SELECTED GEOHYDROLOGIC DATA FOR THE MESILLA BASIN, DOÑA ANA COUNTY, NEW MEXICO, AND EL PASO COUNTY, TEXAS

By Edward L. Nickerson

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U.S. BUREAU OF RECLAMATION, AND CITY OF LAS CRUCES

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CONVERSION FACTORS

In this report, measurements are given in inch-pound units only. The following table contains factors for converting to metric (SI) units.

Multiply inch-pound units	By	To obtain metric (SI) units
foot	0.3048	meter
mile	1.609	kilometer
square mile	2.590	square kilometer

SELECTED GEOHYDROLOGIC DATA FOR THE MESILLA BASIN, DOÑA ANA COUNTY, NEW MEXICO, AND EL PASO COUNTY, TEXAS

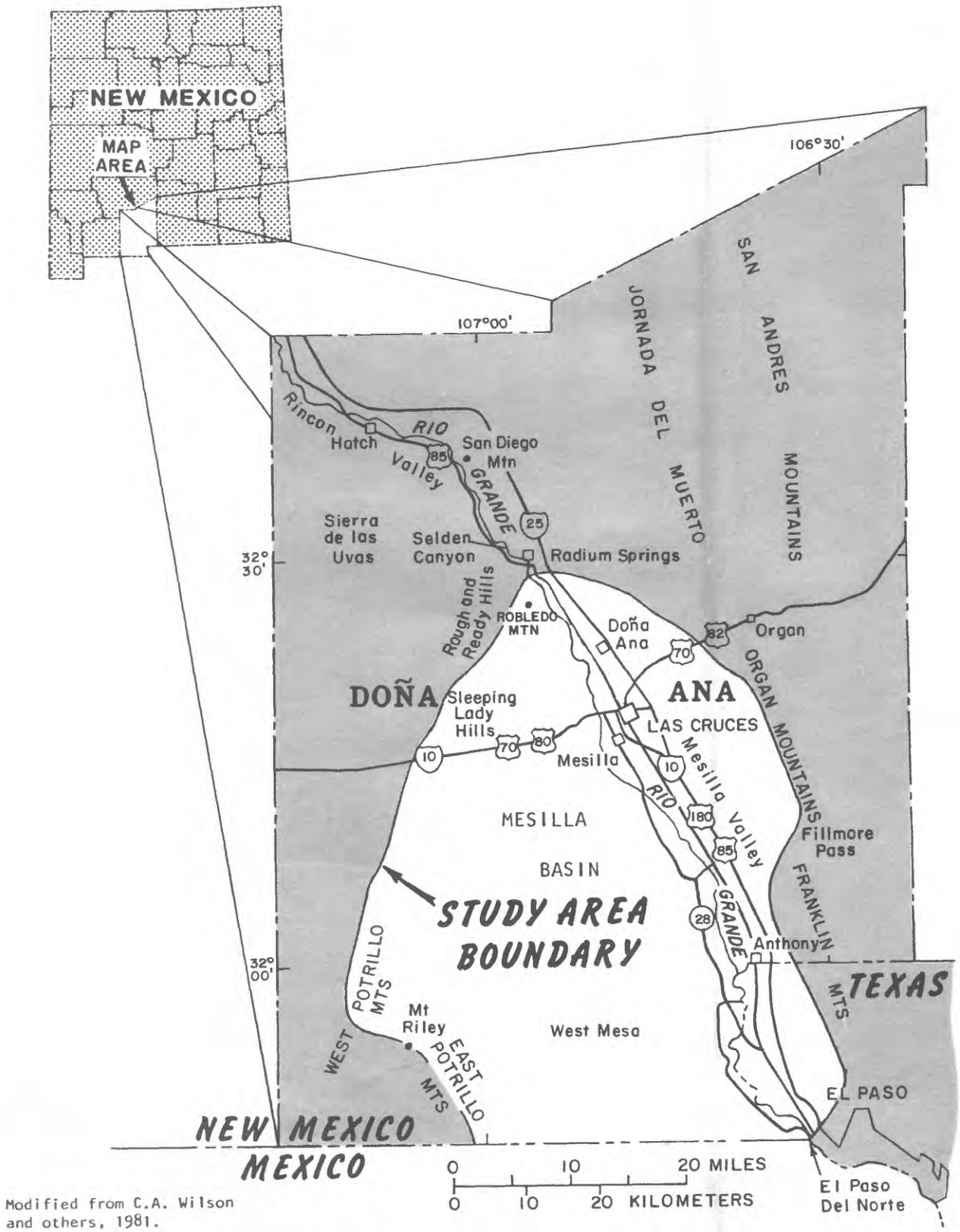
By Edward L. Nickerson

ABSTRACT

In 1983, the U.S. Geological Survey began a multiphase study to help define the hydrologic system of the Mesilla Basin in Doña Ana County, New Mexico, and El Paso County, Texas. This report is a compilation of selected geohydrologic data collected through July 1985. The report describes the ground-water monitoring network of 143 wells, including 3 hydrologic sections constructed across the Mesilla Valley. Geohydrologic data presented in the report include: well records and water levels from 143 wells, chemical analyses of water samples from 34 observation wells, borehole-geophysical logs of 10 observation wells, and river stage at 3 hydrologic sections.

INTRODUCTION

In 1983, the U.S. Geological Survey began a multiphase study to help define the hydrologic system of the Mesilla Basin in Doña Ana County, New Mexico, and El Paso County, Texas. The study is in cooperation with the New Mexico State Engineer Office, City of El Paso, U.S. Section-International Boundary and Water Commission, U.S. Bureau of Reclamation, and City of Las Cruces. This report is a compilation of geohydrologic data collected through July 1985. The location of the study area is shown in figure 1.



Modified from C.A. Wilson and others, 1981.

Figure 1.--Location of the study area.

Purpose and Scope

The purpose of this report is to present selected geohydrologic and chemical-quality data collected for the Mesilla Basin study through July 1985. The report describes the ground-water monitoring network that was established to document water levels and quality of water. Data collection efforts were limited to the Mesilla Valley and West Mesa area.

Acknowledgments

The U.S. Geological Survey expresses appreciation to the cooperating agencies. Special cooperation and assistance by many individuals and their agencies are gratefully acknowledged. These include John Nixon, New Mexico State Engineer Office; Thomas Cliett, El Paso Water Utilities Department; David Overvold, U.S. Bureau of Reclamation; and William Saad, Elephant Butte Irrigation District.

Appreciation is expressed to U.S. Geological Survey personnel who assisted the author in data collection and compilation efforts. These include Raymond Archuleta, Linda Beal, Jim Hudson, Clinton Nagel, Steven Richey, Donald White, and William Whitford.

Well-Numbering Systems

The system of numbering wells in New Mexico is based on the common subdivision of public lands into sections. The well number, in addition to designating the well, locates its position to the nearest 10-acre tract in the land network (fig. 2). The well number is divided by periods into four segments. The first segment denotes the township north or south of the New Mexico base line; the second denotes the range east or west of the New Mexico principal meridian; and the third denotes the section. All wells in Doña Ana County are in townships south of the base line. The fourth segment of the number, which consists of three digits, denotes the 160-, 40-, and 10-acre tracts in which the well is situated in the section. For this purpose, the section is divided into four quarters, numbered 1, 2, 3, and 4, for the northwest, northeast, southwest, and southeast quarters, respectively. The first digit of the fourth segment gives the quarter section, which is a tract of 160 acres. Similarly, the quarter section is divided into four 40-acre tracts numbered in the same manner, and the second digit denotes the 40-acre tract. Finally, the 40-acre tract is divided into four 10-acre tracts, and the third digit denotes the 10-acre tract. Thus, well 24S.2E.23.342 is in the NE¼ of the SE¼ of the SW¼, sec. 23, T. 24 S., R. 2 E. Letters a, b, c, d, and e are added to the last segment to designate the second through sixth wells in the same 10-acre tract. In valley areas where land grants existed when the public lands were subdivided into sections, the section lines have been extended and the artificial sections numbered.

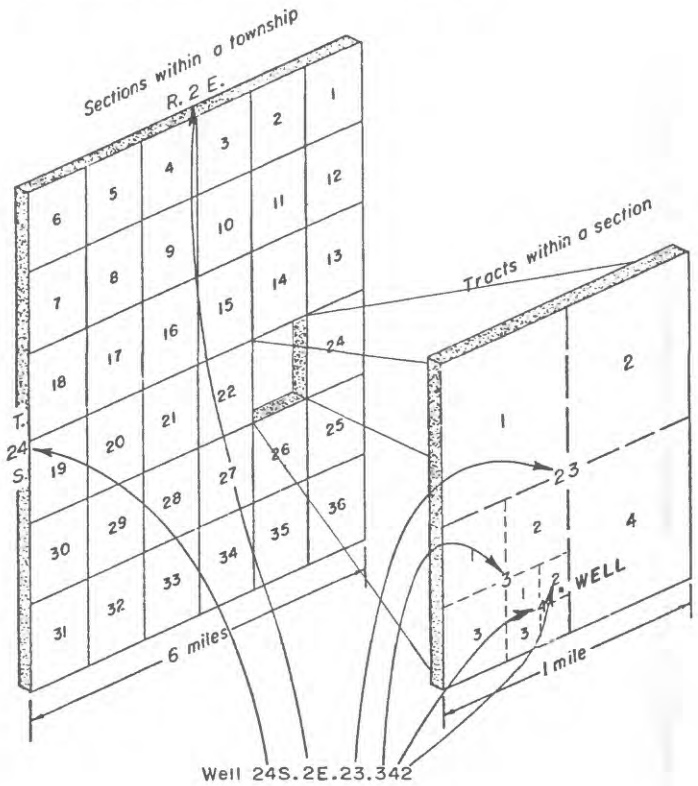
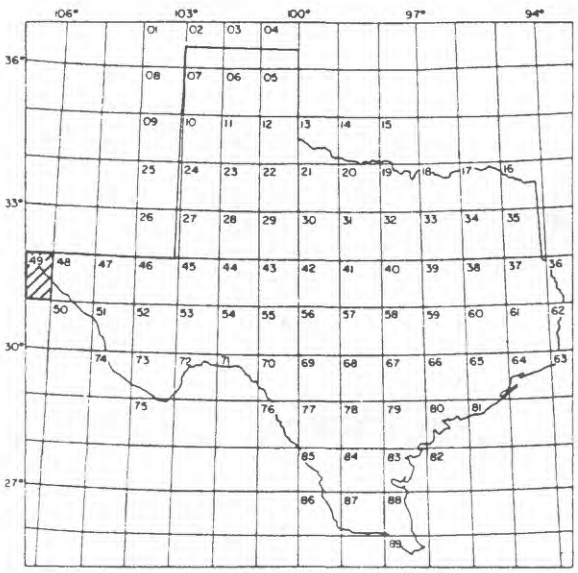


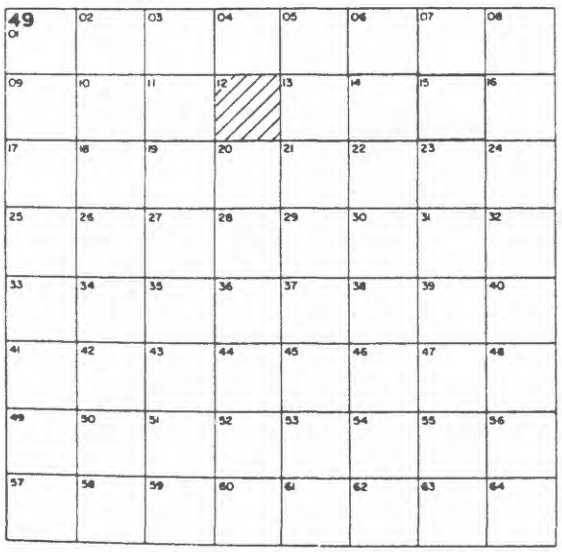
Figure 2.--System of numbering wells in New Mexico.

In the Texas part of the Mesilla Valley, the well-numbering system used in this report is the same as that used by the Texas Department of Water Resources (fig. 3). Under this system, which is based on latitude and longitude, each 1-degree quadrangle in the State is given a two-digit number from 01 through 89. These are the first two digits of the well number. El Paso County is in parts of quadrangles 48 and 49. Each 1-degree quadrangle is subdivided into 7½-minute quadrangles that are given a two-digit number from 01 to 64. These are the third and fourth digits of the well number. Each 7½-minute quadrangle is further subdivided into 2½-minute quadrangles that are each given a single digit number ranging from 1 through 9. This is the fifth digit of the well number. Finally, each well within a 2½-minute quadrangle is given a two-digit number in the order in which the well was inventoried, starting with 01. These are the last two digits of the well number. In addition to the seven-digit well number, a two-letter prefix is used to identify the county; the prefix for El Paso County is JL.



LOCATION OF WELL JL 49-12-501

49	1-degree quadrangle
12	7½-minute quadrangle
5	2½-minute quadrangle
01	Well number within 2½-minute quadrangle
JL	Prefix for El Paso County



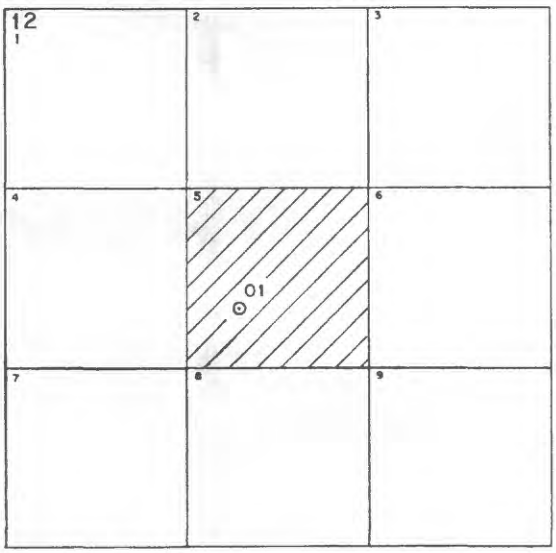


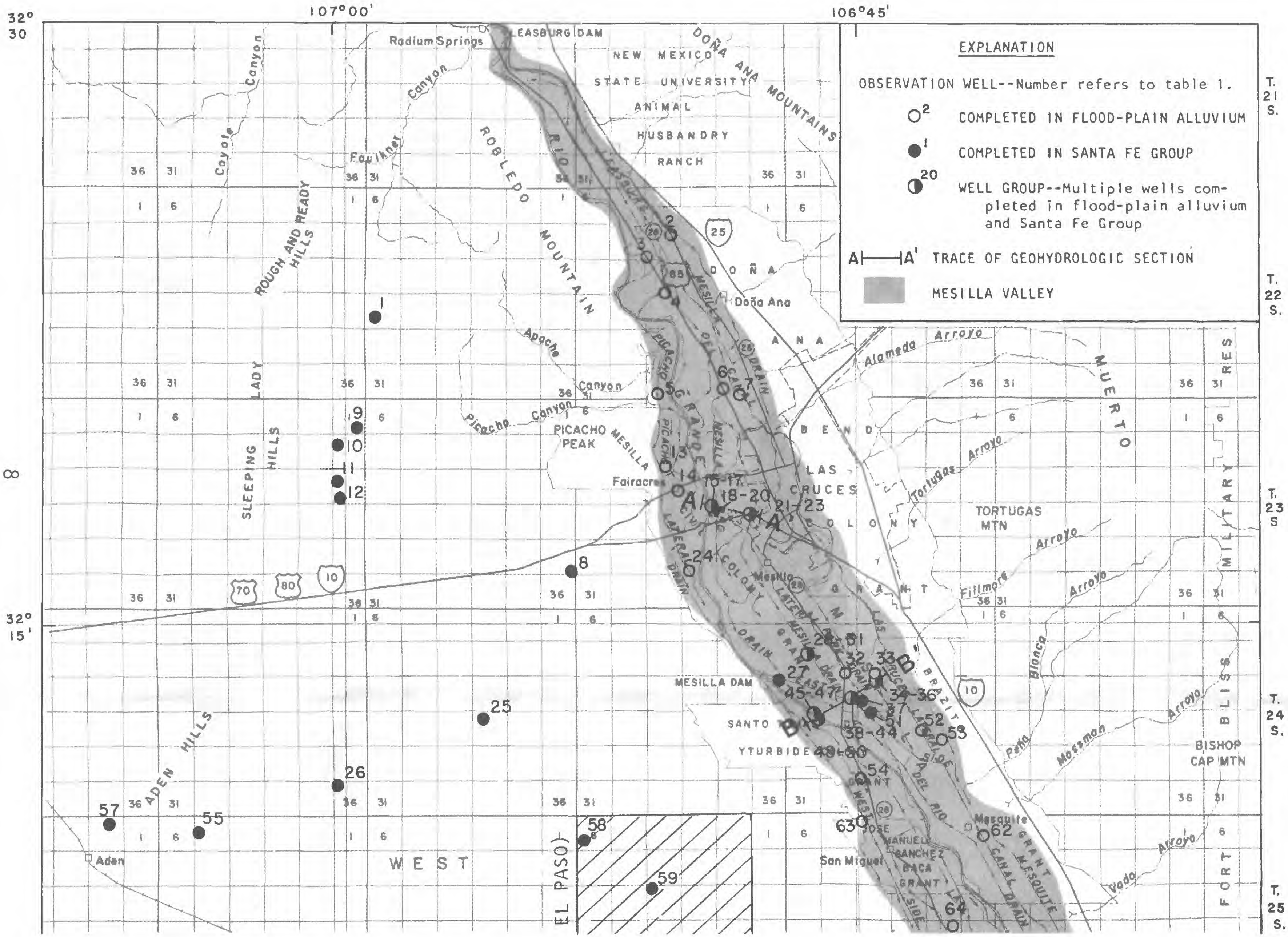
Figure 3.--System of numbering wells in Texas.

GEOHYDROLOGIC SETTING

The Mesilla Basin ground-water system primarily consists of a basin-fill aquifer composed of unconsolidated alluvial deposits. The aquifer system may be divided into two main geologic units: the Santa Fe Group and the Rio Grande flood-plain alluvium (King and others, 1971). The Santa Fe Group is an intermontane basin-fill unit composed of alluvial deposits of Miocene to middle Pleistocene age. These alluvial deposits of clay, silt, sand, and gravel extend throughout the basin and may range in thickness from less than 100 feet to as much as 3,700 feet (King and others, 1971). The Rio Grande flood-plain alluvium overlies the Santa Fe Group and consists of clay, silt, sand, and gravel that is generally 60 to 80 feet thick and was deposited by the Rio Grande from late Pleistocene to Holocene time (Wilson and others, 1981).

MESILLA BASIN OBSERVATION-WELL NETWORK

The Mesilla Basin observation-well network was established in 1983 in order to monitor ground-water levels. The observation-well network consists of 143 wells (fig. 4). Wells were selected based upon geologic unit and location. Records of selected wells including annual water-level measurements are listed in table 1. Key observation wells were selected for monthly water-level measurements. Hydrographs showing monthly water levels in selected observation wells are shown in figure 5. The U.S. Bureau of Reclamation has maintained a series of observation wells in the Mesilla Valley since 1946. These wells are included in the current observation-well network. Hydrographs showing annual February water levels in selected observation wells from 1946 through 1985 are shown in figure 6. Water-level measurements in network wells were made by the U.S. Geological Survey with assistance from the U.S. Bureau of Reclamation and the New Mexico State Engineer Office.


EXPLANATION
OBSERVATION WELL--Number refers to table 1.
COMPLETED IN FLOOD-PLAIN ALLUVIUM
COMPLETED IN SANTA FE GROUP
WELL GROUP--Multiple wells completed in flood-plain alluvium and Santa Fe Group
A—A' TRACE OF GEOHYDROLOGIC SECTION
MESILLA VALLEY
107°00'
106°45'
32° 30
32° 15'
T. 21 S.
T. 22 S.
T. 23 S
T. 24 S.
T. 25 S.
Radium Springs
LEASBURG DAM
NEW MEXICO STATE UNIVERSITY ANIMAL HUSBANDRY RANCH
DOÑA ANA MOUNTAINS
ROBLEDO MOUNTAIN
ROUGH AND READY HILLS
SLEEPING LADY HILLS
PICACHO PEAK
Doña Ana
LAS CRUCES
Fairacres
Mesilla
MESILLA DAM
SANTO TOMAS YTURBIDE
San Miguel
Mesquite
TORTUGAS MTN
BISHOP CAP MTN
ADEN HILLS
Aden
WEST
EL PASO
RIO GRANDE
MUERTO
FORT BLISS MILITARY RES

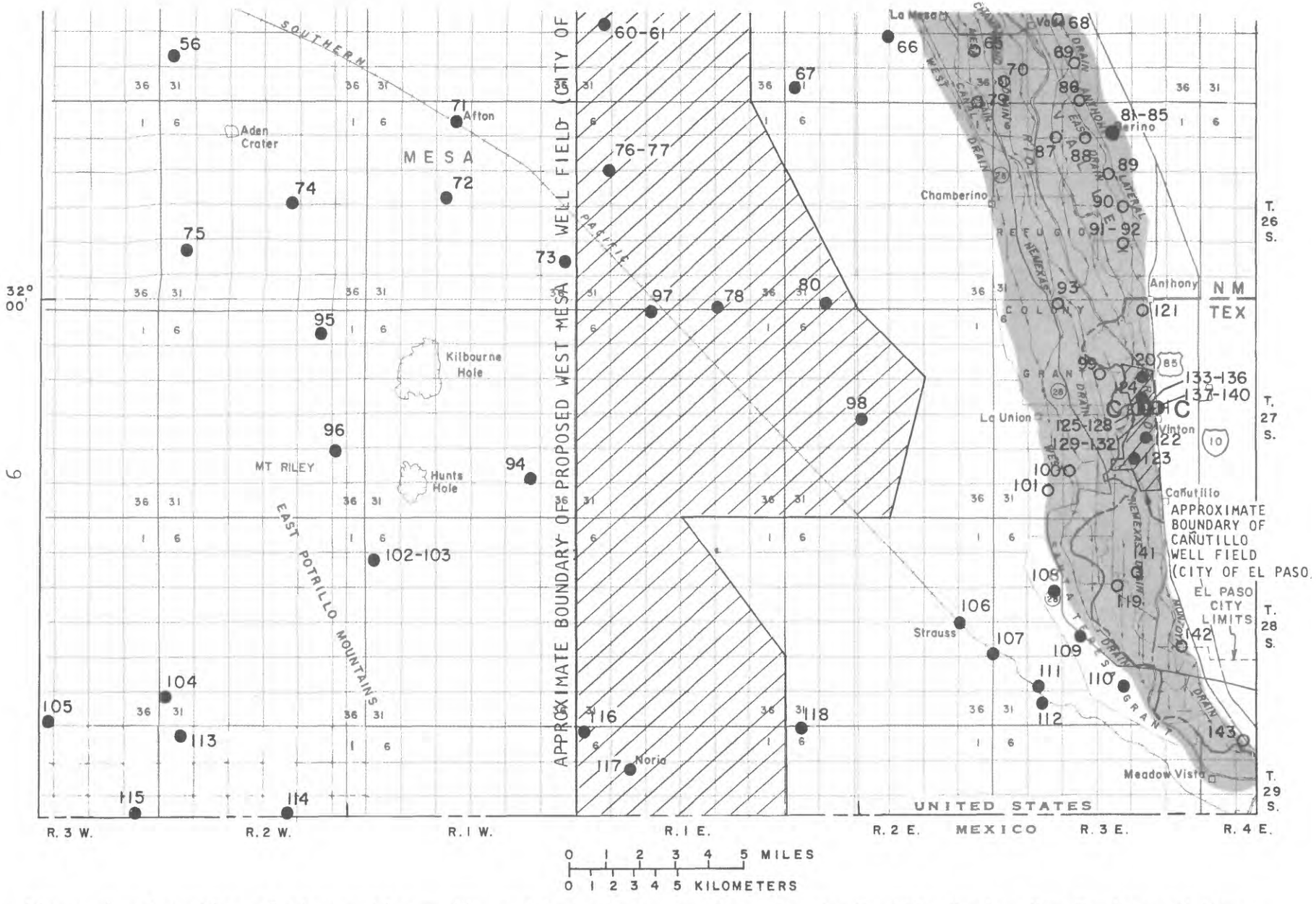
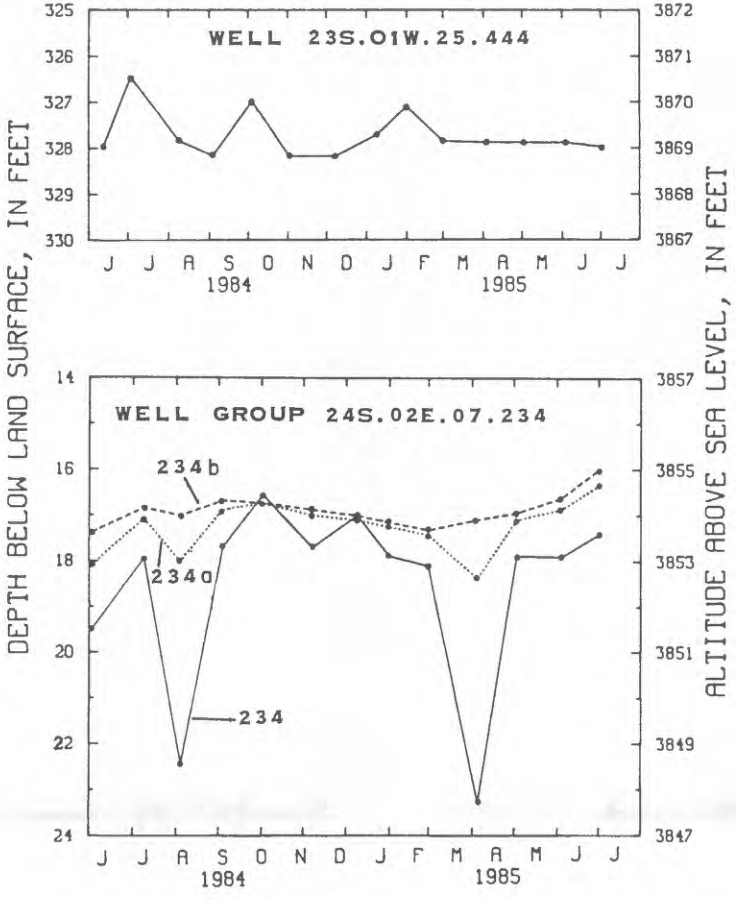
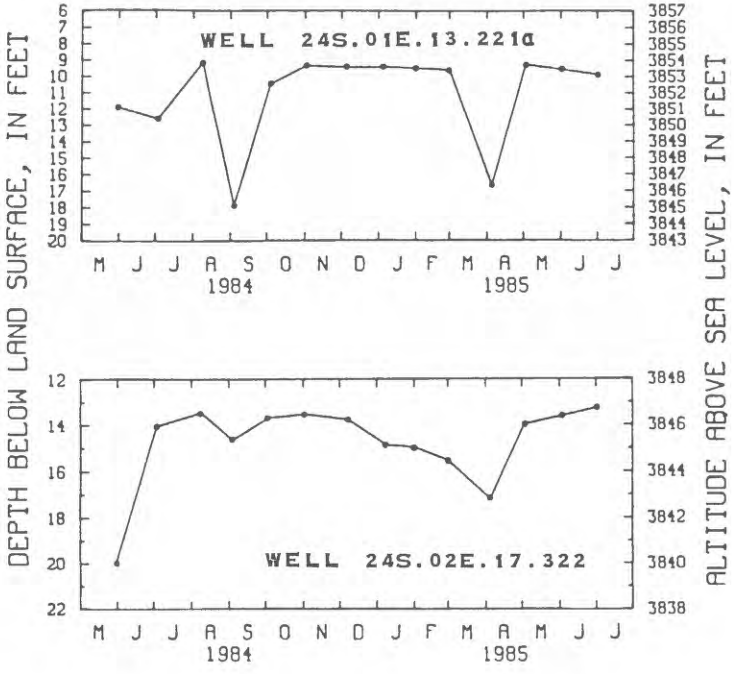


Figure 4.--Location of observation wells and hydrologic sections in the Mesilla Basin, New Mexico and Texas.


WELL 23S.01W.25.444
DEPTH BELOW LAND SURFACE, IN FEET
ALTITUDE ABOVE SEA LEVEL, IN FEET
325
326
327
328
329
330
3872
3871
3870
3869
3868
3867
J J A S O N D J F M A M J J
1984
1985
WELL GROUP 24S.02E.07.234
234b
234a
234
14
16
18
20
22
24
3857
3855
3853
3851
3849
3847


WELL 24S.01E.13.221a
DEPTH BELOW LAND SURFACE, IN FEET
ALTITUDE ABOVE SEA LEVEL, IN FEET
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
3857
3856
3855
3854
3853
3852
3851
3850
3849
3848
3847
3846
3845
3844
3843
M J J A S O N D J F M A M J J
1984
1985
WELL 24S.02E.17.322
12
14
16
18
20
22
3848
3846
3844
3842
3840
3838

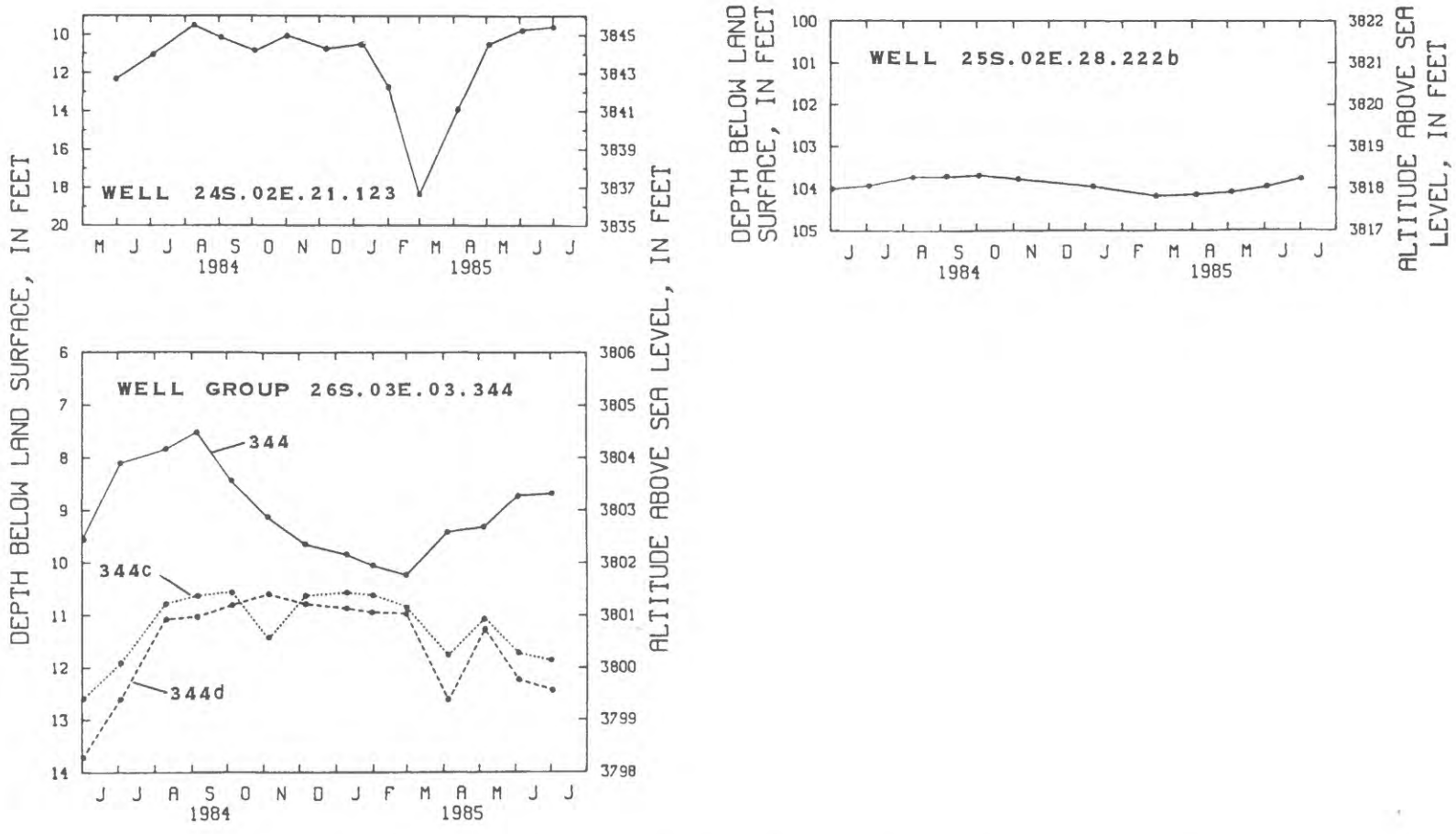


Figure 5.--Monthly water levels in selected observation wells in the Mesilla Basin, 1984-85.

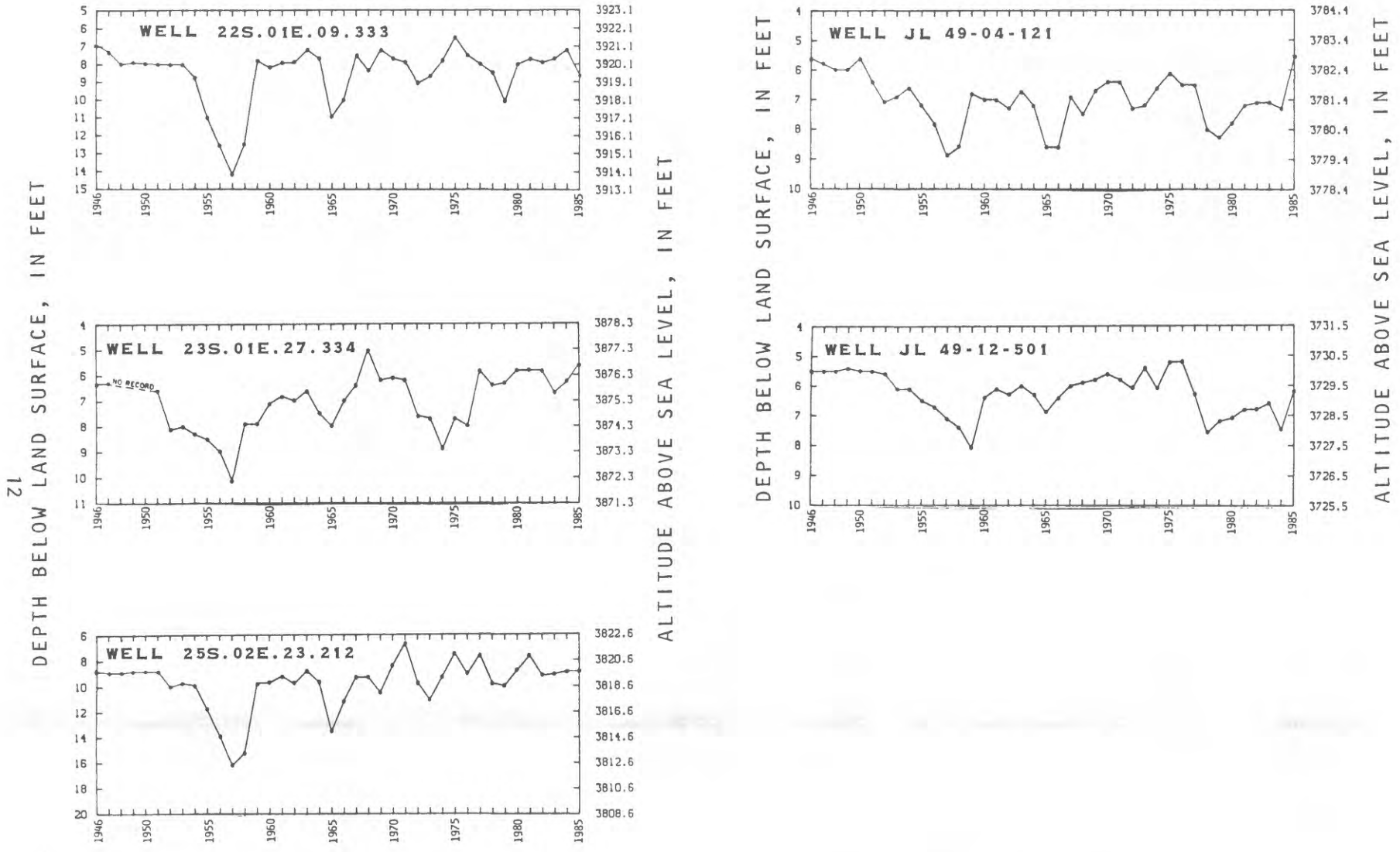


Figure 6.--Annual February water levels in selected observation wells in the Mesilla Valley, 1946-85.

MESILLA VALLEY HYDROLOGIC SECTIONS

Three hydrologic sections were constructed in the Mesilla Valley. These hydrologic sections consist of a river-stage station and several observation well groups alined perpendicular to the Rio Grande. The locations of the Las Cruces hydrologic section (A-A'), Mesquite hydrologic section (B-B'), and Canutillo well field hydrologic section (C-C') are shown on figure 4. Each well group consists of several observation wells completed at depth intervals ranging from 35 to 801 feet. Construction design of an individual observation well within a well group is shown in figure 7.

Water levels, geophysical data, and water-quality data were collected at all well groups. Observation wells were equipped with water-level recorders to collect continuous water-level data. Borehole-geophysical logs were run in the deepest borehole at each well group.

Las Cruces Hydrologic Section

The Las Cruces hydrologic section (A-A') is at the western edge of the city of Las Cruces (fig. 4). The section consists of a river-stage station on the Rio Grande and three observation well groups alined perpendicular to the Rio Grande (fig. 8).

River Stage

The river-stage station, Rio Grande below Picacho Bridge, is located at the Las Cruces hydrologic section (fig. 8). The station is operated by the U.S Geological Survey to record river stage (water-surface altitude). Mean daily stage of the Rio Grande is shown in figure 9.

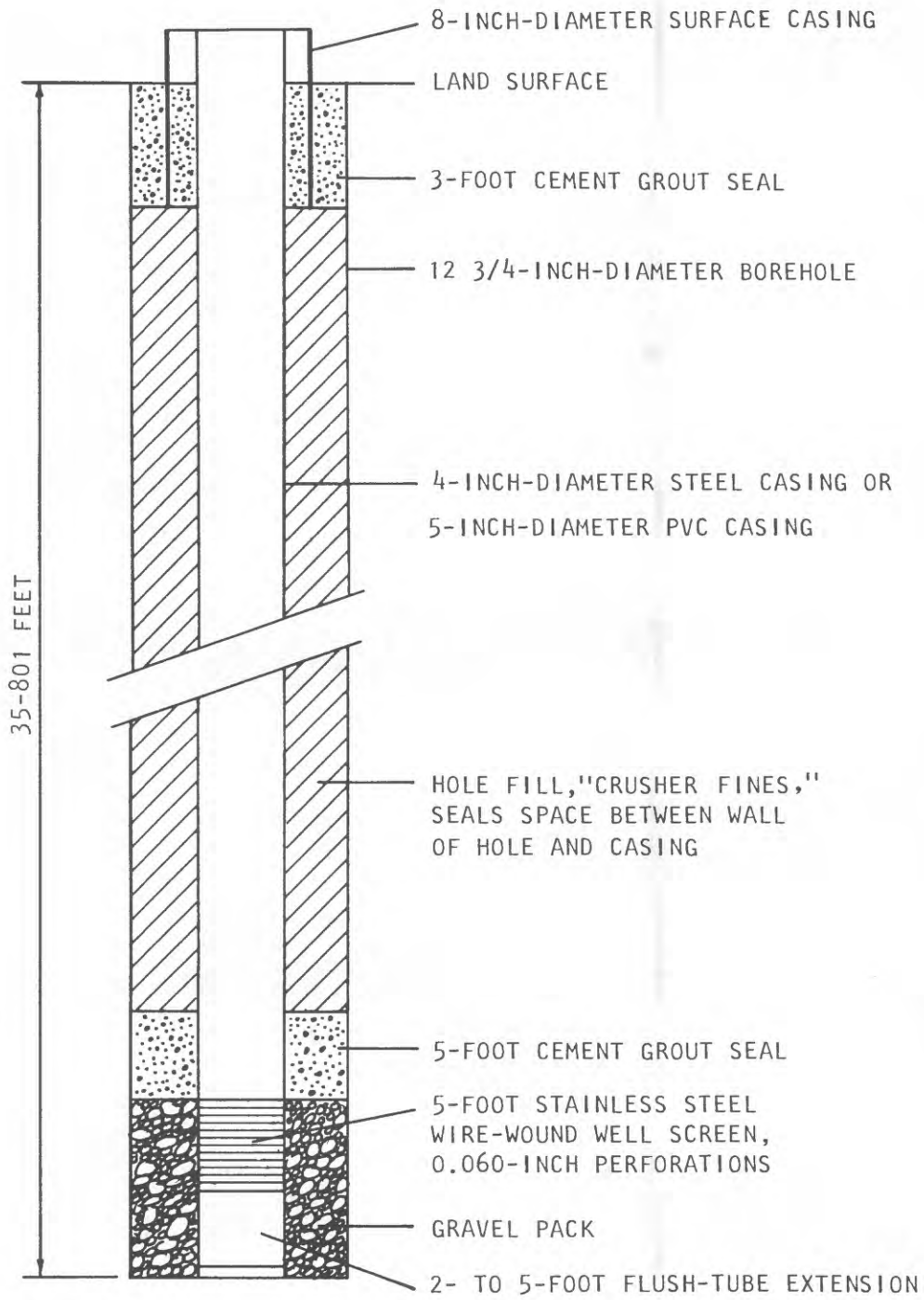


Figure 7.--Construction design for a typical observation well.

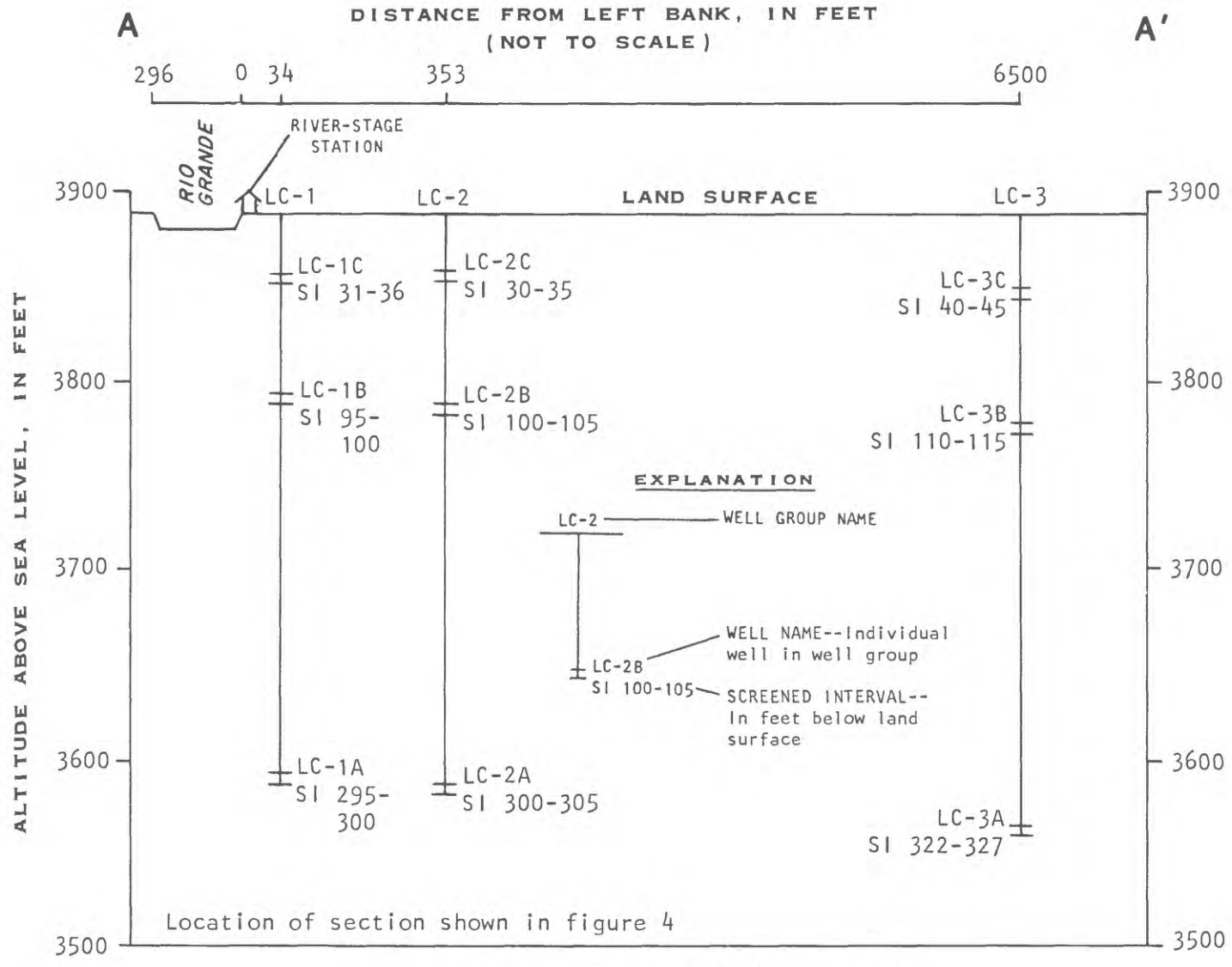


Figure 8.--Las Cruces hydrologic section.

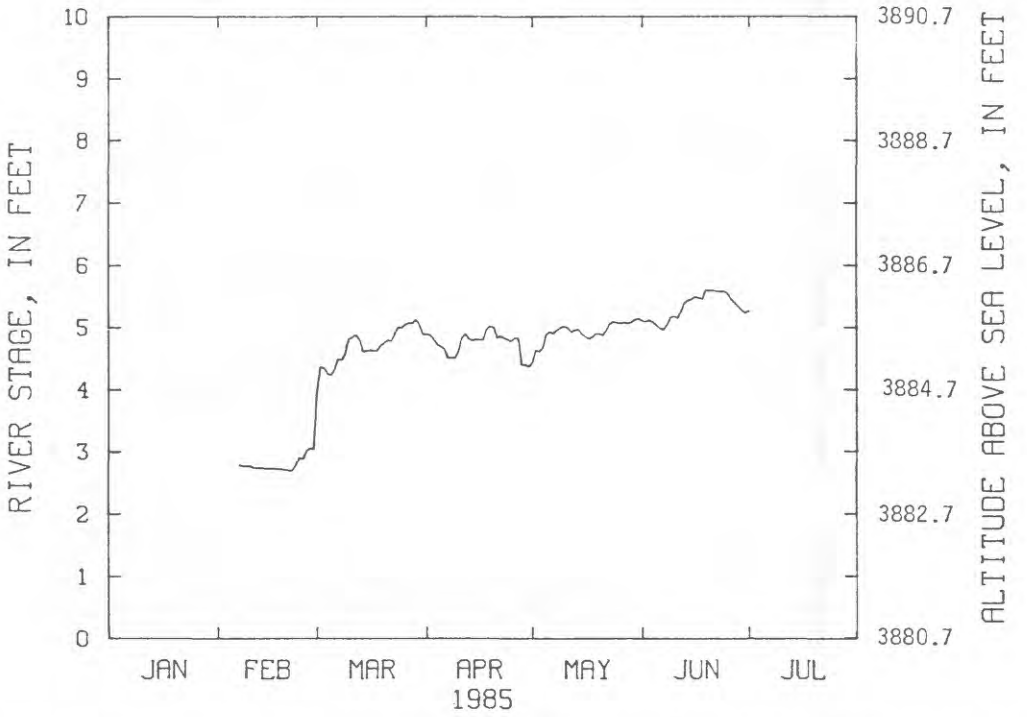


Figure 9.--Mean daily river stage of the Rio Grande below Picacho Bridge, 1985.

Well Group LC-1

Well group LC-1 consists of three observation wells: LC-1A (23S.1E.22.232a), LC-1B (23S.1E.22.232b), and LC-1C (23S.1E.22.232c). Drilling and construction of well group LC-1 were completed on October 12, 1984. Well records are listed by well number in table 1. The screened intervals are from 295 to 300 feet below land surface for well LC-1A, from 95 to 100 feet below land surface for well LC-1B, and from 31 to 36 feet below land surface for well LC-1C (fig. 8). Mean daily water levels in well group LC-1 for 1985 are shown in figure 10. Selected borehole-geophysical logs for well LC-1A are shown in figure 11. Chemical analyses of water samples from the wells are listed in table 2.

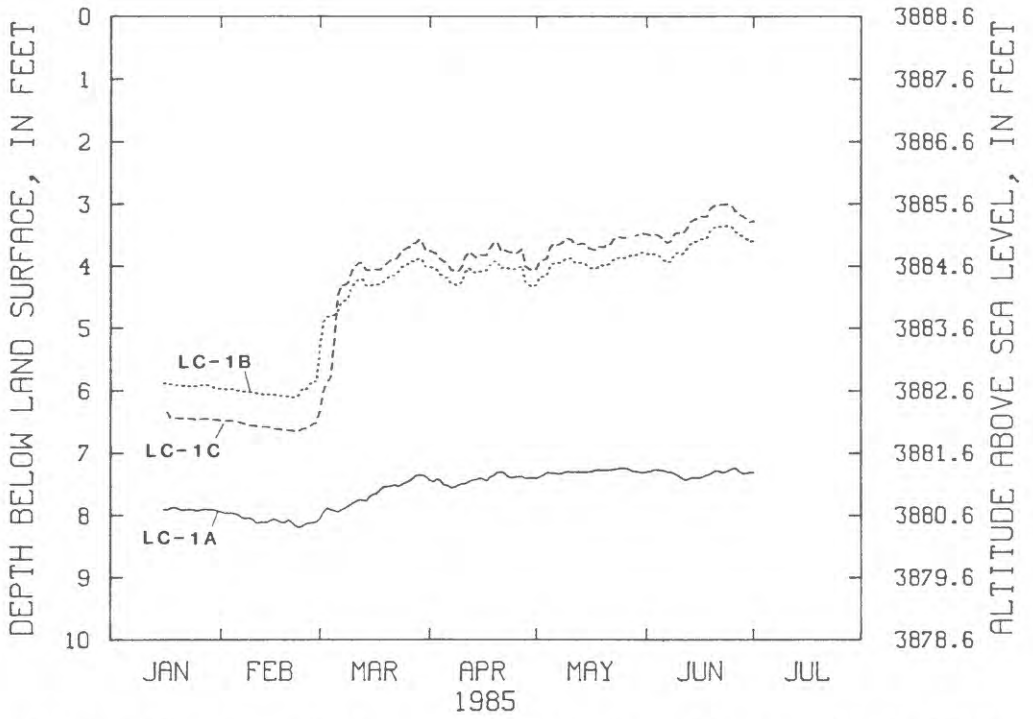


Figure 10.--Mean daily water levels in well group LC-1, 1985.

Las Cruces hydrologic section well group LC-1.

LOGGER: U.S. Geological Survey

ALTITUDE OF LAND SURFACE: 3888.6 feet

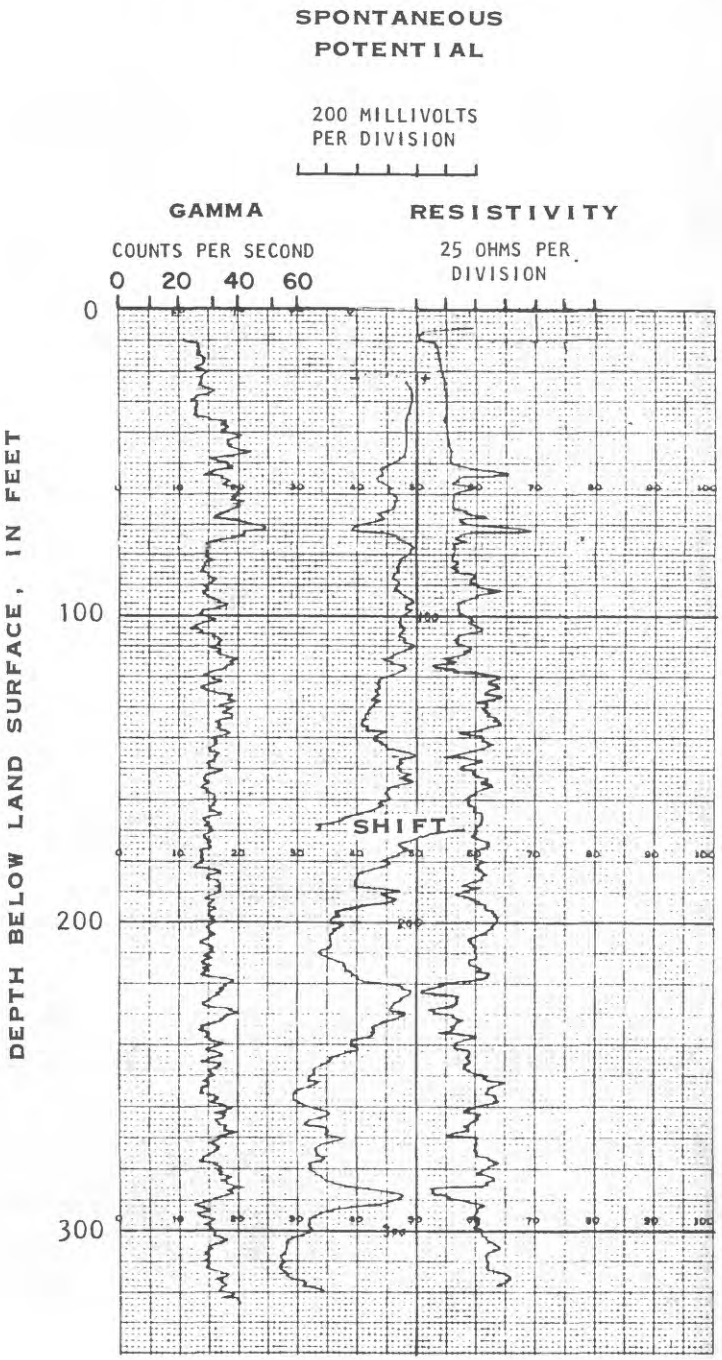


Figure 11.--Selected borehole-geophysical logs for well LC-1A (23S.1E.22.232a).

Well Group LC-2

Well group LC-2 consists of three observation wells: LC-2A (23S.1E.22.241a), LC-2B (23S.1E.22.241b), and LC-2C (23S.1E.22.241c). Drilling and construction of well group LC-2 were completed on October 22, 1984. Well records are listed in table 1. The screened intervals are from 300 to 305 feet below land surface for well LC-2A, from 100 to 105 feet below land surface for well LC-2B, and from 30 to 35 feet below land surface for well LC-2C (fig. 8). Mean daily water levels in well group LC-2 for 1985 are shown in figure 12. Selected borehole-geophysical logs for well LC-2A are shown in figure 13. Chemical analyses of water samples from the wells are listed in table 2.

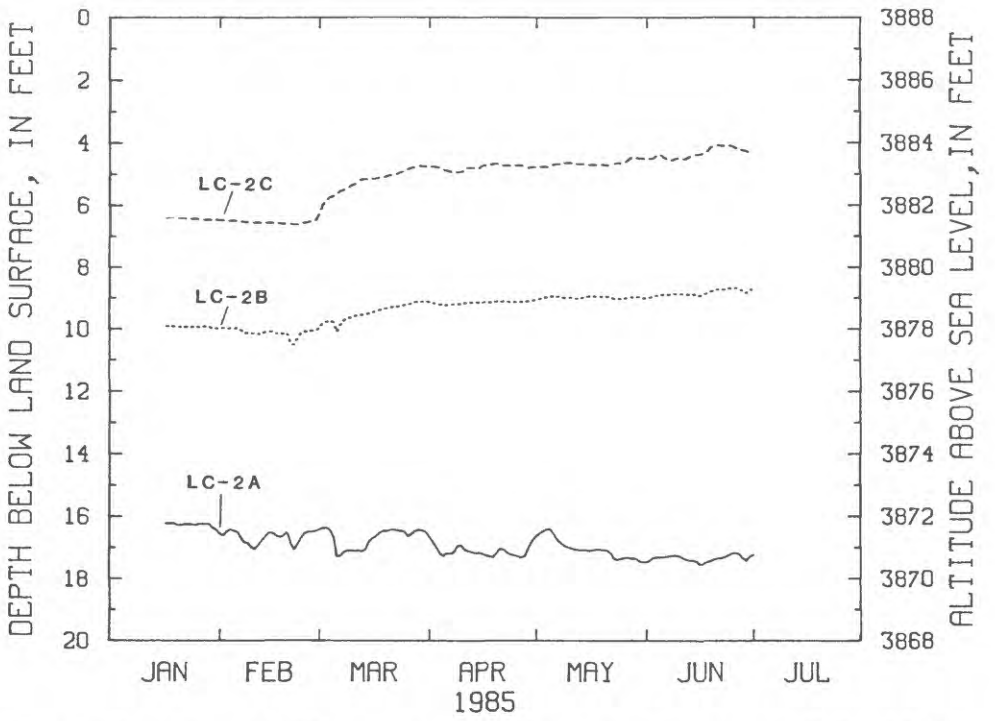


Figure 12.--Mean daily water levels in well group LC-2, 1985.

LOGGER: U.S. Geological Survey

ALTITUDE OF LAND SURFACE: 3888.0 feet

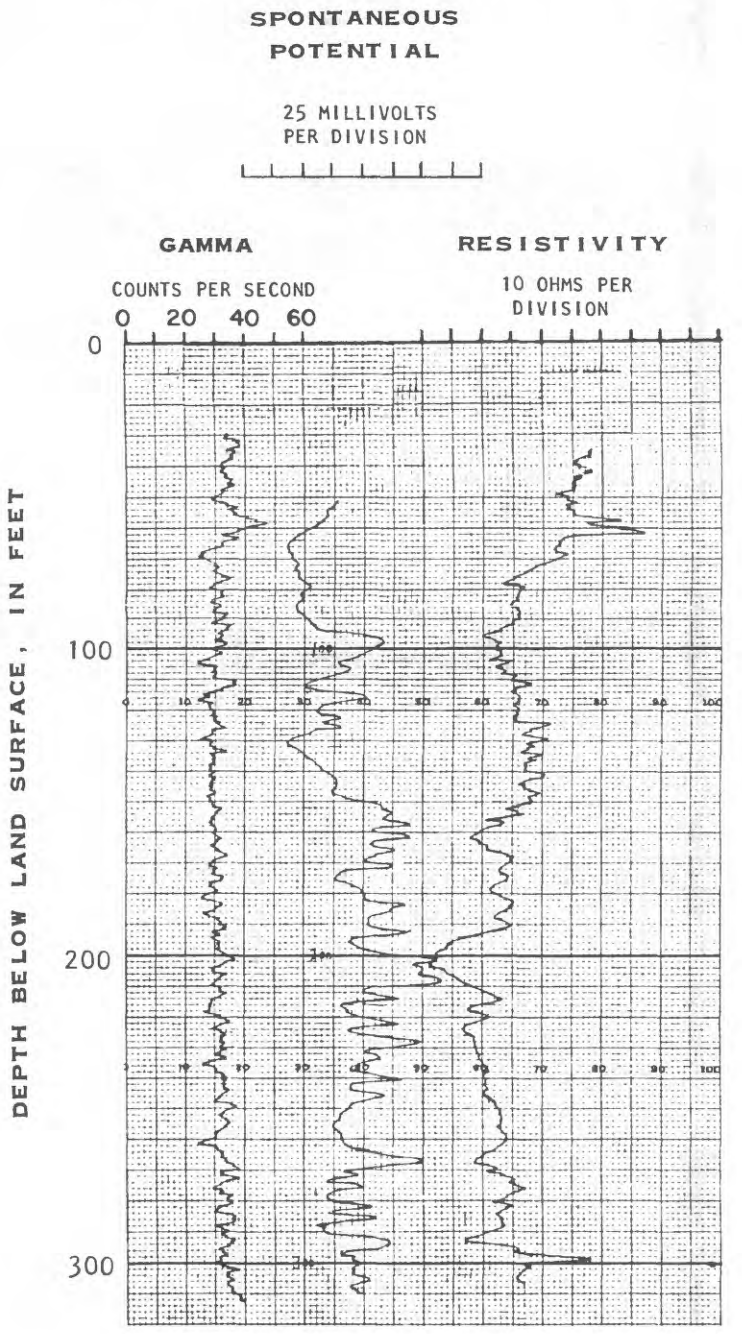


Figure 13.--Selected borehole-geophysical logs for well LC-2A (23S.1E.22.241a).

Well Group LC-3

Well group LC-3 consists of three observation wells: LC-3A (23S.1E.23.244a), LC-3B (23S.1E.23.244b), and LC-3C (23S.1E.23.244c). Drilling and construction of well group LC-3 were completed on November 26, 1984. Well records are listed in table 1. The screened intervals are from 322 to 327 feet below land surface for LC-3A, from 110 to 115 feet below land surface for LC-3B, and from 40 to 45 feet below land surface for LC-3C (fig. 8). Mean daily water levels in well group LC-3 for 1985 are shown in figure 14. Selected borehole-geophysical logs for well LC-3A are shown in figure 15. Chemical analyses of water samples for the wells are listed in table 2.

Mesquite Hydrologic Section

The Mesquite hydrologic section (B-B') is approximately 5 miles northwest of Mesquite (fig. 4). The section consists of a river-stage station on the Rio Grande and four observation well groups alined perpendicular to the Rio Grande (fig. 16).

River Stage

The river-stage station, Rio Grande below Mesilla Dam, is located at the Mesquite hydrologic section (fig. 16). The station is operated by the U.S. Bureau of Reclamation to record river stage (water-surface altitude). Mean daily stage of the Rio Grande is shown in figure 17.

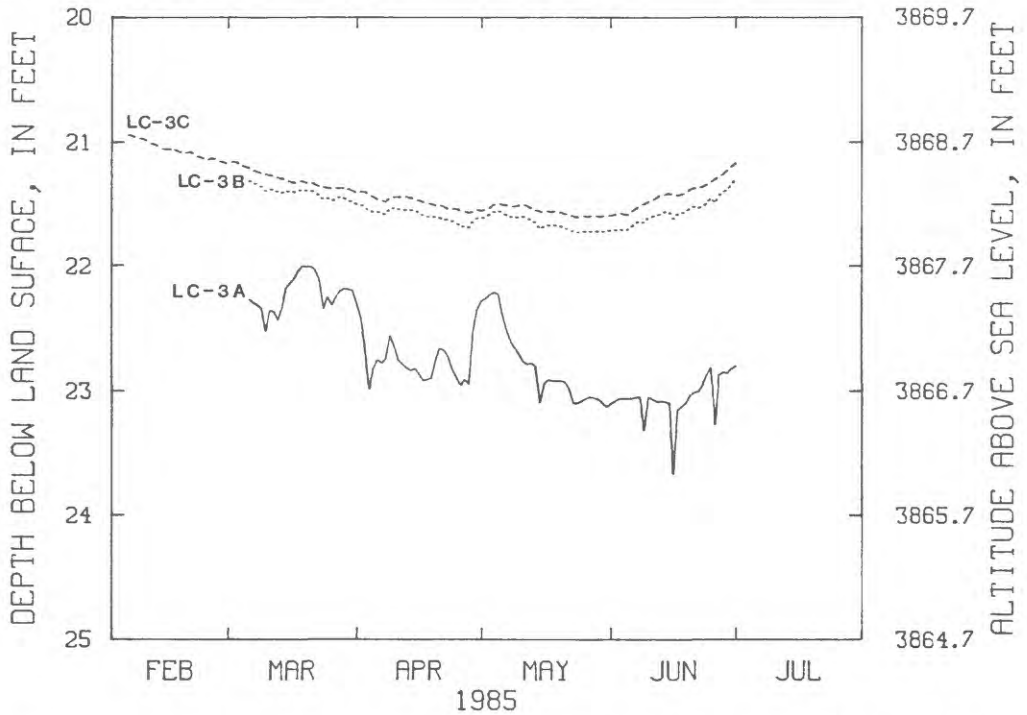


Figure 14.--Mean daily water levels in well group LC-3, 1985.

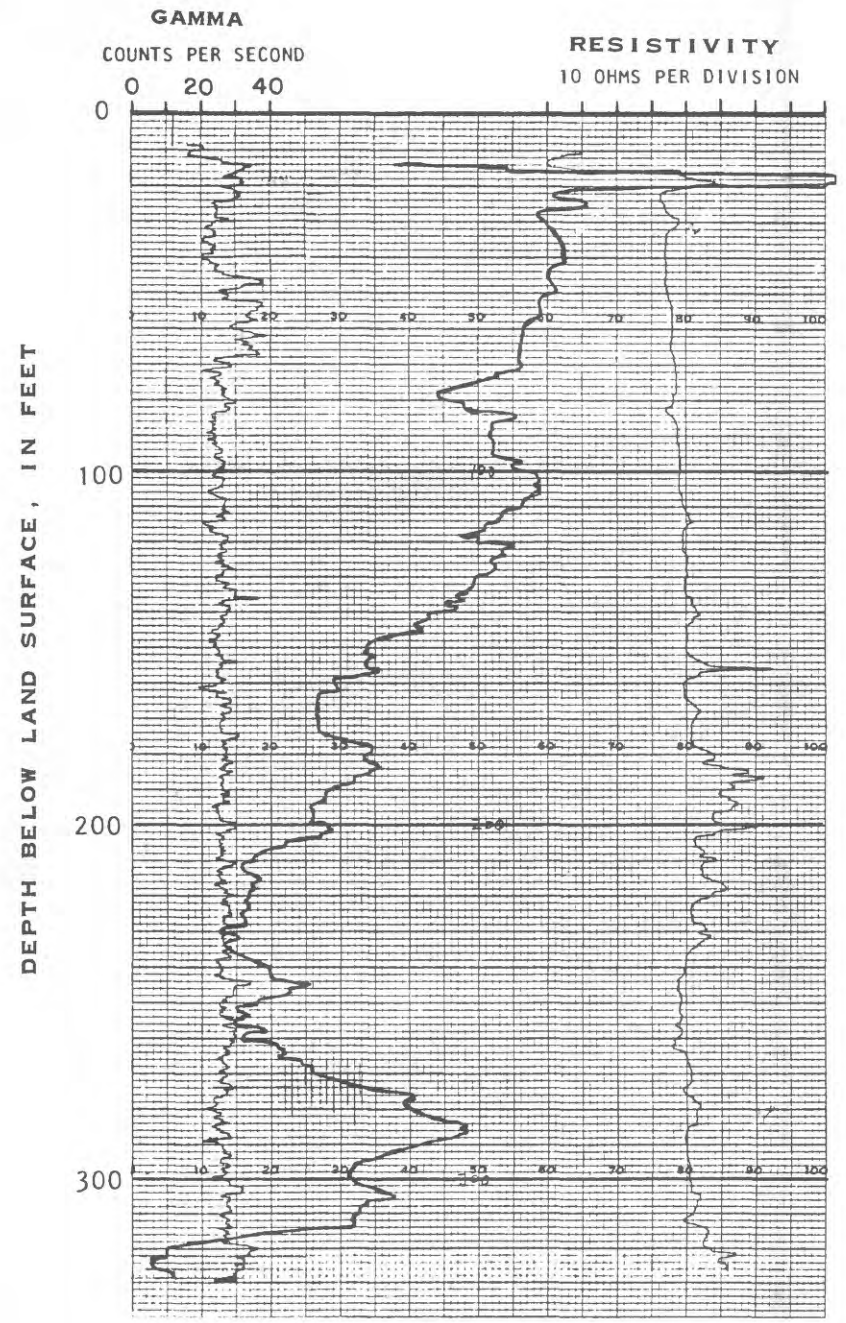


Figure 15.--Selected borehole-geophysical logs for well LC-3A (23S.1E.23.244a).

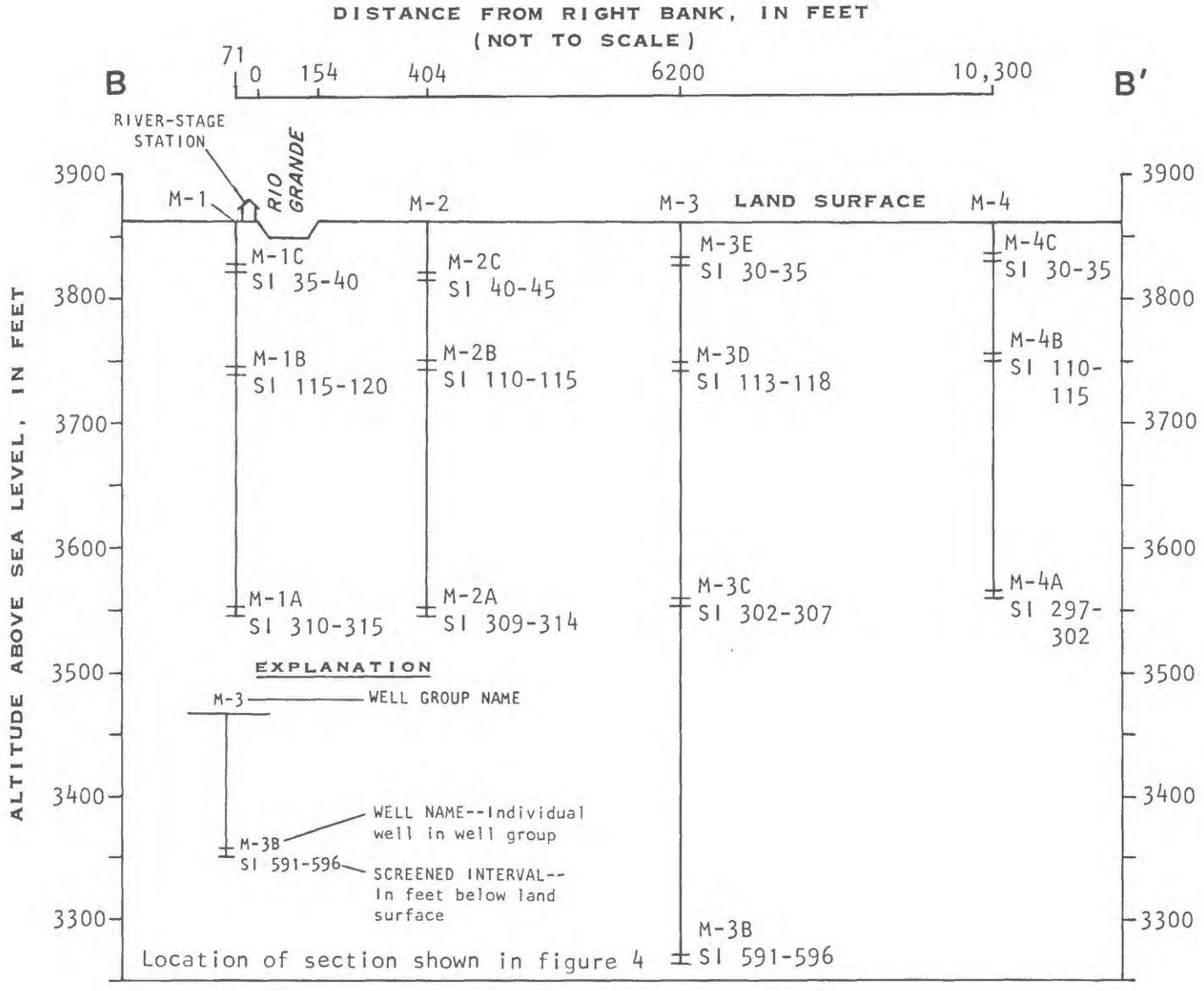


Figure 16.--Mesquite hydrologic section.

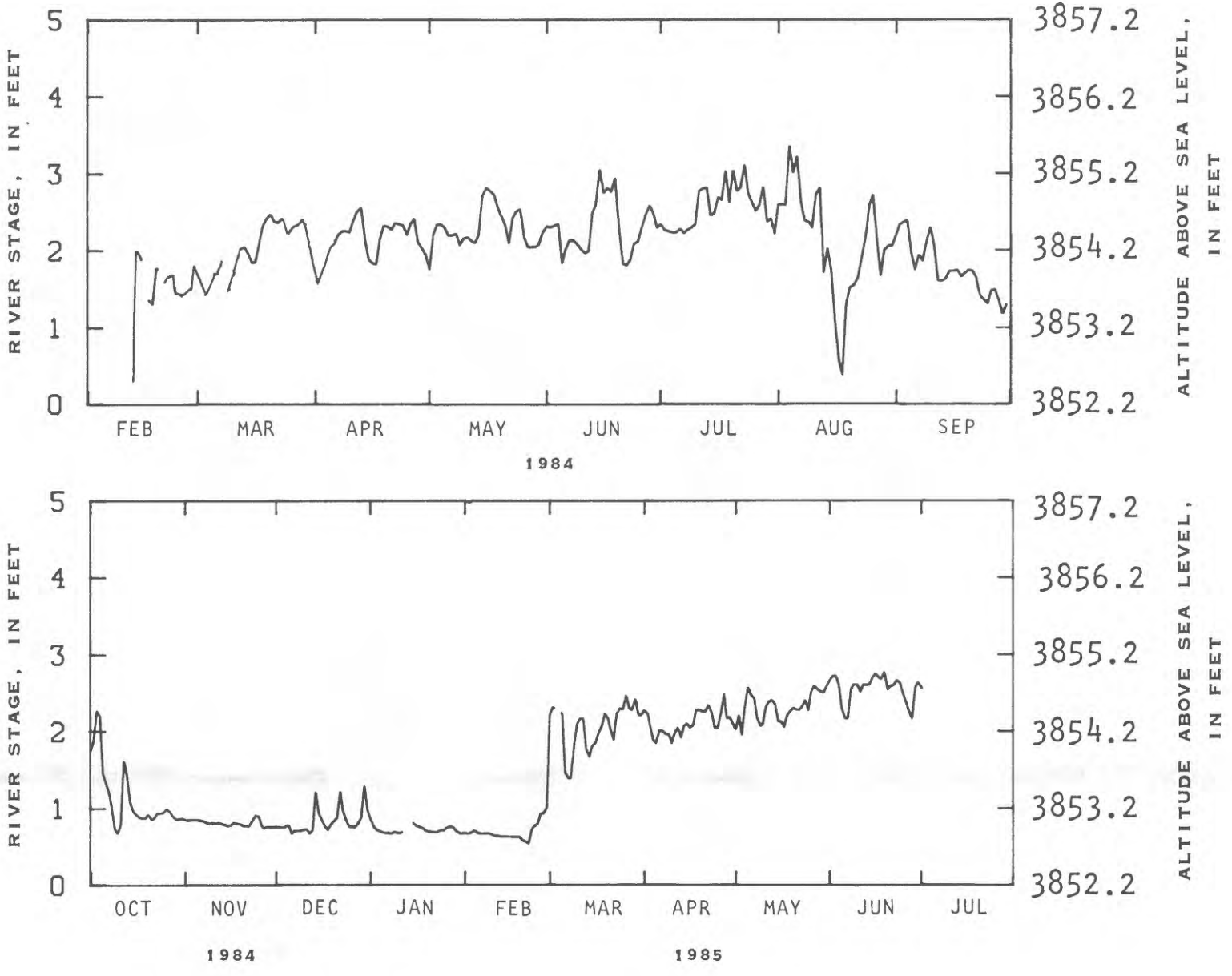


Figure 17.--Mean daily river stage of the Rio Grande below Mesilla Dam, 1984-85.

Well Group M-1

Well group M-1 consists of three observation wells: M-1A (24S.2E.19.214a), M-1B (24S.2E.19.214b), and M-1C (24S.2E.19.214c). Drilling and construction of well group M-1 were completed on November 14, 1983. Well records are listed in table 1. The screened intervals are from 310 to 315 feet below land surface for well M-1A, from 115 to 120 feet below land surface for well M-1B, and from 35 to 40 feet below land surface for well M-1C (fig. 16). Mean daily water levels in well group M-1 for 1984 and 1985 are shown in figures 18 and 19. Selected borehole-geophysical logs for well M-1A are shown in figure 20. Chemical analyses of water samples from the wells are listed in table 2.

Drilling at well group M-1.

Well Group M-2

Well group M-2 consists of three observation wells: M-2A (24S.2E.19.223a), M-2B (24S.2E.19.223b), and M-2C (24S.2E.19.223c). Drilling and construction of well group M-2 were completed on December 5, 1984. Well records are listed in table 1. The screened intervals are from 309 to 314 feet below land surface for well M-2A, from 110 to 115 feet below land surface for well M-2B, and from 40 to 45 feet below land surface for well M-2C (fig. 16). Mean daily water levels in well group M-2 for 1984 and 1985 are shown in figure 21. Selected borehole-geophysical logs for well M-2A are shown in figure 22. Chemical analyses of water samples from the wells are listed in table 2.

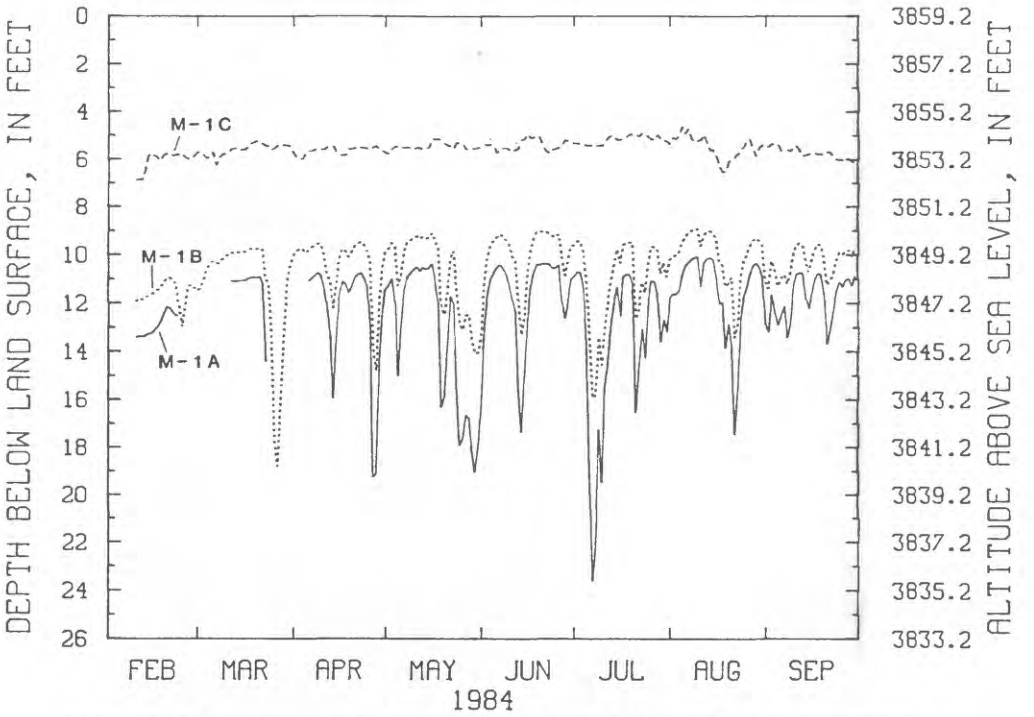


Figure 18.--Mean daily water levels in well group M-1.

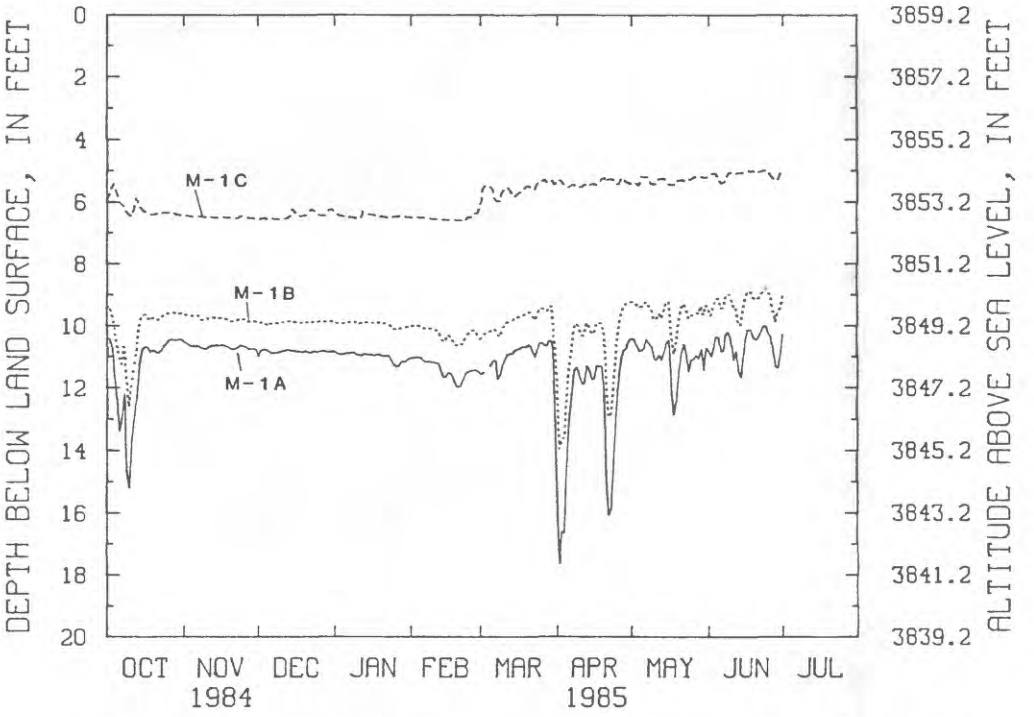


Figure 19.--Mean daily water levels in well group M-1.

LOGGER: U.S. Geological Survey

ALTITUDE OF LAND SURFACE: 3859.2 feet

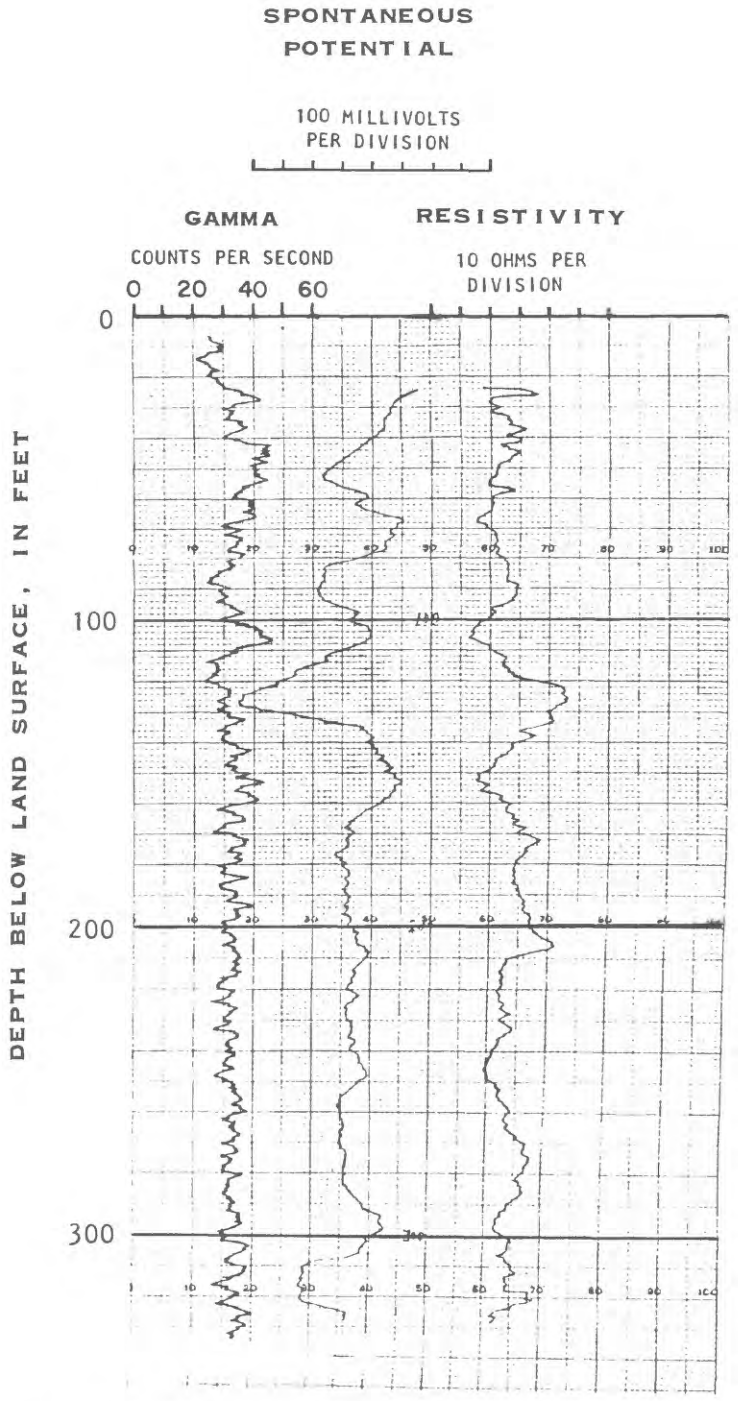


Figure 20.--Selected borehole-geophysical logs for well M-1A (24S.2E.19.214a).

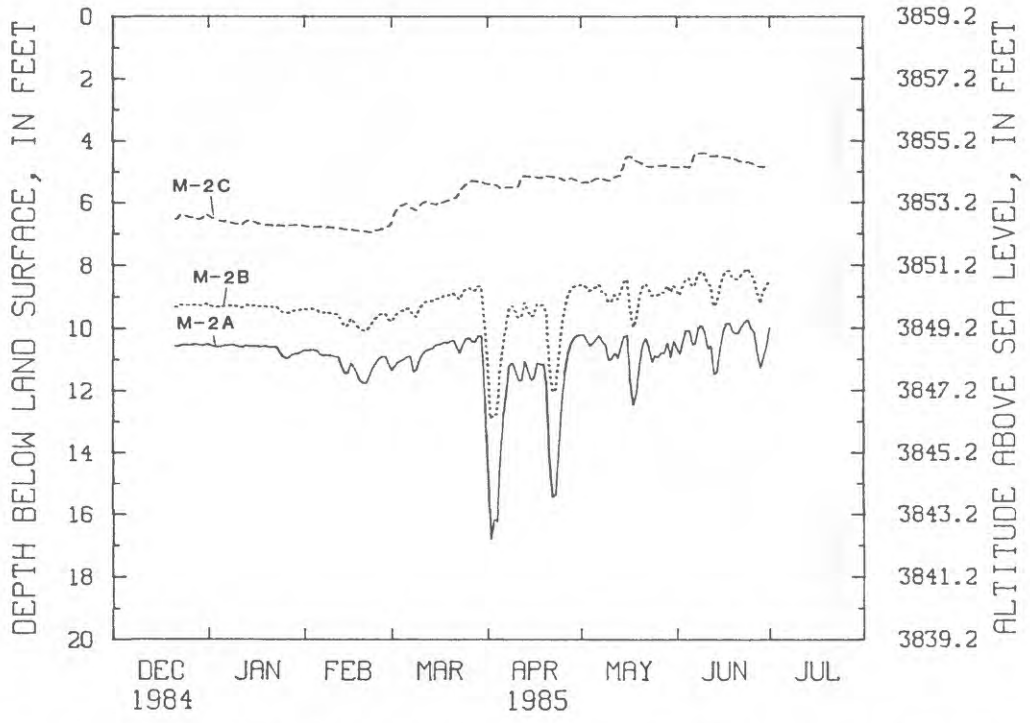


Figure 21.--Mean daily water levels in well group M-2, 1984-85.

LOGGER: U.S. Geological Survey

ALTITUDE OF LAND SURFACE: 3859.2 feet

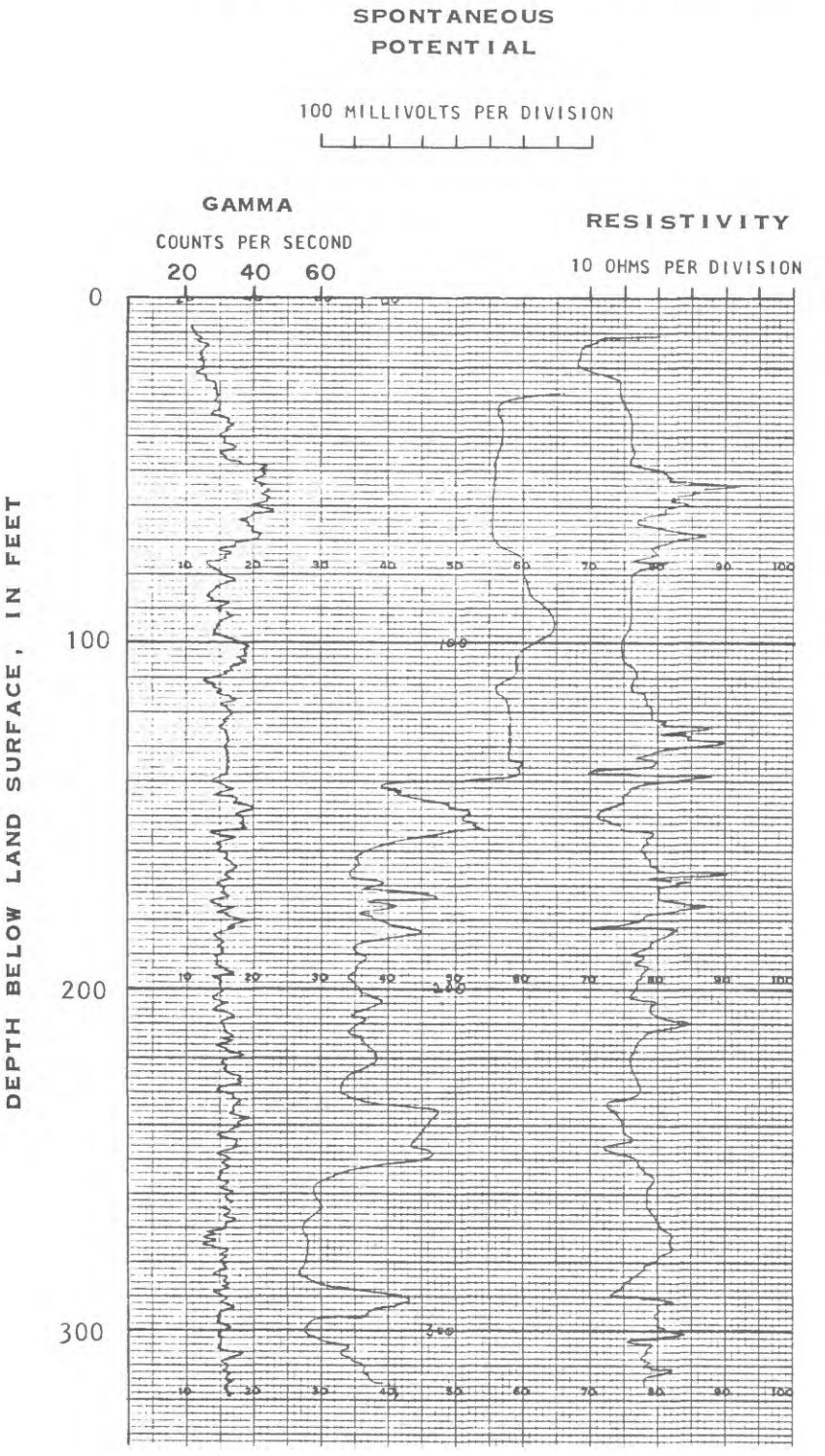


Figure 22.--Selected borehole-geophysical logs for well M-2A (24S.2E.19.223a).

Well Group M-3

Well group M-3 consists of four observation wells: M-3B (24S.2E.17.423b), M-3C (24S.2E.17.423c), M-3D (24S.2E.17.423d), and M-3E (24S.2E.17.423e). Drilling and construction of well group M-3 were completed in 1976 as part of a previous study (Wilson and White, 1984). Well records are listed in table 1. The screened intervals in the wells are from 591 to 596 feet below land surface for well M-3B, from 302 to 307 feet below land surface for well M-3C, from 113 to 118 feet below land surface for well M-3D, and from 30 to 35 feet below land surface for well M-3E (fig. 16). Monthly water levels in well group M-3 for 1984 and 1985 are shown in figure 23.

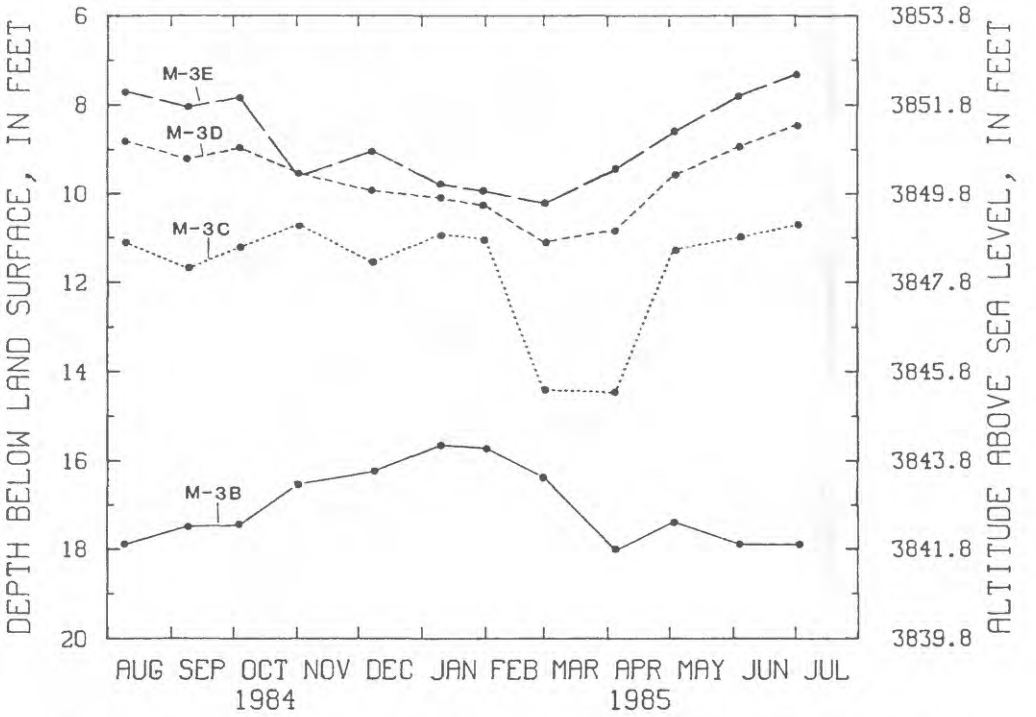


Figure 23.--Monthly water levels in well group M-3, 1984-85.

Well Group M-4

Well group M-4 consists of three observation wells: M-4A (24S.2E.16.124a), M-4B (24S.2E.16.124b), and M-4C (24S.2E.16.124c). Drilling and construction of well group M-4 were completed on December 8, 1983. Well records are listed in table 1. The screened intervals are from 297 to 302 feet below land surface for well M-4A, from 110 to 115 feet below land surface for well M-4B, and from 30 to 35 feet below land surface for well M-4C (fig. 16). Mean daily water levels in well group M-4 are shown in figures 24 and 25. Selected borehole-geophysical logs for well M-4A are shown in figure 26. Chemical analyses of water samples from the wells are listed in table 2.

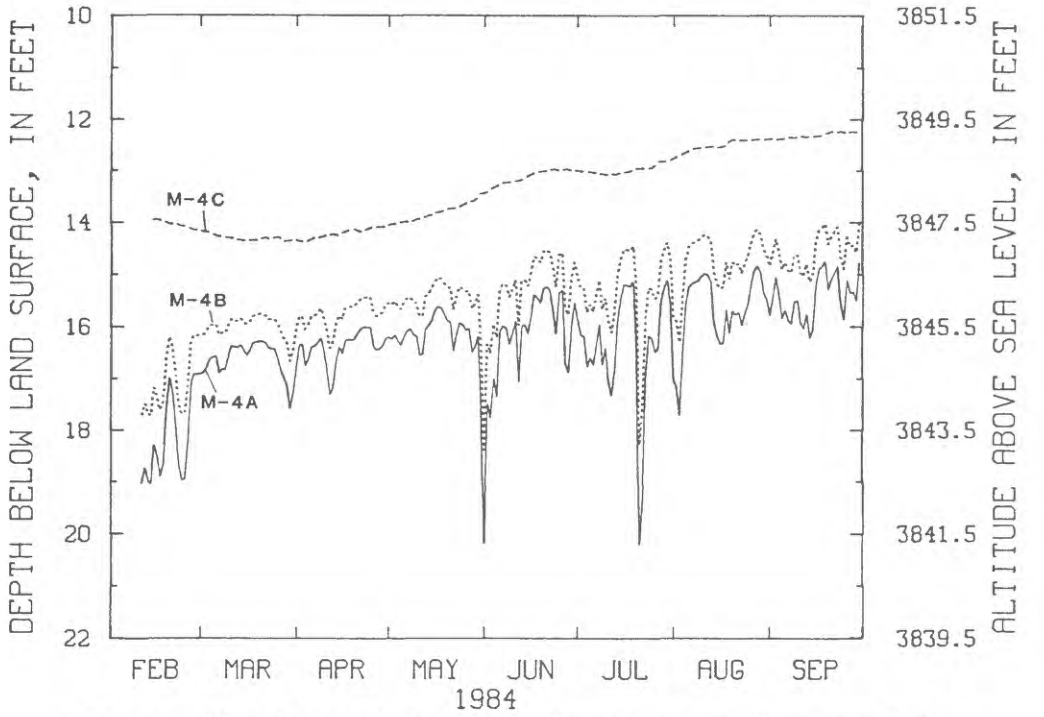


Figure 24.--Mean daily water levels in well group M-4.

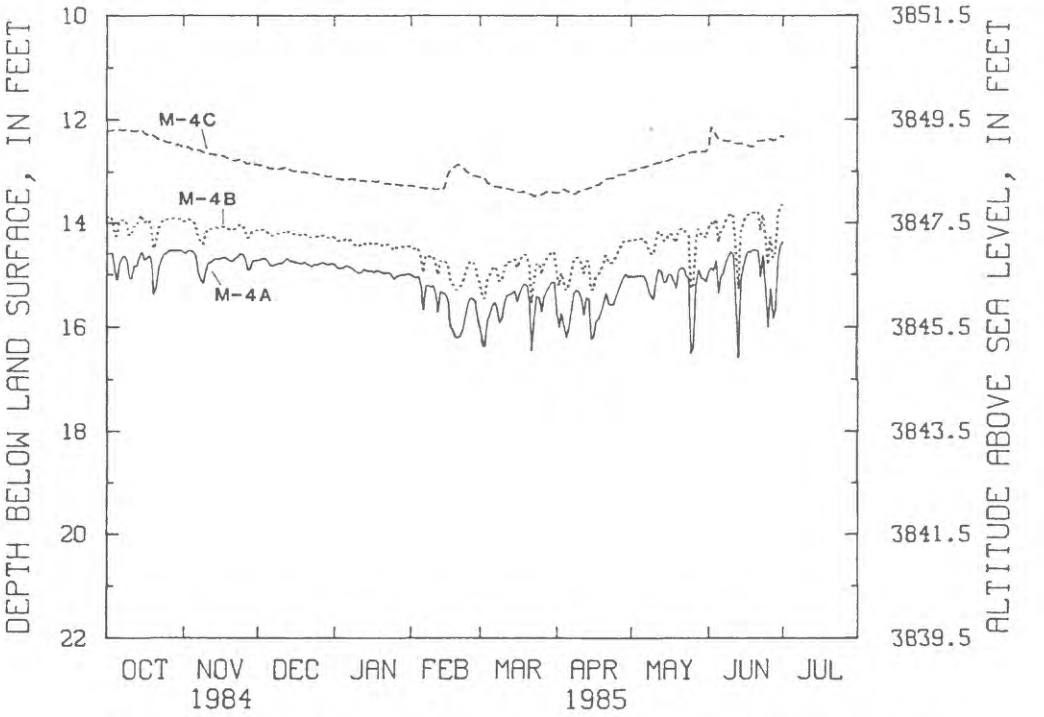


Figure 25.--Mean daily water levels in well group M-4.

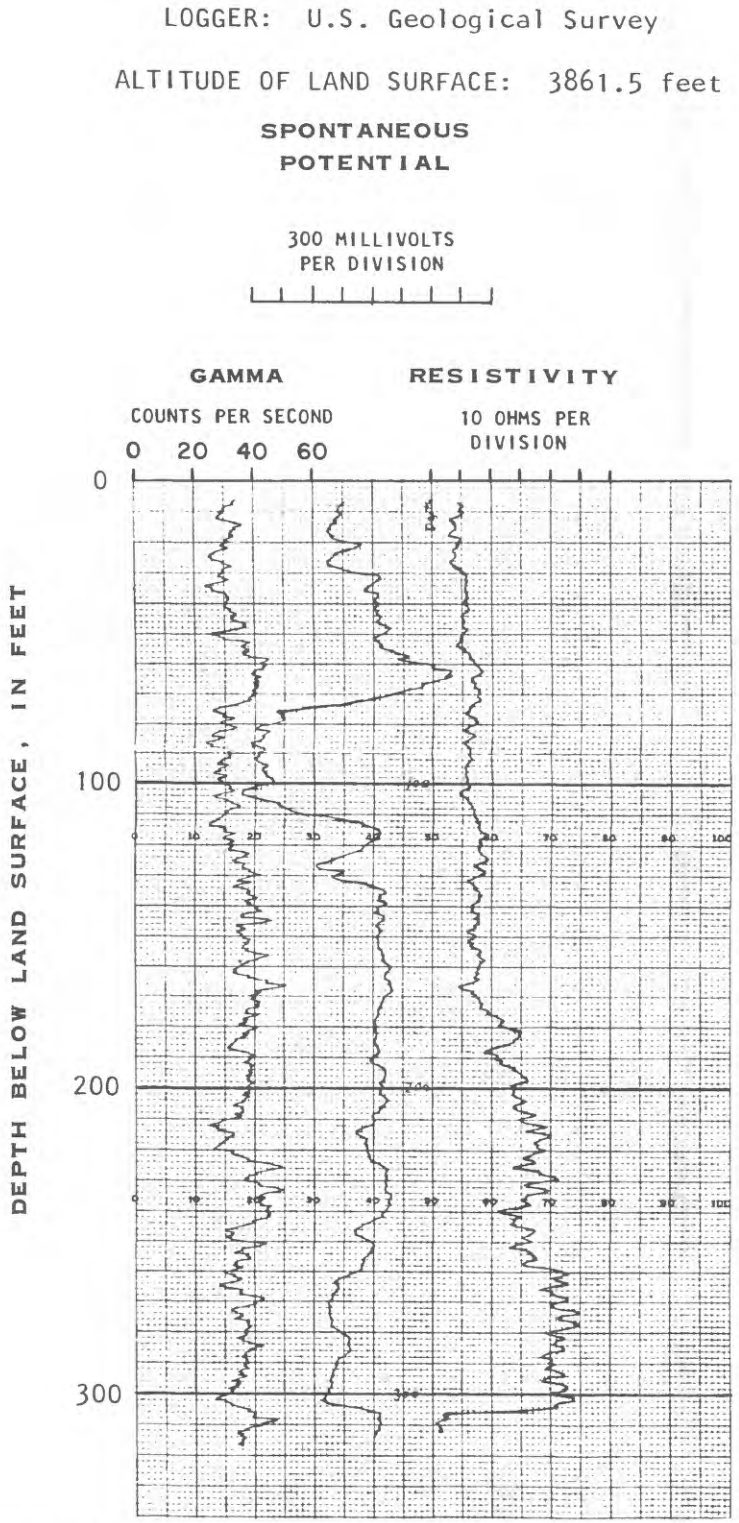


Figure 26.--Selected borehole-geophysical logs for well M-4A (24S.2E.16.124a).

Canutillo Well Field Hydrologic Section

The Canutillo well field hydrologic section (C-C') is within the city of El Paso's Canutillo well field approximately 3 miles north of Canutillo (fig. 4). The section consists of a river-stage station on the Rio Grande and four observation well groups alined perpendicular to the Rio Grande (fig. 27).

River Stage

The river-stage station, Rio Grande below Vinton Bridge, is at the Canutillo well field hydrologic section (fig. 27). The station is operated by the U.S. Geological Survey to record river stage (water-surface altitude). Mean daily stage of the Rio Grande is shown in figure 28.

Well Group CWF-1

Well group CWF-1 consists of four wells: CWF-1A (JL 49-04-478), CWF-1B (JL 49-04-479), CWF-1C (JL 49-04-480), and CWF-1D (JL 49-04-481). Drilling and construction of well group CWF-1 were completed on February 13, 1985. Well records are listed in table 1. The screened intervals are from 45 to 50 feet below land surface for well CWF-1A, from 149 to 154 feet below land surface for well CWF-1B, from 327 to 332 feet below land surface for well CWF-1C, and from 796 to 801 feet below land surface for well CWF-1D (fig. 27). Mean daily water levels and miscellaneous water levels in well group CWF-1 for 1985 are shown in figure 29. Selected borehole-geophysical logs for well CWF-1D are shown in figure 30. Chemical analyses of water samples from the wells are listed in table 2.

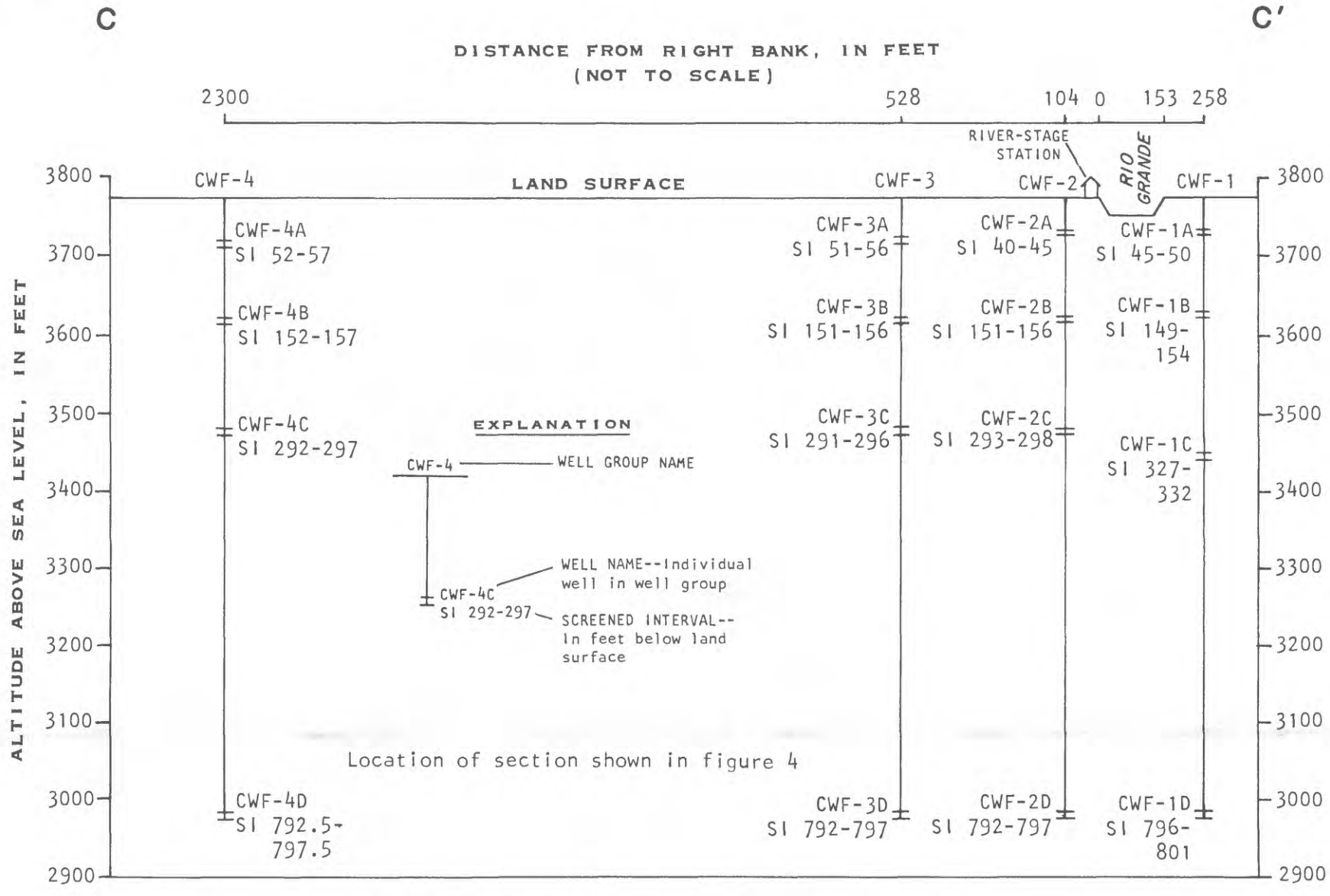


Figure 27.--Canutillo well field hydrologic section.

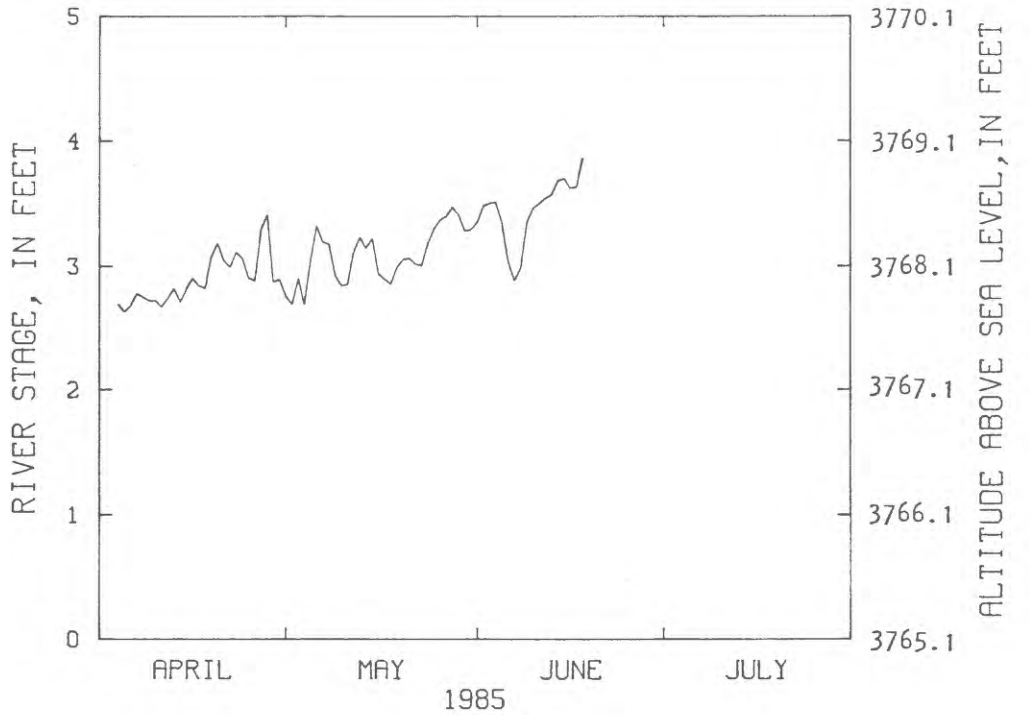


Figure 28.--Mean daily river stage of the Rio Grande below Vinton Bridge, 1985.

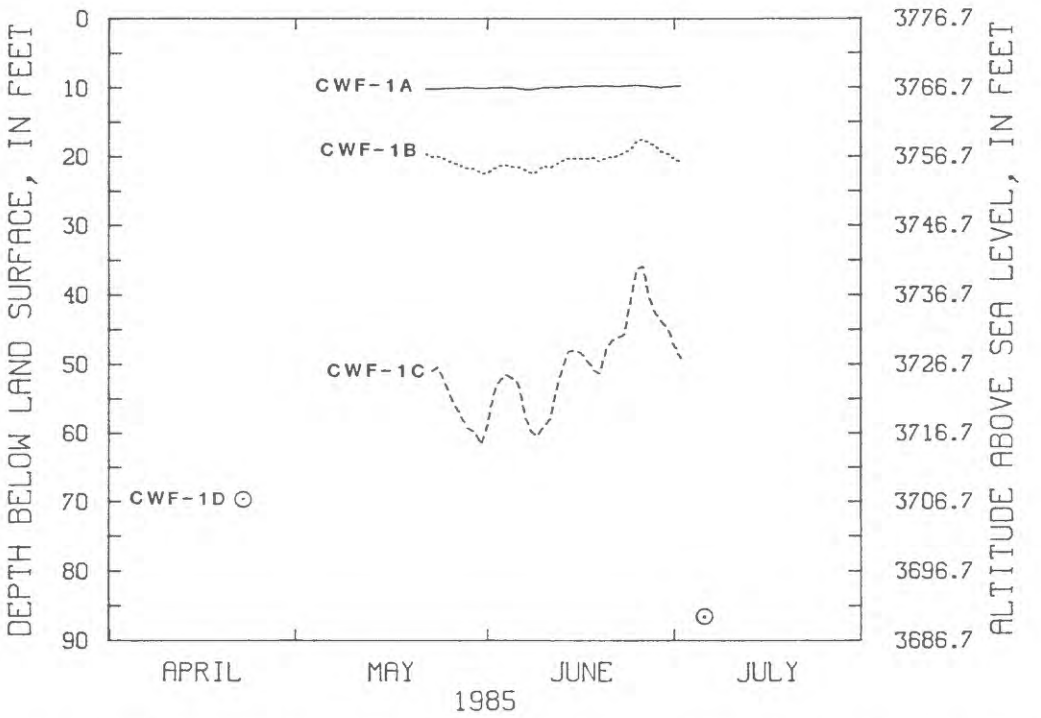


Figure 29.--Mean daily water levels and miscellaneous water levels in well group CWF-1, 1985.

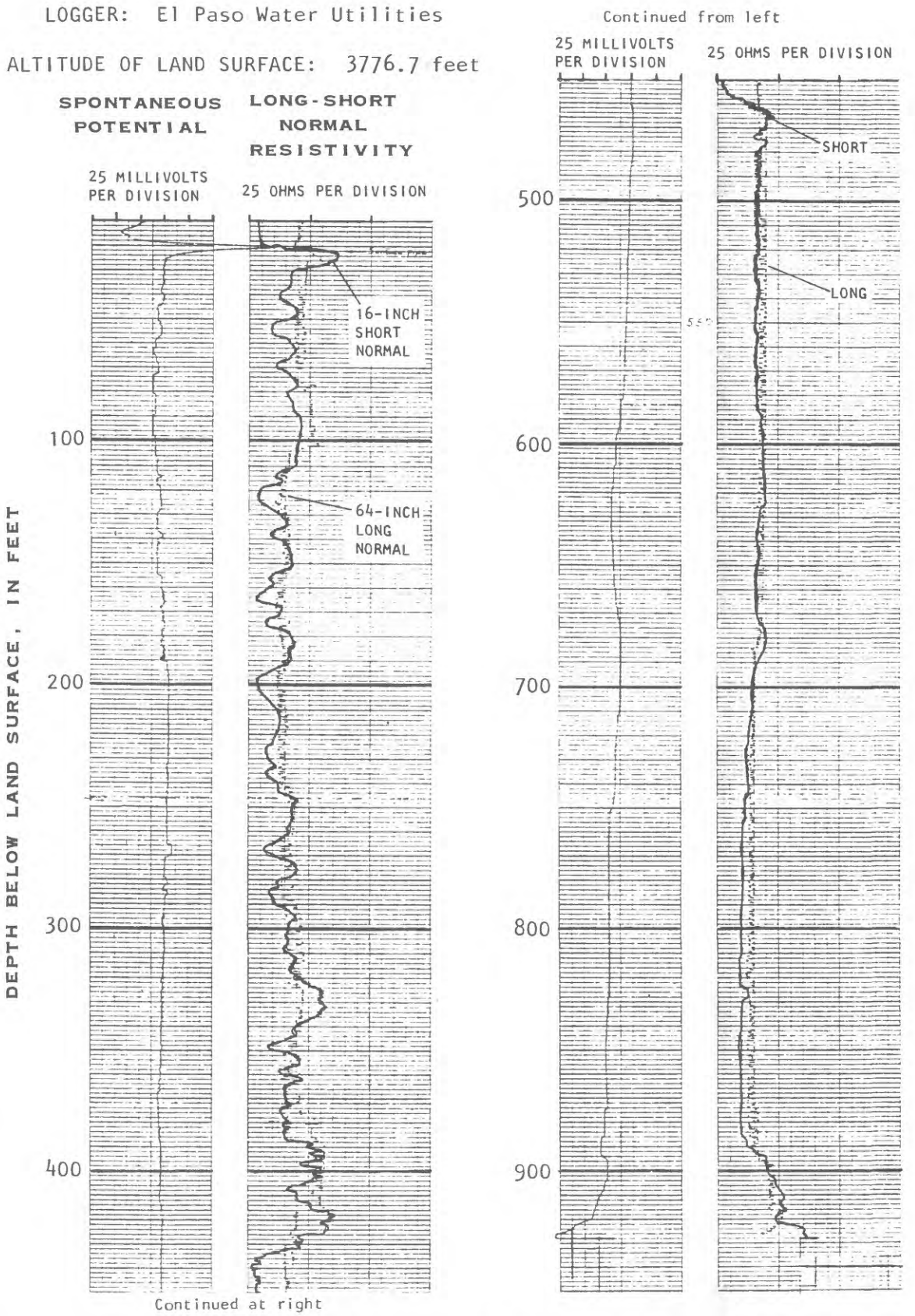


Figure 30.--Selected borehole-geophysical logs for well CWF-1D (JL 49-04-481).

Well Group CWF-2

Well group CWF-2 consists of four observation wells: CWF-2A (JL 49-04-474), CWF-2B (JL 49-04-475), CWF-2C (JL 49-04-476), and CWF-2D (JL 49-04-477). Drilling and construction of well group CWF-2 were completed on January 30, 1985. Well records are listed in table 1. The screened intervals are from 40 to 45 feet below land surface for well CWF-2A, from 151 to 156 feet below land surface for well CWF-2B, from 293 to 298 feet below land surface for well CWF-2C, and from 792 to 797 feet below land surface for well CWF-2D (fig. 27). Mean daily water levels and miscellaneous water levels for well group CWF-2 for 1985 are shown in figure 31. Selected borehole-geophysical logs for well CWF-2D are shown in figure 32. Chemical analyses of water samples from the wells are listed in table 2.

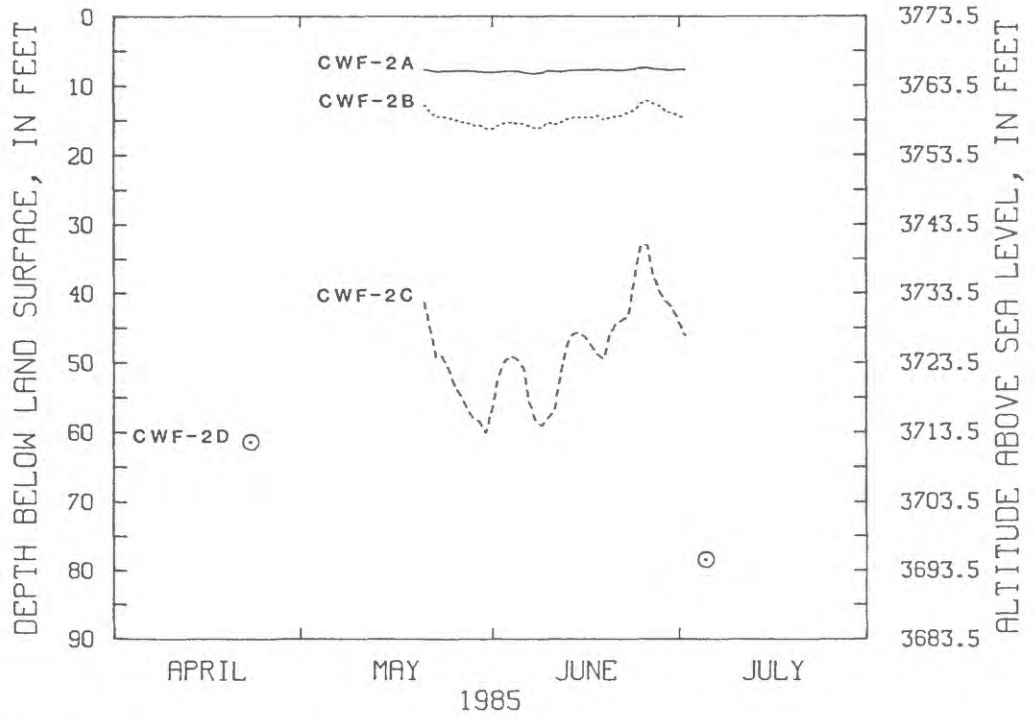


Figure 31.--Mean daily water levels and miscellaneous water levels in well group CWF-2, 1985.

LOGGER: El Paso Water Utilities

ALTITUDE OF LAND SURFACE: 3773.5 feet

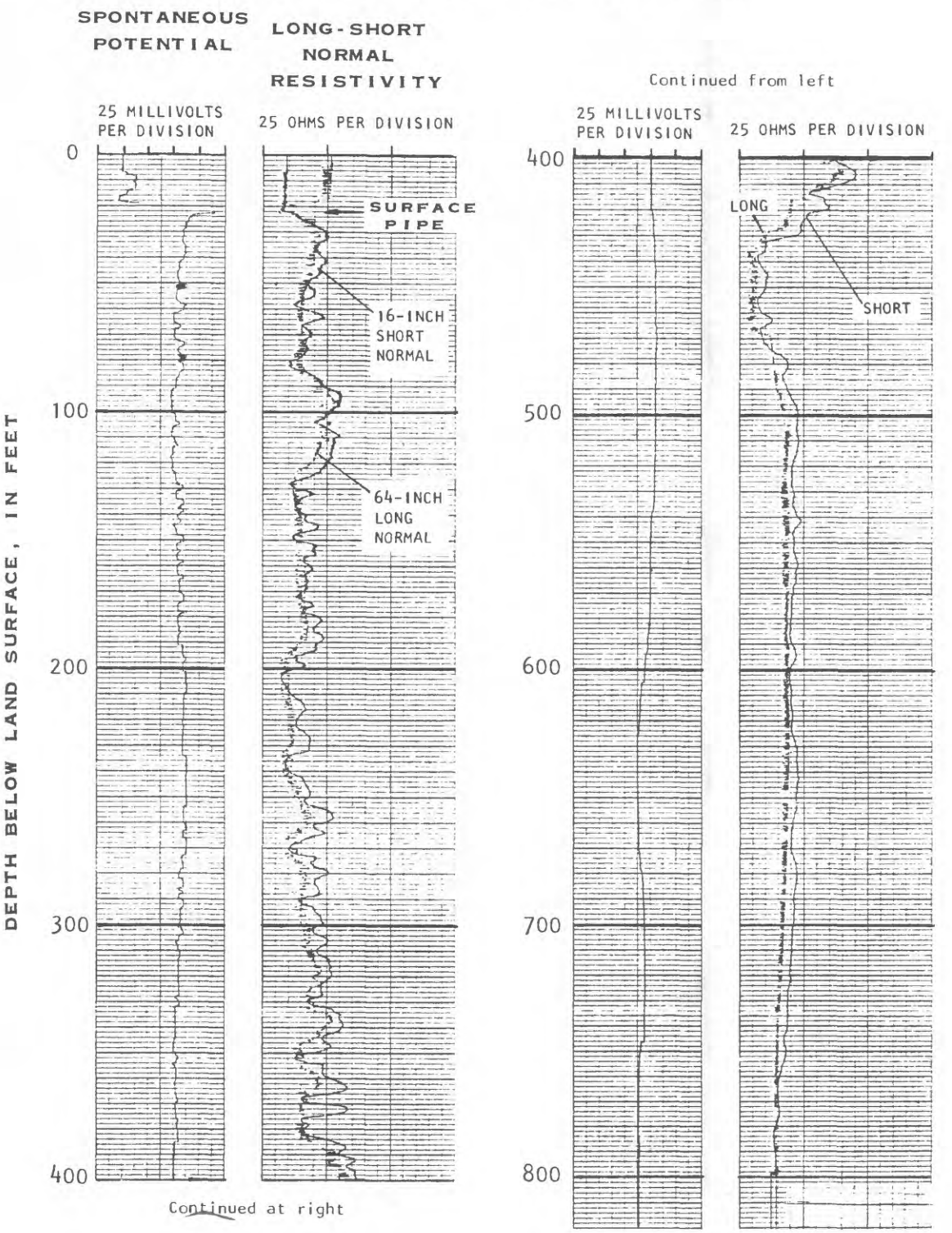


Figure 32.--Selected borehole-geophysical logs for well CWF-2D (JL 49-04-477).

Well Group CWF-3

Well group CWF-3 consists of four observation wells: CWF-3A (JL 49-04-470), CWF-3B (JL 49-04-471), CWF-3C (JL 49-04-472), and CWF-3D (JL 49-04-473). Drilling and construction of well group CWF-3 were completed on January 10, 1985. Well records are listed in table 1. The screened intervals are from 51 to 56 feet below land surface for well CWF-3A, from 151 to 156 feet below land surface for well CWF-3B, from 291 to 296 feet below land surface for well CWF-3C, and from 792 to 797 feet below land surface for well CWF-3D (fig. 27). Mean daily water levels and miscellaneous water levels in well group CWF-3 for 1985 are shown in figure 33. Selected borehole-geophysical logs for well CWF-3D are shown in figure 34. Chemical analyses of water samples from the wells are listed in table 2.

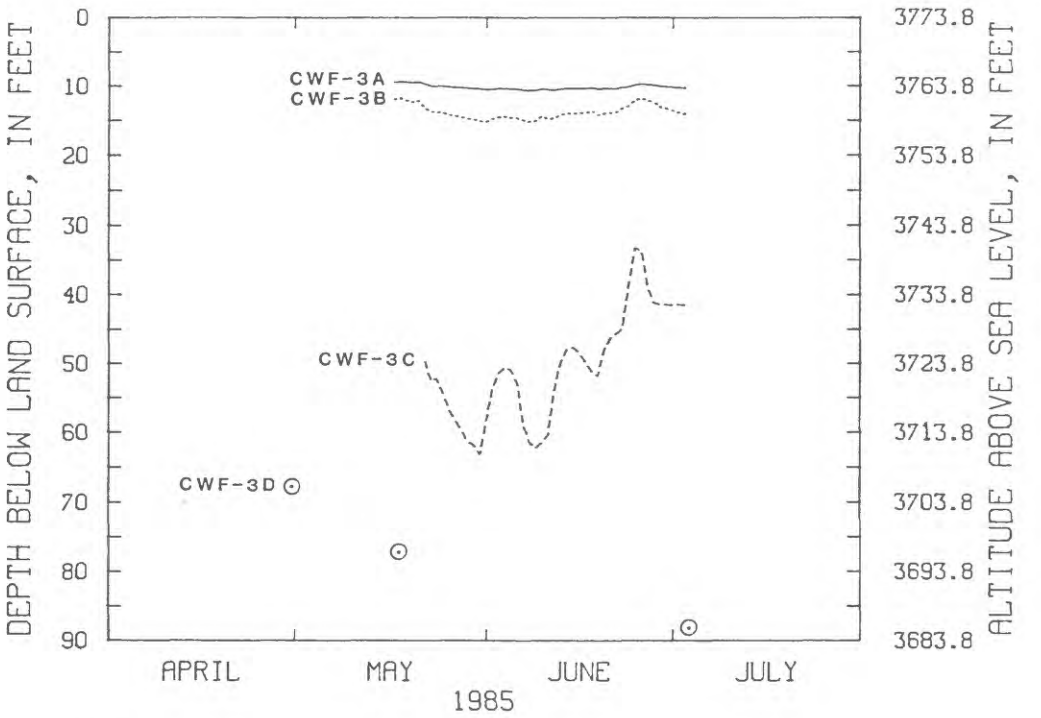


Figure 33.--Mean daily water levels and miscellaneous water levels in well group CWF-3, 1985.

LOGGER: El Paso Water Utilities

ALTITUDE OF LAND SURFACE: 3773.8 feet

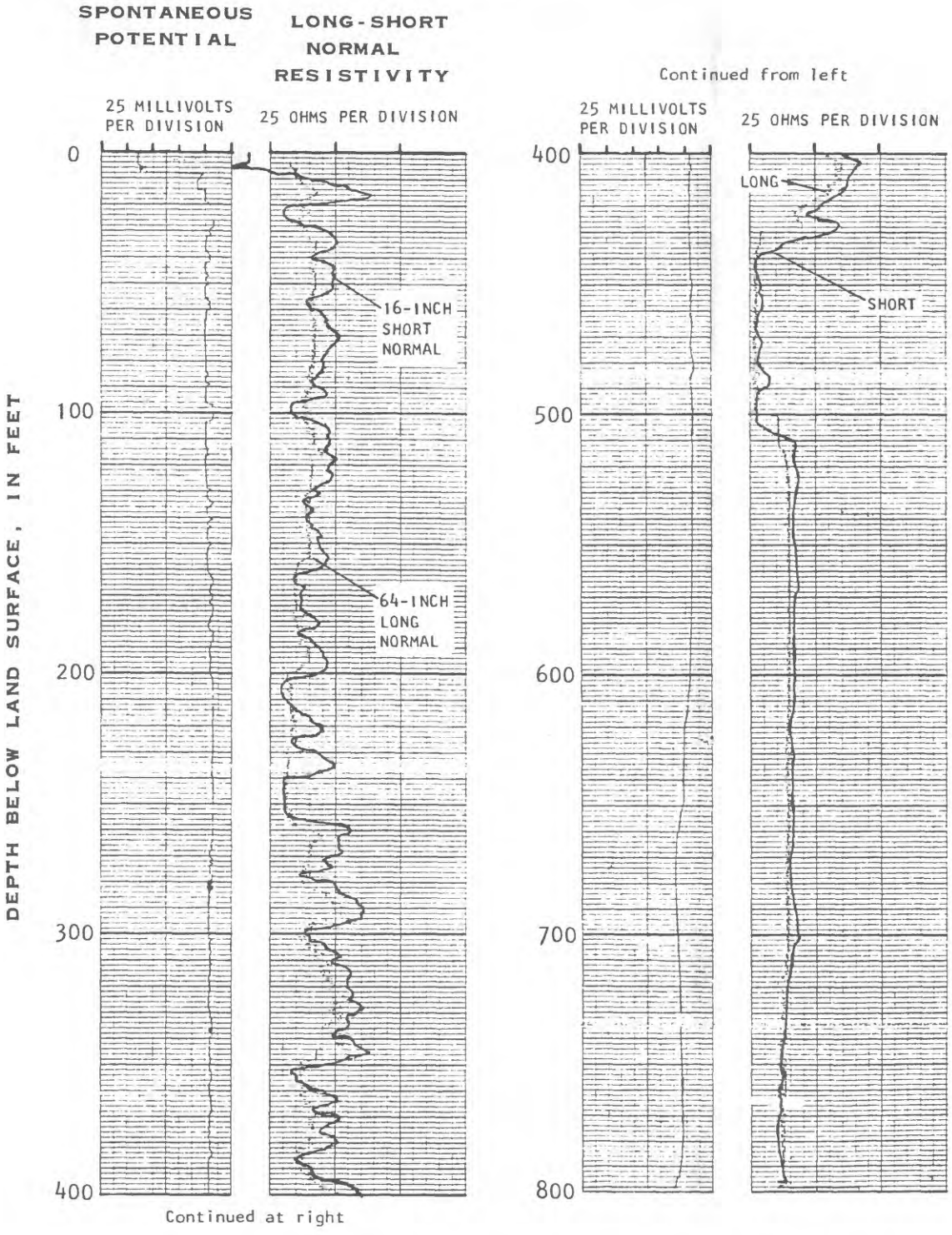


Figure 34.--Selected borehole-geophysical logs for well CWF-3D (JL 49-04-473).

Well Group CWF-4

Well group CWF-4 consists of four observation wells: CWF-4A (JL 49-04-466), CWF-4B (JL 49-04-467), CWF-4C (JL 49-04-468), and CWF-4D (JL 49-04-469). Drilling and construction of well group CWF-4 were completed on December 4, 1984. Well records are listed in table 1. The screened intervals are from 52 to 57 feet below land surface for well CWF-4A, from 152 to 157 feet below land surface for well CWF-4B, from 292 to 297 feet below land surface for well CWF-4C, and from 792.5 to 797.5 feet below land surface for well CWF-4 (fig. 27). Mean daily water levels and miscellaneous water levels in well group CWF-4 for 1985 are shown in figure 35. Selected borehole-geophysical logs for well CWF-4D are shown in figure 36. Chemical analyses of water samples from the wells are listed in table 2.

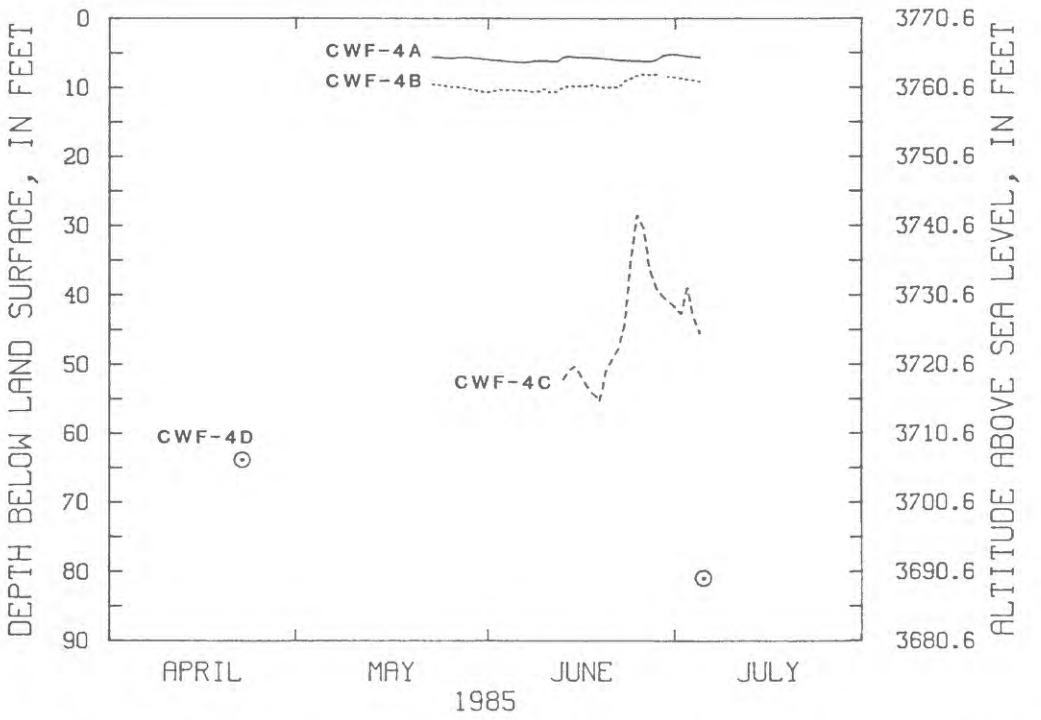


Figure 35.--Mean daily water levels and miscellaneous water levels in well group CWF-4, 1985.

LOGGER: El Paso Water Utilities

ALTITUDE OF LAND SURFACE: 3770.6 feet

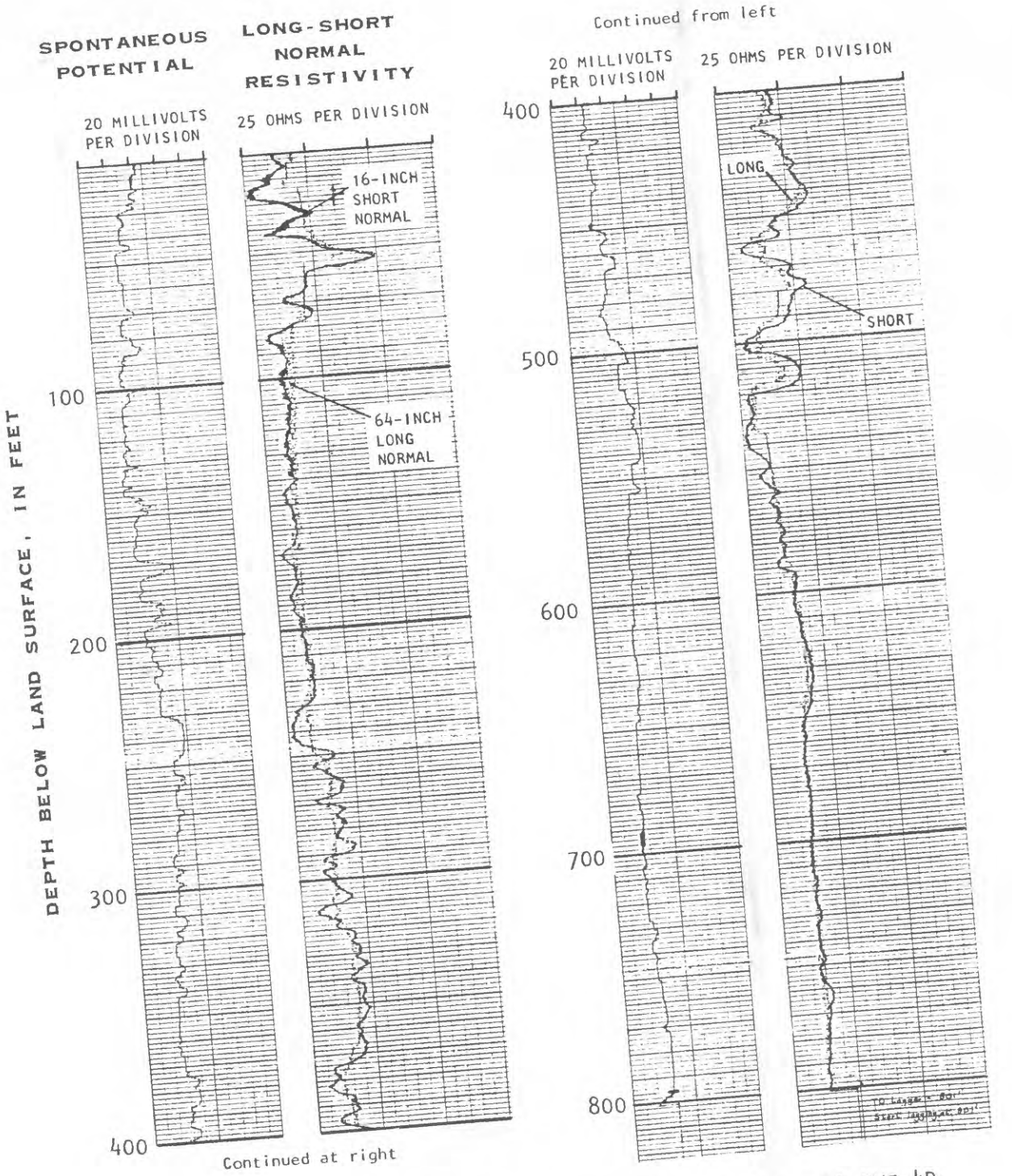


Figure 36.--Selected borehole-geophysical logs for well CWF-4D (JL 49-04-469).

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Myers, R. G., and Orr, B. R., 1984, Geohydrology of the aquifer in the Santa Fe Group, northern West Mesa of the Mesilla Basin near Las Cruces, New Mexico: U.S. Geological Survey Water-Resources Investigations Report 84-4190, 37 p.

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Wilson, C. A., and White, R. R., 1984, Geohydrology of the central Mesilla Valley, Doña Ana County, New Mexico: U.S. Geological Survey Water-Resources Investigations Report 82-555, 144 p.

Table 1. Records of selected wells in the Mesilla Basin

EXPLANATION

Main geologic unit: AVMB, flood-plain alluvium; SNTF, Santa Fe Group.

Depth of well: R, reported.

Altitude: Datum is sea level.

Water level: RP, recently pumped; P, pumping.

Use of water: H, domestic; I, irrigation; S, stock; U, unused.

Remarks: OWN, other well numbers or names; USBR, U.S. Bureau of Reclamation; EBID, Elephant Butte Irrigation District; SI, screened interval; QW, chemical analysis available; WL, additional water-level measurements available.

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
1	22S.1W.19.333	SNTF	250	4460	156.08 158.62	01-23-84 02-26-85	U	
2	22S.1E.09.241a	AVMB	—	3930.1	7.7 9.3	02-01-84 02-01-85	U	OWN: USBR 26; WL
3	22S.1E.09.333	AVMB	14.77	3928.1	6.9 7.7	02-01-84 02-01-85	U	OWN: USBR 20; WL
4	22S.1E.16.433	AVMB	17.83	3923.4	9.4 9.2	02-01-84 02-01-85	U	OWN: USBR 19; WL
5	22S.1E.33.341	AVMB	14.72	3906.6	7.9 8.0	02-01-84 02-01-85	U	OWN: USBR 15; WL
6	22S.1E.35.334	AVMB	25.07	3909.9	13.9 14.0	02-01-84 02-01-85	U	OWN: USBR 18; WL
7	22S.1E.35.434b	AVMB	23.32	3909.6	15.0 15.9	02-01-84 02-01-85	U	OWN: USBR 17; WL
8	23S.1W.25.444	SNTF	380	4197	329.70 327.11	02-22-84 02-01-85	U	SI: 330-380; WL
9	23S.2W.01.422	SNTF	—	4460	200.58 212.38 215.37	02-23-83 01-23-84 02-27-85	U	--
10	23S.2W.12.122	SNTF	—	4463	175.1 217.34	01-23-84 02-27-85	U	—
11	23S.2W.13.134	SNTF	—	4431	182.85 185.62	01-23-84 02-27-85	—	--
12	23S.2W.13.341	SNTF	—	4429	213.10 199.5	01-23-84 02-27-85	I	OWN: 23S.02W.13.311; QW; WL
13	23S.1E.09.433	AVMB	9.00	3894.7	8.3 9.2	02-01-84 02-01-85	U	OWN: USBR 16; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
14	23S.1E.16.424	AVMB	24.15	3865.7	13.4 14.4	02-01-84 02-01-85	U	OWN: USBR 12; WL
15	23S.1E.22.232a	SNTF	322	3888.6	7.91	01-16-85	U	OWN: LC-1A; SI: 295-300; QW; WL
16	23S.1E.22.232b	SNTF	117	3888.6	5.88	01-16-85	U	OWN: LC-1B; SI: 95-100; QW; WL
17	23S.1E.22.232c	AVMB	42	3888.6	6.34	01-17-85	U	OWN: LC-1C; SI: 31-36; QW; WL
18	23S.1E.22.241a	SNTF	314	3888.0	16.23	01-17-85	U	OWN: LC-2A; SI: 300-305; QW; WL
19	23S.1E.22.241b	SNTF	119	3888.0	9.92	01-17-85	U	OWN: LC-2B; SI: 100-105; QW; WL
20	23S.1E.22.241c	AVMB	40	3888.0	6.44	01-17-85	U	OWN: LC-2C; SI: 30-35; QW; WL
21	23S.1E.23.244a	SNTF	332	3889.7	22.26	03-06-85	U	OWN: LC-3A; SI: 322-327; QW; WL
22	23S.1E.23.244b	SNTF	120	3889.7	21.32	03-06-85	U	OWN: LC-3B; SI: 110-115; QW; WL
23	23S.1E.23.244c	AVMB	50	3889.7	21.20	03-06-85	U	OWN: LC-3C; SI: 40-45; QW; WL
24	23S.1E.27.334	AVMB	--	3882.3	6.3 6.2	02-01-84 02-01-85	U	OWN: USBR 11; WL
25	24S.1W.22.121	SNTF	--	4230	353.25 353.85	01-24-83 02-28-85	S	OWN: 24S.01W.22.123; QW; WL
26	24S.2W.36.111	SNTF	--	4319	332.12	03-06-85	S	
27	24S.1E.13.221a	SNTF	370	3863	9.52	02-01-85	U	OWN: EBID 5; SI: 145-370; QW; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
28	24S.2E.07.231	SNTF	460	3870	15.55	02-01-85	U	OWN: EBID 2; SI: 180-460; WL
29	24S.2E.07.234	SNTF	310	3871	17.88	02-01-85	U	SI: 305-310; QW; WL
30	24S.2E.07.234a	SNTF	125	3871	17.26	02-01-85	U	SI: 120-125; QW; WL
31	24S.2E.07.234b	AVMB	80	3871	17.16	02-01-85	U	SI: 75-80; QW; WL
32	24S.2E.08.434a	AVMB	18.45	3862.9	12.4 11.5	02-01-84 02-01-85	U	OWN: USBR 13; WL
33	24S.2E.09.433	AVMB	23.74	3861.9	13.0 12.3	02-01-84 02-01-85	U	OWN: USBR 14; WL
34	24S.2E.16.124a	SNTF	307	3861.5	16.68 14.93	01-26-84 01-15-85	U	OWN: M-4A; SI: 297-302; QW; WL
35	24S.2E.16.124b	SNTF	125	3861.5	16.09 14.40	01-26-84 01-15-85	U	OWN: M-4B; SI: 110-115; QW; WL
36	24S.2E.16.124c	AVMB	45	3861.5	13.85 13.17	01-30-84 01-15-85	U	OWN: M-4C; SI: 30-35; QW; WL
37	24S.2E.17.322	SNTF	464	3860	14.97	02-01-85	U	OWN; EBID 3; SI: 180-464; QW; WL
38	24S.2E.17.414a	SNTF	312	3858	11.14	02-01-85	U	SI: 292-297; QW; WL
39	24S.2E.17.414b	SNTF	618	3858	16.28	02-01-85	U	SI: 612-617; QW; WL
40	24S.2E.17.423a	SNTF	686	3858	12.26 10.96	02-01-84 02-01-85	U	OWN: EBID 1; SI: 310-680; QW; WL
41	24S.2E.17.423b	SNTF	610	3859.8	15.72	02-01-85	U	OWN: M-3B; SI: 591-596; QW; WL
42	24S.2E.17.423c	SNTF	310	3859.8	11.04	02-01-85	U	OWN: M-3C; SI: 302-307; QW; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
43	24S.2E.17.423d	SNTF	121	3859.8	10.28	02-01-85	U	OWN: M-3D; SI: 113-118; QW; WL
44	24S.2E.17.423e	AVMB	35	3859.8	9.95	02-01-85	U	OWN: M-3E; SI: 30-35; QW; WL
45	24S.2E.19.214a	SNTF	335	3859.2	10.45 10.96	12-01-83 01-15-85	U	OWN: M-1A; SI: 310-315; QW; WL
46	24S.2E.19.214b	SNTF	130	3859.2	9.95 9.91	12-01-83 01-15-85	U	OWN: M-1B; SI: 115-120; QW; WL
47	24S.2E.19.214c	AVMB	50	3859.2	6.17 6.42	12-01-83 01-15-85	U	OWN: M-1C; SI: 35-40; QW; WL
48	24S.2E.19.223a	SNTF	321	3859.2	10.59	01-15-85	U	OWN: M-2A; SI: 309-314; QW; WL
49	24S.2E.19.223b	SNTF	122	3859.2	9.28	01-15-85	U	OWN: M-2B; SI: 110-115; QW; WL
50	24S.2E.19.223c	AVMB	52	3859.2	6.61	01-15-85	U	OWN: M-2C; SI: 40-45; QW; WL
51	24S.2E.21.123	SNTF	480	3855	12.73	02-01-85	U	OWN: EBID 4; SI: 170-480; QW; WL
52	24S.2E.22.242	AVMB	17.72	3851.4	10.1 9.8	02-01-84 02-01-85	U	OWN: USBR 10; WL
53	24S.2E.23.342	AVMB	15.51	3848.6	10.9 11.3	02-01-84 02-01-85	U	OWN: USBR 9; WL
54	24S.2E.28.334	AVMB	16.17	3850.5	11.8 10.7	02-01-84 02-01-85	U	OWN: USBR 8; WL
55	25S.2W.05.133	SNTF	—	4432	120.11	03-06-85	S	OWN: 25S.02W.05.134; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
56	25S.2W.30.324	SNTF	—	4288	219.98 218.85	02-16-84 02-27-85	H	
57	25S.3W.02.214	SNTF	527R	4499	404.18 392.62	01-24-84 02-27-85	S	WL
58	25S.1E.06.331	SNTF	400R	4210	368.30 370.24	09-22-83 02-20-85	U	
59	25S.1E.16.111	SNTF	1650	4190	352.82 352.85	01-24-84 02-27-85	U	OWN: 25S.01E.16.114; WL
60	25S.1E.19.424a	SNTF	—	4154	323.93	01-24-84	S	
61	25S.1E.19.424b	SNTF	--	4154	307.01	02-28-85	S	
62	25S.2E.01.411	AVMB	12.27	3835.3	8.3 9.3	02-01-84 02-01-85	U	OWN: USBR 25; WL
63	25S.2E.04.114	AVMB	--	3847	12.7 11.5	02-01-84 02-01-85	U	OWN: USBR 7; WL
64	25S.2E.23.212	AVMB	16.90	3828.6	9.1 8.9	02-01-84 02-01-85	U	OWN: USBR 6; WL
65	25S.2E.25.322	AVMB	14.05	3821.3	9.3 10.4	02-01-84 02-01-85	U	OWN: USBR 5; WL
66	25S.2E.28.222b	SNTF	120	3922	104.60 103.97	02-16-84 01-09-85	S	WL
67	25S.2E.31.312b	SNTF	1,000R	4171	349.77	02-19-85	S	
68	25S.3E.20.421	AVMB	13.77	3818.9	7.6 7.9	02-01-84 02-01-85	U	OWN: USBR 24; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
69	25S.3E.28.343a	AVMB	10.81	3810.5	9.9 10.1	02-01-84 02-01-85	U	OWN: USBR 27; WL
70	25S.3E.31.143	AVMB	—	3814.3	7.6 7.4	02-01-84 02-01-85	U	OWN: USBR 4; WL
71	26S.1W.04.412	SNTF	445	4211	414.19P 384.85	01-24-84 02-27-85	S	OWN: 26S.01W.04.322
72	26S.1W.16.334	SNTF	1000R	4210	388.75	02-27-85	S	
73	26S.1W.25.412	SNTF	563	4194	P	02-09-85	H	SI: 443-563
74	26S.2W.15.434	SNTF	437R	4250	409.17	02-27-85	S	QW
75	26S.2W.30.233	SNTF	800	4333	489.58	03-07-85	S	
76	26S.1E.18.222a	SNTF	430	4213	394.4	02-16-84	S	QW; WL
77	26S.1E.18.222b	SNTF	600R	4213	393.1	02-28-85	H,S	
78	26S.1E.35.332	SNTF	500R	4158	358.39	03-05-85	U	OWN: 26S.01E.35.333; WL
79	26S.2E.01.211	AVMB	11.23	3812.6	8.5 8.5	02-01-84 02-01-85	U	OWN: USBR 3; WL
80	26S.2E.32.333	SNTF	—	4128	332.38 333.18	02-20-84 02-15-85	U	
81	26S.3E.03.344	AVMB	26	3812	10.06	02-01-85	U	SI: 16-26; QW; WL
82	26S.3E.03.344a	AVMB	36	3812	10.11	02-01-85	U	SI: 26-36; QW; WL
83	26S.3E.03.344b	AVMB	48	3812	10.07	02-01-85	U	SI: 45-48; QW; WL
84	26S.3E.03.344c	AVMB	75	3812	10.62	02-01-85	U	SI: 72-75; QW; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
85	26S.3E.03.344d	SNTF	150	3812	10.95	02-01-85	U	SI: 147-150; QW; WL
86	26S.3E.04.122	AVMB	11.77	3814.6	8.4 9.2	02-01-84 02-01-85	U	OWN: USBR 27; WL
87	26S.3E.08.221	AVMB	24.24	3809.0	9.3 10.0	02-01-84 02-01-85	U	OWN: USBR 23; WL
88	26S.3E.09.221a	AVMB	23.97	3804.7	6.8 7.2	02-01-84 02-01-85	U	OWN: USBR 22; WL
89	26S.3E.15.112	AVMB	8.43	3806.5	6.9 7.8	02-01-84 02-01-85	U	OWN: USBR 28; WL
90	26S.3E.22.211	AVMB	10.62	3794.5	4.6 4.0	02-01-84 02-01-85	U	OWN: USBR 30; WL
91	26S.3E.27.211	AVMB	11.29	3793.6	6.8 6.5	02-01-84 02-01-85	U	OWN: USBR 32; WL
92	26S.3E.27.212	AVMB	—	3792.9	5.5 5.8	02-01-84 02-01-85	U	OWN: USBR 31; WL
93	26S.3E.32.441	AVMB	—	3790.0	9.0 8.6	02-01-84 02-01-85	U	OWN: USBR 39; WL
94	27S.1W.26.433	SNTF	314R	4095	284.48	02-26-85	S	
95	27S.2W.02.413	SNTF	406	4203	P	02-16-85	S	
96	27S.2W.25.111	SNTF	600	4167	361.44 361.68	02-21-84 02-13-85	I	QW; WL
97	27S.1E.04.112	SNTF	560R	4189	P	02-13-85	H	
98	27S.2E.21.111	SNTF	—	4092	304.20	02-15-85	U	OWN: 27S.02E.21.113

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
99	27S.03E.09.444	AVMB	14.67	3779.1	6.9 3.5	02-01-84 02-01-85	U	OWN: USBR 38; WL
100	27S.03E.28.314	AVMB	9.83	3771.2	8.6 8.7	02-01-84 02-01-85	U	OWN: USBR 1; WL
101	27S.03E.32.124a	AVMB	—	3773.2	9.7 9.2	02-01-84 02-01-85	U	OWN: USBR 2; WL
102	28S.01W.07.113a	SNTF	—	4111	308.86	02-22-84	U	WL
103	28S.01W.07.113b	SNTF	600	4111	309.34 309.74	02-22-84 02-12-85	U	
104	28S.02W.31.111	SNTF	—	4153	315.89 316.84	03-02-84 02-13-85	S	
105	28S.03W.33.443	SNTF	—	4142	226.10 280.76RP	03-02-84 02-13-85	S	
106	28S.02E.23.222	SNTF	—	4111	333.78 334.08	03-06-84 02-14-85	—	
107	28S.02E.24.444	SNTF	—	4079	313.50	01-22-85	U	WL
108	28S.03E.17.214	SNTF	330	3828	70.30	01-23-85	U	WL
109	28S.03E.21.144	SNTF	300	3803	54.64	01-23-85	U	WL
110	28S.03E.27.434	SNTF	300	3822	72.07	01-23-85	U	WL
111	28S.03E.29.344	SNTF	550	4065	325.56	01-22-85	U	WL
112	28S.03E.32.143	SNTF	605	4095	328.86	01-22-85	U	WL
113	29S.02W.06.231	SNTF	715R	4109	263.73	02-26-85	U	WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
114	29S.2W.15.234	SNTF	—	4037	196.37	02-22-84	S	WL
115	29S.3W.13.134	SNTF	—	4050	202.04 191.92	02-22-84 02-20-85	S	
116	29S.1E.06.111	SNTF	—	4130	326.63 326.77	03-01-84 02-15-85	S	
117	29S.1E.08.124	SNTF	565	4121	324.52 323.96	02-29-84 02-15-85	S	WL
118	29S.2E.06.122b	SNTF	600	4108	307.54	02-21-85	H,S	
119	JL 49-03-916	AVMB	28.02	3754.7	7.9	02-01-84	U	OWN: USBR 36
120	JL 49-04-111	SNTF	1060	3775.8	25.45	02-26-85	U	OWN, CR-6; SI: 740-860, 980-1060; WL
121	JL 49-04-121	AVMB	—	3788.4	7.0 5.5	02-01-84 02-01-85	U	OWN: USBR 29; WL
122	JL 49-04-416	SNTF	1013	3768.5	21.42	02-26-85	U	OWN: CR-3; SI: 528-1013; WL
123	JL 49-04-418	SNTF	545	3769.8	37.78	02-26-85	U	OWN: CR-5; SI: 445-545; WL
124	JL 49-04-419	SNTF	1050	3772.5	33.62	02-26-85	U	OWN: CR-2; SI: 585-1050; WL
125	JL 49-04-466	AVMB	59	3770.6	7.86	12-05-84	U	OWN: CWF-4A; SI: 52-57; QW; WL
126	JL 49-04-467	SNTF	159	3770.6	10.20	12-05-84	U	OWN: CWF-4B; SI: 152-157; QW; WL

Table 1. Records of selected wells in the Mesilla Basin - Continued

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
127	JL 49-04-468	SNTF	299	3770.6	53.40	12-05-84	U	OWN: CWF-4C; SI: 292-297; QW; WL
128	JL 49-04-469	SNTF	800	3770.6	41.11	12-05-84	U	OWN: CWF-4D; SI: 792.5-797.5; QW; WL
129	JL 49-04-470	AVMB	58	3773.8	9.48	01-16-85	U	OWN: CWF-3A; SI: 51-56; QW; WL
130	JL 49-04-471	SNTF	158	3773.8	12.48	01-16-85	U	OWN: CWF-3B; SI: 151-156; QW; WL
131	JL 49-04-472	SNTF	298	3773.8	48.60	01-16-85	U	OWN: CWF-3C; SI: 291-296; QW; WL
132	JL 49-04-473	SNTF	799	3773.8	37.05	01-16-85	U	OWN: CWF-3D; SI: 792-797; QW; WL
133	JL 49-04-474	AVMB	47	3773.5	8.74	02-04-85	U	OWN: CWF-2A; SI: 40-45; QW; WL
134	JL 49-04-475	SNTF	158	3773.5	13.48	02-04-85	U	OWN: CWF-2B; SI: 151-156; QW; WL
135	JL 49-04-476	SNTF	300	3773.5	44.44	02-04-85	U	OWN: CWF-2C; SI: 293-298; QW; WL
136	JL 49-04-477	SNTF	799	3773.5	51.31	02-04-85	U	OWN: CWF-2D; SI: 792-797; QW; WL
137	JL 49-04-478	AVMB	52	3776.7	12.05	02-15-85	U	OWN: CWF-1A; SI: 45-50; QW; WL
138	JL 49-04-479	SNTF	156	3776.7	19.42	02-15-85	U	OWN: CWF-1B; SI: 149-154; QW; WL
139	JL 49-04-480	SNTF	334	3776.7	48.73	02-15-85	U	OWN: CWF-1C; SI: 327-332; QW; WL

Table 1. Records of selected wells in the Mesilla Basin - Concluded

Well number	Well location	Main geologic unit	Depth of well (feet)	Altitude of land surface (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Use of water	Remarks
140	JL 49-04-481	SNTF	803	3776.7	53.19	02-15-85	U	OWN: CWF-1D; SI: 798-803; QW; WL
141	JL 49-04-701	AVMB	16.97	3755.5	6.8 6.9	02-01-84 02-01-85	U	OWN: USBR 37; WL
142	JL 49-12-117	AVMB	—	3747.3	6.3 6.5	02-01-84 02-01-85	U	OWN: USBR 33; WL
143	JL 49-12-501	AVMB	12.02	3735.5	6.6 6.7	02-01-84 02-01-85	U	OWN: USBR 34; WL

Table 2. Chemical analyses of water samples from selected observation wells in the Mesilla Valley

[deg C, degrees Celsius; μS/cm, microsiemens per centimeter at 25° Celsius; mg/L, milligrams per liter; μg/L, micrograms per liter; AVMB, flood-plain alluvium; SNTF, Santa Fe Group]

Well location (and number)	Geologic unit	Date of sample	Temperature (deg C)	Specific conductance (μS/cm)	pH (standard units)	pH lab (standard units)	Alkalinity, field (mg/L as $CaCO_3$)
23S.1E.22.232a (LC-1A)	112SNTF	11-06-84	20.0	580	8.8	8.3	--
23S.1E.22.232b (LC-1B)	112SNTF	10-10-84	20.0	1050	8.2	8.2	--
23S.1E.22.232c (LC-1C)	110AVMB	10-12-84	27.0	705	7.0	8.3	--
23S.1E.22.241a (LC-2A)	112SNTF	11-09-84	17.0	525	8.2	8.4	--
23S.1E.22.241b (LC-2B)	112SNTF	10-20-84	18.0	1200	--	8.2	--
23S.1E.22.241c (LC-2C)	110AVMB	10-22-84	20.0	990	--	8.3	--
23S.1E.23.244a (LC-3A)	112SNTF	11-17-84	19.0	1300	8.1	8.2	--
23S.1E.23.244b (LC-3B)	112SNTF	11-20-84	19.0	2600	7.9	8.1	--
23S.1E.23.244c (LC-3C)	110AVMB	11-27-84	21.0	2850	7.9	8.0	--
24S.2E.16.124a (M-4A)	112SNTF	11-21-84	18.0	580	8.4	8.2	--
24S.2E.16.124b (M-4B)	112SNTF	12-06-83	18.0	1440	--	7.9	--
24S.2E.16.124c (M-4C)	110AVMB	12-08-83	17.5	1640	--	7.9	--
24S.2E.19.214a (M-1A)	112SNTF	11-08-83	18.0	620	8.2	8.2	--
24S.2E.19.214b (M-1B)	112SNTF	11-11-83	16.5	840	9.7	8.3	--
24S.2E.19.214c (M-1C)	110AVMB	11-16-83	17.5	840	9.8	9.3	--
24S.2E.19.223a (M-2A)	112SNTF	12-01-84	18.0	590	8.3	8.1	--
24S.2E.19.223b (M-2B)	112SNTF	12-05-84	18.0	550	8.2	8.2	--
24S.2E.19.223c (M-2C)	110AVMB	12-06-84	19.0	1100	8.1	8.2	--
JL 49-04-466 (CWF-4A)	110AVMB	12-04-84	--	1400	--	8.3	--
JL 49-04-467 (CWF-4B)	112SNTF	12-04-84	--	3150	--	8.2	--
JL 49-04-468 (CWF-4C)	112SNTF	11-30-84	--	800	--	8.6	--
JL 49-04-469 (CWF-4D)	112SNTF	11-20-84	--	480	--	8.9	--
JL 49-04-470 (CWF-3A)	110AVMB	01-10-85	--	1200	8.0	8.2	182
JL 49-04-471 (CWF-3B)	112SNTF	01-09-85	--	1250	8.0	8.2	139
JL 49-04-472 (CWF-3C)	112SNTF	01-07-85	--	535	7.8	8.4	74
JL 49-04-473 (CWF-3D)	112SNTF	12-31-84	30.5	405	8.1	8.7	61
JL 49-04-474 (CWF-2A)	110AVMB	01-30-85	--	1220	8.1	8.2	198
JL 49-04-475 (CWF-2B)	112SNTF	01-29-85	18.0	1200	8.0	8.3	175
JL 49-04-476 (CWF-2C)	112SNTF	01-29-85	24.0	795	7.7	7.9	57
JL 49-04-477 (CWF-2D)	112SNTF	01-25-85	29.5	395	8.1	8.0	67
JL 49-04-478 (CWF-1A)	110AVMB	02-13-85	19.0	1400	8.0	8.1	185
JL 49-04-479 (CWF-1B)	112SNTF	02-12-85	--	1270	7.9	8.1	143
JL 49-04-480 (CWF-1C)	112SNTF	02-12-85	24.0	700	7.7	7.3	64
JL 49-04-481 (CWF-1D)	112SNTF	02-15-85	29.0	480	8.6	8.7	75

Nitrogen, NO_2+NO_3 dissolved (mg/L as N)	Phosphorus, dissolved (mg/L as P)	Calcium, dissolved (mg/L as Ca)	Magnesium, dissolved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potassium, dissolved (mg/L as K)	Chloride, dissolved (mg/L as Cl)	Sulfate, dissolved (mg/L as SO_4)
--	.010	62	9.3	41	3.2	51	81
--	.020	84	14	130	4.3	110	220
--	.030	52	11	73	6.6	50	140
--	.010	50	8.0	38	3.2	41	62
--	.030	110	17	120	4.9	130	250
--	.020	67	13	110	6.1	73	190
--	.010	170	26	68	5.6	150	270
--	.020	240	56	220	8.6	120	880
--	--	330	50	310	15	290	880
--	.020	45	9.0	46	3.1	45	44
.13	.010	160	28	120	10	140	380
.29	.010	150	25	170	9.3	150	460
--	.010	54	8.6	55	3.7	51	75
--	--	56	11	67	5.7	130	130
--	.280	53	5.8	110	7.7	59	170
--	.020	54	9.2	52	3.3	52	77
--	.010	53	8.7	46	3.3	53	69
--	.020	100	17	120	5.5	130	250
--	--	83	16	226	8.0	75	285
--	--	162	19	540	19	369	750
--	--	27	3.4	135	3.0	88	155
--	--	4.0	.5	80	8.0	30	77
--	.010	55	18	180	6.7	120	260
--	--	55	4.4	210	5.2	160	270
--	.010	13	1.6	99	3.0	50	100
--	.010	4.2	.10	83	1.2	32	81
--	--	68	26	160	11	120	270
.13	--	77	7.7	180	5.8	130	260
.25	--	25	2.7	140	4.0	110	160
.20	--	3.3	.10	85	.90	30	69
.81	--	72	31	190	10	150	300
.41	--	54	4.3	230	4.8	140	270
.24	--	21	1.5	120	3.5	90	120
--	--	7.5	.03	93	1.4	39	79

Table 2. Chemical analyses of water samples from selected observation wells in the Mesilla Valley - Concluded

Well location (and number)	Date of sample	Fluoride, dissolved (mg/L as F)	Silica, dissolved (mg/L as SiO_2)	Boron, dissolved (μg/L as B)	Iron, dissolved (μg/L as Fe)
23S.1E.22.232a (LC-1A)	11-06-84	.40	22	60	13
23S.1E.22.232b (LC-1B)	10-10-84	.40	24	180	230
23S.1E.22.232c (LC-1C)	10-12-84	.60	17	140	130
23S.1E.22.241a (LC-2A)	11-09-84	.30	23	60	7
23S.1E.22.241b (LC-2B)	10-20-84	.30	23	150	150
23S.1E.22.241c (LC-2C)	10-22-84	.60	19	160	150
235.1E.23.244a (LC-3A)	11-17-84	.20	23	80	6
235.1E.23.244b (LC-3B)	11-20-84	.20	31	230	60
235.1E.23.244c (LC-3C)	11-27-84	.30	37	430	40
24S.2E.16.124a (M-4A)	11-21-83	.40	24	70	8
24S.2E.16.124b (M-4B)	12-06-83	.30	29	120	12
24S.2E.16.124c (M-4C)	12-08-83	.40	32	200	8
24S.2E.19.214a (M-1A)	11-08-83	.20	25	60	690
24S.2E.19.214b (M-1B)	11-11-83	.30	21	50	9
24S.2E.19.214c (M-1C)	11-16-83	.70	20	190	6
24S.2E.19.223a (M-2A)	12-01-84	.20	23	70	10
24S.2E.19.223b (M-2B)	12-05-84	.30	22	60	3
24S.2E.19.223c (M-2C)	12-06-84	.50	22	160	8
JL 49-04-466 (CWF-4A)	12-04-84	.34	25	--	--
JL 49-04-467 (CWF-4B)	12-04-84	.12	32	--	--
JL 49-04-468 (CWF-4C)	11-30-84	.50	34	--	--
JL 49-04-469 (CWF-4D)	11-20-84	1.1	30	--	--
JL 49-04-470 (CWF-3A)	01-10-85	.60	33	220	28
JL 49-04-471 (CWF-3B)	01-09-85	.20	37	210	5
JL 49-04-472 (CWF-3C)	01-07-85	.80	32	110	7
JL 49-04-473 (CWF-3D)	12-31-84	.90	28	100	33
JL 49-04-474 (CWF-2A)	01-30-85	.60	23	--	--
JL 49-04-475 (CWF-2B)	01-29-85	.40	35	--	--
JL 49-04-476 (CWF-2C)	01-29-85	.60	35	--	--
JL 49-04-477 (CWF-2D)	01-25-85	.80	27	--	--
JL 49-04-478 (CWF-1A)	02-13-85	.70	28	--	--
JL 49-04-479 (CWF-1B)	02-12-85	.20	46	--	--
JL 49-04-480 (CWF-1C)	02-12-85	.50	32	--	--
JL 49-04-481 (CWF-1D)	02-15-85	.80	23	--	--

Lead, dissolved (µg/L as Pb)	Manganese, dissolved (µg/L as Mn)	Solids, sum of constituents, dissolved (mg/L)	Solids, residue at 180 deg C, dissolved (mg/L)	Depth of well, total (feet)	Specific conductance, lab (µS/cm)	Alkalinity lab (mg/L as ($CaCO_3$)
—	67	340	330	305	560	118
3	320	690	702	105	1090	172
3	53	430	437	41	700	139
—	78	300	302	310	517	132
3	660	760	783	110	1190	179
3	320	580	573	40	914	168
2	460	830	866	332	1280	200
2	2900	1800	1960	120	2630	359
1	3300	2100	2170	50	2970	374
3	110	310	306	307	493	148
—	520	970	949	120	1390	162
—	320	1100	1140	40	1580	164
4	34	360	372	320	562	146
2	6	450	460	125	700	51
2	34	530	519	45	705	174
5	30	360	360	319	598	152
6	120	340	339	120	572	139
5	610	760	758	50	1160	185
—	—	1164	—	59	—	386
—	—	2320	—	159	—	378
—	—	519	—	299	—	94
—	—	276	—	800	—	68
—	73	780	779	58	1200	185
5	8	830	825	158	1280	140
4	1	340	340	298	551	75
—	1	270	268	799	423	63
—	—	800	—	47	1240	—
—	—	800	—	158	1230	—
—	—	510	—	300	806	—
—	—	260	—	799	417	—
—	—	890	—	52	1430	—
—	—	840	—	156	1270	—
—	—	430	—	334	708	—
—	—	290	—	803	479	—

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