66	---	---	---	---	179.79	177.02	178.18
16	179.15	---	180.62	181.22	181.85	---	---	---	---	179.69	176.97	178.16
17	178.92	179.58	180.51	181.31	181.85	---	---	---	---	179.43	177.08	178.09
18	179.00	179.89	180.64	181.44	182.01	---	---	---	182.69	179.18	177.08	178.08
19	179.09	179.89	180.85	181.34	182.03	---	---	---	182.72	179.02	177.25	178.19
20	179.13	179.83	180.79	181.40	182.00	---	---	---	182.71	178.83	177.32	178.39
21	179.14	179.88	180.58	181.46	181.90	---	---	---	182.76	178.79	177.28	178.48
22	178.92	180.04	180.78	181.41	181.96	---	---	---	182.73	178.80	177.17	178.48
23	178.80	180.01	180.73	181.51	182.14	---	---	---	182.54	178.64	177.08	178.41
24	179.19	180.00	180.79	181.41	182.12	---	---	---	182.31	178.50	177.21	178.40
25	179.32	180.15	180.83	181.62	---	---	---	---	182.30	178.37	177.23	178.33
26	179.21	180.14	180.93	181.61	---	---	---	---	182.18	178.31	177.12	178.59
27	179.03	180.06	180.78	181.57	---	---	---	---	182.23	178.22	177.39	178.65
28	179.16	180.22	180.87	181.65	---	---	---	---	182.21	178.00	177.41	178.59
29	179.10	180.31	180.82	181.65	---	---	---	---	182.11	177.92	177.42	178.63
30	179.11	180.31	181.06	181.55	---	---	---	---	182.12	177.91	177.34	178.86
31	179.28	---	181.05	181.57	---	---	---	---	---	177.84	177.46	---
LOW	179.32	180.31	181.06	181.65	182.14	---	---	---	182.76	181.95	177.67	178.86

e Estimated

SITE NUMBER FROM LOCATION MAP.—67.

COUNTY.—Fall River.

LOCAL WELL NUMBER.—7S4E19BCCB.

SITE ID (STATION NUMBER).—432548103414801.

OTHER IDENTIFIERS.—FR-92A and Mnkt Jnct Mdsn.

LOCATION.—Lat 43°25′45.8″, long 103°41′51.2″, in NW1/4SW1/4SW1/4NW1/4 sec. 19, T. 7 S., R. 4 E., Hydrologic Unit 10120106, about 10 mi west of Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 1,540 ft deep with 1,339 ft of 5-in. steel casing; 4.5-in. steel casing from 1,309 to 1,540 ft; bottom 14 ft slotted with 1/4 by 1 1/4-in. vertical slots.

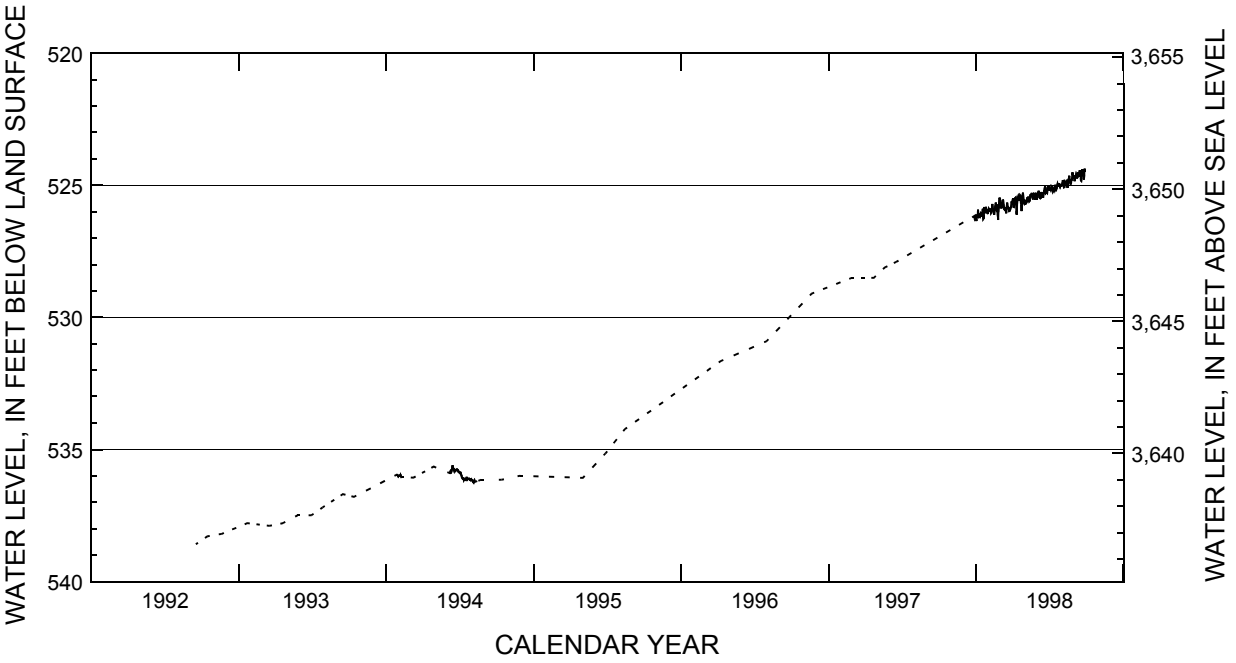
INSTRUMENTATION.—Electronic data logger with pressure transducer. Prior to Jan. 27, 1994, intermittent taped measurements.

DATUM.—Elevation of land-surface datum is 4,175.1 ft above sea level. Measuring point: Top of steel casing, 2.1 ft above land-surface datum.

REMARKS.—Available records fair.

PERIOD OF RECORD.—September 1992 to September 1998.

EXTREMES.—Highest daily water level, 524.37 ft below land-surface datum, Sept. 27, 1998; lowest daily water level, 538.60 ft below land-surface datum, Sept. 16, 1992.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	e536.08	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	e536.15	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	e534.23	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	e535.15	---	---	---
29	---	e536.00	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	536.15	536.00	---	---	---	---	---	536.08	535.15	---	534.23	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	e531.65	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	e530.90	---	---
LOW	---	---	---	---	---	---	531.65	---	---	530.90	---	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	e527.9	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	529.1	---	---	---	---	---	e528.1	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	e528.5	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	e528.5	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	529.10	---	---	528.50	---	528.50	528.10	527.90	---	---	---

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	526.30	526.00	525.52	525.62	525.63	525.54	525.13	525.01	524.70
2	---	---	---	526.35	525.89	525.65	525.54	525.55	525.38	525.19	524.97	524.84
3	---	---	---	526.11	525.92	525.84	525.49	525.70	525.28	525.13	524.91	524.78
4	---	---	---	526.18	526.01	525.84	525.81	525.70	525.33	525.13	524.80	524.64
5	---	---	---	526.19	525.92	525.66	525.82	525.67	525.21	525.18	524.90	524.63
6	---	---	---	525.92	525.91	525.86	525.68	525.66	525.25	525.14	525.02	524.58
7	---	---	---	526.19	526.03	525.74	525.62	525.52	525.46	525.03	525.08	524.62
8	---	---	---	526.24	525.99	525.58	525.48	525.48	525.48	525.05	525.06	524.71
9	---	---	---	526.11	525.92	525.57	525.46	525.46	525.33	525.09	524.87	524.71
10	---	---	---	526.11	525.70	525.72	525.60	525.52	525.47	525.11	524.90	524.66
11	---	---	---	526.15	525.82	525.82	526.07	525.61	525.47	525.22	524.91	524.51
12	---	---	---	526.10	525.90	525.91	526.11	525.54	525.25	525.19	524.85	524.64
13	---	---	---	526.17	525.92	525.93	525.60	525.60	525.40	525.16	524.87	524.63
14	---	---	---	526.02	526.04	525.86	525.52	525.58	525.34	525.19	524.98	524.53
15	---	---	---	526.18	526.11	525.86	525.50	525.44	525.37	524.98	525.05	524.43
16	---	---	---	526.07	525.94	525.97	525.42	525.34	525.46	525.02	525.09	524.55
17	---	---	---	526.05	525.81	526.06	525.47	525.44	525.28	525.09	524.88	524.59
18	---	---	---	525.88	525.77	525.84	525.53	525.36	525.26	525.22	524.90	524.82
19	---	---	---	526.27	525.66	525.66	525.58	525.29	525.30	525.14	524.77	524.83
20	---	---	---	526.24	525.79	525.81	525.38	525.44	525.15	525.11	524.64	524.51
21	---	---	---	525.82	525.96	525.82	525.40	525.50	525.02	525.04	524.77	524.39
22	---	---	---	525.93	526.00	525.87	525.60	525.49	525.19	524.95	524.86	524.46
23	---	---	---	525.93	525.73	525.87	525.84	525.43	525.30	524.99	524.92	524.55
24	---	---	---	526.05	526.11	525.98	525.97	525.33	525.28	525.02	524.96	524.64
25	---	---	---	525.98	526.30	525.97	525.83	525.34	525.25	525.02	524.76	524.78
26	---	---	---	525.81	525.91	525.91	525.42	525.54	525.27	524.93	524.79	524.69
27	---	---	---	526.00	525.64	525.91	525.28	525.50	525.10	525.04	524.76	524.37
28	---	---	526.16	525.99	525.47	525.82	525.47	525.28	525.07	525.07	524.51	524.45
29	---	---	526.24	526.04	---	525.82	525.63	525.41	525.07	525.02	524.65	524.45
30	---	---	526.18	526.08	---	525.61	525.67	525.48	525.00	524.95	524.73	524.45
31	---	---	526.23	525.89	---	525.66	---	525.33	---	525.02	524.65	---
LOW	---	---	526.24	526.35	526.30	526.06	526.11	525.70	525.54	525.22	525.09	524.84

e Estimated

SITE NUMBER FROM LOCATION MAP.—68.

COUNTY.—Fall River.

LOCAL WELL NUMBER.—7S4E19BCCB2.

SITE ID (STATION NUMBER).—432548103414802.

OTHER IDENTIFIERS.—FR-94A and Mnkt Jnct Mnls.

LOCATION.—Lat 43°25′45.8″, long 103°41′51.2″, in NW1/4SW1/4SW1/4NW1/4 sec. 19, T. 7 S., R. 4 E., Hydrologic Unit 10120106, about 10 mi west of Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 710 ft deep with 557 ft of 5-in. steel casing; open hole from 557 to 710 ft.

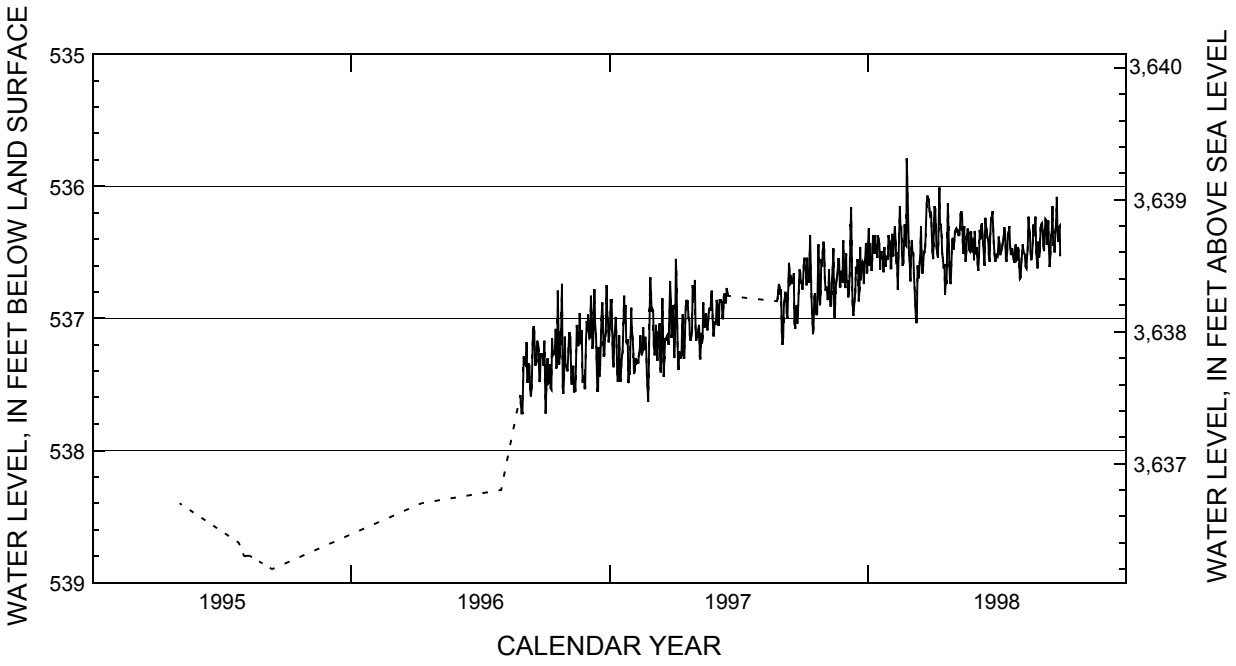
INSTRUMENTATION.—Electronic data logger with pressure transducer. Prior to September 1994, intermittent taped measurements.

DATUM.—Elevation of land-surface datum is 4,175.1 ft above sea level. Measuring point: Top of steel casing, 1.5 ft above land-surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—May 1995 to September 1998.

EXTREMES.—Highest daily water level, 535.79 ft below land-surface datum, Feb. 25, 1998; lowest daily water level, 538.9 ft below land-surface datum, Sept. 11, 1995.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	e538.8	---
3	---	---	---	---	---	---	---	e538.40	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	e538.8	---
11	---	---	---	---	---	---	---	---	---	---	---	e538.9
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	e538.7	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
LOW	---	---	---	---	---	---	---	538.40	---	538.70	538.80	538.90

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	537.29
2	---	---	---	---	---	---	---	---	---	---	---	537.32
3	---	---	---	---	---	---	---	---	---	---	---	537.35
4	---	---	---	---	---	---	---	---	---	---	---	537.36
5	---	---	---	---	---	---	---	---	---	---	---	537.18
6	---	---	---	---	---	---	---	---	---	---	---	537.48
7	---	---	---	---	---	---	---	---	---	---	---	537.48
8	---	---	---	---	---	---	---	---	---	---	---	537.34
9	---	---	---	---	---	---	e538.40	---	---	---	---	537.36
10	---	---	---	---	---	---	---	---	---	---	---	537.53
11	---	---	---	---	---	---	---	---	---	---	---	537.59
12	---	---	---	---	---	---	---	---	---	---	---	537.52
13	---	---	---	---	---	---	---	---	---	---	---	537.29
14	---	---	---	---	---	---	---	---	---	---	---	537.09
15	---	---	---	---	---	---	---	---	---	---	---	537.06
16	---	---	---	---	---	---	---	---	---	---	---	537.10
17	---	---	---	---	---	---	---	---	---	---	---	537.35
18	---	---	---	---	---	---	---	---	---	---	---	537.35
19	---	---	---	---	---	---	---	---	---	---	---	537.33
20	---	---	---	---	---	---	---	---	---	---	---	537.17
21	---	---	---	---	---	---	---	---	---	---	---	537.19
22	---	---	---	---	---	---	---	---	---	---	---	537.23
23	---	---	---	---	---	---	---	---	---	---	---	537.48
24	---	---	---	---	---	---	---	---	---	---	---	537.47
25	---	---	---	---	---	---	---	---	---	---	---	537.27
26	---	---	---	---	---	---	---	---	---	---	---	537.27
27	---	---	---	---	---	---	---	---	---	---	537.58	537.27
28	---	---	---	---	---	---	---	---	---	---	537.65	537.30
29	---	---	---	---	---	---	---	---	---	---	537.72	537.36
30	---	---	---	---	---	---	---	---	---	---	537.72	537.17
31	---	---	---	---	---	---	---	---	---	e538.30	537.49	---
LOW	---	---	---	---	---	---	538.40	---	---	538.30	537.72	537.59

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537.47	537.39	536.97	537.06	537.08	536.95	537.14	536.71	536.86	---	---	537.10
2	537.72	537.40	537.11	536.86	537.15	536.93	537.30	537.07	536.90	---	---	537.20
3	537.53	537.24	537.15	536.86	537.28	536.94	537.16	537.17	537.05	---	---	537.14
4	537.31	537.11	537.14	537.09	537.42	537.20	536.55	537.10	537.05	---	---	536.89
5	537.31	537.11	536.83	537.30	537.40	537.28	536.66	537.15	536.86	---	---	536.86
6	537.49	537.15	536.95	537.37	537.30	537.26	537.06	537.09	536.86	---	---	536.80
7	537.48	537.46	537.23	537.14	537.35	537.05	537.33	537.05	536.86	---	---	536.83
8	537.35	537.50	537.19	537.10	537.32	537.20	537.39	537.30	536.88	---	---	536.96
9	537.53	537.43	537.00	536.99	537.32	537.32	537.25	537.31	537.00	---	---	537.00
10	537.54	537.36	536.78	537.11	537.34	537.10	537.30	537.11	537.00	---	---	536.84
11	537.15	537.56	537.07	537.41	537.27	537.11	537.30	537.19	536.83	---	---	536.58
12	537.26	537.55	537.13	537.48	537.25	537.04	537.28	537.15	536.81	---	---	536.63
13	537.27	537.55	537.30	537.45	537.13	537.39	537.06	536.88	536.88	---	---	536.74
14	537.25	537.35	537.55	537.13	537.23	537.41	536.97	537.03	536.88	---	---	536.73
15	537.24	537.05	537.55	537.43	537.28	537.20	537.30	537.07	536.77	---	---	536.69
16	537.08	537.15	537.22	537.48	537.25	536.85	537.30	536.98	536.80	---	---	536.70
17	537.38	537.21	537.44	537.36	537.07	537.20	537.13	536.96	536.83	---	---	536.74
18	537.36	537.17	537.35	537.27	537.24	537.44	536.92	537.07	---	---	---	536.66
19	536.79	536.96	537.20	537.26	537.22	537.31	536.86	537.09	---	---	---	537.03
20	537.13	537.18	537.00	537.04	537.14	537.15	536.87	537.00	---	---	---	537.08
21	537.35	537.19	536.88	536.83	537.21	537.17	536.87	536.94	---	---	---	536.96
22	537.28	537.09	537.00	537.04	537.43	537.14	537.00	536.92	---	---	---	536.90
23	537.10	537.48	537.29	536.90	537.51	537.13	537.00	536.94	---	---	---	537.04
24	537.09	537.48	537.28	537.18	537.63	537.17	537.13	536.83	---	---	---	536.96
25	536.74	537.43	537.15	537.19	537.33	537.20	537.17	536.79	---	---	536.87	536.80
26	537.52	537.53	537.11	537.16	536.93	537.06	537.13	536.99	---	---	536.85	536.63
27	537.57	537.53	536.75	537.49	536.69	536.72	537.09	537.13	---	---	536.80	536.65
28	537.45	537.17	536.94	537.42	536.81	536.87	536.75	537.13	---	---	536.74	536.73
29	537.14	537.02	537.01	537.42	---	537.14	536.82	537.02	---	---	536.77	536.73
30	537.36	537.10	537.18	537.13	---	537.14	536.86	537.05	---	---	536.82	536.78
31	537.36	---	537.14	536.92	---	536.90	---	537.02	---	---	536.78	---
LOW	537.72	537.56	537.55	537.49	537.63	537.44	537.39	537.31	537.05	---	536.87	537.20

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	536.74	536.70	536.51	536.44	536.42	536.56	536.29	536.39	536.34	536.53	536.46	536.49
2	536.60	536.79	536.73	536.32	536.62	536.72	536.49	536.48	536.50	536.52	536.48	536.32
3	536.54	536.76	536.71	536.60	536.62	536.47	536.55	536.42	536.51	536.53	536.60	536.29
4	536.62	536.78	536.84	536.43	536.36	536.41	536.44	536.34	536.46	536.50	536.70	536.28
5	536.64	536.86	536.81	536.54	536.52	536.51	536.15	536.33	536.59	536.38	536.69	536.34
6	536.75	536.82	536.67	536.64	536.53	536.51	536.17	536.32	536.64	536.44	536.56	536.45
7	536.54	536.63	536.31	536.56	536.38	536.67	536.30	536.35	536.52	536.52	536.50	536.49
8	536.64	536.85	536.16	536.37	536.30	536.78	536.46	536.33	536.33	536.50	536.44	536.35
9	536.73	536.91	536.56	536.47	536.43	536.90	536.51	536.37	536.40	536.48	536.50	536.25
10	536.65	536.89	536.88	536.51	536.57	537.03	536.54	536.37	536.30	536.45	536.51	536.26
11	536.37	536.72	536.98	536.37	536.56	537.03	536.33	536.31	536.28	536.42	536.52	536.44
12	536.61	536.62	536.93	536.51	536.78	536.60	536.01	536.21	536.37	536.38	536.61	536.37
13	536.83	536.47	536.86	536.44	536.52	536.69	536.29	536.19	536.44	536.31	536.62	536.26
14	536.95	536.97	536.79	536.54	536.37	536.69	536.29	536.22	536.53	536.36	536.53	536.45
15	537.12	537.00	536.61	536.37	536.15	536.57	536.38	536.42	536.60	536.56	536.47	536.61
16	537.08	536.79	536.66	536.40	536.31	536.54	536.50	536.51	536.24	536.57	536.23	536.51
17	536.84	536.73	536.55	536.44	536.31	536.30	536.55	536.30	536.31	536.49	536.32	536.37
18	536.81	536.69	536.59	536.63	536.51	536.59	536.62	536.48	536.33	536.36	536.36	536.36
19	536.95	536.65	536.87	536.52	536.60	536.66	536.59	536.57	536.39	536.34	536.50	536.15
20	536.97	536.55	536.78	536.49	536.58	536.61	536.82	536.50	536.40	536.30	536.56	536.45
21	536.97	536.55	536.46	536.55	536.43	536.50	536.73	536.38	536.52	536.45	536.52	536.42
22	536.73	536.76	536.71	536.54	536.29	536.50	536.73	536.32	536.57	536.52	536.42	536.50
23	536.44	536.76	536.58	536.65	536.44	536.45	536.49	536.35	536.37	536.49	536.29	536.34
24	536.80	536.64	536.57	536.46	536.45	536.28	536.13	536.48	536.24	536.47	536.37	536.28
25	536.90	536.68	536.60	536.57	535.79	536.14	536.32	536.49	536.24	536.52	536.37	536.08
26	536.81	536.73	536.74	536.61	536.07	536.07	536.59	536.39	536.19	536.55	536.23	536.33
27	536.55	536.41	536.57	536.54	536.33	536.10	536.72	536.34	536.33	536.58	536.50	536.42
28	536.61	536.59	536.56	536.55	536.51	536.10	536.74	536.47	536.43	536.48	536.56	536.31
29	536.49	536.72	536.43	536.55	---	536.18	536.59	536.50	536.52	536.44	536.62	536.30
30	536.42	536.77	536.66	536.37	---	536.22	536.41	536.39	536.57	536.56	536.42	536.53
31	536.48	---	536.65	536.41	---	536.21	---	536.56	---	536.55	536.54	---
LOW	537.12	537.00	536.98	536.65	536.78	537.03	536.82	536.57	536.64	536.58	536.70	536.61

SITE NUMBER FROM LOCATION MAP.—69.

COUNTY.—Fall River.

LOCAL WELL NUMBER.—7S5E14CCCC.

SITE ID (STATION NUMBER).—432603103295901.

OTHER IDENTIFIERS.—FR-95A and Vets Home Mdsn.

LOCATION.—Lat 43°26′02.7″, long 103°29′58.7″, in SW1/4SW1/4SW1/4SW1/4 sec. 14, T. 7 S., R. 5 E., Hydrologic Unit 10120109, at Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Madison.

WELL CHARACTERISTICS.—Drilled observation well, 915 ft deep with 902 ft of 5-in. steel casing; open hole from 902 to 915 ft.

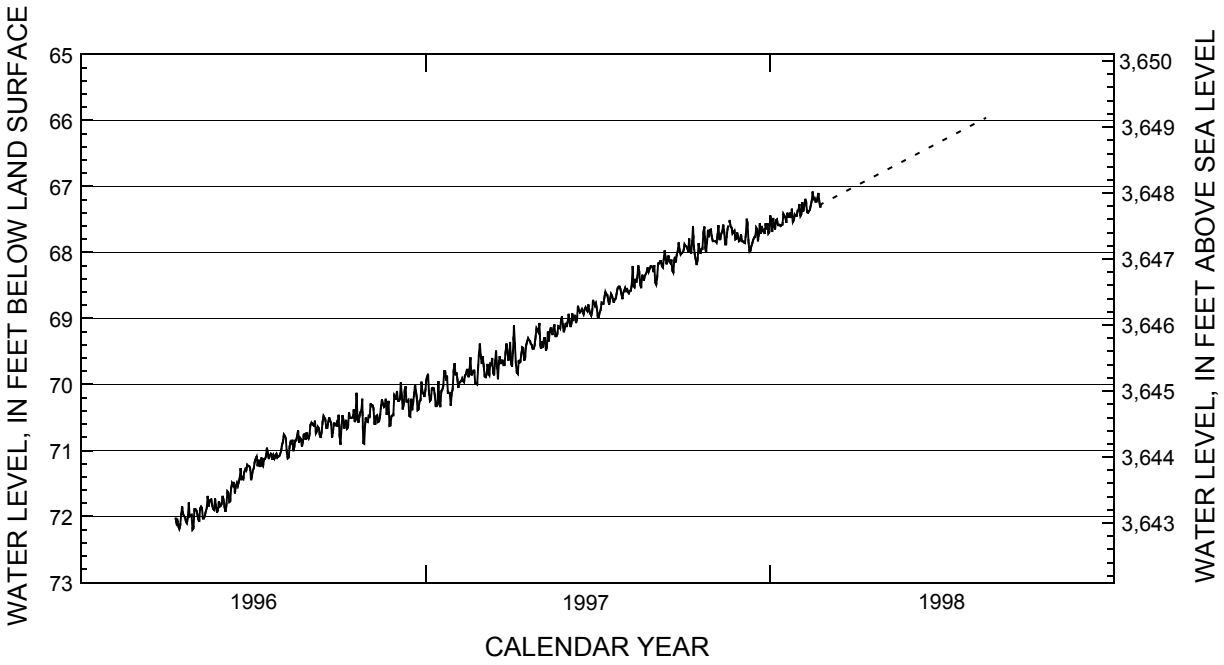
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,715.1 ft above sea level. Measuring point: Top of steel casing, 2.1 ft above land-surface datum.

REMARKS.—Available records are good.

PERIOD OF RECORD.—April 1996 to September 1998.

EXTREMES.—Highest daily water level, 65.96 ft (estimated) below land-surface datum, Aug. 17, 1998; lowest daily water level, 72.20 ft below land-surface datum, Apr. 28, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	71.89	71.86	71.30	70.91	70.58
2	---	---	---	---	---	---	---	71.91	71.93	71.27	70.87	70.61
3	---	---	---	---	---	---	---	71.96	71.83	71.17	70.76	70.61
4	---	---	---	---	---	---	---	72.05	71.62	71.12	70.78	70.64
5	---	---	---	---	---	---	---	72.08	71.64	71.09	70.82	70.55
6	---	---	---	---	---	---	---	71.88	71.78	71.24	71.02	70.74
7	---	---	---	---	---	---	---	71.85	71.77	71.14	71.12	70.71
8	---	---	---	---	---	---	---	71.87	71.58	71.24	71.11	70.64
9	---	---	---	---	---	---	---	72.03	71.50	71.24	70.94	70.66
10	---	---	---	---	---	---	72.02	72.03	71.53	71.11	70.87	70.77
11	---	---	---	---	---	---	72.10	71.99	71.48	71.22	70.89	70.81
12	---	---	---	---	---	---	72.07	71.92	71.65	71.24	70.84	70.72
13	---	---	---	---	---	---	72.16	71.87	71.54	71.13	71.01	70.57
14	---	---	---	---	---	---	72.19	71.69	71.49	71.13	70.95	70.48
15	---	---	---	---	---	---	72.14	71.85	71.54	71.09	70.85	70.50
16	---	---	---	---	---	---	71.98	71.77	71.48	70.96	70.85	70.53
17	---	---	---	---	---	---	71.85	71.75	71.42	71.05	70.78	70.66
18	---	---	---	---	---	---	71.96	71.74	71.27	71.13	70.70	70.66
19	---	---	---	---	---	---	72.00	71.83	71.45	71.08	70.88	70.58
20	---	---	---	---	---	---	72.01	71.89	71.41	71.05	70.81	70.50
21	---	---	---	---	---	---	72.08	71.90	71.43	71.06	70.83	70.55
22	---	---	---	---	---	---	72.10	71.73	71.32	71.14	70.94	70.58
23	---	---	---	---	---	---	72.01	71.85	71.28	71.08	70.87	70.81
24	---	---	---	---	---	---	71.79	71.94	71.30	71.12	70.76	70.71
25	---	---	---	---	---	---	72.00	71.90	71.22	71.07	70.75	70.58
26	---	---	---	---	---	---	71.99	71.77	71.24	71.05	70.84	70.62
27	---	---	---	---	---	---	71.98	71.85	71.24	71.11	70.73	70.62
28	---	---	---	---	---	---	72.20	71.84	71.27	71.09	70.80	70.58
29	---	---	---	---	---	---	72.18	71.81	71.45	71.09	70.82	70.64
30	---	---	---	---	---	---	71.89	71.69	71.40	71.05	70.77	70.46
31	---	---	---	---	---	---	---	71.75	---	71.00	70.61	---
LOW	---	---	---	---	---	---	72.20	72.08	71.93	71.30	71.12	70.81

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70.78	70.48	70.10	69.94	69.86	69.69	69.69	69.07	68.93	68.85	68.60	68.46
2	70.91	70.49	70.25	69.88	69.82	69.57	69.73	69.41	69.05	68.98	68.54	68.49
3	70.64	70.29	70.25	69.84	69.93	69.72	69.50	69.46	69.13	68.98	68.60	68.38
4	70.47	70.33	70.22	70.13	70.05	69.88	69.11	69.35	69.07	68.90	68.62	68.17
5	70.54	70.32	69.97	70.25	69.98	69.89	69.40	69.44	68.92	68.87	68.58	68.17
6	70.67	70.36	70.16	70.23	69.96	69.85	69.68	69.30	69.04	68.76	68.58	68.13
7	70.58	70.60	70.38	70.06	69.95	69.69	69.82	69.30	68.96	68.77	68.50	68.13
8	70.54	70.60	70.30	70.05	69.91	69.84	69.84	69.49	68.96	68.78	68.21	68.21
9	70.67	70.48	70.09	70.06	69.95	69.86	69.63	69.43	69.07	68.69	68.51	68.23
10	70.65	70.47	70.03	70.16	69.97	69.69	69.67	69.20	69.01	68.60	68.53	68.09
11	70.42	70.57	70.26	70.33	69.86	69.70	69.66	69.35	68.81	68.64	68.40	67.97
12	70.51	70.56	70.26	70.33	69.85	69.60	69.54	69.19	68.88	68.64	68.46	68.08
13	70.51	70.48	70.24	70.27	69.78	69.83	69.44	69.14	68.91	68.72	68.38	68.18
14	70.50	70.34	70.48	69.95	69.78	69.86	69.45	69.21	68.89	68.79	68.20	68.12
15	70.50	70.23	70.49	70.31	69.89	69.66	69.64	69.25	68.86	68.71	68.29	68.05
16	70.38	70.30	70.22	70.34	69.79	69.49	69.60	69.14	68.90	68.63	68.48	68.14
17	70.57	70.34	70.39	70.10	69.59	69.73	69.41	69.09	68.94	68.66	68.54	68.16
18	70.54	70.32	70.28	70.08	69.86	69.92	69.35	69.27	68.86	68.70	68.34	68.11
19	70.13	70.22	70.15	70.03	69.83	69.67	69.30	69.27	68.83	68.76	68.38	68.28
20	70.49	70.46	70.00	69.80	69.79	69.57	69.33	69.24	68.87	68.71	68.43	68.31
21	70.58	70.42	70.12	69.80	69.79	69.69	69.34	69.12	68.89	68.70	68.35	68.12
22	70.49	70.25	70.19	69.94	69.99	69.64	69.38	69.13	68.79	68.62	68.33	68.07
23	70.42	70.63	70.39	69.87	69.99	69.64	69.40	69.15	68.88	68.54	68.29	68.15
24	70.41	70.62	70.38	70.13	70.00	69.71	69.46	69.01	68.93	68.52	68.23	68.02
25	70.22	70.48	70.25	70.13	69.73	69.71	69.46	68.97	68.96	68.52	68.29	67.97
26	70.89	70.47	70.24	70.13	69.54	69.52	69.41	69.11	68.89	68.56	68.25	67.85
27	70.90	70.47	69.96	70.32	69.38	69.38	69.29	69.21	68.72	68.63	68.21	67.98
28	70.60	70.16	70.12	70.14	69.58	69.49	69.15	69.14	68.77	68.71	68.21	68.03
29	70.50	70.18	70.14	70.07	---	69.64	69.18	69.07	68.81	68.62	68.22	68.01
30	70.56	70.23	70.19	69.79	---	69.57	69.21	69.13	68.77	68.58	68.30	68.00
31	70.57	---	70.10	69.68	---	69.36	---	69.05	---	68.54	68.19	---
LOW	70.91	70.63	70.49	70.34	70.05	69.92	69.84	69.49	69.13	68.98	68.62	68.49

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67.97	67.83	67.73	67.44	67.27	---	---	---	---	---	---	---
2	67.88	67.83	67.83	67.53	67.45	---	---	---	---	---	---	---
3	67.90	67.83	67.83	67.69	67.42	---	---	---	---	---	---	---
4	67.91	67.83	67.85	67.48	67.24	---	---	---	---	---	---	---
5	67.94	67.85	67.86	67.59	67.38	---	---	---	---	---	---	---
6	67.99	67.75	67.74	67.65	67.31	---	---	---	---	---	---	---
7	67.79	67.59	67.49	67.51	67.19	---	---	---	---	---	---	---
8	67.98	67.80	67.56	67.50	67.23	---	---	---	---	---	---	---
9	68.02	67.80	67.84	67.59	67.39	---	---	---	---	---	---	---
10	67.86	67.71	67.99	67.59	67.40	---	---	---	---	---	---	---
11	67.60	67.69	67.98	67.58	67.37	---	---	---	---	---	---	---
12	67.93	67.58	67.90	67.60	67.36	---	---	---	---	---	---	---
13	68.05	67.69	67.86	67.59	67.29	---	---	---	---	---	---	---
14	68.11	67.88	67.80	67.58	67.22	---	---	---	---	---	---	---
15	68.19	67.88	67.77	67.42	67.08	---	---	---	---	---	---	---
16	68.11	67.74	67.77	67.45	67.19	---	---	---	---	---	---	---
17	67.86	67.63	67.63	67.46	67.18	---	---	---	---	---	---	---
18	67.97	---	67.66	67.55	67.23	---	---	---	---	---	e65.96	---
19	68.02	67.51	67.83	67.40	67.23	---	---	---	---	---	---	---
20	67.95	67.61	67.72	67.46	67.18	---	---	---	---	---	---	---
21	67.95	67.62	67.56	67.46	67.10	---	---	---	---	---	---	---
22	67.70	67.71	67.72	67.40	67.22	---	---	---	---	---	---	---
23	67.61	67.69	67.60	67.48	67.32	---	---	---	---	---	---	---
24	67.94	67.67	67.67	67.34	e67.27	---	---	---	---	---	---	---
25	68.00	67.80	67.66	67.54	---	---	---	---	---	---	---	---
26	67.83	67.79	67.72	67.51	---	---	---	---	---	---	---	---
27	67.66	67.70	67.56	67.43	---	---	---	---	---	---	---	---
28	67.77	67.77	67.65	67.45	---	---	---	---	---	---	---	---
29	67.66	67.83	67.56	67.45	---	---	---	---	---	---	---	---
30	67.65	67.82	67.71	67.37	---	---	---	---	---	---	---	---
31	67.77	---	67.69	67.37	---	---	---	---	---	---	---	---
LOW	68.19	67.88	67.99	67.69	67.45	---	---	---	---	---	65.96	---

SITE NUMBER FROM LOCATION MAP.—70.

COUNTY.—Fall River.

LOCAL WELL NUMBER.—7S5E14CCCC2.

SITE ID (STATION NUMBER).—432603103295902.

OTHER IDENTIFIERS.—FR-95B and Vets Home Mnls.

LOCATION.—Lat 43°26′02.7″, long 103°29′58.7″, in SW1/4SW1/4SW1/4SW1/4 sec. 14, T. 7 S., R. 5 E., Hydrologic Unit 10120109, at Hot Springs. Owner: South Dakota Department of Environment and Natural Resources.

AQUIFER.—Minnelusa.

WELL CHARACTERISTICS.—Drilled observation well, 320 ft deep with 260 ft of 5-in. steel casing; open hole from 260 to 320 ft.

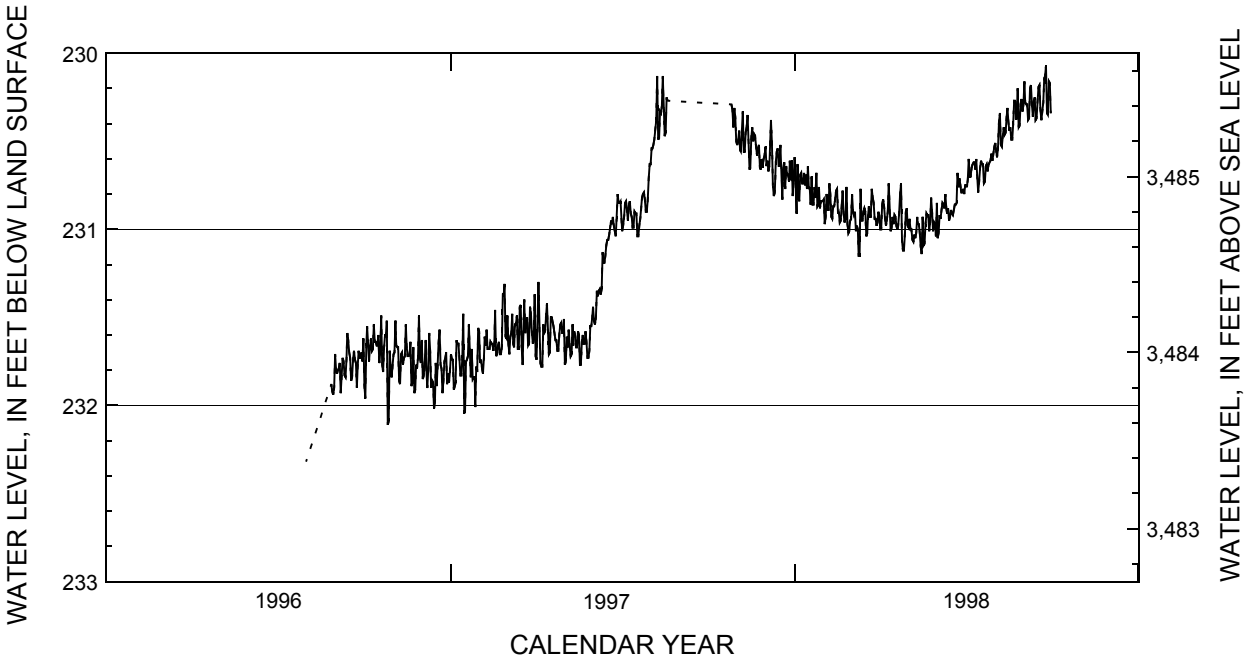
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,715.7 ft above sea level. Measuring point: Top of steel casing, 2.4 ft above land-surface datum.

REMARKS.—Available records are good.

PERIOD OF RECORD.—July 1996 to September 1998.

EXTREMES.—Highest daily water level, 230.13 ft below land-surface datum, Aug. 8, 14, 1997; lowest daily water level, 232.32 ft (estimated) below land-surface datum, July 31, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	231.80
2	---	---	---	---	---	---	---	---	---	---	---	231.82
3	---	---	---	---	---	---	---	---	---	---	---	231.80
4	---	---	---	---	---	---	---	---	---	---	---	231.79
5	---	---	---	---	---	---	---	---	---	---	---	231.76
6	---	---	---	---	---	---	---	---	---	---	---	231.93
7	---	---	---	---	---	---	---	---	---	---	---	231.84
8	---	---	---	---	---	---	---	---	---	---	---	231.73
9	---	---	---	---	---	---	---	---	---	---	---	231.75
10	---	---	---	---	---	---	---	---	---	---	---	231.83
11	---	---	---	---	---	---	---	---	---	---	---	231.84
12	---	---	---	---	---	---	---	---	---	---	---	231.74
13	---	---	---	---	---	---	---	---	---	---	---	231.59
14	---	---	---	---	---	---	---	---	---	---	---	231.63
15	---	---	---	---	---	---	---	---	---	---	---	231.70
16	---	---	---	---	---	---	---	---	---	---	---	231.73
17	---	---	---	---	---	---	---	---	---	---	---	231.86
18	---	---	---	---	---	---	---	---	---	---	---	231.84
19	---	---	---	---	---	---	---	---	---	---	---	231.74
20	---	---	---	---	---	---	---	---	---	---	---	231.69
21	---	---	---	---	---	---	---	---	---	---	---	231.74
22	---	---	---	---	---	---	---	---	---	---	---	231.76
23	---	---	---	---	---	---	---	---	---	---	---	231.90
24	---	---	---	---	---	---	---	---	---	---	---	231.78
25	---	---	---	---	---	---	---	---	---	---	---	231.69
26	---	---	---	---	---	---	---	---	---	---	---	231.73
27	---	---	---	---	---	---	---	---	---	---	231.88	231.73
28	---	---	---	---	---	---	---	---	---	---	231.92	231.70
29	---	---	---	---	---	---	---	---	---	---	231.94	231.75
30	---	---	---	---	---	---	---	---	---	---	231.90	231.62
31	---	---	---	---	---	---	---	---	---	e232.32	231.71	---
LOW	---	---	---	---	---	---	---	---	---	232.32	231.94	231.93

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231.89	231.71	231.63	231.71	231.76	231.62	231.72	231.51	231.44	230.95	230.63	---
2	231.96	231.70	231.85	231.74	231.74	231.49	231.74	231.77	231.52	231.01	230.54	---
3	231.66	231.52	231.83	231.74	231.79	231.65	231.50	231.75	231.54	230.98	230.54	---
4	231.55	231.66	231.75	231.91	231.82	231.71	231.30	231.61	231.50	230.93	230.52	---
5	231.64	231.67	231.63	231.89	231.73	231.61	231.57	231.67	231.35	230.85	230.49	---
6	231.75	231.67	231.79	231.87	231.61	231.59	231.76	231.57	231.38	230.84	230.43	---
7	231.67	231.86	231.90	231.63	231.66	231.48	231.78	231.66	231.35	230.89	230.38	---
8	231.62	231.88	231.80	231.65	231.57	231.65	231.78	231.72	231.34	230.95	230.13	---
9	231.69	231.71	231.59	231.65	231.68	231.67	231.54	231.71	231.37	230.86	230.49	---
10	231.68	231.70	231.69	231.73	231.68	231.54	231.59	231.54	231.34	230.84	230.48	---
11	231.54	231.77	231.90	231.83	231.68	231.54	231.58	231.66	231.13	230.91	230.33	---
12	231.64	231.73	231.86	231.83	231.64	231.49	231.49	231.58	231.19	230.93	230.34	---
13	231.64	231.72	231.87	231.73	231.65	231.68	231.42	231.60	231.19	230.99	230.30	---
14	231.66	231.54	232.02	231.48	231.65	231.68	231.58	231.67	231.15	230.99	230.13	---
15	231.66	231.66	231.98	232.04	231.69	231.44	231.71	231.67	231.09	230.90	230.32	---
16	231.60	231.72	231.76	232.04	231.65	231.43	231.70	231.58	231.06	230.91	230.47	---
17	231.76	231.72	231.89	231.75	231.46	231.67	231.50	231.60	231.06	230.91	230.45	---
18	231.70	231.71	231.78	231.74	231.72	231.77	231.50	231.77	231.03	231.04	230.25	---
19	231.49	231.64	231.64	231.72	231.71	231.50	231.53	231.77	230.99	231.04	230.27	---
20	231.77	231.89	231.57	231.54	231.66	231.40	231.55	231.64	230.95	230.98	---	---
21	231.81	231.87	231.77	231.69	231.64	231.59	231.59	231.60	230.97	230.94	---	---
22	231.67	231.67	231.79	231.84	231.71	231.52	231.63	231.65	230.93	230.88	---	---
23	231.60	231.93	231.93	231.68	231.71	231.50	231.63	231.65	230.98	230.82	---	---
24	231.60	231.91	231.86	231.85	231.67	231.66	231.69	231.58	231.01	230.80	---	---
25	231.52	231.77	231.75	231.84	231.37	231.65	231.69	231.64	231.04	230.79	---	---
26	232.11	231.79	231.73	231.84	231.37	231.44	231.60	231.73	230.94	230.83	---	---
27	232.09	231.73	231.70	232.01	231.31	231.48	231.54	231.73	230.80	230.90	---	---
28	231.69	231.49	231.88	231.78	231.61	231.59	231.53	231.69	230.85	230.90	---	---
29	231.78	231.73	231.82	231.81	---	231.65	231.59	231.55	230.85	230.83	---	---
30	231.84	231.76	231.87	231.56	---	231.61	231.59	231.55	230.84	230.71	---	---
31	231.78	---	231.80	231.58	---	231.37	---	231.50	---	230.63	---	---
LOW	232.11	231.93	232.02	232.04	231.82	231.77	231.78	231.77	231.54	231.04	230.63	---

e Estimated

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	230.52	230.53	230.59	230.83	230.95	230.92	230.98	230.85	230.75	230.53	230.29
2	---	230.50	230.64	230.75	230.97	230.94	231.00	230.99	231.05	230.75	230.51	230.16
3	---	230.44	230.61	230.91	230.93	230.80	231.00	230.94	231.02	230.76	230.55	230.28
4	---	230.55	230.67	230.63	230.80	230.90	230.86	231.00	230.92	230.72	230.59	230.29
5	---	230.56	230.64	230.80	230.89	230.92	230.83	231.00	230.94	230.60	230.54	230.29
6	---	230.44	230.51	230.84	230.89	230.90	230.87	231.06	230.89	230.70	230.39	230.38
7	---	230.33	230.38	230.69	230.74	231.01	230.94	231.07	230.85	230.70	230.34	230.37
8	---	230.56	230.51	230.68	230.80	230.98	230.98	231.03	230.86	230.65	230.52	230.20
9	---	230.56	230.75	230.74	230.93	231.00	230.94	231.05	230.88	230.63	230.53	230.18
10	---	230.45	230.81	230.74	230.94	231.15	230.90	231.02	230.80	230.62	230.47	230.29
11	---	230.42	230.79	230.68	230.87	231.15	230.74	230.93	230.88	230.62	230.42	230.36
12	---	230.35	230.62	230.75	230.87	230.77	230.90	230.97	230.91	230.66	230.46	230.27
13	---	230.50	230.56	230.69	230.83	230.95	231.01	230.97	230.88	230.60	230.45	230.25
14	---	230.66	230.54	230.77	230.78	230.95	230.99	231.02	230.95	230.70	230.37	230.38
15	---	230.65	230.64	230.64	230.77	230.90	230.93	231.10	230.93	230.79	230.31	230.37
16	---	230.48	230.64	230.77	230.91	230.88	230.97	231.14	230.89	230.73	230.39	230.27
17	---	230.42	230.52	230.76	230.90	230.90	230.92	230.93	230.91	230.65	230.44	230.19
18	---	230.50	230.64	230.86	230.96	231.04	230.93	231.09	230.92	230.61	230.42	230.18
19	---	230.46	230.83	230.70	230.95	231.02	230.98	231.08	230.89	230.63	230.49	230.32
20	---	230.47	230.66	230.86	230.87	230.93	231.00	230.97	230.86	230.63	230.49	230.38
21	---	230.53	230.62	230.86	230.78	230.87	230.98	230.91	230.86	230.74	230.40	230.33
22	---	230.58	230.77	230.76	230.91	230.93	230.91	230.92	230.85	230.73	230.27	230.28
23	---	230.54	230.64	230.82	230.96	230.93	230.80	230.92	230.68	230.64	230.27	230.14
24	---	230.52	230.69	230.68	230.94	230.77	230.74	231.01	230.76	230.63	230.37	230.13
25	---	230.65	230.69	230.87	230.76	230.82	231.06	230.96	230.71	230.67	230.37	230.07
26	230.29	230.66	230.73	230.86	230.97	230.85	231.12	230.82	230.75	230.63	230.20	230.34
27	230.32	230.60	230.61	230.76	231.02	230.94	231.12	230.90	230.79	230.62	230.42	230.35
28	230.42	230.65	230.72	230.88	231.01	230.94	231.03	231.01	230.79	230.61	230.41	230.16
29	230.31	230.60	230.61	230.84	---	230.98	230.90	230.96	230.77	230.57	230.29	230.17
30	230.36	230.58	230.81	230.84	---	230.96	230.88	230.97	230.80	230.61	230.26	230.34
31	230.50	---	230.71	230.84	---	230.90	---	231.04	---	230.57	230.33	---
LOW	230.50	230.66	230.83	230.91	231.02	231.15	231.12	231.14	231.05	230.79	230.59	230.38

SITE NUMBER FROM LOCATION MAP.—71.

COUNTY.—Fall River.

LOCAL WELL NUMBER.—9S6E3ACAD.

SITE ID (STATION NUMBER).—431753103233601.

OTHER IDENTIFIERS.—FR-95C and Angostura.

LOCATION.—Lat 43°17′55.4″, long 103°23′33.8″, in SE1/4NE1/4SW1/4NE1/4 sec. 3, T. 9S., R.6 E., Hydrologic Unit 10120106, about 8 mi southeast of Hot Springs. Owner: South Dakota Game, Fish and Parks.

AQUIFER.—Fall River (Inyan Kara).

WELL CHARACTERISTICS.—Drilled unused production well, 1,600 ft deep with 501 ft of 7-in. steel casing; 5.5-in. steel casing from 501 to 1432 ft; perforated 4.75-in. casing to 1,560 ft. Blank casing from 1,560 to 1,600 ft.

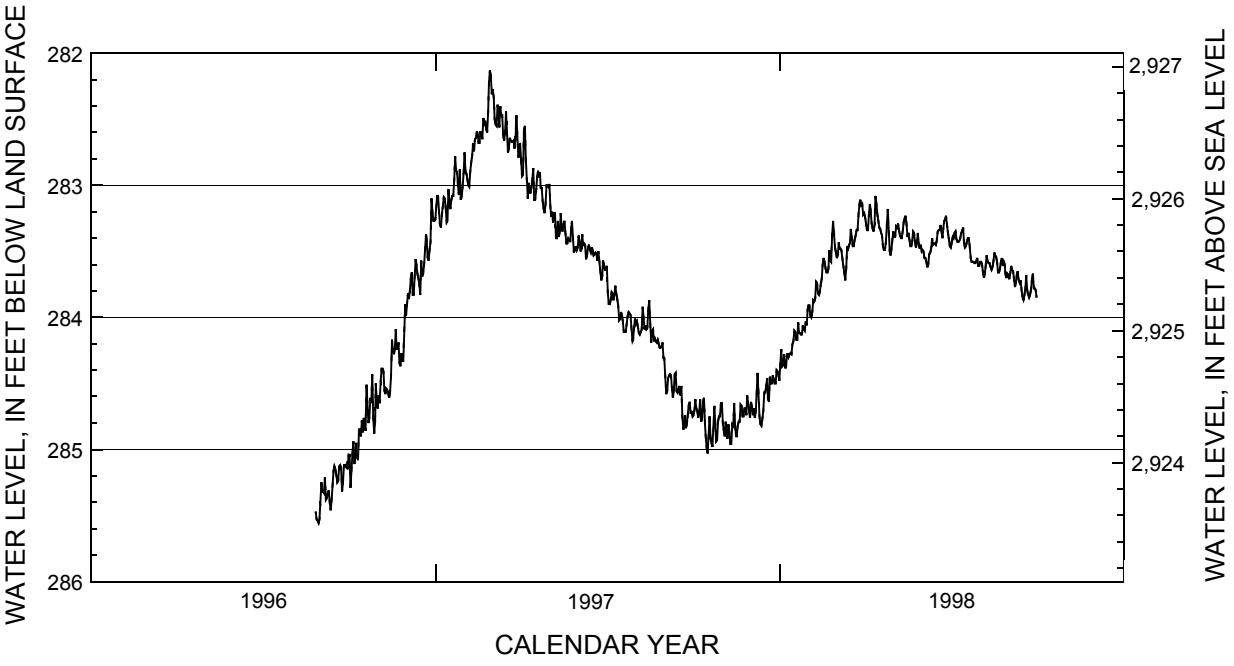
INSTRUMENTATION.—Electronic data logger with pressure transducer.

DATUM.—Elevation of land-surface datum is 3,209.1 ft above sea level. Measuring point: Top of steel casing, 1.6 ft above land-surface datum.

REMARKS.—Available records good.

PERIOD OF RECORD.—August 1996 to September 1998.

EXTREMES.—Highest daily water level, 282.13 ft below land-surface datum, Feb. 27, 1997; lowest daily water level, 285.56 ft below land-surface datum, Aug. 29, 1996.



WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	285.25
2	---	---	---	---	---	---	---	---	---	---	---	285.32
3	---	---	---	---	---	---	---	---	---	---	---	285.32
4	---	---	---	---	---	---	---	---	---	---	---	285.33
5	---	---	---	---	---	---	---	---	---	---	---	285.21
6	---	---	---	---	---	---	---	---	---	---	---	285.38
7	---	---	---	---	---	---	---	---	---	---	---	285.37
8	---	---	---	---	---	---	---	---	---	---	---	285.33
9	---	---	---	---	---	---	---	---	---	---	---	285.31
10	---	---	---	---	---	---	---	---	---	---	---	285.40
11	---	---	---	---	---	---	---	---	---	---	---	285.46
12	---	---	---	---	---	---	---	---	---	---	---	285.38
13	---	---	---	---	---	---	---	---	---	---	---	285.27
14	---	---	---	---	---	---	---	---	---	---	---	285.16
15	---	---	---	---	---	---	---	---	---	---	---	285.13
16	---	---	---	---	---	---	---	---	---	---	---	285.15
17	---	---	---	---	---	---	---	---	---	---	---	285.19
18	---	---	---	---	---	---	---	---	---	---	---	285.25
19	---	---	---	---	---	---	---	---	---	---	---	285.24
20	---	---	---	---	---	---	---	---	---	---	---	285.13
21	---	---	---	---	---	---	---	---	---	---	---	285.12
22	---	---	---	---	---	---	---	---	---	---	---	285.14
23	---	---	---	---	---	---	---	---	---	---	---	285.32
24	---	---	---	---	---	---	---	---	---	---	---	285.25
25	---	---	---	---	---	---	---	---	---	---	---	285.12
26	---	---	---	---	---	---	---	---	---	---	285.47	285.12
27	---	---	---	---	---	---	---	---	---	---	285.53	285.13
28	---	---	---	---	---	---	---	---	---	---	285.54	285.11
29	---	---	---	---	---	---	---	---	---	---	285.56	285.15
30	---	---	---	---	---	---	---	---	---	---	285.53	285.04
31	---	---	---	---	---	---	---	---	---	---	285.41	---
LOW	---	---	---	---	---	---	---	---	---	---	285.56	285.46

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285.04	284.59	283.90	283.16	282.90	282.31	282.82	282.99	283.38	283.61	284.05	284.44
2	285.29	284.65	283.82	283.08	282.91	282.27	282.93	283.16	283.43	283.81	284.03	284.58
3	285.15	284.49	283.86	283.08	282.96	282.33	282.92	283.24	283.50	283.90	284.07	284.56
4	285.03	284.39	283.80	283.20	283.00	282.50	282.58	283.20	283.48	283.90	284.12	284.46
5	284.94	284.39	283.70	283.30	283.01	282.54	282.55	283.28	283.37	283.87	284.13	284.44
6	285.11	284.41	283.66	283.32	282.90	282.55	282.81	283.21	283.45	283.81	284.11	284.43
7	285.07	284.56	283.83	283.22	282.83	282.39	282.96	283.21	283.44	283.82	284.09	284.44
8	284.95	284.58	283.83	283.16	282.78	282.43	283.10	283.40	283.45	283.87	283.92	284.54
9	285.06	284.54	283.69	283.09	282.68	282.56	282.98	283.40	283.56	283.83	284.00	284.61
10	285.08	284.55	283.56	283.10	282.74	282.40	283.04	283.27	283.53	283.76	284.09	284.55
11	284.85	284.57	283.60	283.17	282.65	282.47	283.06	283.39	283.47	283.82	284.06	284.43
12	284.85	284.61	283.67	283.28	282.64	282.47	283.02	283.35	283.45	283.86	284.09	284.42
13	284.90	284.57	283.70	283.27	282.59	282.62	282.96	283.21	283.49	283.91	284.08	284.56
14	284.78	284.45	283.75	283.03	282.62	282.66	282.87	283.31	283.51	284.02	283.94	284.57
15	284.87	284.17	283.83	283.13	282.68	282.60	283.11	283.35	283.47	284.01	283.87	284.54
16	284.76	284.25	283.57	283.18	282.68	282.44	283.11	283.29	283.49	283.96	284.06	284.52
17	284.83	284.28	283.69	283.11	282.59	282.61	283.04	283.27	283.53	283.99	284.19	284.59
18	284.86	284.24	283.67	283.08	282.63	282.75	282.94	283.36	283.52	284.03	284.10	284.52
19	284.51	284.09	283.60	283.08	282.65	282.72	282.89	283.44	283.51	284.11	284.09	284.75
20	284.65	284.24	283.48	282.96	282.49	282.64	282.94	283.44	283.52	284.11	284.18	284.85
21	284.80	284.24	283.37	282.78	282.53	282.66	282.90	283.40	283.57	284.11	284.16	284.83
22	284.76	284.19	283.41	282.89	282.51	282.67	283.02	283.41	283.50	284.05	284.18	284.74
23	284.61	284.35	283.55	282.90	282.58	282.67	283.02	283.43	283.57	283.99	284.19	284.84
24	284.65	284.37	283.57	282.99	282.60	282.66	283.12	283.33	283.65	283.96	284.17	284.81
25	284.43	284.27	283.49	283.07	282.45	282.72	283.18	283.27	283.72	283.97	284.20	284.74
26	284.76	284.33	283.43	282.88	282.23	282.65	283.21	283.40	283.69	283.98	284.23	284.66
27	284.88	284.33	283.10	283.11	282.13	282.47	283.14	283.51	283.57	284.08	284.23	284.64
28	284.79	284.09	283.20	283.08	282.17	282.61	283.00	283.49	283.60	284.18	284.22	284.73
29	284.50	283.90	283.27	283.01	---	282.79	283.00	283.46	283.64	284.17	284.19	284.71
30	284.63	283.99	283.27	282.90	---	282.76	283.01	283.49	283.64	284.08	284.31	284.75
31	284.69	---	283.26	282.75	---	282.68	---	283.47	---	284.01	284.31	---
LOW	285.29	284.65	283.90	283.32	283.01	282.79	283.21	283.51	283.72	284.18	284.31	284.85

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY LOWEST VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284.74	284.80	284.64	284.36	283.91	283.51	283.24	283.35	283.49	283.47	283.58	283.71
2	284.70	284.86	284.68	284.24	283.99	283.55	283.29	283.39	283.50	283.43	283.58	283.67
3	284.62	284.90	284.74	284.37	284.00	283.52	283.34	283.39	283.55	283.39	283.60	283.61
4	284.69	284.79	284.69	284.36	283.96	283.43	283.34	283.31	283.55	283.40	283.66	283.64
5	284.71	284.90	284.76	284.28	283.87	283.48	283.22	283.32	283.58	283.36	283.70	283.65
6	284.76	284.92	284.71	284.38	283.88	283.48	283.14	283.29	283.62	283.35	283.67	283.71
7	284.72	284.81	284.57	284.38	283.86	283.49	283.19	283.34	283.60	283.41	283.61	283.77
8	284.62	284.87	284.42	284.28	283.73	283.55	283.29	283.38	283.52	283.43	283.53	283.74
9	284.79	284.96	284.56	284.28	283.74	283.61	283.33	283.40	283.51	283.43	283.58	283.68
10	284.77	284.96	284.75	284.30	283.82	283.66	283.35	283.40	283.48	283.42	283.59	283.65
11	284.64	284.81	284.81	284.28	283.83	283.72	283.30	283.35	283.40	283.40	283.59	283.72
12	284.61	284.82	284.82	284.27	283.81	283.63	283.08	283.28	283.45	283.36	283.62	283.74
13	284.80	284.65	284.77	284.28	283.75	283.46	283.14	283.25	283.44	283.34	283.64	283.72
14	284.90	284.83	284.71	284.20	283.71	283.48	283.22	283.23	283.44	283.32	283.62	283.79
15	284.99	284.90	284.57	284.18	283.60	283.45	283.27	283.29	283.45	283.43	283.58	283.85
16	285.03	284.90	284.57	284.10	283.55	283.44	283.32	283.39	283.42	283.47	283.51	283.87
17	284.91	284.82	284.52	284.11	283.58	283.33	283.33	283.36	283.35	283.46	283.53	283.83
18	284.75	284.79	284.46	284.17	283.63	283.40	283.36	283.41	283.34	283.43	283.54	283.78
19	284.91	284.79	284.62	284.17	283.66	283.46	283.38	283.46	283.34	283.40	283.58	283.68
20	284.95	284.66	284.64	284.04	283.66	283.46	283.46	283.46	283.30	283.40	283.66	283.79
21	284.98	284.67	284.45	284.12	283.63	283.41	283.49	283.43	283.35	283.46	283.66	283.83
22	284.85	284.75	284.50	284.12	283.49	283.38	283.49	283.35	283.40	283.55	283.63	283.85
23	284.67	284.75	284.50	284.13	283.57	283.34	283.43	283.36	283.34	283.58	283.58	283.83
24	284.80	284.69	284.44	284.13	283.58	283.34	283.29	283.43	283.27	283.58	283.55	283.79
25	284.94	284.69	284.47	284.06	283.38	283.22	283.18	283.47	283.26	283.58	283.61	283.71
26	284.93	284.74	284.50	284.09	283.27	283.14	283.36	283.43	283.23	283.59	283.58	283.67
27	284.79	284.59	284.50	284.10	283.36	283.11	283.50	283.36	283.30	283.59	283.60	283.78
28	284.75	284.65	284.40	284.03	283.47	283.15	283.53	283.45	283.36	283.57	283.67	283.78
29	284.75	284.71	284.41	284.06	---	283.14	283.49	283.48	283.41	283.55	283.70	283.79
30	284.65	284.76	284.43	283.94	---	283.22	283.42	283.45	283.46	283.61	283.67	283.85
31	284.65	---	284.48	283.91	---	283.21	---	283.50	---	283.61	283.68	---
LOW	285.03	284.96	284.82	284.38	284.00	283.72	283.53	283.50	283.62	283.61	283.70	283.87

Section B - Hydrographs for miscellaneous wells

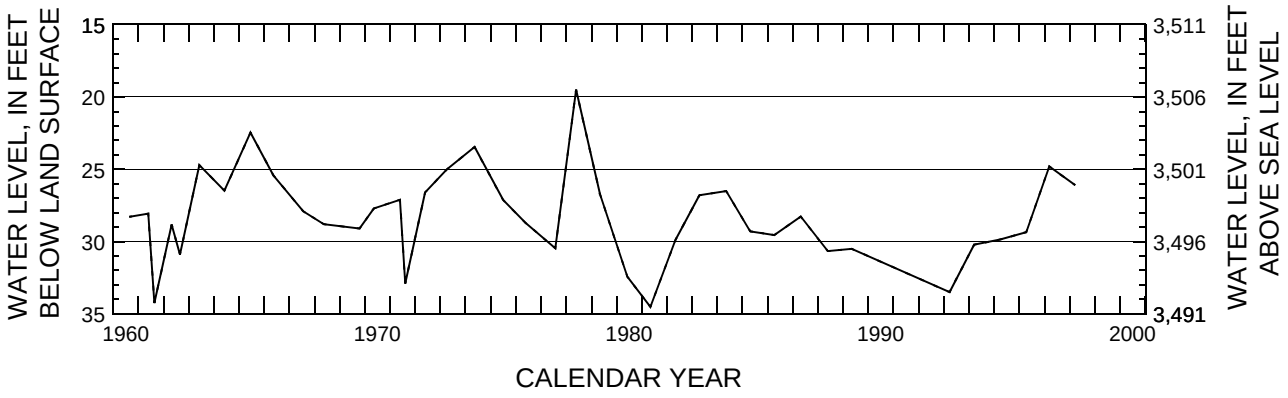
LOCAL WELL NUMBER.—7N1E26ACD.

SITE ID.—443215103573001.

COUNTY.—Lawrence.

WELL CHARACTERISTICS.—Artesian stock well in the Minnelusa Formation. Diameter, 4 in.; depth, 270 ft; opening, open end; measuring point, top of casing, 1.00 ft above land-surface datum; land-surface datum, about 3,526 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 19.49 ft, May 24, 1978; lowest, 34.52 ft, May 5, 1981.



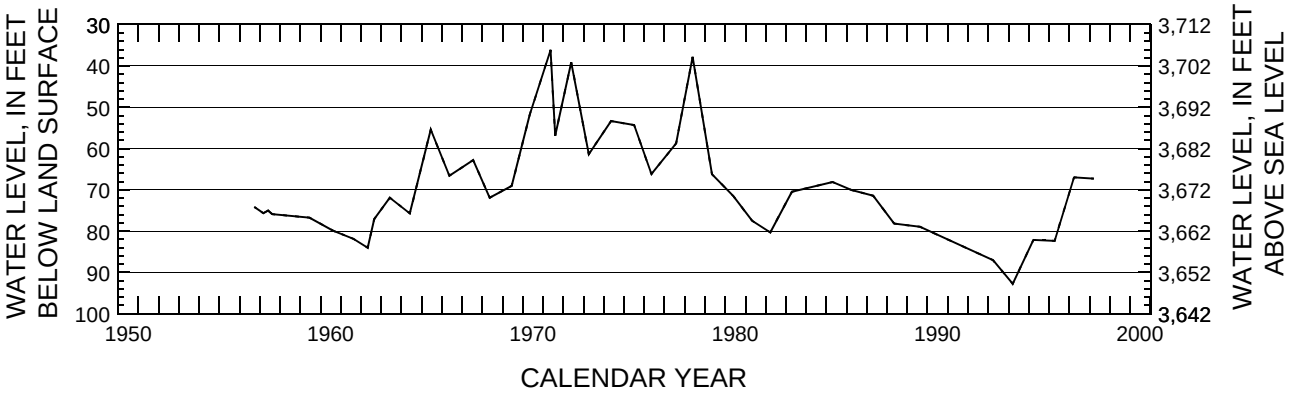
LOCAL WELL NUMBER.—6N2E23BBBA.

SITE ID.—442820103503501.

COUNTY.—Lawrence.

WELL CHARACTERISTICS.—Unused artesian well in the Minnelusa Formation. Diameter, 8 in.; depth, 415 ft (measured 264 ft, Sept. 25, 1956); opening, unknown; measuring point, hole in top of cap, 1.50 ft above land-surface datum; land-surface datum, about 3,742 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 36.07 ft, May 16, 1971; lowest, 92.72 ft, Mar. 17, 1994.



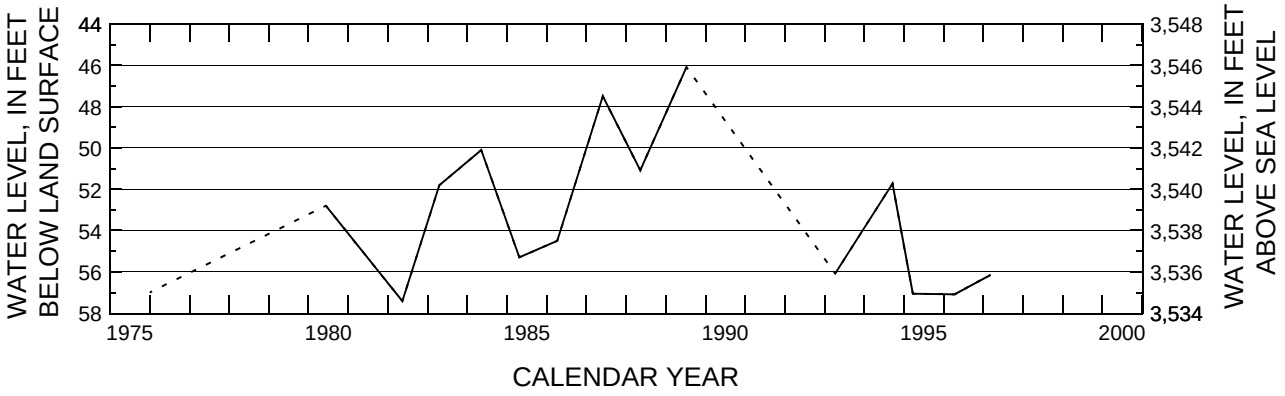
LOCAL WELL NUMBER.—6N2E10BCBB.

SITE ID.—443008103514701.

COUNTY.—Lawrence.

WELL CHARACTERISTICS.—Artesian domestic well in the Spearfish Formation. Diameter, 6.0 in.; depth, 75 ft; opening, unknown; measuring point, 5.5 ft above land-surface datum; land-surface datum, about 3,592 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 46.08 ft, July 11, 1989; lowest, 57.42 ft, May 13, 1982.



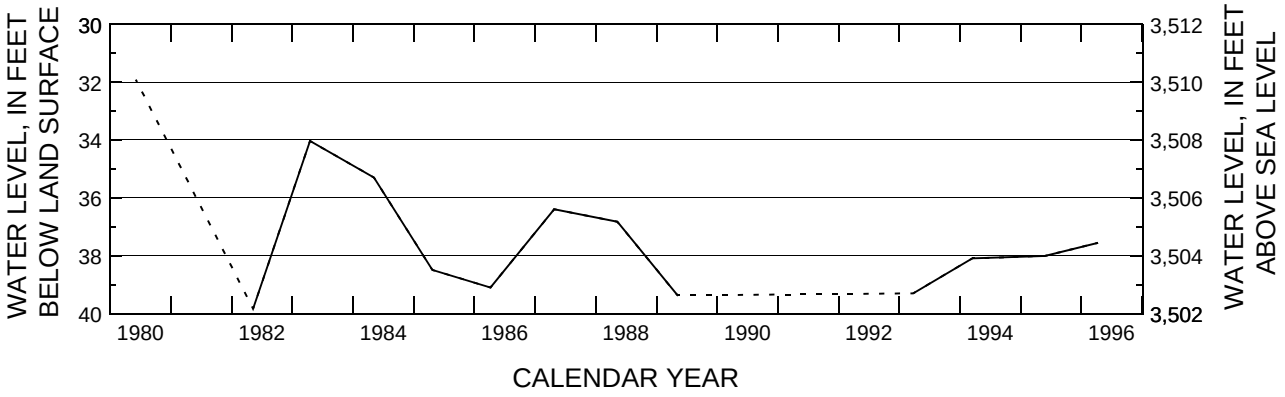
LOCAL WELL NUMBER.—6N2E4BDD.

SITE ID.—443044103525801.

COUNTY.—Lawrence.

WELL CHARACTERISTICS.—Artesian stock well in the Minnekahta Limestone. Diameter, 6.0 in.; depth, 70 ft; opening, perforated 55-70 ft; measuring point, top of casing, 0.50 ft above land-surface datum; land-surface datum, about 3,542 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 31.91 ft, June 4, 1980; lowest, 39.84 ft, May 11, 1982.



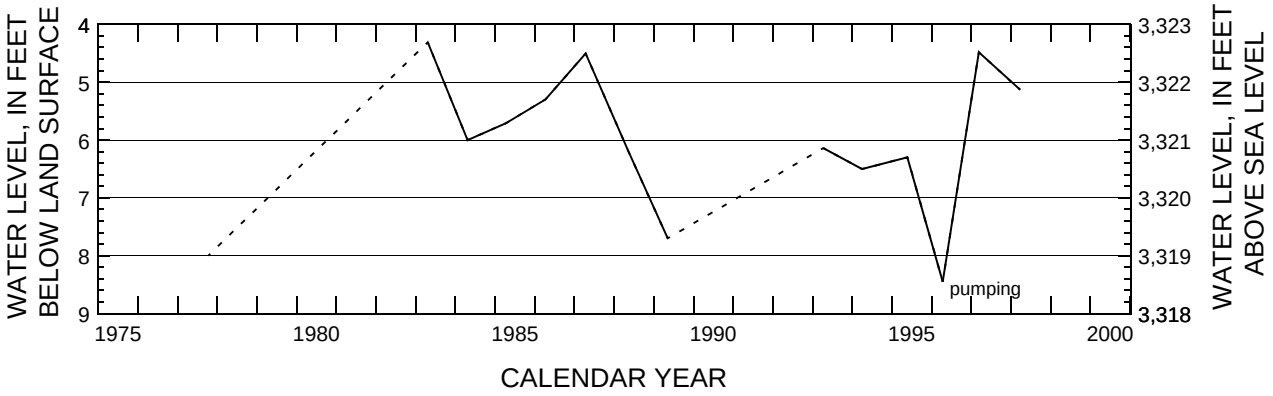
LOCAL WELL NUMBER.—6N5E19AAAC.

SITE ID.—442804103330401.

COUNTY.—Meade.

WELL CHARACTERISTICS.—Artesian domestic well in the Fall River Formation. Diameter, 4.0 in.; depth, 285 ft; opening, perforated 205-285 ft; measuring point, 1.00 ft above land-surface datum; land-surface datum, about 3,327 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 4.31 ft, Apr. 21, 1983; lowest, 8.45 ft, Apr. 12, 1996 (affected by recent pumping).



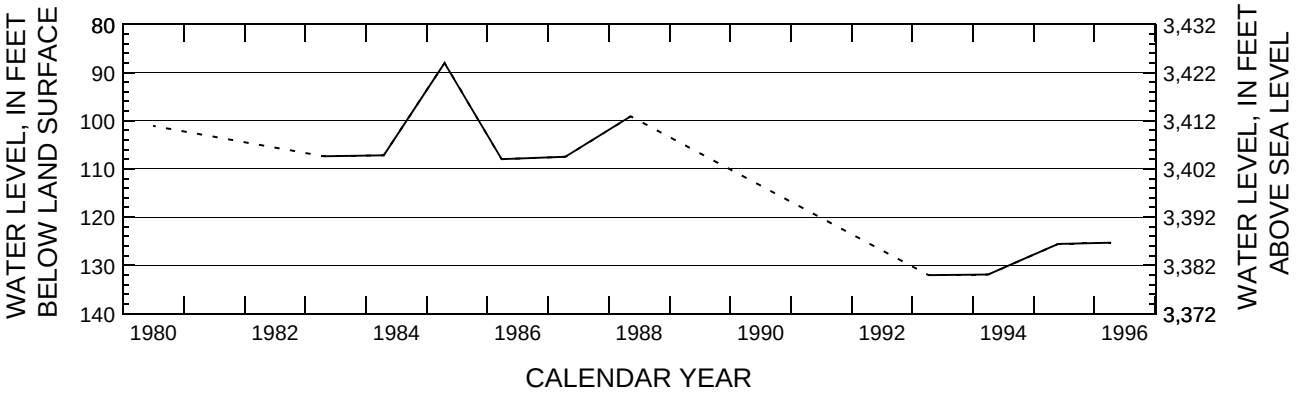
LOCAL WELL NUMBER.—3N6E23DCB3.

SITE ID.—441155103222501.

COUNTY.—Meade.

WELL CHARACTERISTICS.—Artesian well in the Spearfish Formation. Diameter, 6.62 in.; depth, 135 ft; opening, perforated 110-120 ft; measuring point, 0.70 ft above land-surface datum; land-surface datum, about 3,512 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 88.00 ft, Apr. 18, 1985; lowest, 132.06 ft, Apr. 9, 1993.



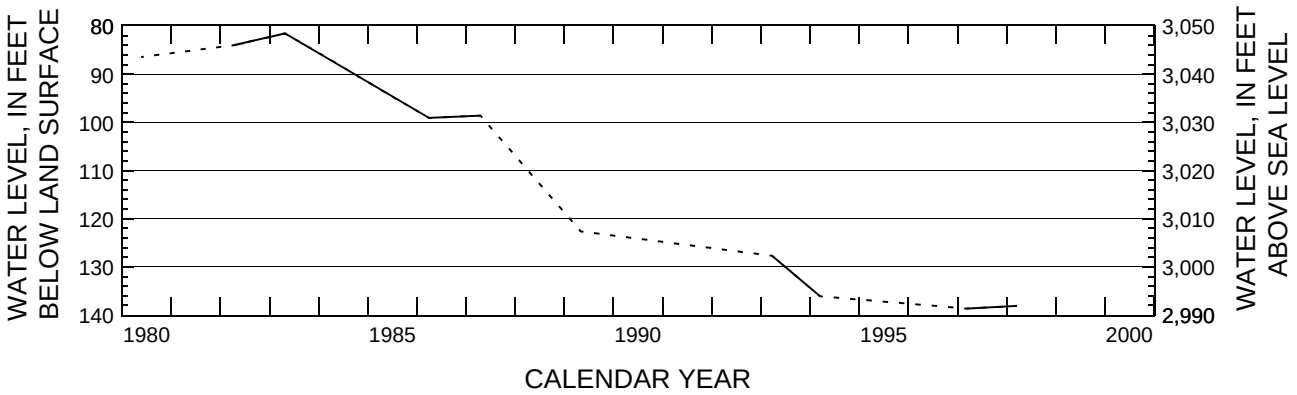
LOCAL WELL NUMBER.—2N8E28BCB.

SITE ID.—440622103101101.

COUNTY.—Pennington.

WELL CHARACTERISTICS.—Industrial supply well in the Lakota Formation. Diameter, unknown; depth, 1,648 ft; opening, unknown; measuring point, 0.00 ft at land-surface datum; land-surface datum, about 3,130 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 81.57 ft, Apr. 27, 1983; lowest, 138.67 ft, Mar. 12, 1997.



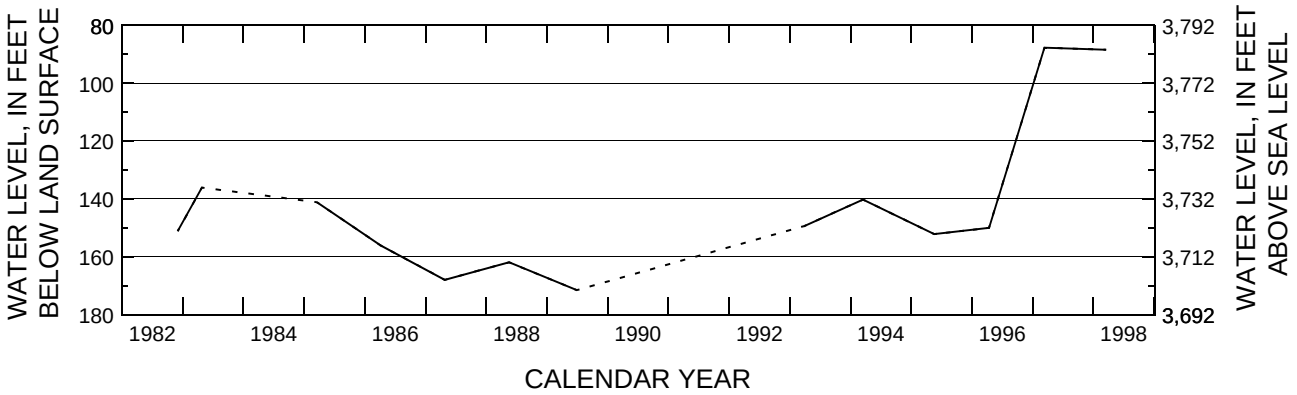
LOCAL WELL NUMBER.—1N7E14CBBD.

SITE ID.—440243103150001.

COUNTY.—Pennington.

WELL CHARACTERISTICS.—Artesian well (usage unknown) in the Sundance Formation. Diameter, unknown; depth, unknown; opening, unknown; measuring point, unknown; land-surface datum, about 3,872 ft above sea level. Site modifications may have affected well characteristics after 1996.

EXTREMES FOR PERIOD OF RECORD.—Highest, 87.68 ft, Mar. 12, 1997; lowest, 171.60 ft, June 30, 1989.



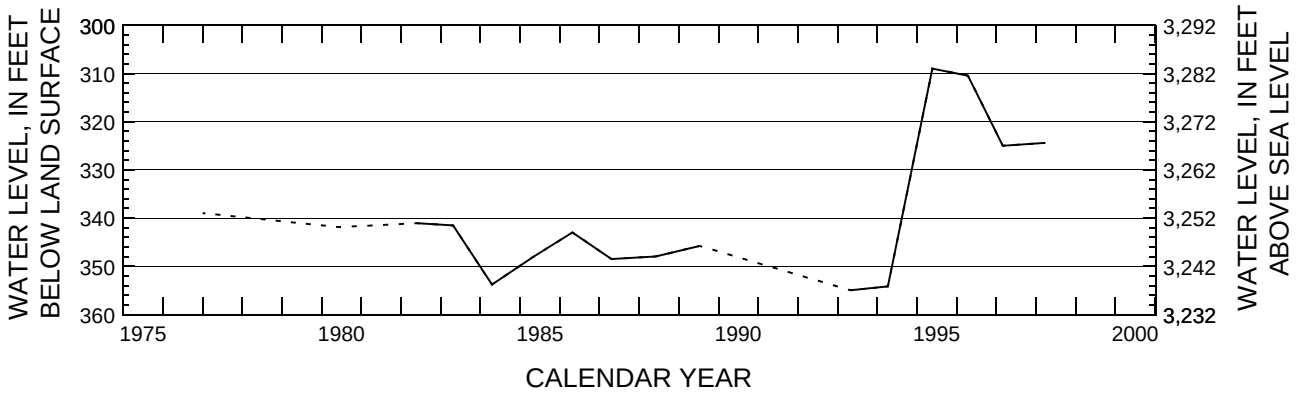
LOCAL WELL NUMBER.—3S7E23DDAC.

SITE ID.—434611103142501.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Artesian stock well in the Lakota Formation. Diameter, 5.0 in.; depth, 355 ft; opening, perforated 300-355 ft; measuring point, 0.0 ft at land-surface datum; land-surface datum, about 3,592 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 309.0 ft, May 23, 1995; lowest, 355.0 ft, Apr. 29, 1993.



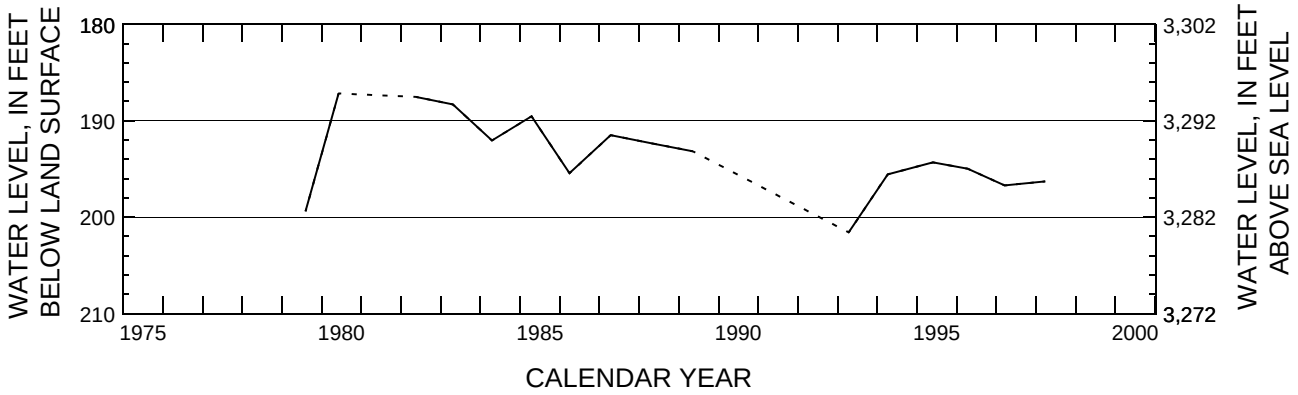
LOCAL WELL NUMBER.—3S7E35DBB.

SITE ID.—434443103145601.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Artesian well (usage unknown) in the Lakota Formation. Diameter, unknown; depth, 345 ft; opening, unknown; measuring point, 0.00 ft on Apr. 15, 1987; land-surface datum, about 3,482 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 187.17 ft, June 5, 1980; lowest, 201.59 ft, Apr. 14, 1993.



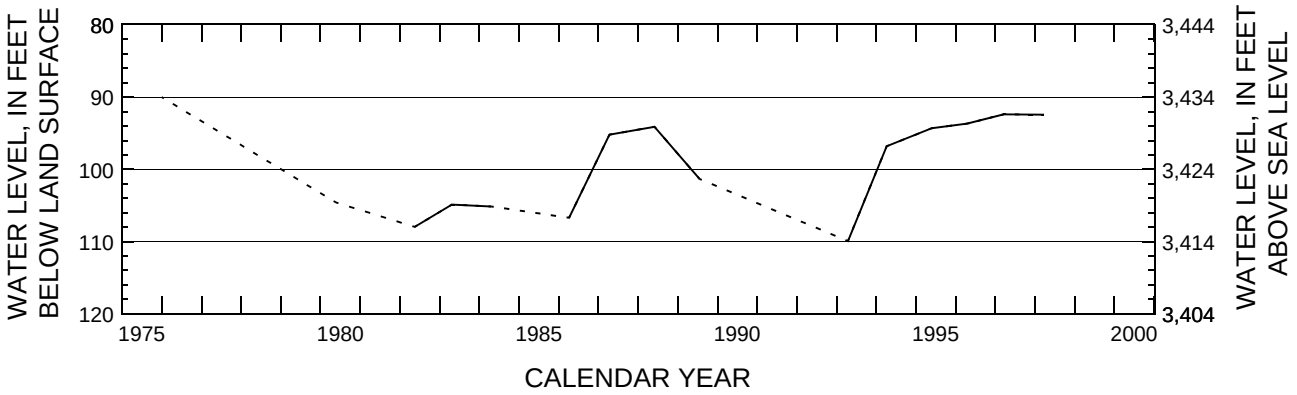
LOCAL WELL NUMBER.—3S8E17BACB.

SITE ID.—434737103113301.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Unused artesian well in the Greenhorn Formation. Diameter, 8.62 in.; depth, 428 ft; opening, unknown; measuring point, 0.90 ft above land-surface datum; land-surface datum, about 3,524 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 90 ft, 1976, reported; lowest, 109.93 ft, Apr. 15, 1993.



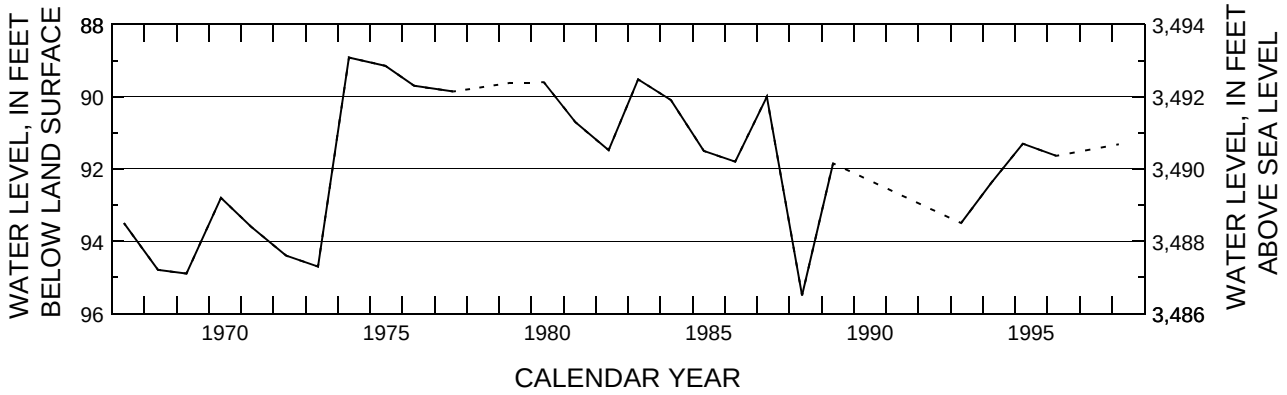
LOCAL WELL NUMBER.—4S7E28DBBC.

SITE ID.—434016103171001.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Artesian stock well in the Fall River Formation. Diameter, 6 in.; depth, 250 ft; opening, unknown; measuring point, top of well cover, 1.5 ft above land-surface datum (since 1973); land-surface datum, about 3,582 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 88.92 ft, May 8, 1974; lowest, 95.50 ft, May 25, 1988.



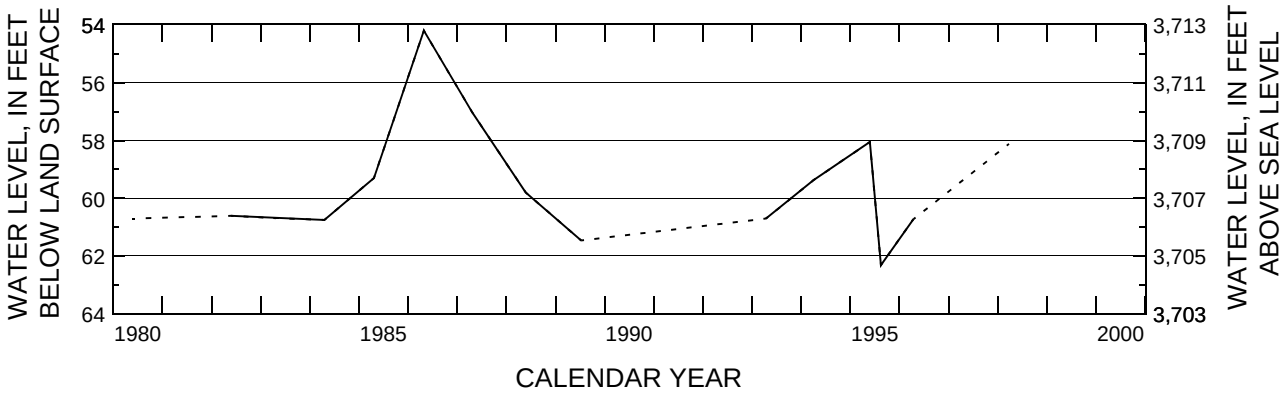
LOCAL WELL NUMBER.—5S6E12DAAD.

SITE ID.—433740103202801.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Unused well in the Lakota Formation. Diameter, 6.0 in.; depth, 220 ft; opening, unknown; measuring point, top of casing, 0.52 ft above land-surface datum on July 12, 1989; land-surface datum, about 3,767 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 54.20 ft, Apr. 28, 1986; lowest, 62.31 ft. Aug. 18, 1995.



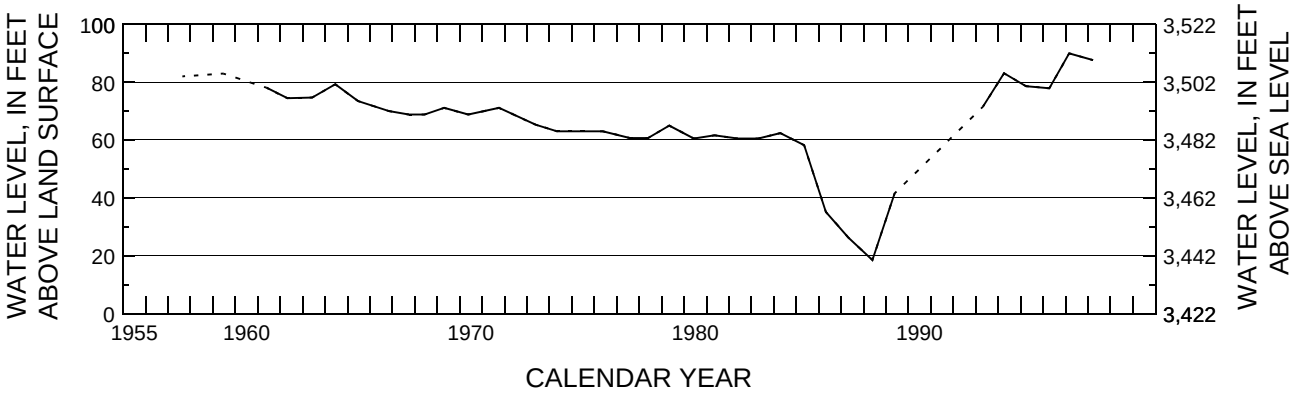
LOCAL WELL NUMBER.—6S6E15ABDD.

SITE ID.—433150103230501.

COUNTY.—Custer.

WELL CHARACTERISTICS.—Artesian domestic well in the Madison Limestone. Diameter, 7 in.; depth, 939 ft; opening, perforated 929-939 ft and open end; measuring point, 0.4 ft below land-surface datum; land-surface datum, about 3,422 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, +90.00 ft, Mar. 1, 1997; lowest, +18.46 ft, May 25, 1988.



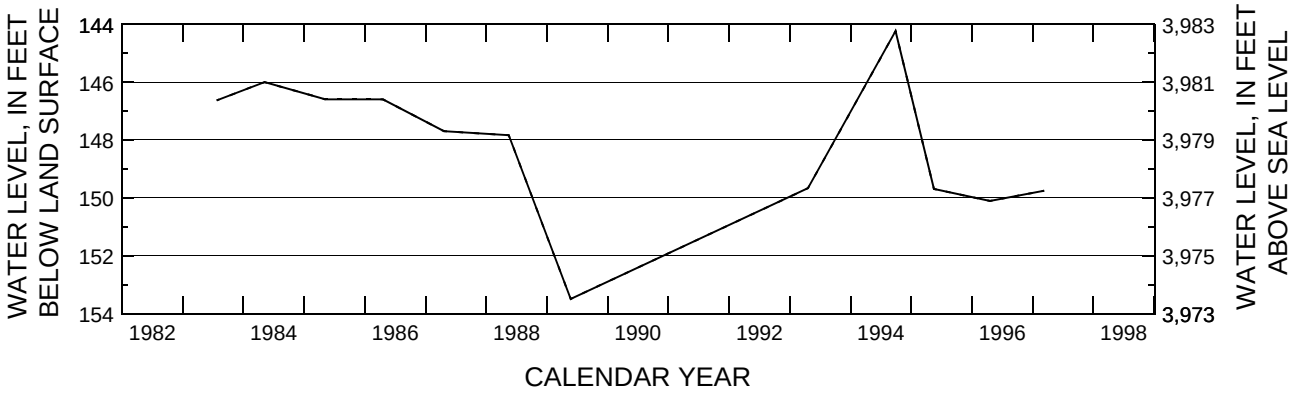
LOCAL WELL NUMBER.—7S2E3DAAB.

SITE ID.—432813103512701.

COUNTY.—Fall River.

WELL CHARACTERISTICS.—Unused well in the Sundance Formation. Diameter, 3.0 in.; depth, 220 ft; opening, unknown; measuring point, 0.0 ft at land-surface datum on Apr. 23, 1987; land-surface datum, about 4,127 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 144.23 ft, Sept. 29, 1994; lowest, 153.50 ft, May 23, 1989.



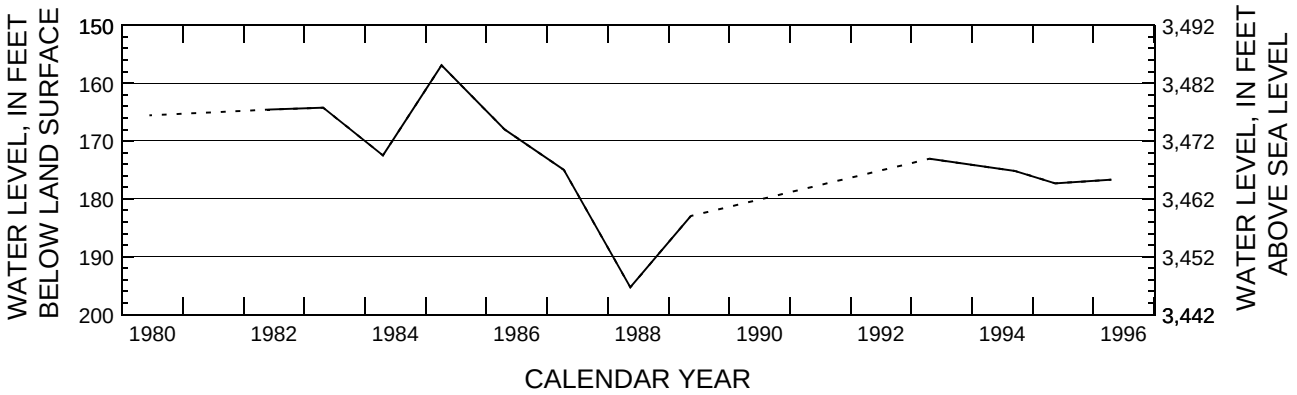
LOCAL WELL NUMBER.—7S5E12CDBB.

SITE ID.—432704103282801.

COUNTY.—Fall River.

WELL CHARACTERISTICS.—Public supply well in the Spearfish Formation (previously published as Minnelusa Formation). Diameter, unknown; depth, 300 ft; opening, unknown; measuring point, 6.00 ft below land-surface datum; land-surface datum, about 3,642 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 156.90 ft, Apr. 7, 1985; lowest, 195.30 ft, May 16, 1988.



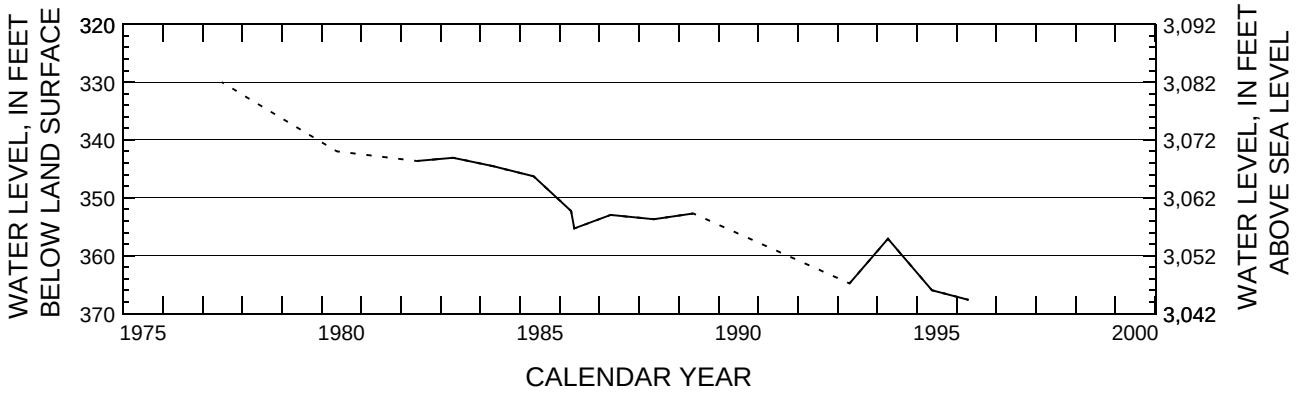
LOCAL WELL NUMBER.—7S7E6BBBC (formerly 7S6E1AAAD).

SITE ID.—432834103203301.

COUNTY.—Fall River.

WELL CHARACTERISTICS.—Artesian domestic well in the Fall River Formation. Diameter, 6.25 in.; depth, 640 ft; opening, perforated 607-640 ft; measuring point, 0.70 ft above land-surface datum; land-surface datum, about 3,412 ft above sea level.

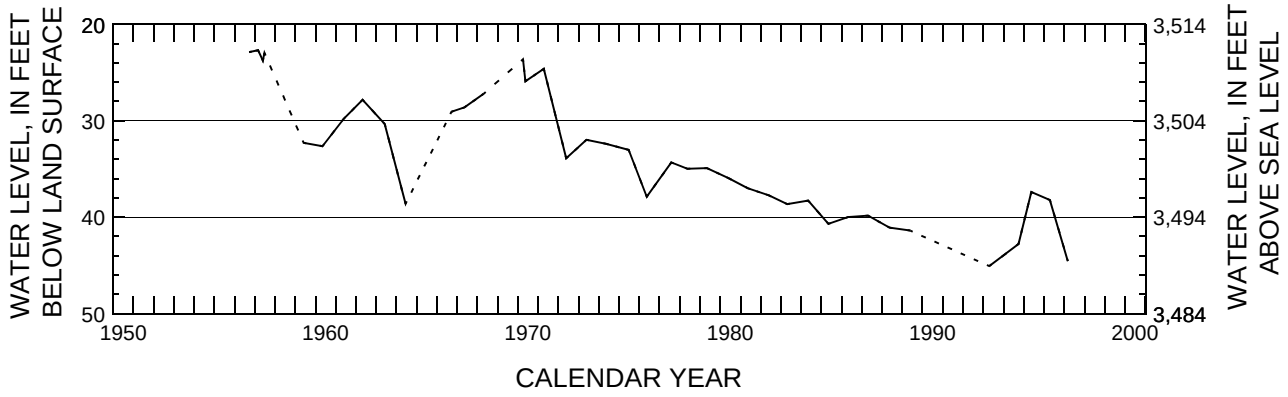
EXTREMES FOR PERIOD OF RECORD.—Highest, 330.0 ft, June 26, 1977; lowest, 367.68 ft, Apr. 19, 1996.



LOCAL WELL NUMBER: 8S2E20DACC.

SITE ID: 432015103535801.

COUNTY.—Fall River.

WELL CHARACTERISTICS.—Artesian stock well in the Lakota Formation. Diameter, 5 in.; depth, 410 ft; opening, open end; measuring point, top of casing, 0.6 ft above land-surface datum; land-surface datum, about 3,534 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Highest, 22.69 ft, Mar. 1, 1957; lowest, 45.10 ft, Apr. 20, 1993.