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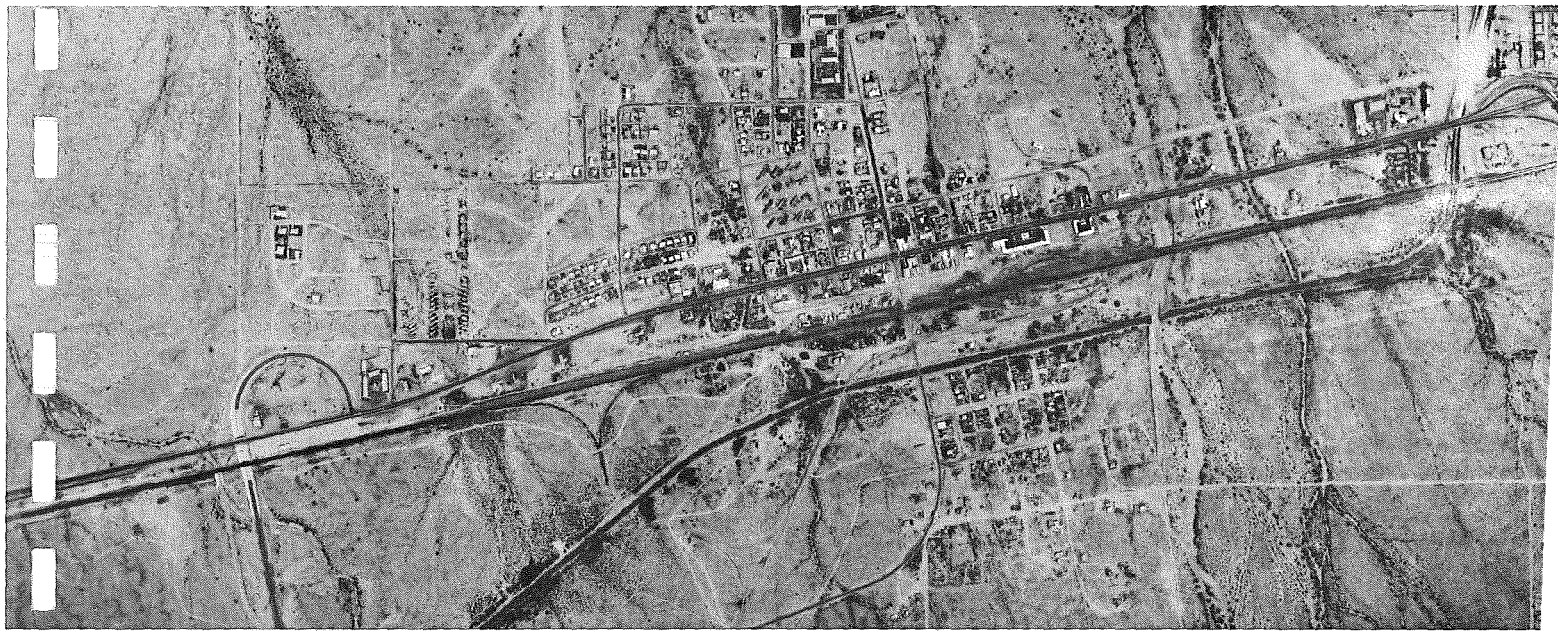
HYDROLOGIC CONDITIONS IN THE GILA BEND BASIN, MARICOPA COUNTY, ARIZONA

BY R. S. STULIK AND OTTO MOOSBURNER



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HYDROLOGIC CONDITIONS IN THE GILA BEND BASIN, MARICOPA COUNTY, ARIZONA

By

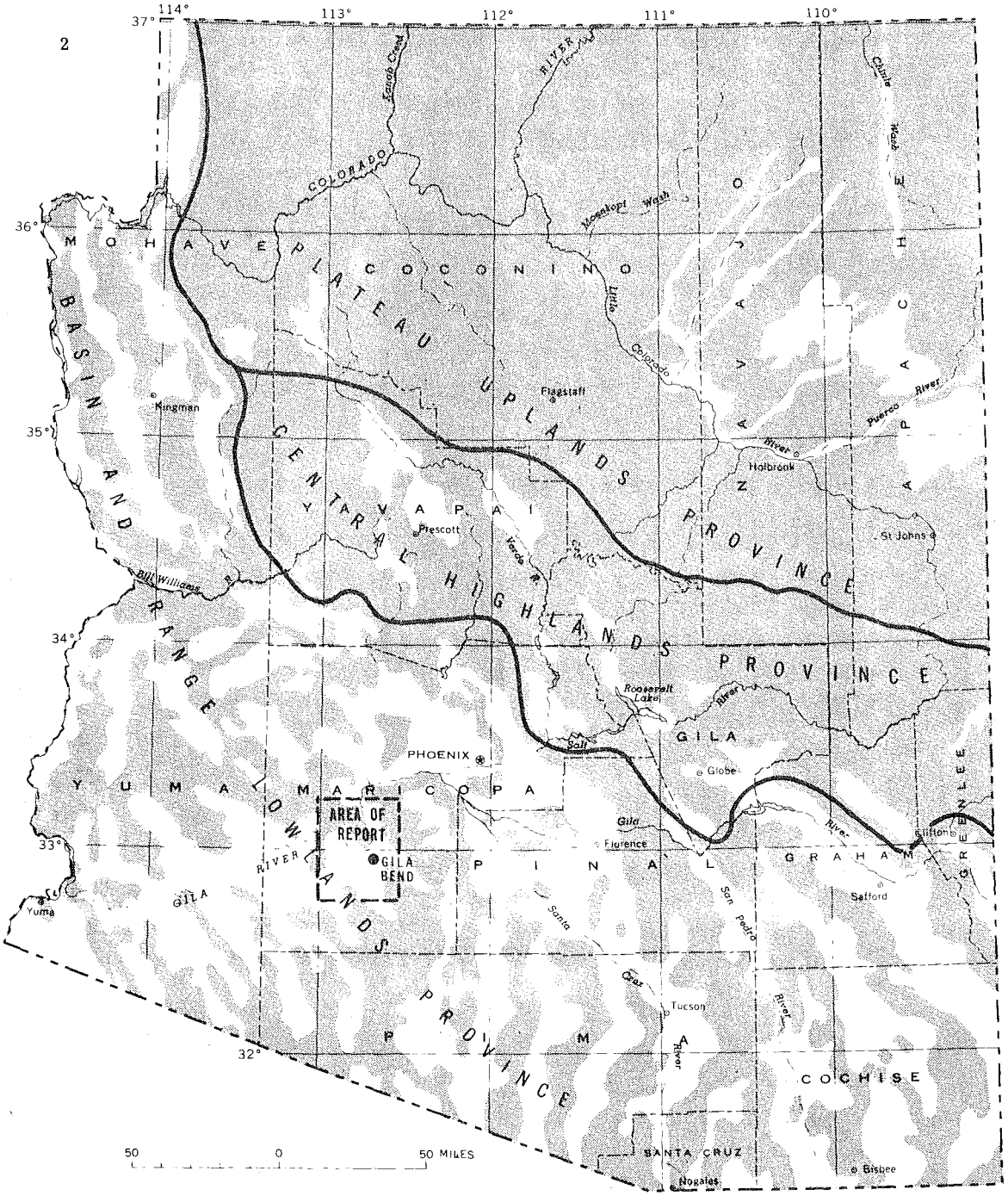
R. S. Stulik and Otto Moosburner

Introduction

In the Gila Bend basin, ground water and surface water are used for irrigation and other purposes. It is important to acquire a thorough knowledge of the characteristics of the hydrologic regimen in order to obtain the maximum benefits from the water supplies. The ground-water reservoir is the main source of supply in the basin.

The U.S. Geological Survey, in cooperation with the Arizona State Land Department, O. M. Lassen, Commissioner, has been collecting and analyzing information concerning the water resources of Arizona for many years (Arizona State Land Department, issued annually). The present program provides for a periodic detailed inventory of the hydrologic data in selected basins or areas and for the subsequent analysis and publication of these data. The purpose of the program is to make available basic hydrologic data, which are useful in water-resources planning and development and in solving or alleviating problems that result from the large-scale development of water supplies. This report summarizes the hydrologic conditions for the Gila Bend basin (fig. 1) and makes available the basic data for the area. The study was conducted under the immediate supervision of H. M. Babcock, district chief of the Water Resources Division of the U.S. Geological Survey in Arizona.

A complete inventory of the irrigation wells in the Gila Bend basin was made in 1965 and the early part of 1966. Other fieldwork included measurements of discharge from wells, water-level measurements in pumping and nonpumping wells, streamflow measurements, measurements of flow in canals, the collection of power-consumption records, and the collection of water samples for chemical analysis. The cultivated acreage was mapped using aerial photographs taken in spring 1965. Records of selected wells, water-level data, chemical analyses, and drillers' logs are given in tables 1, 2, 3, and 4, respectively (see appendix). The locations of the wells are shown in figure 2, and all well locations in the basin are described according to the well-numbering system used in Arizona (fig. 3).



Alluvial contacts by M. E. Cooley, 1967

EXPLANATION

ALLUVIAL DEPOSITS

CONSOLIDATED ROCKS

FIGURE 1.--AREA OF REPORT AND ARIZONA'S WATER PROVINCES.

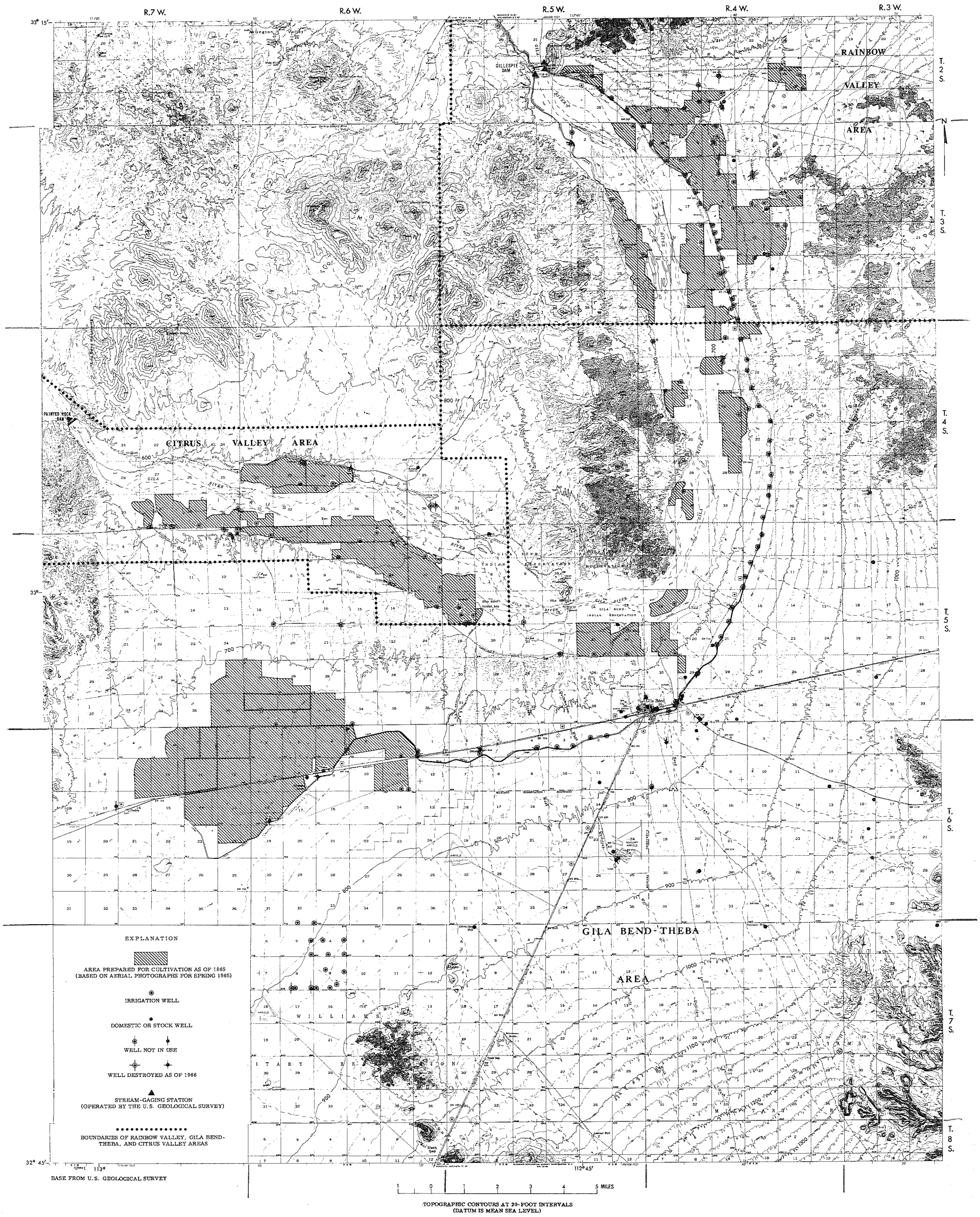
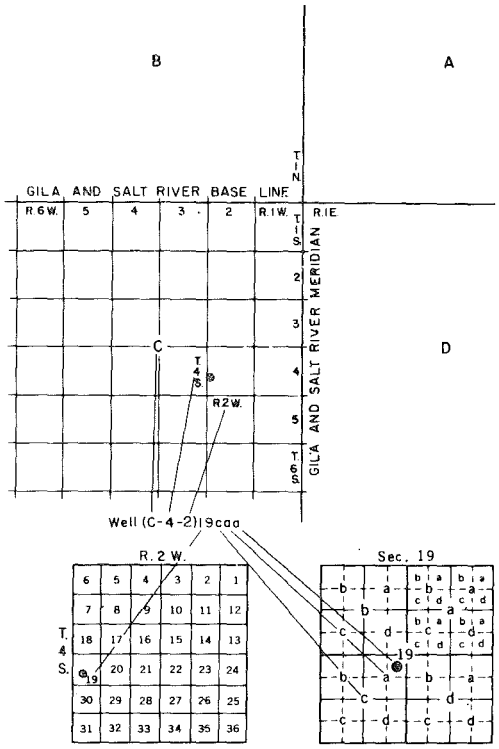


FIGURE 2.--LOCATION OF WELLS AND CULTIVATED AREAS IN THE GILA BEND BASIN.



The well numbers used by the Geological Survey in Arizona are in accordance with the Bureau of Land Management's system of land subdivision. The land survey in Arizona is based on the Gila and Salt River meridian and base line, which divide the State into four quadrants. These quadrants are designated counterclockwise by the capital letters A, B, C, and D. All land north and east of the point of origin is in A quadrant, that north and west in B quadrant, that south and west in C quadrant, and that south and east in D quadrant. The first digit of a well number indicates the township, the second the range, and the third the section in which the well is situated. The lowercase letters a, b, c, and d after the section number indicate the well location within the section. The first letter denotes a particular 160-acre tract, the second the 40-acre tract, and the third the 10-acre tract. These letters also are assigned in a counterclockwise direction, beginning in the northeast quarter. If the location is known within the 10-acre tract, three lowercase letters are shown in the well number. In the example shown, well number (C-4-2)19caa designates the well as being in the NE$\frac{1}{4}$NE$\frac{1}{4}$SW$\frac{1}{4}$ sec. 19, T. 4 S., R. 2 W. Where there is more than one well within a 10-acre tract, consecutive numbers beginning with 1 are added as suffixes.

FIGURE 3.--WELL-NUMBERING SYSTEM IN ARIZONA.

The authors wish to acknowledge the many people who provided information and assistance during this study. Personnel of the Gila Bend office and the Gas Engine Division office of the Arizona Public Service Co. were especially cooperative in furnishing data for the computation of the amount of ground water pumped in the basin, and S. F. Turner, consulting engineer, Phoenix, supplied information regarding wells in the area.

Physical setting.--The Gila Bend basin is in the Basin and Range lowlands of Arizona (fig. 1); the basin is that part of the Gila River valley bounded by the Gila Bend Mountains and the Buckeye Hills on the north, the Maricopa and Sand Tank Mountains on the east, the Sauceda Mountains on the south, and the Painted Rock Mountains on the west (fig. 2). The basin is a wide, gently sloping, alluvial plain that covers about 800 square miles. The Gila River enters the basin at Gillespie Dam; it leaves the basin 36 miles downstream at Painted Rock Dam. The principal population center is Gila Bend, an incorporated city of about 2,000 people. In this report, the Gila Bend basin is divided into three areas (fig. 2)—the Rainbow Valley area, Gila Bend-Theba area, and Citrus Valley area—for purposes of discussion.

Although slightly more than 35,000 acres of land was prepared for crops in the Gila Bend basin in 1965 (fig. 2), less than 60 percent was actually cultivated. The water used to irrigate the cultivated acreage came from two sources: (1) ground water pumped from irrigation wells, and (2) surface water diverted from the Gila River at Gillespie Dam into the Enterprise and Gila Bend Canals. Water is transported in the Enterprise Canal to a ranch about 6 miles downstream from Gillespie Dam and in the Gila Bend Canal for more than 35 miles to a ranch near Theba. About 50 irrigation wells pump water directly into the Gila Bend Canal to supplement the surface water.

Previous investigations.--The water resources, geology, and geography of the Gila Bend basin have been described in the following reports:

1897. Davis, A. P., Irrigation near Phoenix, Arizona: U.S. Geol. Survey Water-Supply Paper 2, 98 p.

1914. Phalen, W. C., Celestite deposits in California and Arizona: U.S. Geol. Survey Bull. 540-T, p. 521-533.

1922. Ross, C. P., Routes to desert watering places in the lower Gila region, Arizona: U. S. Geol. Survey Water-Supply Paper 490-C, p. 271-315.

1922. Bryan, Kirk, Routes to desert watering places in the Papago country, Arizona: U.S. Geol. Survey Water-Supply Paper 490-D, p. 317-429.

1923. Ross, C. P., The lower Gila region, Arizona, a geographic, geologic, and hydrologic reconnaissance with a guide to desert watering places: U.S. Geol. Survey Water-Supply Paper 498, 237 p.

1925. Bryan, Kirk, The Papago country, Arizona, a geographic, geologic, and hydrologic reconnaissance with a guide to desert watering places: U.S. Geol. Survey Water-Supply Paper 499, 436 p.

1948. Babcock, H. M., and Kendall, K. K., Geology and ground-water resources of the Gila Bend basin, Maricopa County, Arizona, with a section on quality of water, by J. D. Hem: U.S. Geol. Survey open-file report, 26 p.

1952. Coates, D. R., Gila Bend basin, Maricopa County, in Ground water in the Gila River basin and adjacent areas, Arizona—a summary, by L. C. Halpenny and others: U.S. Geol. Survey open-file report, p. 159-164.

1953. Wolcott, H. N., Memorandum on ground-water resources and geology of Rainbow Valley-Waterman Wash area, Maricopa County, Arizona: U.S. Geol. Survey open-file report, 13 p.

1955. Johnson, P. W., and Cahill, J. M., Ground-water resources and geology of the Gila Bend and Dendora areas, Maricopa County, Arizona: U.S. Geol. Survey open-file report, 53 p.

1960. Cahill, J. M., Supplemental memorandum on ground water in vicinity of Painted Rock damsite: U.S. Geol. Survey open-file report, 7 p.

1963. Heindl, L. A., and Armstrong, C. A., Geology and ground-water conditions in the Gila Bend Indian Reservation, Maricopa County, Arizona: U.S. Geol. Survey Water-Supply Paper 1647-A, 48 p.

1963. White, N. D., Ground-water conditions in the Rainbow Valley and Waterman Wash areas, Maricopa and Pinal Counties, Arizona: U.S. Geol. Survey Water-Supply Paper 1669-F, 50 p.

Ground Water

In the Gila Bend basin the alluvium, which consists of permeable lenses of sand and gravel interbedded with silt and clay, constitutes the principal storage reservoir for ground water. In 1966 the depth to water in the alluvium ranged from less than 50 to more than 350 feet below the land surface (fig. 4).

Effects of ground-water withdrawal.--Prior to extensive agricultural development, the shape of the ground-water surface conformed, in general, to that of the land surface (Babcock and Kendall, 1948, p. 11). The shape of the water surface in 1966 (fig. 5) was the result of increased withdrawal of ground water for irrigation and of the application of water to cultivated land.

In the Rainbow Valley area, the 1966 water-level contours (fig. 5) indicate that the cone of depression described by White (1963, p. 21) still exists; however, the shape of the cone has altered, probably because of a change in the distribution of pumpage since 1961. Ground water from as far south as Gila Bend is moving northward toward the center of the cone of depression.

The ground-water mound near Theba (fig. 5) has been described by Johnson and Cahill (1955, pl. 2) and may be either a mounding of the main water table or a perched water table. In either instance, the mound probably is the result of the infiltration of irrigation water, which is transported in canals from other parts of the basin.

The shape of the 590-foot contours (fig. 5) suggests that a ground-water divide has developed west of Gila Bend. West of the divide ground water moves northwestward toward the Citrus Valley area and southwestward toward the area south of Theba; east of the divide ground water moves northward toward the cone of depression in the center of the Rainbow Valley area.

A study of the available data indicates that water-level changes in the Gila Bend basin have varied with the amount and distribution of pumpage. Water levels in the Rainbow Valley area declined more than 100 feet from 1952 to 1961 (White, 1963). A comparison of the 1961 water-level data with the data for 1966 shows that the rate of water-level decline in the Rainbow Valley area has decreased markedly since 1961 (fig. 6). Water levels in several wells in the northern part of the area declined about 1 foot per year from 1961 to 1966; however, water levels in most wells rose slightly

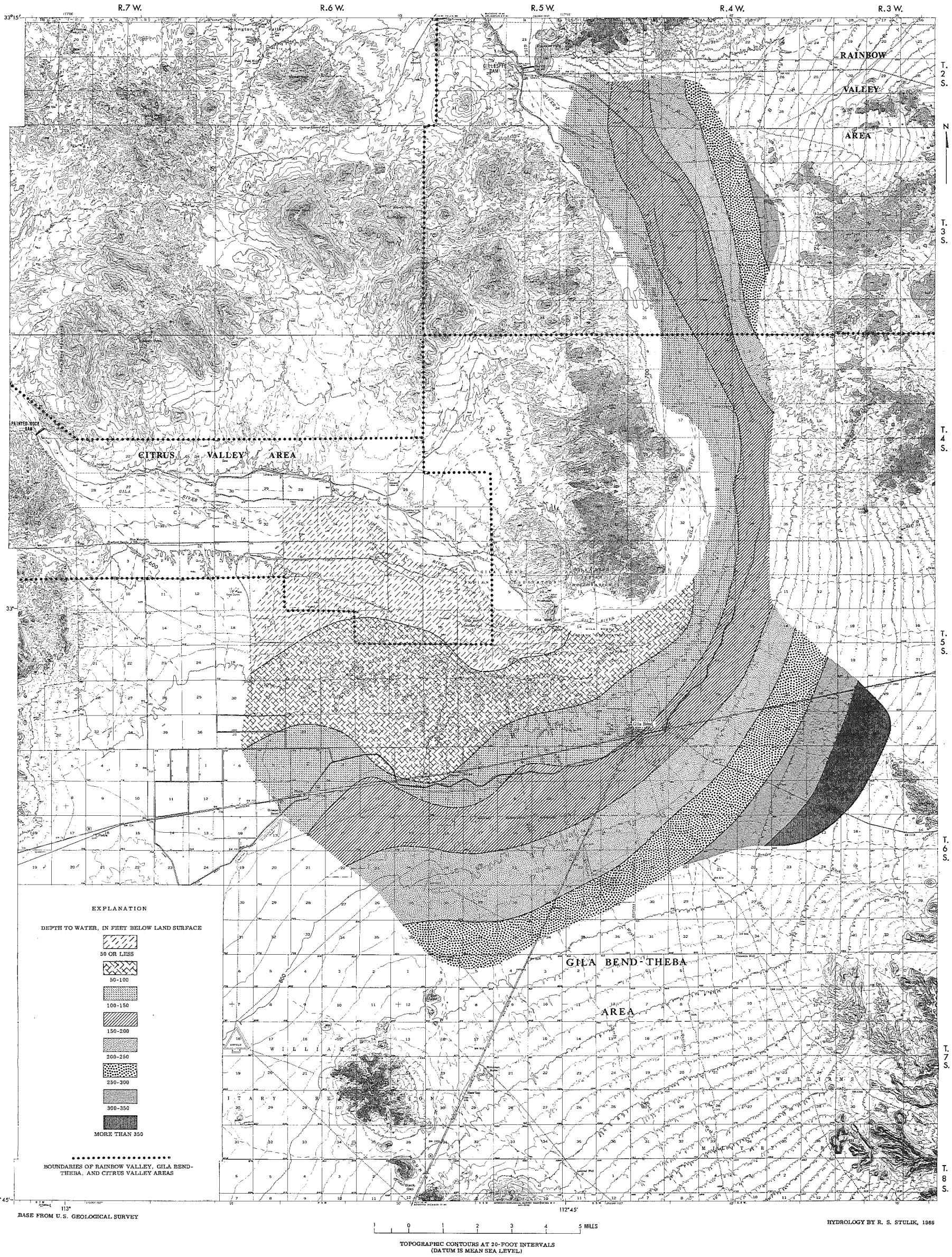
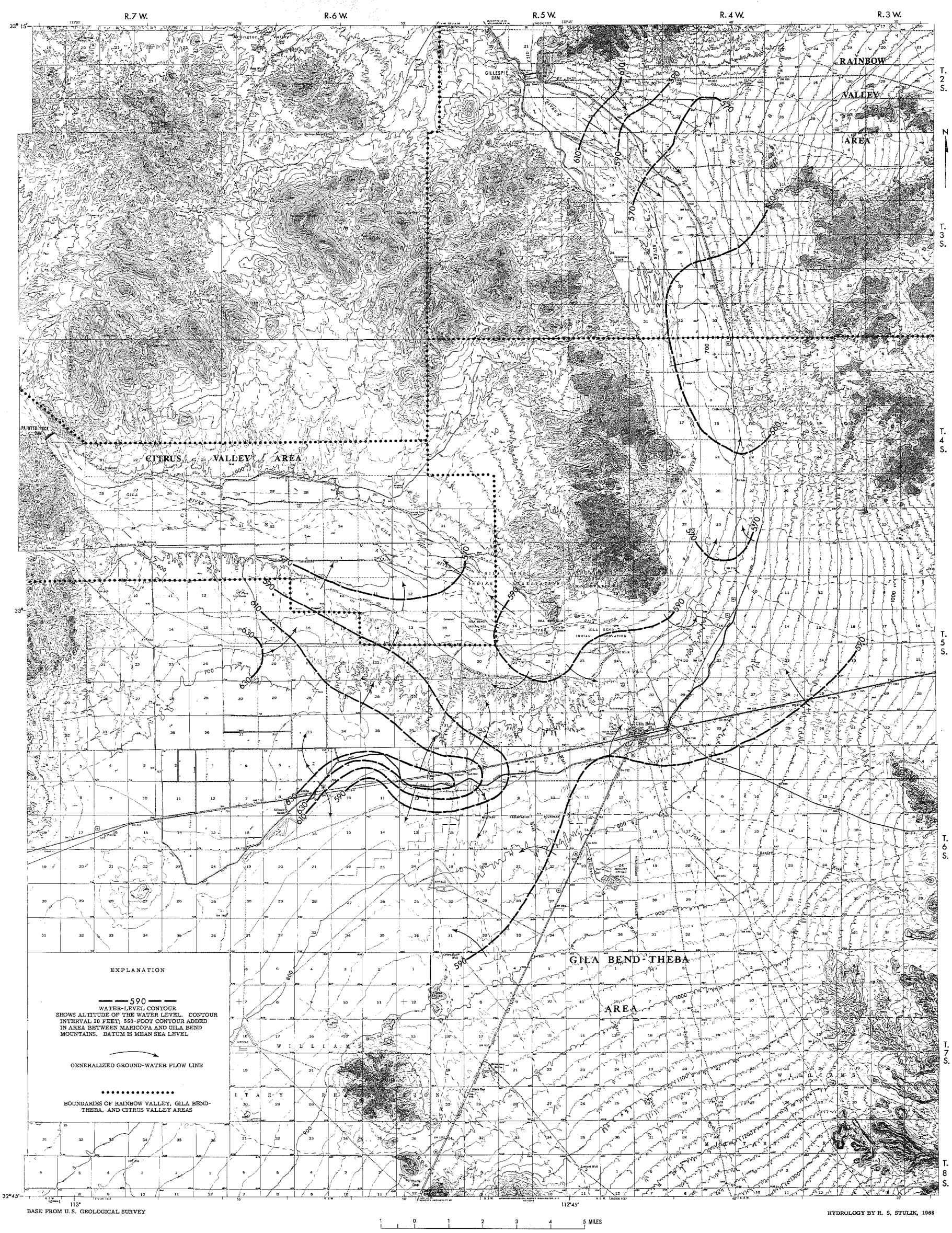


FIGURE 4.--DEPTH TO WATER BY ZONES, SPRING 1966, IN THE GILA BEND BASIN.



BASE FROM U.S. GEOLOGICAL SURVEY

HYDROLOGY BY R. S. STULIK, 1966

FIGURE 5.--WATER-LEVEL CONTOURS AND GENERALIZED FLOW PATTERN, SPRING 1966, IN THE GILA BEND BASIN.

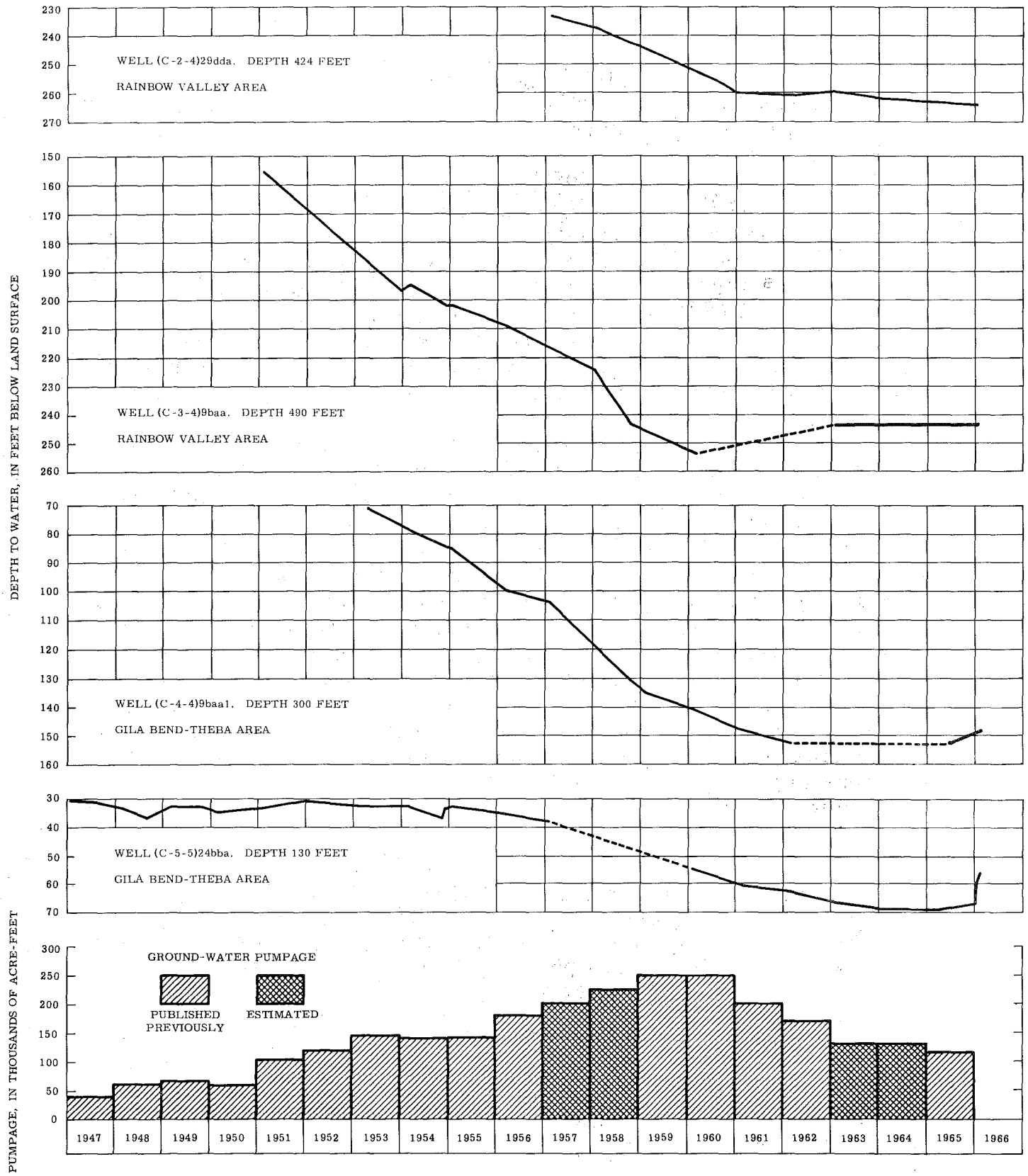


FIGURE 6.--WATER LEVELS IN SELECTED WELLS AND ANNUAL PUMPAGE IN THE GILA BEND BASIN.

or did not change from 1961 to 1966, probably because of a reduction in pumpage. Most of the wells along the Gila Bend Canal have not been used as much in recent years as in the past.

The 1961 water-level data were insufficient for the Gila Bend-Theba area; therefore, 1953 data were compared with those for 1966, and a water-level change map for this period was prepared (fig. 7). Maximum declines of more than 60 feet occurred in the northern part of the area; most of the decline has occurred since about 1956 (fig. 6). Water-level fluctuations from 1953 to 1966 in the rest of the Gila Bend-Theba area ranged from almost no change to declines of 60 feet. The magnitude of water-level fluctuations caused by application of surface water for irrigation northwest of Theba cannot be determined because of insufficient data.

Most of the observation wells in the Citrus Valley area were inundated by the flood of January 1966 before water-level measurements were made, and, therefore, a comparison of the 1953 and 1966 data would be misleading. The available data, however, show that water levels in the western part of the area declined slightly until about 1958, when farming was abandoned because of the possibility of inundation of the land by floodwater stored by the newly completed Painted Rock Dam. As a result, water levels probably rose slowly during the early 1960's, but in 1965, 11 irrigation wells were reconditioned and farming was resumed in this part of the area. If the renewed withdrawal resulted in any decline in water levels, the decline was offset by the January flood. Measurements made after the floodwater receded showed an average rise in water level of about 11 feet from spring 1965 to spring 1966. Water levels in the eastern part of the Citrus Valley area generally rose from 1953 to 1966; the maximum rise in water level was about 10 feet.

Water-yielding characteristics.--An important facet of the hydrology of any basin is the water-yielding characteristics of the saturated materials that fill the basin. The specific capacity of a well—discharge, measured in gallons per minute per foot of drawdown caused by pumping—is an indication of the water-yielding ability of the materials penetrated by the well. Tests made in 1964 and 1965 indicated that the specific capacity of the wells in the Gila Bend basin ranged from about 7 gpm (gallons per minute) per foot of drawdown to about 116 gpm per foot of drawdown. The following tabulation shows a marked difference between the specific capacities of wells in the Citrus Valley area and those in the Gila Bend-Theba and Rainbow Valley areas.

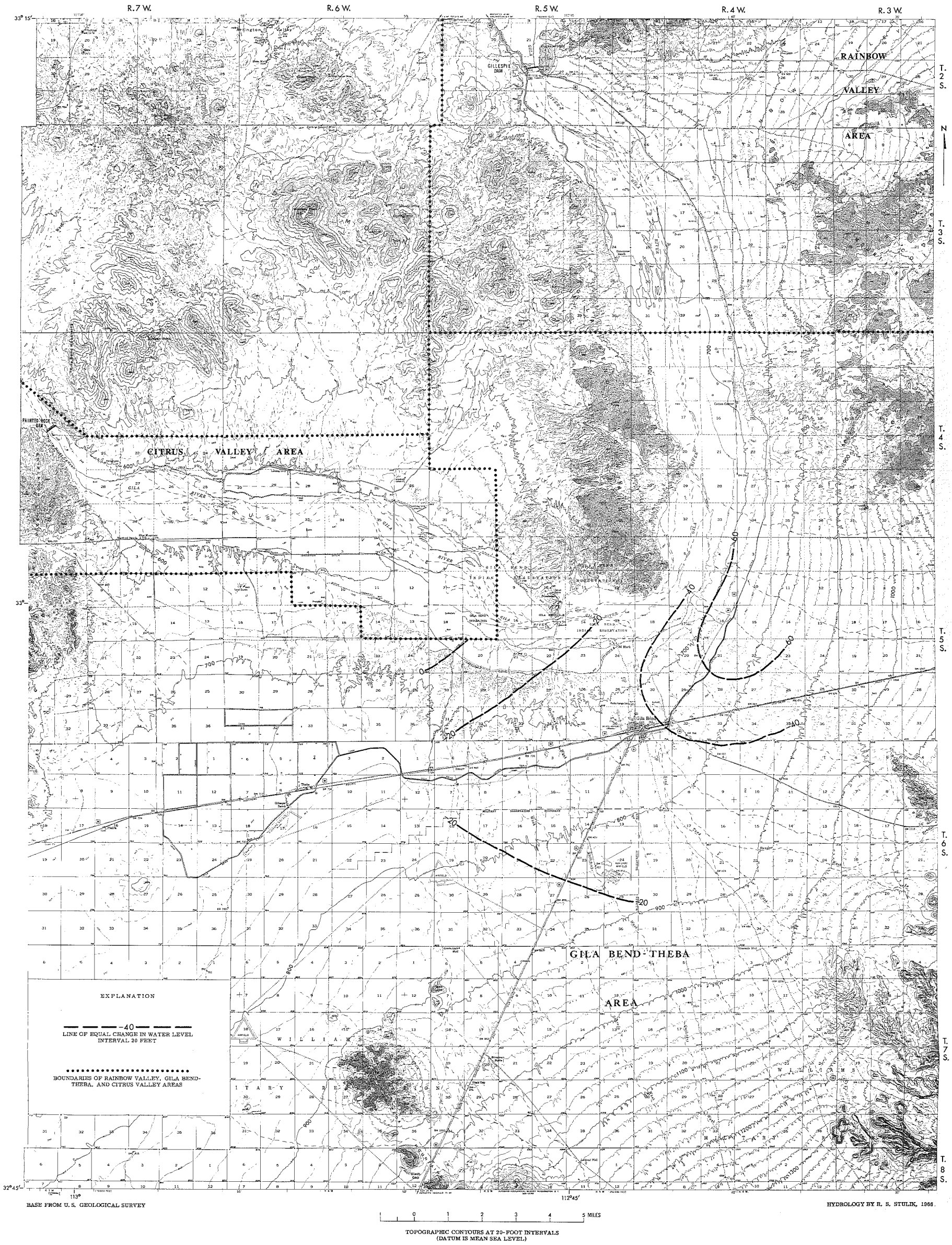


FIGURE 7.--CHANGE IN GROUND-WATER LEVELS FROM SPRING 1953 TO SPRING 1966 IN THE GILA BEND-THEBA AREA.

Area	Number of wells used	Specific capacity (gallons per minute per foot of drawdown)		
		Minimum	Maximum	Average
Rainbow Valley	18	12	116	56
Gila Bend-Theba	38	15	110	50
Citrus Valley	14	7	44	26

Chemical quality of the ground water.--The amount and type of dissolved chemical constituents in water determine the water's suitability for use by plant and animal life, and, therefore, the collection and analysis of water samples are an integral part of the basic-data program. Table 3 is a compilation of water-quality data for the Gila Bend basin.

The U.S. Geological Survey has recently (1967) changed the method of reporting Survey water-quality data from the English system to the metric system. Therefore, the water-quality data in this report are given in milligrams per liter (mg/l), degrees Celsius (°C), and micromohos at 25°C. The terms "parts per million" and "milligrams per liter" are practically synonymous for water containing as much as 5,000 to 10,000 mg/l of dissolved solids. The exact amount is dependent on the nature of the dissolved material. The Survey has set 7,000 mg/l dissolved solids as the point above which the difference in parts per million and milligrams per liter becomes significant. In order to convert data from one system to the other, a density factor must be applied to the analytical results of all water containing more than 7,000 mg/l of dissolved solids.

Temperature data given in table 3 (see appendix) can be converted to degrees Fahrenheit (°F) by using the following:

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
32	0	41	5	50	10	59	15	68	20
33	1	42	6	51	11	60	16	69	21
34	1	43	6	52	11	61	16	70	21
35	2	44	7	53	12	62	17	71	22
36	2	45	7	54	12	63	17	72	22
37	3	46	8	55	13	64	18	73	23
38	3	47	8	56	13	65	18	74	23
39	4	48	9	57	14	66	19	75	24
40	4	49	9	58	14	67	19	76	24

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
77	25	87	31	97	36	107	42	117	47
78	26	88	31	98	37	108	42	118	48
79	26	89	32	99	37	109	43	119	48
80	27	90	32	100	38	110	43	120	49
81	27	91	33	101	38	111	44	121	49
82	28	92	33	102	39	112	44	122	50
83	28	93	34	103	39	113	45		
84	29	94	34	104	40	114	46		
85	29	95	35	105	41	115	46		
86	30	96	36	106	41	116	47		

Although a detailed analysis of the water-quality data is not within the scope of this report, several important facts should be noted. The U.S. Public Health Service (1962) has recommended that water for drinking purposes should contain no more than 500 mg/l of dissolved solids. Water containing a higher dissolved-solids content, however, is used if better water is not available. Recommended limits for some of the chemical constituents are given below.

Constituent	Concentration (mg/l)
Chloride (Cl)	250
Nitrate (NO_3)	45
Sulfate (SO_4)	250
Fluoride (F)	1/
Dissolved solids	500

Specific conductance is a measure of the ability of the ions in solution to conduct an electrical current and is an indication of the amount of dissolved solids in the water; the dissolved-solids content, in milligrams per liter, is about 0.6 of the specific conductance.

1/ The latest recommendations (U.S. Public Health Service, 1962) give lower, optimum, and upper limits for fluoride based on the annual average of maximum daily air temperature. For the Gila Bend basin these limits are 0.6 mg/l (lower), 0.7 mg/l (optimum), and 0.8 mg/l (upper). Concentrations of more than twice the optimum value constitute grounds for rejection of the supply. It should be noted that most of the ground water sampled in the Gila Bend basin contained fluoride in excess of the recommended limits.

Use of ground water.--Water is withdrawn from the ground-water reservoir in the Gila Bend basin for domestic and agricultural use. Annual pumpage of ground water for 1947 to 1965 is shown in figure 6. In 1965 about 115,000 acre-feet of ground water was used to irrigate an estimated 20,000 acres of farmland; an additional 500 acre-feet was withdrawn for domestic use.

The withdrawal of ground water for agricultural use in 1965 was nearly equal in the three areas. In the Citrus Valley area about 44,000 acre-feet of ground water was withdrawn, and about 8,000 acres was under cultivation or fallow. In the Gila Bend-Theba area about 35,000 acre-feet of ground water was withdrawn, and about 18,000 acres was prepared for planting; however, less than 8,000 acres was planted and irrigated. In the Rainbow Valley area about 36,000 acre-feet of ground water was withdrawn, which is less than half the amount withdrawn in 1960 (White, 1963), and about 9,000 acres was under cultivation or fallow. In the Gila Bend-Theba and Rainbow Valley areas ground water was supplemented by surface water diverted at Gillespie Dam and transported through the Gila Bend and Enterprise Canals.

Surface Water

All the streams in the Gila Bend basin are tributary to the Gila River and flow only in response to precipitation, which occurs in the summer and winter. Summer precipitation, originating from moisture over the Gulf of Mexico and from remnants of tropical disturbances along the west coast of Mexico, is more intense than winter precipitation. Generally, summer rainstorms are of short duration—several hours or less—and cover only a small area, although precipitation from tropical disturbances may cover a large area. Winter storms generally originate over the Pacific Ocean, are less intense, and are of longer duration than summer storms.

The mean annual surface-water inflow to the Gila Bend basin for the 1960-65 water years was 15,390 acre-feet based on streamflow records for Gillespie Dam. This amount includes the discharge of the Gila River and the water diverted to the Enterprise and Gila Bend Canals. The mean annual diversion to the Enterprise and Gila Bend Canals for the 1960 - 65 water years was 12,410 acre-feet. The annual flows vary greatly and reflect "wet" and "dry" years in the upstream drainage areas. Since the beginning of records (1921), the mean annual flow in the Gila River below Gillespie Dam has declined gradually, except for years of unusually high flows. Increased upstream use and the expansion of storage facilities in the contributing drainage area probably are the main causes of the decrease in streamflow to the basin. Most of the streamflow occurs in July and August and from December to April.

Surface water leaves the Gila Bend basin at the Painted Rock narrows. Generally, outflow is the result of high flows at Gillespie Dam. For the 1960-65 water years, the mean annual flow below Painted Rock Dam was 980 acre-feet. Additional detailed data concerning flow and diversions at Gillespie and Painted Rock Dams are published in "Surface Water Records of Arizona" (U.S. Geological Survey, issued annually).

The U.S. Geological Survey in cooperation with the Arizona Highway Department and the Maricopa County Flood Control District began the operation of crest-stage partial-record stations on several streams in the basin in 1963 to determine the peak-discharge characteristics. These data are published in "Surface Water Records of Arizona" (U.S. Geological Survey, issued annually).

Chemical quality of the surface water.--The dissolved-solids content of surface water entering the Gila Bend basin is extremely high. Chemical analyses of water samples taken at Gila River below Gillespie Dam indicate that the dissolved-solids content ranged from several hundred milligrams per liter during infrequent high flows to about 7,000 mg/l during normal flows in the 1960-65 water years. The annual weighted average for dissolved solids ranged from 2,890 mg/l in 1964 to 6,130 mg/l in 1962. More detailed data concerning the quality of the surface water entering the basin are published in "Water Quality Records of Arizona" and "Quality of Surface Waters of the United States, Parts 9-14" (U.S. Geological Survey, issued annually).

Flood of January 1966.--A peak flow of about 64,000 cfs occurred in Gila River at Gillespie Dam at about midnight on January 1, 1966. The flow, which was the result of large releases from the Salt River Project's system of reservoirs, was the largest since 1927. The releases were necessitated by unusually large amounts of precipitation and runoff in November and December 1965.

Generally, a flood peak becomes flatter and broader as it moves downstream; however, this flood peak became sharper from Granite Reef Dam to Gillespie Dam as the front of the floodwave was absorbed and stored (Aldridge, 1966, p. 52). A similar occurrence also was evident in the reach from Gillespie Dam to Painted Rock Reservoir, as indicated by the hydrographs of flow at the two stations (fig. 8). The peak was reduced only slightly from Granite Reef Dam to Painted Rock Reservoir—from 67,000 to 64,000 cfs in the reach from Granite Reef Dam to Gillespie Dam and from 64,000 to about 56,000 cfs in the reach from Gillespie Dam to Painted Rock Reservoir—but the volume of flow was reduced appreciably.

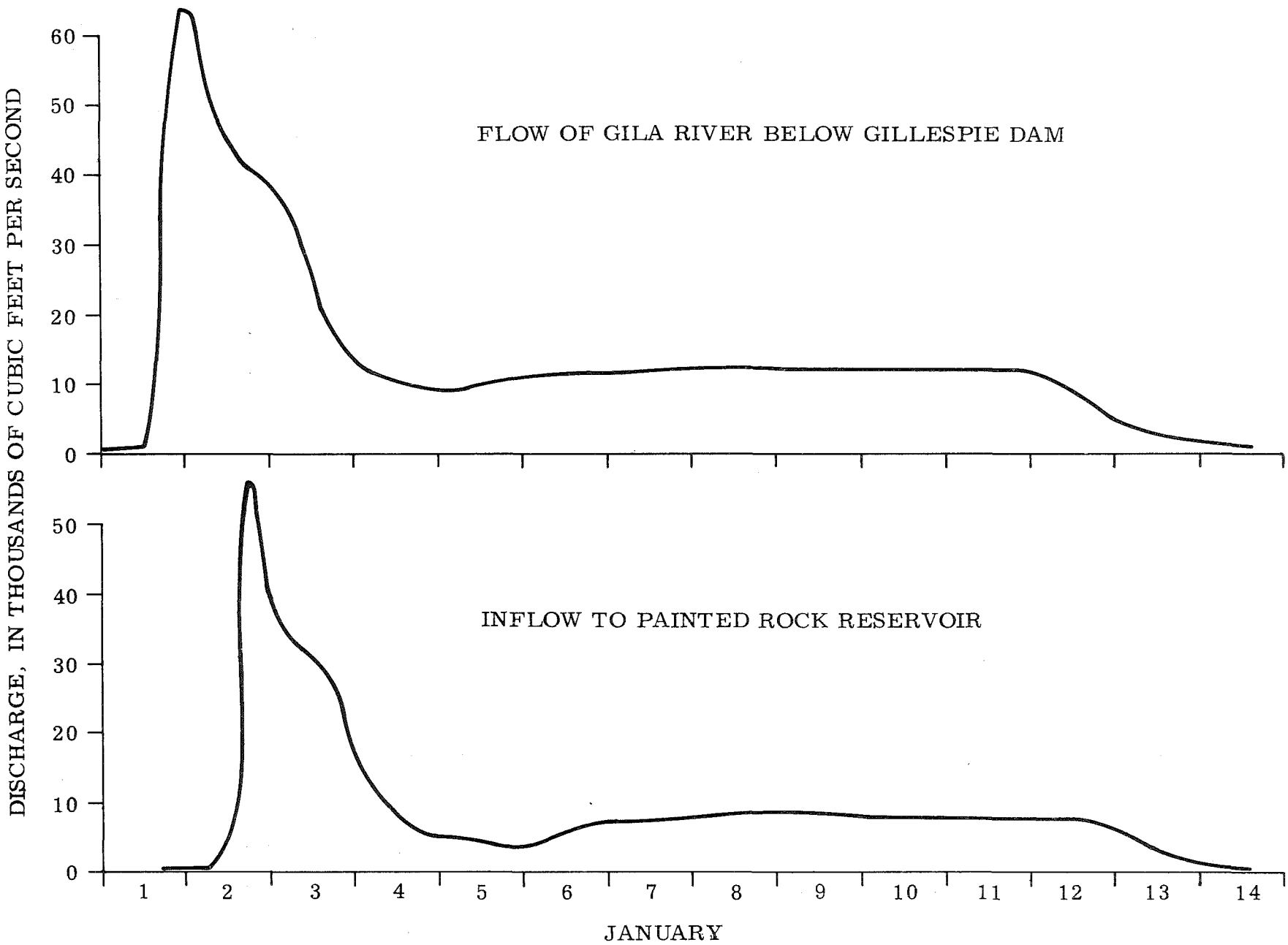


FIGURE 8.--FLOW OF GILA RIVER BELOW GILLESPIE DAM AND INFLOW TO PAINTED ROCK RESERVOIR, JANUARY 1-14, 1966.

Flood volumes were reduced greatly from Granite Reef Dam to Painted Rock Reservoir. About 509,000 acre-feet of water was released at Granite Reef Dam between December 22, 1965, and January 11, 1966. Of this amount, about 407,000 acre-feet, which includes a small amount of tributary inflow between Granite Reef Dam and Gillespie Dam, passed Gillespie Dam; about 255,000 acre-feet of water was released from Painted Rock Dam between January and March 1966. Detailed flow records at Granite Reef Dam, Gillespie Dam, and below Painted Rock Dam for the flood period are given by Aldridge (1966, p. 72, 76, 77).

Changes in ground-water levels in well (C-5-5)16cdd show a definite relation to the flow of the Gila River at Gillespie Dam (fig. 9). Water levels in wells in the flood-plain area (fig. 10) rose markedly, but outside the flood-plain area water levels did not rise appreciably. The difference between the total flows at Gillespie Dam and the releases from Painted Rock Reservoir was about 150,000 acre-feet. If it is assumed that this volume of water (150,000 acre-feet) was added to the ground-water reservoir in the flood plain between Gillespie Dam and Painted Rock Reservoir and if the porosity of the subsurface materials is assumed to be about 0.25, then the average water-level rise would have been about 16 feet. All measured water-level rises were less than this amount (fig. 10); however, water-level rises in wells closer to the Gila River or in the riverbed probably were greater. Therefore, a large percentage of the flow loss (150,000 acre-feet) probably went into ground-water storage.

Summary

Ground water from irrigation wells and surface water diverted from the Gila River supply the water used to irrigate about 20,000 acres of cultivated land in the Gila Bend basin. The depth to water ranged from less than 50 to more than 350 feet below the land surface in spring 1966.

Ground-water withdrawal has caused fluctuations in the water levels and corresponding changes in the shape of the ground-water surface. Changes in water levels vary with the amount and distribution of pumpage. The rate of water-level decline in the Rainbow Valley area has decreased markedly since 1961—probably in response to decreased pumpage. Near Gila Bend, water levels have declined from 20 to 60 feet since 1953, but in the Citrus Valley area north of Theba water levels have risen since 1953.

In 1965, about 115,000 acre-feet of ground water was pumped for agricultural use, and 500 acre-feet was pumped for domestic use. The chemical quality of the ground water varies throughout the basin, but most of the water sampled contained fluoride in excess of the recommended limits.

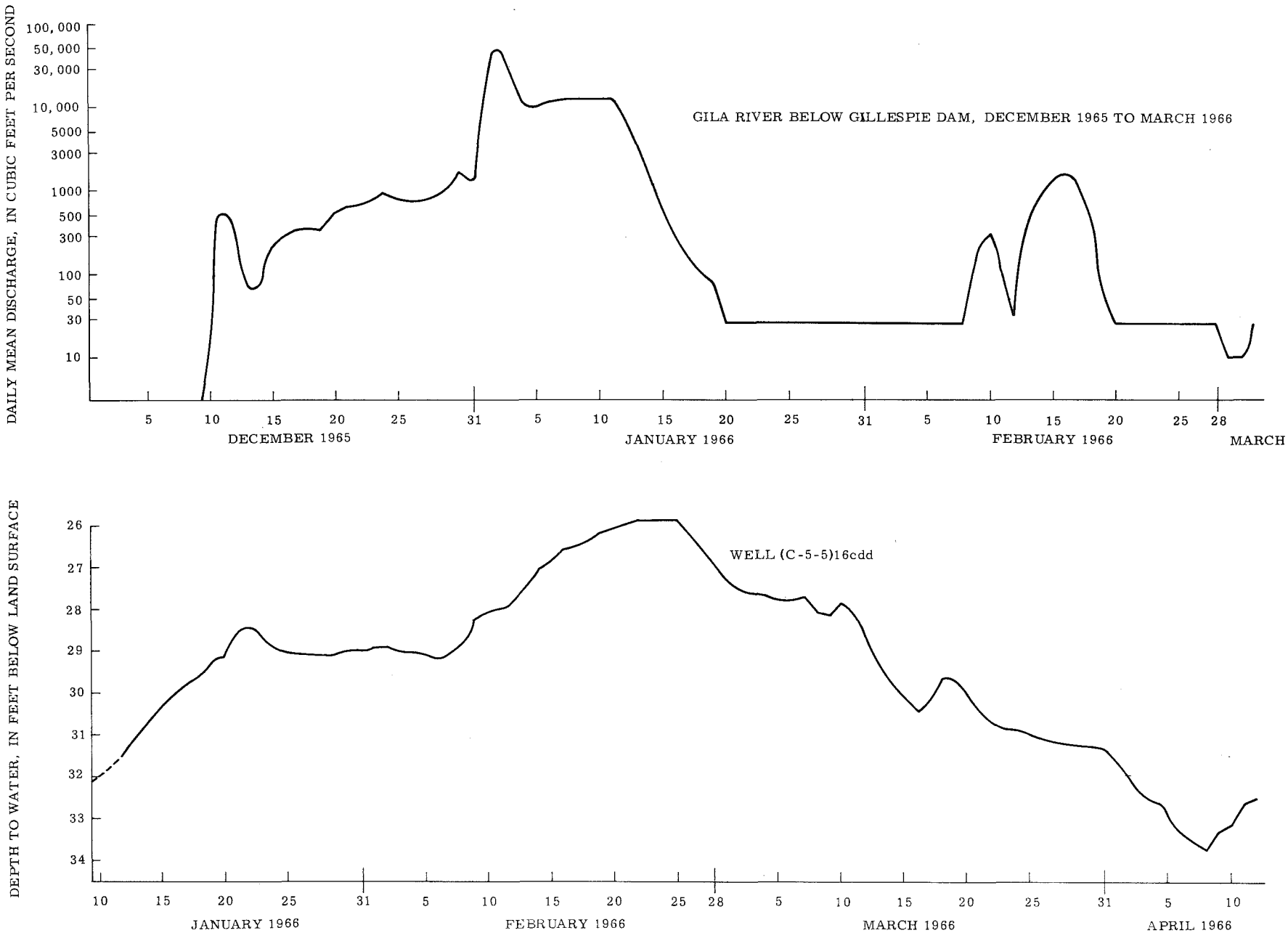


FIGURE 9.--FLOW OF GILA RIVER BELOW GILLESPIE DAM AND DEPTH TO WATER IN WELL (C-5-5)16cdd.

The mean annual surface-water inflow to the Gila Bend basin for the 1960-65 water years was 15,390 acre-feet. During the flood of January 1966, about 407,000 acre-feet of water passed Gillespie Dam, but only about 255,000 acre-feet of water passed Painted Rock Dam. A large part of the flow loss (150,000 acre-feet) probably went into ground-water storage.

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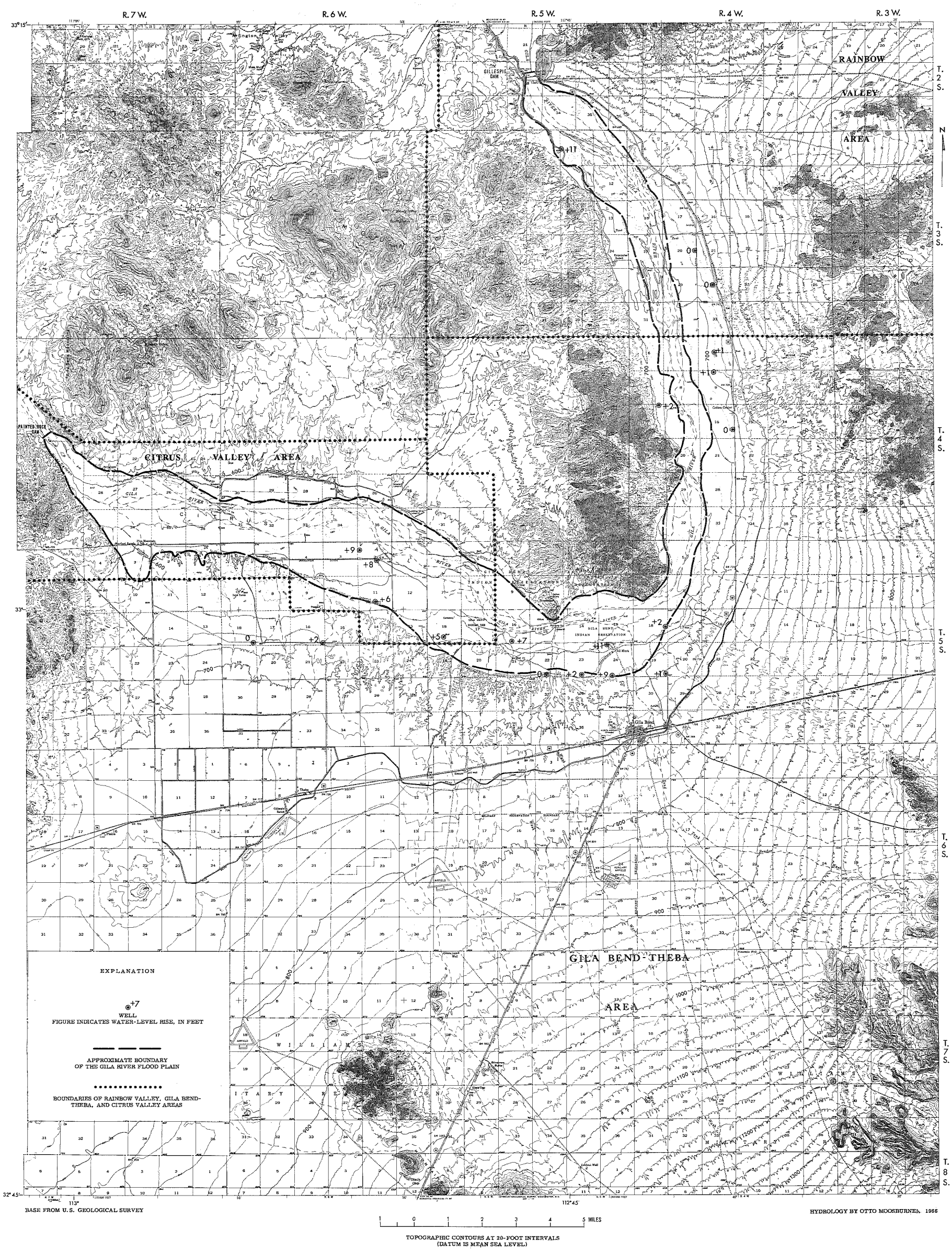

FIGURE 10.--WATER-LEVEL RISES IN SELECTED WELLS IN THE GILA BEND BASIN, JANUARY TO FEBRUARY 1966.

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APPENDIX —— BASIC DATA

Table 1.--Records of selected wells in the Gila Bend basin

Well location: See page 5 for description of well-numbering system.
Perforated interval: OH, open hole.
Land-surface altitude: Determined from Geological Survey topographic maps.

Type of well: I, irrigation; D, domestic; S, stock; N, not used; PS, public supply; C, construction; T, test hole.
Water level: I, interpolated; R, reported.
Pumping data: R, reported.

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-2-4)25ccc	1957	855	16	0- 417	228- 315 333- 400 OH 417- 855	945	I	329.5 349.2	10/58 1/61	1,300	.....	6/65	.....	Originally drilled to 450 feet in 1955—deepened to 621 feet in 1955, then deepened to 855 feet in 1957.
26add	1955	512	16	0- 512	270- 500	925	I	319.0 302.2	12/58 1/61	920	.....	6/65	.....	
26bda	1960	600	16	0- 440	250- 440 OH 440- 600	.....	I	246.8 284.8	2/57 11/64	.....	.....	.....	.....	Originally drilled to 428 feet in 1955—casing pulled and deepened to 600 feet in 1960.
28dbb	1959	850	16	0- 850	290- 850	865	N	282.7 291.0	5/63 1/66	.....	.....	.....	.....	
29dda	1956	424	16	0- 424	230- 424	845	N	233.5 264.0	2/57 1/66	.....	.....	.....	.....	
31daa	1952	452	20	0- 452	150- 452	787	I	182.8 210.7	12/54 1/66	1,670 1,330	....	5/53 10/55	.....	
32ada	1951	450	20	0- 450	160- 430	820	I	187.2 251.8	4/52 1/66	1,900 670	 58	5/53 9/65	 12	
32caa	1952	460	20	0- 460	210- 440	800	I	187.8 241.1	12/54 1/61	1,700 1,300	....	5/53 8/56	.....	
33abb	1959	705	16	0- 705	250- 705	838	I	.....	.....	.....	.....	.....	.....	
33acc1	.....	169	6	.....	.....	828	N	139.3 166.4	1/46 2/51	.....	.....	.....	.....	
33acc2	1962	400	6	0- 20	OH 20- 400	828	D,S	.....	.....	.....	.....	.....	.....	
33bca	1957	997	20 16	0- 500 500- 960	480- 960 OH 960- 997	824	I	249.4	1/61	1,500	.....	9/60	.....	C
(C-2-5)26cba	1957	1,000	20 16	0- 900 900-1,000	250-1,000	756	I	134.4	2/66	.....	.....	.....	.....	
27daa	1954	503	20	0- 385	135- 375 OH 385- 503	760	I	95.0	9/55	2,100	.....	8/56	.....	
28aab	1954	980	18	0- 490	OH 490- 980	775	N	48.6	1/61	.....	.....	.....	.....	C
28aca	.....	45	96	.....	.....	730	I	.....	.....	.....	.....	.....	.....	
28acb	1952	51	6	.....	.....	750	N	.....	.....	.....	.....	.....	.....	
28caa	1957	991	16	0- 70	OH 70- 991	740	.....	.....	.....	.....	.....	.....	.....	
33baa	.....	576	.....	.....	.....	740	.....	.....	.....	.....	.....	.....	.....	
35adb	1954	900	20	0- 380	50- 365 OH 380- 900	750	I	80.6 140 I	1/61 1/66	1,720 1,300R	 93	5/53 2/66	 14	Originally drilled to 400 feet in 1938 and deepened to 900 feet in 1954.
35baa	1954	840	20 16	0- 386 380- 658	50- 372 OH 658- 840	748	I	124.9 131.2	1/61 1/66	1,800 1,470R	 61	5/53 2/66	 24	Originally drilled to 386 feet in 1938 and deepened to 840 feet in 1954.
36cbd	1954	900	20 16	0- 345	155- 180 240- 270 290- 342	750	I	54.9 158.2	12/45 1/66	2,160 1,360R	 55	4/46 2/66	 25	Originally drilled to 353 feet in 1938 and deepened to 900 feet in 1954.

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-2-5)36daa	.....	....	20	.....	.....	780	I	156.4 195.0	12/53 10/58	1,920	.....	8/56	.....	
(C-3-4)4baa	1948	250	18	0- 250	150- 250	815	I	159.7 203.1	2/51 9/60	1,770 740	....	5/53 8/65	.....	
4bdd	1949	492	20	0- 480	170- 480 OH 480- 492	810	I	186.4 227.9	12/53 10/58	2,980 2,460	....	8/51 8/56	.....	
4cab1	1953	....	16	.....	.....	800	N	236.9 246.0	10/58 1/61	1,840	.....	10/55	.....	
4cab2	.....	....	.....	.....	.....	800	I	.....	.....	.....	.....	.....	.....	
6bba	1940	545	20	0- 500	100- 486 OH 500- 545	748	I	62.5 166.3	12/45 1/66	1,470 1,390R	 46	5/53 2/66	 30	
6caa	1955	815	20	0- 496	100- 484 OH 496- 815	750	I	62.5 170.2	12/45 1/66	2,200 2,000R	 49	5/53 2/66	 41	Originally drilled to 530 feet in 1940 and deepened to 815 feet in 1955.
6dab	1955	500	16	0- 500	40- 500	760	I	180.0 188.8	10/58 1/66	.....	.....	.....	.....	
7aaa1	1938	332	20	0- 322	60- 308 OH 322- 332	750	I	189.7 182.4	9/60 1/66	2,750 910R	....	5/53 3/64	....	
7aaa2	1936	153	8	.....	.....	745	N	67.7	4/46	.....	.....	.....	.....	Abandoned and filled with trash.
7aab	1936	176	20	0- 176	60- 166	748	N	64.7 100.2	4/46 4/52	.....	.....	.....	.....	Well capped in 1953.
8bab	1951	406	14	0- 406	130- 400	760	I	111.8 192.5	2/51 1/61	1,300 1,570	....	5/53 8/56	.....	
8caa	1955	817	20 16	0- 362 362- 767	135- 356 OH 767- 817	749	I	67.8 180.9	12/45 1/66	1,170 2,250R	 20	5/53 2/66	 112	Originally drilled to 370 feet in 1938 and deepened to 817 feet in 1955.
8dcb	.....	....	.....	.....	.....	746	I	67.1 182.4	12/45 1/66	2,150 1,750	....	5/53 8/56	.....	
9aad	1952	474	20	0- 404	190- 404 OH 404- 474	825	D	228.7 270.7	12/54 1/66	.....	.....	.....	.....	Originally drilled for irrigation purposes.
9baa	1948	490	20	0- 490	135- 490	807	I	155.0 243.8	2/51 1/66	2,060 1,910	 34	3/49 6/65	 56	
9caa	1947	500	20	0- 500	135- 500	795	I	208.2 233.5	12/54 1/66	2,280 1,750	....	8/51 9/55	.....	
9dda	1954	....	.....	.....	.....	818	I	222.4 259.5	12/54 1/61	2,360	.....	9/55	.....	
10caa1	.....	....	20	.....	.....	859	N	251.5 298.6	12/53 1/61	2,570 1,590	....	5/53 9/55	.....	
10caa2	1955	500	20 16	0- 394	0- 200 OH 394- 500	859	N	297.4	1/66	.....	.....	.....	.....	
			[illegible]	0- 600	300- 600	945	I	.....	.....	1,090	.....	8/65	.....	

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-3-4)15bdd	1951	465	20	0- 465	128- 465	830	I	225.6 268.5	12/53 1/66	3,180 2,500	....	8/51 6/65	.....	
15daa	1951	420	20 16	0- 294 294- 420	154- 420	860	N	259.2 316.5	12/53 10/58	3,180 1,290	....	8/51 12/65	.....	
16daa	1951	412	20	0- 412	160- 392	806	I	159.3 251.3	4/52 1/61	2,650 2,300	....	5/53 9/55	.....	
17aab	.....	780	20	0- 770	120- 755 OH 770- 780	745	I	183.8	1/66	2,890 1,500R	 15	7/48 2/66	 100	
17add	1937	302	20	.....	115- 288	745	I	196.6 182 I	1/61 1/66	2,030 1,360R	 30	8/50	 46	
19bbb	1957	1,200	20	.....	.....	710	I	78.3 133.4	12/53 1/61	1,900 1,570	....	9/53 6/65	.....	Originally drilled to 460 feet in 1951 and deepened to 1,200 feet in 1957.
19ccd	1963	1,107	24 20	0- 65 0- 634	197- 624 OH 634-1,107	700	I	139.6 137.1	6/65 1/66	.....	.....	.....	.....	
20aaa	1954	681	20 16	0- 479 479- 681	125- 681	735	I	152.3 179.4	2/57 1/64	1,710 3,380	....	8/56 9/60	.....	
20daa	.....	....	20	.....	.....	730	I	166.3 166.1	1/66 2/66	3,040	36	6/65	84	
20dba	.....	....	6	.....	.....	718	D	107.6 119.4	12/53 12/54	.....	.....	.....	.....	
21bba	1937	300	20	.....	115- 288	748	I	68.7 104.8	12/45 1/52	2,040 1,900	....	8/50 9/55	.....	
21bdb	.....	....	20	.....	.....	746	I	195.1	10/58	3,420 2,000R	....	7/48 2/64	.....	
21cab	1943	550	20 16	0- 300 292- 550	160- 288 300- 538	750	I	70.4 208.7	12/45 9/60	2,320 1,800R	....	4/46 3/64	.....	Originally drilled to 300 feet in 1937 and deepened to 550 feet in 1943.
21cda	1947	812	20	0- 812	140- 800	750	I	152.7	2/61	3,520 1,740R	....	9/47 2/64	.....	
22ddd1	1951	465	20 16	0- 305 305- 465	45- 465	854	D	248.3 261.5	5/53 12/54	3,410 2,600	....	8/51 9/53	.....	Originally drilled for irrigation purposes.
22ddd2	1955	600	20	0- 490	0- 260 OH 490- 600	854	I	295.1 298.4	10/58 1/66	2,680 2,760	 32	9/55 6/65	 86	
23baa	1951	372	20 18	0- 339 339- 360	141- 360 OH 360- 372	895	N	277.3	5/53	1,730	.....	5/53	.....	
23bba	1953	397	20	0- 397	247- 397	872	I	287.7 328.6	12/54 1/66	2,420	.....	9/55	.....	
26bcc	.....	317	6	.....	.....	865	D	.....	.....	.....	.....	.....	.....	
27baa	.....	....	20	.....	.....	812	I	204.0 324.0	5/53 1/61	2,500	.....	9/57	.....	
28abb	.....	918	20	0- 918	160- 906	745	I	318.5	1/61	2,740 1,640R	....	9/47 2/64	.....	

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-3-4)28acc	1940	1,000	20	0-1,000	130- 985	744	I	72.5	12/45	2,720 2,580	....	5/46 9/55	.....	C
28dbb	.....	332	20	.....	60- 308	742	I	164.1 184.9	12/53 1/66	1,940 1,480	 33	8/56 6/65	 45	
33aba	1940	800	20	0- 800	100- 780	743	I	76.2 188 I	12/45 1/66	2,880 1,770R	 21	5/46 3/66	 84	
33adb	.....	775	20	0- 775	125- 760	742	I	189.6	1/66	2,900 2,090R	 18	9/47 3/66	 116	
33adc	1945	800	20	0- 800	100- 780	740	I	187 I	1/66	2,580 1,940R	 25	5/46 3/66	 78	
33dab	1953	400	16	0- 400	232- 384	740	I	133.6 187.0	4/53 10/58	1,270 1,500	....	8/56 6/65	.....	
33ddd	1957	712	20 16	0- 440 430- 640	120- 608 OH 640- 712	742	I	202.8 188 I	9/60 1/66	2,350 1,140R	 30	5/46 3/66	 38	Originally drilled to 640 feet in 1943 and deepened to 712 feet in 1957.
(C-3-5)1aaa	1948	490	20	0- 470	200- 458 OH 470- 490	743	I	131.0 162.7	12/54 4/65	3,340 2,920	....	8/50 9/60	.....	
2bbc	1957	1,500	.....	.....	.....	720	N	86.3	2/66	.....	.....	.....	.....	C
2cbb	.....	320	24	0- 274	60- 245 OH 274- 320	735	I	60.6 119.0	12/53 1/66	980	.....	7/53	.....	
13bac	1963	1,007	24 20	0- 100 0- 501	199- 497 OH 501-1,007	718	I	125 I	1/66	2,130	175	6/65	12	
(C-4-4)3abb	1953	350	16	0- 350	184- 334	796	I	174.3 238.7	5/53 1/66	1,700 1,190	 26	9/53 8/65	 46	
3bcc	.....	543	.....	.....	.....	745	I	121.4 191.3	5/53 1/66	2,540 1,730R	 41	7/48 3/66	 42	
4bdd	1946	316	20	0- 316	70- 308	710	I	84.1 155.8	12/53 1/66	1,670 1,280	 63	7/48 6/65	 20	
6cab	1960	....	16	.....	.....	700	N	.....	.....	.....	.....	.....	.....	
8cca	.....	700	20	0- 700	250- 700	682	I	120.3 118.1	1/66 2/66	.....	.....	.....	.....	
9baa1	.....	300	20	.....	.....	705	N	70.9 149.6	4/53 1/66	1,830 1,260	....	9/53 8/56	.....	
9baa2	.....	....	.....	.....	.....	710	I	.....	.....	.....	.....	.....	.....	
10bba	1955	941	20 16	0- 500 480- 780	130- 780 OH 780- 941	742	I	.....	.....	3,190 2,300R	....	6/55 3/64	.....	
10bcd	1955	1,015	20 16	0- 480 480-1,000	80-1,000 OH 1,000-1,015	742	I	187 I	1/66	3,000 2,280R	 41	9/55 3/66	 56	C
10cdc	1955	613	20	0- 500	80- 500 OH 500- 613	742	I	184 I	1/66	2,800 1,440R	 26	9/55 2/66	 55	
15acc		977	20	0- 500	.....	742	I	183 I	1/66	2,960R	27	2/66	110	

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-4-4)15cba	1957	707	20 16	0- 294 294- 652	254- 654 OH 652- 707	712	I	153.4 155.9	1/66 2/66	2,990 3,220	....	9/60	.....	
15ddd	1957	846	20	0- 846	95- 846	742	I	202.3 182 I	9/60 1/66	3,360R	36	2/66	93	
16dad	.....	....	.....	.....	.....	695	I	140.4 141.8	1/66 2/66	2,600	101	6/65	26	
18aab	.....	378	20	0- 378	18- 378	690	I	43.5 119.4	12/53 2/66	1,450 1,850	....	9/53 8/56	.....	
22dab	1957	915	20 12	0- 400 392- 915	30- 915	750	I	187.0	1/66	3,460R	70	2/66	49	
22ddc	1957	982	20	0- 982	96- 982	742	I	179 I	1/66	3,600R	37	2/66	97	
27daa	1957	880	20	0- 880	118- 880	745	I	182.5	2/66	2,700R	66	2/66	41	
27ddc	1957	936	20	0- 936	118- 936	745	I	180 I	1/66	3,230R	73	2/66	44	
32bba	1952	260	20	0- 174	OH 174- 260	670	I	24.9 60.4	12/54 10/58	2,460 2,880	....	9/53 6/65	.....	
34aac	1957	953	20	0- 953	0- 953	742	I	176 I	1/66	3,450R	78	2/66	44	
34dcb	1957	808	20	0- 800	0- 800 OH 800- 808	740	I	172 I	1/66	3,380R	40	2/66	84	
(C-4-6)25bac	.....	....	6	.....	.....	.....	S	.....	.....	.....	.....	.....	.....	
27bdb	1946	350	20	0- 350	.....	595	I	48.0 39.9	4/53 2/66	1,640 2,420	 134	7/48 6/65	 18	
28dac	1946	600	20 16	0- 400 400- 600	100- 600	585	I	29.8 36 R	12/53 2/65	1,940 2,910	 78	7/48 10/65	 37	
29aaa1	1946	340	20	0- 340	200- 330	598	N	30.7 26.8	1/46 2/66	510	.....	7/48	.....	Reported as collapsed at 54 feet.
29aaa2	1948	948	20	.....	.....	596	I	44.9 33.1	4/53 2/66	1,540 2,480	 204	7/48 9/65	 12	
29dac	1946	1,000	20	.....	.....	580	I	36.4 29 R	4/53 2/65	2,640 3,800	 139	7/48 10/65	 27	C
31cdd	1952	804	20 16	0- 425 425- 777	185- 265 345- 777 OH 777- 804	572	I	23.0 6.5	12/53 4/66	2,570 2,800	 208	4/53 10/65	 13	
36adc1	1946	960	24	.....	100- 300	605	I	63.7	12/58	2,340 1,570	....	7/48 8/56	.....	C
36adc2	.....	....	.....	.....	.....	605	I	38.0 50.3	12/53 4/66	380 1,010	....	4/53 12/54	.....	
(C-4-7)34cdc	1953	830	20	0- 830	200- 830	580	I	37.2 28.8	4/53 4/66	2,000 3,850	 124	8/54 10/65	 31	C
34ddc	.....	....	.....	.....	.....	575	N	29.9 30.2	12/53 3/60	1,700 1,500	....	7/48 6/54	.....	Destroyed.

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-4-7)34ddd	1948	463	14	0- 463	80- 463	575	I	27.2 15.0	12/53 4/66	970 2,410	 132	9/52 6/65	 20	
35dcd	1953	700	20 16	0- 523 523- 677	177- 677 OH 677- 700	575	I	25.3 18.9	12/53 4/66	3,440	79	6/65	44	
36daa	1952	700	20 16	0- 250 250- 700	250- 700	569	N	30.8 21.8	4/53 12/54	.....	.....	.....	.....	Originally drilled to 396 feet; deepened to 700 feet in 1952. Destroyed.
(C-5-3)8bbc	.....	....	6	.....	.....	950	S	297.0 289.2	4/53 12/54	.....	.....	.....	.....	
29cbc	.....	....	6	.....	.....	990	S	394.2	4/66	.....	.....	.....	.....	
(C-5-4)3acc	1957	986	20	0- 986	88- 986	740	I	47.5 170 I	9/60 1/66	3,440R	49	2/66	70	
3cda	1957	841	20	0- 841	107- 841	740	I	164.7 169 I	9/60 1/66	3,020R	46	2/66	66	
9ddd	1957	1,400	20	0-1,400	.....	740	I	140.8 168 I	10/58 1/66	3,420R	39	2/66	88	C
10bac	1957	1,031	20	0-1,031	80-1,031	740	I	143.5 168.5	10/58 2/66	3,240R	44	2/66	74	
10cbc	1957	1,133	20	0-1,133	110-1,133	740	I	140.0 165 I	10/58 1/66	3,340R	48	2/66	70	
16dba	1957	1,090	20	0-1,090	107-1,090	740	I	142.7 165 I	10/58 1/66	2,850R	53	2/66	54	
16dcc	1957	1,036	20 16	0- 730 730-1,036	.....	740	I	155.6 168.7	10/58 4/65	2,620R	.....	2/66	.....	
18add	1950	501	20	0- 501	130- 482	655	I	26.4 65.6	4/53 1/66	1,290 1,910	....	7/53 8/65	.....	
19ddd	1951	926	20	0- 908	255- 908 OH 908- 926	705	I	78.0 126.1	12/53 1/66	1,960 2,420	 83	4/53 6/65	 29	
21bdc	1955	1,200	20 16	0- 496 496- 954	40- 954 OH 954-1,200	745	I	121.3 172.7	9/55 2/66	2,720R	55	2/66	49	C
21cbc	.....	130	6	.....	.....	730	N	94.1 120.9	12/45 2/57	.....	.....	.....	.....	Partly filled with trash.
21cbd	1955	1,009	20 16	0- 498 498-1,000	80-1,000 OH 1,000-1,009	738	I	165.8	2/66	2,700 2,900R	 68	6/55 2/66	 43	
29cbd	1958	308	8	0- 308	.....	.....	D	.....	.....	.....	.....	.....	.....	Supplies trailer court.
29dbb	1955	1,037	20 16	0- 480 480-1,000	80-1,000 OH 1,000-1,037	740	I	161 I	1/66	3,690 1,750R	 44	9/55 2/66	 40	
31add	1955	1,217	20 16	0- 505 505-1,100	80-1,100 OH 1,100-1,217	746	I	159.7	2/66	2,100 1,440	 68	9/55 7/65	 21	C
31bbc	.....	....	.....	.....	.....	.....	PS	.....	.....	.....	.....	.....	.....	Gila Bend School.

* See also: Geol + Grd Wtr. Res of Gila Bend Basin UT, 70

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-5-4)31cac1	1917	1,746	10 7⅝	0-1,125 1,000-1,746	1,210-1,710	735	PS	.....	.....	.....	.....	.....	.....	City water supply; intermittently perforated.
31cac2	1910	1,746	17 13½ 11⅝ 7⅝	0- 92 0-1,175 810-1,210 996-1,746	1,210-1,710	735	PS	.....	.....	.....	.....	.....	.....	City water supply; intermittently perforated.
31cbb	.....	310	6	0- 295	.....	730	D	.....	.....	.....	.....	.....	.....	
31cbd	1918	1,752	16 11 7⅝	0- 225 0-1,178 1,079-1,752	1,210-1,710	735	PS	129.1	12/53	.....	.....	.....	.....	City water supply; intermittently perforated.
31daa	.....	220	7	0- 212	.....	740	N	.....	.....	.....	.....	.....	.....	
31dac	1955	1,000	20 16	0- 500 500-1,000	150-1,000	740	I	86.3 155 I	9/55 1/66	1,850 1,620R	 69	8/57 3/66	 23	
32bcb1	.....	....	.....	.....	.....	741	D	114.1 153.0	12/53 2/59	.....	.....	.....	.....	
32bcb2	1953	955	8 6	0- 435 0- 900	805- 875 OH 900- 955	741	D	.....	.....	.....	.....	.....	.....	
32dcd1	1948	220	6	0- 220	190- 210	770	N	.....	.....	.....	.....	.....	.....	
32dcd2	1958	215	10	0- 200	40- 200 OH 200- 215	770	D	.....	.....	.....	.....	.....	.....	
33ddc	1965	1,782	8	0- 20	OH 20-1,782	818	T	229 R	1/66	.....	.....	.....	.....	This hole has a cement and clay packer at 1,040 feet and 2 piezometer tubes. PZ No. 1 is set at 1,092 feet and PZ No. 2 is set at 462 feet.
(C-5-5)5bda	1954	256	10	0- 256	.....	610	S	35.4	12/54	.....	.....	.....	.....	
16cdd	1960	616	20	0- 253	OH 253- 616	630	N	37.7 33.7	6/65 1/66	.....	.....	.....	.....	Drilled for irrigation use but never completed.
18bdd	1948	865	20	0- 835	227- 835 OH 835- 865	630	N	.....	.....	.....	.....	.....	.....	Destroyed in 1949.
18dcb	1949	960	20	0- 890	400- 890 OH 890- 960	635	I	55.8 56.5	12/53 1/66	2,820 980	 132	3/49 6/65	 7	
18dcd	1957	410	20	0- 410	.....	645	I	96.7	12/58	2,190 2,900	....	7/48 8/56	.....	
18dda	.....	550	20	0- 550	.....	640	I	72.8 48.3	12/58 2/66	3,100 2,840	....	9/52 8/56	.....	
18ddc1	1947	1,031	20	0-1,000	150- 900 OH 1,000-1,031	645	N	57.2	12/53	.....	.....	.....	.....	Well caved in 1956 and was abandoned.
18ddc2	1957	800	.....	.....	.....	645	T	.....	.....	.....	.....	.....	.....	This test hole was reamed out to make well No. 18ddc3.
18ddc3	1957	708	20	0- 708	150- 708	645	I	89.9	12/58	3,410	.....	6/65	.....	

Maybe S. Pacific well T-D 1746 NW4 SE4

U.S.B.R.

E.L. C

Table 1.--Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-5-5)22cdd	1957	1,447	24 20 16 12	0- 254 254- 879 860-1,245 1,245- 1,447	254-1,447	665	I	75.3	1/66	2,520	165	9/65	15	
WSP 1647-A → 23cdd	1957	(1,307) 1475	20 16	0- 824 824-1,307	216-1,307	655	I	66.4	1/66	5,960	90	8/65	66	Pilot hole was drilled to 1,475 feet; well reamed out to 1,307 feet.
24bba	1945	130	10	.....	.....	650	D,S	33.2 66.9	10/45 1/66	.....	.....	.....	.....	
24cdd	1957	1,400	20	0-1,400	100-1,400	680	I	94.8 85.6	1/66 2/66	4,150	79	6/65	52	
36cac	1958	291	8	0- 291	.....	720	D	.....	.....	.....	.....	.....	.....	
36cda	1952	308	10	0- 308	180- 300	730	N	.....	.....	.....	.....	.....	.....	
36dab	.....	183	6	0- 178	.....	730	D	.....	.....	.....	.....	.....	.....	
(C-5-6)1cdd	1955	900	20	0- 860	150- 860 OH 860- 900	605	I	64.3	12/58	2,850 2,820	....	8/56 9/65	.....	
2bbc	1965	600	20	0- 580	200- 580 OH 580- 600	595	I	41.2	1/66	3,310	80	6/65	41	
2dbb	1943	425	20	0- 425	150- 425	600	I	18.8 41.1	1/46 1/66	1,170 1,530	....	4/46 8/56	.....	
3acc	1952	534	20	0- 518	100- 508 OH 518- 534	595	I	35.5	12/54	3,860 2,820	....	4/53 8/56	.....	
4ddd	1953	700	20 16	0- 400 400- 700	100- 700	602	I	17.9	12/53	1,720 2,110	....	8/56 6/65	.....	
6ada	1948	956	24	.....	.....	585	I	25.8 24.2	12/53 4/66	1,480 2,790	 132	7/48 6/65	 21	
11caa	.....	400	20	0- 400	150- 400	610	I	45.7 27.7	4/53 1/66	.....	.....	.....	.....	
11cda	.....	920	20	0- 900	210- 900 OH 900- 920	617	I	53.7 46.1	4/53 1/66	3,440 3,460	 109	9/52 6/65	 32	
12ddd	.....	525	20	0- 525	150- 525	615	I	.....	.....	2,490 2,940	....	7/48 4/53	.....	
13adc	1941	280	20	.....	.....	625	I	62.4 57.2	4/53 4/65	2,780 2,060	....	4/46 8/57	.....	
16ddd	1957	1,672	20 16	0- 779 776-1,672	321-1,672	660	N	60.7 58.3	2/63 1/66	.....	.....	.....	.....	
18ddd	1957	1,502	20 16	0- 770 770-1,502	339-1,502	670	N	35.7	1/66	.....	.....	.....	.....	
31ddd	1957	1,600	18 [illegible]	0- 445 445-1,384	160-1,600	719	N	101.1	1/66	2,480	.....	8/57	.....	

Table 1.--Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-5-6)34ccd	1955	1,000	20	.....	.....	736	I	110.2	1/66	2,580 3,850R	 44	6/55 2/65	 88	
(C-5-7)1aaa1	1946	30	8	.....	.....	570	N	19.5 20.2	4/46 2/63	2,410 1,500	....	9/52 8/57	.....	Destroyed.
1aaa2	.....	700	20	0- 700	80- 700	570	I	19.8 16.4	3/46 4/66	1,440	100	6/65	14	
1abd1	1948	100	10	.....	.....	580	N	13.7 Dry at 18 feet	12/53 2/63	.....	.....	.....	.....	
1abd2	1955	825	20	.....	.....	580	I	23.4 26 R	3/62 2/65	..... 3,350R	 106	..... 10/65	 32	
1baa	1948	700	20	0- 700	200- 700	575	N	18.8 23.8	12/54 2/63	2,120 1,510	....	9/52 8/57	.....	
(C-6-3)18ad	.....	....	.....	.....	.....	.....	PS	.....	.....	.....	.....	.....	.....	Hyway Rest Stop well.
19abd	1966	660	8 6	0- 563 556- 660	556- 660	.....	C	.....	.....	.....	.....	.....	.....	
30aaa	.....	....	8	.....	.....	.....	S	.....	.....	.....	.....	.....	.....	
(C-6-4)5aba	1952	229	6	0- 229	.....	.....	....	.....	.....	.....	.....	.....	.....	
5bad	.....	198	8	0- 198	.....	775	D	159.2 146.5	4/53 12/54	.....	.....	.....	.....	
6dbb	1940	162	6	.....	.....	762	N	141.2 141.2	12/45 12/53	.....	.....	.....	.....	This well has been filled with rocks.
7ccc	.....	236	8	0- 230	60- 230 OH 230- 236	795	N	179.4 192.0	12/53 2/59	.....	.....	.....	.....	
12cdd	.....	....	12	.....	.....	980	S	376.2	3/66	.....	.....	.....	.....	
29acc	.....	302	6	.....	.....	870	S	.....	.....	.....	.....	.....	.....	
(C-6-5)2adb	1955	1,000	20 16	0- 500 500-1,000	0-1,000	737	I	147 I	1/66	2,760 2,660R	 38	6/55 2/66	 70	
2bdc	1955	985	20 16	0- 500 500- 985	150- 985	737	I	149 I	1/66	2,300 2,240R	 40	9/55 2/66	 56	
3cbd	1955	1,000	20 16	0- 500 500-1,000	0-1,000	737	I	121.4 152 I	9/56 1/66	1,990 2,070	 65	8/57 6/65	 32	
3dac	1955	1,000	20 16	0- 500 500-1,000	0-1,000	736	I	150 I	1/66	1,600 1,650R	 69	9/55 2/66	 24	
C 4dcb	1958	1,061	20	0-1,061	130-1,061	730	I	151.5	1/66	3,500 3,960R	 96	7/65 2/66	 41	
6dad	.....	....	6	.....	.....	730	N	80.3 79.8	4/53 12/58	.....	.....	.....	.....	Destroyed. — C "Salt well" on Theba Quad Top. Sheet.
6ddd	1958	1,017	20	0-1,017	.....	730	I	105.6	1/66	2,640	179	7/65	15	C
11cda	.....	....	6	.....	.....	778	D,S	161.6 183.9	12/53 1/66	.....	.....	.....	.....	

Table 1. --Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-6-5)23dda	.....	405	14	0- 400	.....	847	PS	252.1 255.3	2/63 4/65	.....	.....	.....	.....	Airbase water supply.
25bbb1	1941	400	16	0- 391	.....	859	N	249.8 261.8	1/46 2/63	.....	.....	.....	.....	
25bbb2	1963	646	16	0- 644	340- 560 OH 644- 646	859	PS	265.2	1/66	.....	.....	.....	.....	Airbase water supply.
(C-6-6)1ccb1	1957	1,454	18 16	0- 687 687-1,454	250-1,454	735	N	.....	.....	.....	.....	.....	.....	
1ccb2	1957	1,520	20 16	0- 721 721-1,520	100-1,520	735	I	94.7	1/66	1,770	.....	3/65	.....	
C 2dcc	1957	1,560	20 16	0-1,050 1,050- 1,560	300-1,560	745	I	154.6	1/66	2,520	.....	3/64	.....	C
4aaa	1923	244	6	0- 215	.....	730	N	121.6 152.2	4/45 2/57	.....	.....	.....	.....	
4dda	1955	736	20	0- 732	155- 720 OH 732- 736	740	N	113.8 107.1	2/57 4/66	.....	.....	.....	.....	
8dba	.....	296	6	.....	.....	725	D	116.1 116.6	4/53 12/54	.....	.....	.....	.....	
9bca	.....	275	8	.....	.....	732	D	124.2	4/53	.....	.....	.....	.....	
9cbc	1948	2,065	20 16	0-1,230 1,230- 2,065	300- 350 1,467-1,867	728	N	.....	.....	.....	.....	.....	.....	Originally drilled to 1,230 feet and deepened to 2,065 feet in 1948. Destroyed. C
11dcc	.....	1,100	.....	.....	.....	763	I	.....	.....	.....	.....	.....	.....	
11dcd	1963	1,130	20 16	0- 672 672-1,130	672-1,130	765	I	178.8	1/66	.....	.....	.....	.....	C
18dcc	.....	300	6	.....	.....	730	N	88.2 109.4	4/53 3/66	.....	.....	.....	.....	
32cdd	1965	....	.....	.....	.....	784	I	.....	.....	.....	.....	.....	.....	
32ddd	1965	....	.....	.....	.....	795	I	.....	.....	.....	.....	.....	.....	
(C-6-7)17add	1952	270	10	.....	.....	727	N	159.1 153.8	12/54 3/61	.....	.....	.....	.....	
(C-7-3)4aac	1966	540	6	0- 540	355- 540	1,259	C	.....	.....	.....	.....	.....	.....	
(C-7-4)3aba	.....	385	6	.....	.....	980	S	362.5 370.7	1/46 12/58	.....	.....	.....	.....	
(C-7-5)6aab	1924	280	6	0- 280	.....	860	S	255.0 271.1	1/46 3/66	.....	.....	.....	.....	
(C-7-6)4add	1965	895	14 8⅝	0- 495 484- 895	495- 555 705- 895	822	I	.....	.....	.....	.....	.....	.....	
					[illegible]	809	I	.....	.....	.....	.....	.....	.....	

Table 1.--Records of selected wells in the Gila Bend basin—Continued

Well location	Date completed (year)	Depth of well (feet)	Diameter of casing (inches)	Depth of casing (feet)	Perforated interval (feet below land surface)	Land-surface altitude (feet above mean sea level)	Type of well	Water level: Depth below land surface (feet)	Water level: Date measured (month, year)	Pumping data: Yield (gpm)	Pumping data: Drawdown (feet)	Pumping data: Date measured (month, year)	Specific capacity (gallons per minute per foot of drawdown)	Remarks
(C-7-6)4cdd	1965	832	16 $12\frac{3}{4}$	0- 640 617- 831	682- 831	815	I	.....	.....	.....	.....	.....	.....	Intermittently perforated.
4ddd	1965	886	16 $12\frac{3}{4}$	0- 612 612- 886	642- 810	827	I	272.5 310.7	5/65 1/66	.....	.....	.....	.....	Intermittently perforated.
5add	1965	900	14 $8\frac{5}{8}$	0- 500 489- 900	500- 620 750- 890	802	I	.....	.....	.....	.....	.....	.....	
5ddd	1965	900	16 10	0- 640 630- 900	640- 900	805	I	.....	.....	.....	.....	.....	.....	
8cdd1	.....	....	16	.....	.....	812	N	273.0	1/66	.....	.....	.....	.....	
8cdd2	1966	1,000	20	0-1,000	600- 760	812	I	.....	.....	.....	.....	.....	.....	
8ddd	1959	785	16 12	0- 590 580- 785	590- 785	818	N	.....	.....	.....	.....	.....	.....	
9add	1965	950	14 $8\frac{5}{8}$	0- 586 583- 950	586- 950	835	I	.....	.....	.....	.....	.....	.....	Intermittently perforated.
9bdc	1966	1,944	.....	.....	.....	820 [illegible]	.....	.....	.....	.....	.....	.....	.....	C
9ccc	1966	960	16 12	0- 700 690- 960	400- 960	818	I	.....	.....	.....	.....	.....	.....	
9cdd	1965	1,212	20 14 $8\frac{5}{8}$	0- 250 0- 602 599-1,212	657-1,212	830	I	306.0 309.6	12/65 1/66	.....	.....	.....	.....	Intermittently perforated.
9dca	1965	960	14 $8\frac{5}{8}$	0- 520 510- 960	520- 960	830	I	282 R	9/65	1,100R	88	9/65	12	Intermittently perforated.

Table 2. --Measurements of the water level in wells in the Gila Bend basin

[Water level: In feet below land surface. Water-level altitude: In feet above mean sea level. I, interpolated; A, air line; P, pumping nearby; R, reported]

Well location	Date measured	Water level	Water-level altitude
(C-2-4)25ccc	10/27/58	329.50	615
	9/20/60	345.50	599
	1/19/61	349.18	596
(C-2-4)26add	12/27/58	319	605
	9/20/60	312.10	613
	1/19/61	302.16	623
(C-2-4)26bda	2/14/57	246.79	653
	10/27/58	253.80	646
	3/ 2/60	268.60	631
	2/ 4/63	281.79	618
	1/28/64	284.83	615
(C-2-4)28dbb	5/24/63	282.7	582
	1/19/66	291.01	574
(C-2-4)29dda	2/14/57	233.46	612
	1/29/58	237.94	607
	10/28/58	243.06	602
	2/ 4/59	244.14	601
	9/22/60	256.47	589
	1/24/61	260.02	585
	3/ 5/62	260.49	585
	2/ 4/63	259.50	585
	5/24/63	260.20	585
	5/29/63	260.27	585
	1/28/64	262.10	583
	4/14/65	263.38	582
	1/19/66	264.01	581
(C-2-4)31daa	12/14/54	182.78	604
	9/21/60	219.40	568
	1/24/61	219.26	568
	1/19/66	210.74	576
(C-2-4)32ada	4/ 1/52	187.15	633
	12/27/53	195.25	625
	12/14/54	205.10	615
	10/27/58	239.54	580
	1/24/61	246.58	573
	1/19/66	251.76	568
(C-2-4)32caa	2/14/54	187.81	612
	10/27/58	196.71	603
	1/24/61	241.09	559
(C-2-4)33acc1	1/21/46	139.27	689
	2/ 7/46	139.26	689
	6/ /49	154 R	674
	2/13/51	166.40	662
	4/ 1/52	Dry	.....
(C-2-4)33bca	1/24/61	249.42	575
(C-2-5)26cba	2/ 3/66	134.35	622
(C-2-5)27daa	12/ /54	92 R	668
	9/15/55	95.03	665
(C-2-5)28aab	1/24/61	48.58	726
(C-2-5)28caa	1/24/61	25.59	714
(C-2-5)35adb	1/24/61	80.57	669
	1/ /66	140 I	610
(C-2-5)35baa	1/24/61	124.94	623
	1/14/66	131.18	617
(C-2-5)36cbd	12/18/45	54.93	695
	9/19/60	163.93	586
	1/14/66	158.25	592
(C-2-5)36daa	12/27/53	156.45	624
	10/27/58	195.05	585
(C-3-4)4baa	2/13/51	159.68	655
	12/28/53	176.87	638
	12/14/54	206.37	609
	10/28/58	219.50	595
	9/21/60	203.11	612
(C-3-4)4bdd	12/28/53	186.35	624
	12/14/54	200.92	609
	10/28/58	227.87	582
(C-3-4)4cab1	10/28/58	236.93	563
	1/24/61	246.04	554
(C-3-4)6bba	12/18/45	62.52	685
	1/24/61	164.30	584
	1/13/66	166.30	582
(C-3-4)6caa	12/18/45	62.52	687
	9/19/60	169.68	580
	1/14/66	170.19	580
(C-3-4)6dab	10/28/58	179.97	580
	1/24/61	188.70	571
	1/19/66	188.77	571
(C-3-4)7aaa1	9/21/60	189.72	560
	1/24/61	179.67	570
	1/14/66	182.43	568
(C-3-4)7aaa2	4/10/46	67.73	681
(C-3-4)7aab	4/10/46	64.72	683
	2/13/51	98.36	650
	4/ 1/52	100.25	648
(C-3-4)8bab	2/15/51	111.83	648
	4/ 1/52	103.80	656
	12/28/53	160.56	599
	12/14/54	154.28	606
	10/28/58	185.87	574
	1/24/61	192.50	568
(C-3-4)8caa	12/18/45	67.81	681
	9/19/60	182.50	567
	1/25/61	181.05	568
	1/14/66	180.92	568
(C-3-4)8dcb	12/18/45	67.08	679
	9/15/55	150.48	596
	10/30/58	177.21	569
	9/19/60	217.4	529
	1/25/61	182.45	564
	1/14/66	182.42	564
(C-3-4)9aad	12/14/54	228.72	596
	2/14/57	245.58	579
	1/23/58	250.18	575
	10/28/58	261.32	564
	3/ 2/60	262.30	563
	9/21/60	276.30	549
	3/ 5/62	269.89	555
	2/ 4/63	269.4	556
	1/28/64	270.78	554
	4/14/65	270.4	555
	1/19/66	270.71	554
(C-3-4)9baa	2/13/51	154.95	652
	12/27/53	196.30	611
	3/ 5/54	194.50	613
	12/14/54	201.99	605
	1/24/55	201.83	605
	3/12/56	208.89	598
	1/23/58	224.08	583
	10/28/58	243.64	563
	3/ 2/60	253.80	553
	2/ 4/63	243.30	564
	1/28/64	243.26	564
	4/14/65	243.83	563
	1/19/66	243.79	563
(C-3-4)9caa	12/14/54	208.19	587
	10/28/58	229.51	565
	1/19/66	233.5	561
(C-3-4)9dda	12/14/54	222.37	596
	10/28/58	261.11	557
	9/21/60	264.50	554
	1/20/61	259.53	558
(C-3-4)10caa1	12/28/53	251.54	607
	12/15/54	261.10	598
	10/28/58	299.30	560
	9/21/60	304.95	554
	1/20/61	298.61	560
(C-3-4)10caa2	1/19/66	297.45	562
(C-3-4)15adc	1/19/66	285.15	565
(C-3-4)15bdd	12/29/53	225.64	604
	12/15/54	234.07	596
	10/28/58	266.99	563
	2/16/61	271.40	559
	1/19/66	268.51	561
(C-3-4)15daa	12/29/53	259.24	601
	12/15/54	265.72	594
	10/28/58	316.54	543
(C-3-4)16daa	4/ 1/52	159.30	647
	12/15/54	205.90	600
	10/28/58	238.04	568
	1/19/61	251.33	555
(C-3-4)17aab	1/14/66	183.84	561
(C-3-4)17add	1/25/61	196.64	548
	1/ /66	182 I	563
(C-3-4)19bbb	12/30/53	78.28	632
	12/ 1/54	87.66	622
	1/14/61	133.35	577
(C-3-4)19ccd	6/17/65	139.60	560
	1/11/66	137.09	563
	2/14/67	137.06	563
(C-3-4)20aaa	2/14/57	152.26	583
	10/30/58	174.21	561
	2/ 4/59	178.80	556
	2/ 4/63	180.7	554
	1/28/64	179.36	556
(C-3-4)20daa	1/ 5/66	166.30	564
	1/13/66	165.73	564
	1/21/66	165.45	565
	2/16/66	166.10	564
(C-3-4)20dba	12/30/53	107.60	610
	12/ 4/54	119.38	599
(C-3-4)21bba	12/18/45	68.67	679
	1/28/52	104.80	643
(C-3-4)21bdb	10/30/58	195.05	551
(C-3-4)21cab	12/18/45	70.38	680
	9/19/60	208.70	541
(C-3-4)21cda	2/16/61	152.66	597
(C-3-4)22ddd1	5/ 6/53	248.33	606
	12/15/54	261.49	593
(C-3-4)22ddd2	10/28/58	295.08	559
	9/20/60	366.15	488
	1/19/61	327.14	527
	1/19/66	298.4	556
(C-3-4)23baa	5/ 6/53	277.33	618
(C-3-4)23bba	12/15/54	287.70	584
	10/28/58	322.13	550
	1/19/61	318.50	554
	1/19/66	328.6	543
(C-3-4)27baa	4/ 1/52	192 A	620
	5/ 6/53	204.03	608
	10/28/58	248.02	564
	1/19/61	324.02	488

Table 2.--Measurements of the water level in wells in the Gila Bend basin—Continued

Well location	Date measured	Water level	Water-level altitude
(C-3-4)28abb	1/19/61	318.50	427
(C-3-4)28acc	12/18/45	72.50	672
(C-3-4)28dbb	12/30/53	164.13	578
	12/15/54	150.06	592
	10/30/58	184.32	558
	1/ 5/66	184.97	557
	1/13/66	184.51	557
	1/21/66	184.28	558
	2/16/66	186.13	556
(C-3-4)33aba	12/18/45	76.15	667
	1/ /66	188 I	555
(C-3-4)33adb	1/18/66	189.6	552
(C-3-4)33adc	1/ /66	187 I	553
(C-3-4)33dab	4/24/53	133.60	606
	12/ 4/54	149.98	590
	10/30/58	187.01	553
(C-3-4)33ddd	9/22/60	202.80	539
	1/ /66	188 I	554
(C-3-5)1aaa	12/ 4/54	130.96	612
	2/14/57	144.20	599
	1/29/58	158.35	585
	10/28/58	163.56	579
	2/ 4/59	161.60	581
	3/ 2/60	155.20	588
	1/24/61	156.54	586
	3/ 5/62	154.33	589
	2/ 4/63	156.6	586
	1/28/64	160.37	583
	4/14/65	162.69	580
(C-3-5)2bbc	2/14/66	86.30	634
(C-3-5)2cbb	12/30/53	60.64	674
	12/ 1/54	67.35	668
	1/24/61	108.45	627
	1/11/66	119.05	616
	1/21/66	115.66	619
	2/14/66	107.98	627
(C-3-5)13bac	1/ /66	125 I	593
(C-4-4)3abb	5/ 8/53	174.30	622
	12/29/53	183.62	612
	12/15/54	190.65	605
	10/30/58	240.80	555
	1/19/66	238.71	557
(C-4-4)3bcc	5/ 8/53	121.44	624
	9/22/60	238.31	507
	1/18/66	191.3	554
(C-4-4)4bdd	12/30/53	84.06	626
	12/ 4/54	91.58	618
	10/30/58	127.35	583
	1/ 5/66	155.85	554
	1/13/66	155.22	555
	1/21/66	154.56	555
	2/16/66	154.80	555
(C-4-4)8cca	1/14/66	120.28	562
	2/14/66	118.10	564
(C-4-4)9baa1	4/24/53	70.90	634
	12/30/53	76.73	628
	3/ 5/54	78.80	626
	12/ 4/54	84.19	621
	1/24/55	84.84	620
	3/12/56	99.40	606
	2/14/57	103.84	601
	1/23/58	118.52	586
	10/30/58	130.91	574
	2/ 4/59	134.30	571
	3/ 2/60	140.30	565
	1/24/61	147.55	557
	3/ 5/62	152.71	552
(C-4-4)9baa1—Continued	1/28/64	204.5 P	501
	4/14/65	153.47	552
	1/13/66	149.58	555
	2/16/66	148.63	556
(C-4-4)10bcd	1/ /66	187 I	555
(C-4-4)10cdc	1/ /66	184 I	558
(C-4-4)15acc	1/ /66	183 I	559
(C-4-4)15cba	1/ 5/66	153.38	559
	2/15/66	155.92	556
(C-4-4)15ddd	9/22/60	202.30	540
	1/ /66	182 I	560
(C-4-4)16dad	1/ 5/66	140.40	555
	1/13/66	144.71P	550
	1/21/66	140.30	555
	2/15/66	141.75	553
(C-4-4)18aab	12/29/53	43.50	646
	12/ 4/54	50.34	640
	10/30/58	80.81	609
	2/ /59	96.5	594
	1/14/66	121.65	568
	2/14/66	119.45	571
(C-4-4)22dab	1/18/66	187.0	563
(C-4-4)22ddc	1/ /66	179 I	563
(C-4-4)27daa	2/16/66	182.5	563
(C-4-4)27ddc	1/ /66	180 I	565
(C-4-4)32bba	12/15/54	24.90	645
	10/31/58	60.35	610
(C-4-4)34aac	1/ /66	176 I	566
(C-4-4)34dcb	1/ /66	172 I	568
(C-4-6)27bdb	4/16/53	47.95	547
	12/28/53	42.36	553
	12/ 1/54	45.07	550
	2/ 5/63	46.42	549
	3/ 8/63	52.48	543
	2/ /65	42 R	553
	2/14/66	39.90	555
(C-4-6)28dac	12/28/53	29.75	555
	12/ 1/54	32.88	552
	12/10/58	50.84	534
	3/ 8/63	42.44	543
	1/ 8/64	32.21	553
	2/ /65	36 R	549
(C-4-6)29aaa1	1/15/46	30.70	567
	4/16/53	44.50	554
	12/28/53	35.31	563
	6/ 4/54	43.92	554
	12/ 1/54	36.47	562
	2/14/57	43.97	554
	1/23/58	41.53	556
	12/ 6/58	49.80	548
	3/ 2/60	45.04	553
	3/14/61	39.34	559
	3/ 5/62	38.48	560
	2/ 5/63	38.06	560
	3/ 8/63	38.49	560
	1/ 8/64	37.98	560
	2/ /65	36 R	562
	4/13/65	50.93P	547
	2/14/66	26.80	571
(C-4-6)29aaa2	4/16/53	44.92	551
	12/28/53	38.51	557
	3/ 8/63	40.20	556
	2/ /65	34 R	562
	2/14/66	33.11	563
(C-4-6)29dac	4/16/53	36.35	544
	12/28/53	27.14	553
	12/ 1/54	29.53	550
	12/10/58	39.57	540
	3/ 8/63	33.65	546
	2/ /65	29 R	551
(C-4-6)31cdd	12/18/53	23.04	549
	12/ 3/54	22.66	549
	12/10/58	22.80	549
	2/ /65	18 R	554
	4/19/66	6.52	565
(C-4-6)36adc1	12/10/58	63.68	541
(C-4-6)36adc2	12/28/53	38.03	567
	12/ 1/54	39.56	565
	12/10/58	57.42	548
	4/19/66	50.32	555
(C-4-7)34cdc	4/15/53	37.23	543
	12/18/53	34.88	545
	12/ 3/54	35.51	544
	12/10/58	39.78	540
	2/ /65	32 R	548
	4/19/66	28.79	551
(C-4-7)34ddc	12/18/53	29.90	545
	12/ 3/54	30.64	544
	2/14/57	35.21	540
	1/23/58	40.75	534
	3/ 2/60	30.22	545
(C-4-7)34ddd	12/18/53	27.24	548
	12/ 3/54	26.89	548
	12/10/58	33.18	542
	2/ 6/63	24.45	551
	1/28/64	23.87	551
	2/ /65	34 R	541
	4/13/65	24.35	551
	4/19/66	14.95	560
(C-4-7)35dcd	4/15/53	45 R	530
	12/18/53	25.31	550
	12/ 3/54	24.65	550
	12/10/58	26.14	549
	2/ /65	45 R	530
	4/19/66	18.94	556
(C-4-7)36daa	4/15/53	30.78	538
	12/18/53	20.79	548
	12/ 3/54	21.84	547
(C-5-3)8bbc	4/23/53	297.0	653
	12/ 3/54	289.15	661
(C-5-3)29cbc	4/19/66	394.2	596
(C-5-4)3acc	1/ /66	170 I	570
(C-5-4)3cda	9/22/60	164.70	575
	1/ /66	169 I	571
(C-5-4)9ddd	10/30/58	140.83	599
	1/ /66	168 I	572
(C-5-4)10bac	10/30/58	143.47	597
	2/15/66	168.5	572
(C-5-4)10cbc	10/30/58	139.96	600
	1/ /66	165 I	575
(C-5-4)16dba	10/31/58	142.69	597
	1/ /66	165 I	575
(C-5-4)16dcc	10/31/58	155.59	584
	2/ 4/63	170.0	570
	1/28/64	167.82	572
	4/14/65	168.7	571

Table 2. --Measurements of the water level in wells in the Gila Bend basin—Continued

Well location	Date measured	Water level	Water-level altitude
(C-5-4)18add	4/22/53	26.44	629
	12/30/53	27.07	628
	1/13/66	65.55	589
	1/21/66	63.68	591
	2/14/66	63.20	592
(C-5-4)19ddd	12/18/53	78.05	627
	12/ 4/54	80.40	625
	1/ 5/66	126.20	579
	1/21/66	126.10	579
	2/15/66	124.85	580
(C-5-4)21bdc	9/21/55	121.26	624
	10/31/58	153.44	592
	2/16/66	172.70	572
(C-5-4)21cbc	12/21/45	94.06	636
	4/13/53	97.52	632
	12/ 4/54	92.70	637
	2/14/57	120.91	609
(C-5-4)21cbd	2/16/66	165.85	572
(C-5-4)29bbc1	1/24/46	78.18	640
(C-5-4)29dbb	2/11/66	161 I	579
(C-5-4)31add	2/16/66	159.7	586
(C-5-4)31cbd	12/30/53	129.10	606
(C-5-4)31dac	9/22/55	86.28	654
	1/ /66	155 I	585
(C-5-4)32bcb1	12/30/53	114.07	627
	12/ 4/54	114.80	626
	2/ 4/59	153.01	588
(C-5-4)33ddc	1/19/66	229 R	589
(C-5-5)5bda	12/12/54	35.41	575
(C-5-5)16cdd	6/ 2/65	37.70	592
	1/ 4/66	33.70	596
	1/12/66	31.50	598
	1/13/66	31.18	599
	1/20/66	29.15	601
	1/27/66	29.10	601
	2/14/66	27.05	603
(C-5-5)18dcb	12/28/53	55.76	579
	2/14/57	81.20	554
	1/23/58	94.68	540
	3/ 2/60	83.53	551
	3/14/61	90.13	545
	3/ 2/62	79.79	555
	1/ 4/66	56.50	579
	1/12/66	52.94	582
	1/20/66	51.09	584
	2/16/66	52.93	582
(C-5-5)18dcd	12/ 9/58	96.73	548
(C-5-5)18dda	12/ 9/58	72.78	567
	2/16/66	48.30	592
(C-5-5)18ddc1	12/28/53	57.22	588
(C-5-5)18ddc3	12/ 9/58	89.94	555
(C-5-5)22cdd	1/ 4/66	75.29	590
	1/21/66	74.98	590
(C-5-5)23cdd	1/13/66	66.40	589
	1/21/66	63.75	591
	2/14/66	64.32	591
(C-5-5)24bba	10/23/45	33.19	617
	12/21/45	31.91	618
	3/26/46	31.63	618
	5/27/46	32.24	618
	9/ 6/46	32.41	618
	12/ 3/46	30.80	619
(C-5-5)24bba—Continued	2/10/47	30.65	619
	6/ 4/47	31.69	618
	8/26/47	31.56	618
	3/ 1/48	33.28	617
	9/ 7/48	36.75	613
	3/ 7/49	32.40	618
	11/11/49	33.00	617
	3/17/50	34.58	615
	2/21/51	33.67	616
	1/28/52	30.98	619
	2/10/53	33.36	617
	12/18/53	33.36	617
	3/ 1/54	33.36	617
	11/22/54	37.44	613
	12/ 3/54	34.20	616
	1/24/55	33.54	616
	2/ 1/56	35.70	614
	2/14/57	38.23	612
	3/ 2/60	55.82	594
	3/14/61	60.98	589
	3/ 2/62	63.06	587
	2/ 5/63	66.48	584
	1/28/64	68.93	581
	4/14/65	69.42	581
	1/ 5/66	66.90	583
	1/13/66	62.40	588
	1/21/66	59.90	590
	2/14/66	56.13	594
(C-5-5)24cdd	1/ 5/66	94.81	585
	1/13/66	87.32	593
	1/21/66	85.32	595
	2/14/66	85.60	594
(C-5-6)1cdd	12/10/58	64.33	541
(C-5-6)2bbc	1/ 4/66	41.18	554
	1/12/66	36.83	558
	1/20/66	33.61	561
	2/16/66	32.24	563
(C-5-6)2dbb	1/15/46	18.83	581
	4/16/53	46.59	553
	12/20/53	36.16	564
	12/ 1/54	41.63	558
	1/ 4/66	41.14	559
	1/12/66	37.31	563
	1/20/66	32.77	567
(C-5-6)3acc	12/ 1/54	35.53	559
(C-5-6)4ddd	4/16/53	17.90	584
	12/28/53	17.92	584
(C-5-6)6ada	12/18/53	25.83	559
	12/10/58	32.28	553
	2/ 5/63	25.62	559
	1/28/64	26.57	558
	2/ /65	44 R	541
	4/13/65	36.72	548
	4/19/66	24.22	562
(C-5-6)11caa	4/16/53	45.70	564
	12/28/53	36.20	574
	3/ 1/54	33.64	576
	6/ 4/54	58.66	551
	12/ 1/54	44.10	566
	1/24/55	23.82	586
	2/ 1/56	66.00	544
	2/14/57	52.50	558
	1/23/58	83.80	526
	2/25/59	72.07	538
	3/ 2/60	53.40	557
	3/14/61	79.14	531
	3/ 2/62	54.70	555
	2/ 5/63	52.90	557
	1/ 8/64	43.03	567
	4/13/65	55.15	554
	1/ 4/66	27.70	582
	1/12/66	25.70	584
	1/20/66	24.16	586
	2/16/66	28.91	581
(C-5-6)11cda	4/17/53	53.72	563
	12/28/53	44.44	573
	1/ 4/66	46.14	571
	1/12/66	42.62	574
	1/20/66	40.04	577
(C-5-6)13adc	4/16/53	62.35	563
	12/ 1/54	56.90	568
	1/28/64	58.49	567
	4/13/65	57.20	568
(C-5-6)16ddd	2/ 5/63	60.68	599
	1/28/64	62.11	598
	4/13/65	66.98	593
	1/ 5/66	58.30	602
	1/13/66	56.98	603
	1/20/66	55.95	604
	2/16/66	56.37	604
	4/19/66	68.00	592
(C-5-6)18ddd	1/28/64	32.29	638
	1/ 4/66	35.68	634
	1/13/66	35.68	634
	1/20/66	35.70	634
	2/16/66	35.82	634
	4/19/66	35.98	634
(C-5-6)31ddd	1/13/66	101.14	618
(C-5-6)34ccd	1/13/66	110.2	626
(C-5-7)1aaa1	4/10/46	19.48	551
	12/18/53	14.62	555
	2/ 6/63	20.2	550
(C-5-7)1aaa2	3/10/46	19.82	550
	12/18/53	29.25	541
	12/ 3/54	31.04	539
	12/10/58	30.14	540
	2/ 5/63	24.76	545
	2/ /65	24 R	546
	4/19/66	16.35	554
(C-5-7)1abd1	12/18/53	13.70	566
	3/ 1/54	14.50	566
	6/ 4/54	12.84	567
	12/ 3/54	14.00	566
	1/24/55	14.09	566
	2/ 1/56	12.66	567
	2/14/57	12.96	567
	1/23/58	14.82	565
	3/ 2/60	12.85	567
	3/19/61	15.94	564
	2/ 6/63	Dry at 18 feet	.....
(C-5-7)1abd2	3/ 5/62	23.43	557
	2/ 5/63	24.9	55[illegible]
	2/ /65	26 R	55[illegible]
(C-5-7)1baa	12/ 3/54	18.76	55[illegible]
	2/ 6/63	23.78	55[illegible]
(C-6-4)5bad	4/15/53	159.25	61
	12/ 4/54	146.50	62
(C-6-4)6dbb	12/28/45	141.21	62
	4/15/53	142.83	61
	12/29/53	141.18	62
(C-6-4)7ccc	12/29/53	179.39	61
	11/30/54	179.55	61
	2/ /59	192.00	6[illegible]
(C-6-4)12cdd	3/23/66	376.20	6[illegible]
(C-6-5)2adb	1/ /66	147 I	5[illegible]
(C-6-5)2bdc	1/ /66	149 I	5
(C-6-5)3cbd	9/22/55	121.43	6
	1/ /66	152 I	5

Table 2. --Measurements of the water level in wells in the Gila Bend basin—Continued

Well location	Date measured	Water level	Water-level altitude
(C-6-5)3dac	1/ /66	150 I	585
(C-6-5)4dcb	1/27/66	151.50	578
(C-6-5)6dad	4/17/53	80.26	650
	12/18/53	80.33	650
	12/ 3/54	80.38	650
	12/ 9/58	79.80	650
(C-6-5)6ddd	1/27/66	105.64	624
(C-6-5)11cda	12/17/53	161.58	616
	11/30/54	161.73	616
	1/20/66	183.88	594
(C-6-5)23dda	2/ 5/63	252.06	595
	1/28/64	253.96	593
	4/14/65	255.29	592
(C-6-5)25bbb1	1/23/46	249.78	609
	2/17/53	242.65	616
	11/30/54	247.50	611
	3/ 1/57	248.17	611
	1/23/58	250.77	608
	3/13/61	266 R	593
	3/ 6/62	259.59	599
	2/ 5/63	261.76	597
(C-6-5)25bbb2	1/20/66	265.15	592
(C-6-6)1ccb2	1/13/66	94.69	640
(C-6-6)2dcc	1/13/66	154.59	590
(C-6-6)4aab	4/27/45	121.60	608
	10/21/45	122.52	607
	10/23/45	124.70	605
	3/26/46	121.77	608
	4/28/46	122.89	607
	9/ 6/46	124.46	606
	12/ 3/46	120.79	609
	2/11/47	119.97	610
	6/ 4/47	123.61	606
	8/26/47	126.57	603
	3/ 1/48	127.35	603
	9/ 1/48	132.32	598
	9/ 7/48	132.31	598
	3/ 7/49	121.65	608
	11/11/49	128.08	602
	3/17/50	123.23	607
	2/21/51	124.58	605
	1/28/52	123.82	606
	2/10/53	123.88	606
	5/17/53	126.75	603
	12/18/53	129.60	600
	3/ 5/54	127.05	603
	5/28/54	132.40	598
	12/ 1/54	130.44	600
	1/24/55	127.06	603
	2/ 3/56	128.36	602
	2/14/57	152.19	578
(C-6-6)4dda	2/14/57	113.80	626
	4/20/66	107.10	633
(C-6-6)8dba	4/17/53	116.1	609
	12/ 1/54	116.59	608
(C-6-6)9bca	4/17/53	124.2	608
(C-6-6)11dcd	1/13/66	178.81	586
(C-6-6)18dcc	4/17/53	88.25	642
	3/16/66	109.35	621
(C-6-7)17add	12/ 1/54	159.07	568
	1/24/55	158.78	568
	3/12/56	161.16	566
	10/31/56	158.14	569
	11/30/56	158.20	569
	2/14/57	157.67	569
	5/ 1/57	157.75	569
	5/31/57	163.60	563
	7/ 1/57	157.77	569
	1/23/58	156.10	571
	3/ 2/60	150.00	577
	3/14/61	153.81	573
(C-7-4)3ab	1/16/46	362.50	618
	11/30/54	363.0	617
	12/11/58	370.67	609
(C-7-5)6aab	1/23/46	255.05	605
	4/22/53	255.04	605
	11/30/54	255.59	604
	3/18/66	271.1	589
(C-7-6)4ddd	5/11/65	272.5	555
	7/ 2/65	272.85	554
	1/14/66	310.67P	516
(C-7-6)8cdd1	1/14/66	272.95	539
(C-7-6)9cdd	12/ 2/65	305.98	524
	1/14/66	309.65	520
(C-7-6)9dca	9/27/65	282 R	548

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin

[Analyses by U. S. Geological Survey. Results in milligrams per liter except as indicated. Dissolved solids: Dissolved-solids values represent sum of determined constituents in solution. Specific conductance: F, specific conductance determined in the field]

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
Derbach 43 WW 183 (C-2-4)25ccc	6/23/65	855	36	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,100 F	....	
44A 26add	6/23/65	512	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,900 F	....	
44B 26bda	9/26/55	428	32	31	54	5.7	279	110	0	116	370	7.0	15	....	932	1.27	158	68	79	9.6	1,650	7.4	
	9/26/60	600	....	36	64	2.6	373	143	0	132	498	4.3	16	....	1,200	1.63	170	53	83	12	2,110	6.6	Deepened to 600 feet in 1960.
	6/22/65	600	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,700 F	....	
31daa	5/ 6/53	452	28	30	96	28	352	237	0	139	550	1.2	4.0	0.9	1,320	1.80	354	160	68	....	2,330	....	
45-A 32ada	5/ 6/53	450	33	29	80	6.1	482	95	0	181	702	5.0	2.6	1.8	1,530	2.08	224	146	82	....	2,730	....	
	9/30/65	450	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,000 F	....	
45-B 32caa	5/ 6/53	460	33	29	92	18	411	162	0	163	628	3.0	3.2	2.0	1,430	1.94	304	171	75	....	2,520	....	
	9/30/65	460	36	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,650 F	....	
46 WW 141 33bca	9/30/65	997	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,200 F	....	
(C-2-5)28aca	9/10/52	45	22	37	510	210	1,800	666	0	1,080	3,090	3.1	5.7	....	7,060	9.60	2,140	1,590	65	....	10,900	....	Shallow well in river channel. Density = 1.003 gm/ml.
28acb	9/23/52	51	22	....	....	....	....	634	0	....	3,150	....	....	....	....	....	....	....	....	....	11,100	....	Shallow well in river channel. Density = 1.003 gm/ml.
35adb	4/ 9/46	400	23	....	202	71	503	257	0	327	945	.7	5.7	....	2,180	2.96	796	586	....	....	3,770	....	
	5/ 6/53	400	23	26	224	70	377	226	0	268	850	.4	4.1	1.2	1,930	2.62	847	662	49	....	3,370	....	
	6/ 4/54	400	23	....	....	....	....	227	0	....	850	....	....	....	....	....	....	....	....	....	3,380	....	
	6/16/55	900	23	38	171	72	339	190	5	230	745	.6	4.1	....	1,700	2.31	722	558	50	5.5	2,930	8.4	Deepened to 900 feet October 1954.
	8/31/56	900	23	....	....	....	....	218	0	....	1,020	....	....	....	....	....	1,120	942	....	....	3,980	7.1	
	9/11/57	900	....	....	....	....	....	199	0	....	630	....	....	.32	....	....	526	363	....	....	2,610	7.1	
	9/26/60	900	23	34	482	165	684	280	0	690	1,710	.7	6.6	....	3,910	5.32	1,880	1,650	44	6.9	6,400	7.2	Has not pumped for some time.
35baa	4/19/46	386	23	....	....	....	....	235	0	....	700	....	....	....	....	....	....	....	....	....	2,850	....	
	5/ 6/53	386	24	....	....	....	....	214	0	....	735	....	....	1.0	....	....	....	....	....	....	2,980	....	
36cbd	4/ 9/46	353	23	....	....	....	....	270	0	....	920	....	....	....	....	....	....	....	....	....	3,580	....	
47-A (C-3-4)4baa	5/ 6/53	250	32	29	92	7.4	524	134	0	180	770	4.0	5.8	1.2	1,680	2.28	260	150	81	....	2,950	....	
	8/ 6/65	250	32	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4,000 F	....	
47-B 4bdd	5/ 6/53	492	31	29	134	18	535	126	0	275	820	4.0	19	1.2	1,900	2.58	408	306	74	....	3,270	....	
6bba	4/ 9/46	545	23	....	194	63	428	247	0	274	835	1.1	6.7	....	1,920	2.61	743	540	....	....	3,390	....	
6caa	5/27/46	530	24	....	....	....	....	233	0	....	645	....	....	....	....	....	....	....	....	....	2,680	....	
	5/ 6/53	530	24	....	....	....	....	218	0	....	602	....	....	.9	....	....	....	....	....	....	2,550	....	
7aaa1	5/27/46	332	23	....	....	....	....	259	0	....	772	....	....	....	....	....	....	....	....	....	3,100	....	
	5/ 5/53	332	24	....	....	....	....	250	0	....	688	....	....	.7	....	....	....	....	....	....	2,870	....	
				20	105	38	293	202	18	124	515	.8	2.7	.28	1,230	1.67	418	223	60	....	2,140	....	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-3-4)8dcb	4/10/46	.....	23	....	....	.....	.....	234	0	.....	585	....	....	.....	.....	....	.....	.....	....	.....	2,460	....	
	5/ 8/53	.....	24	....	....	.....	.....	250	0	.....	565	....	....	.31	.....	....	.....	.....	....	.....	2,400	....	
9baa	2/15/51	490	21	25	104	16	477	126	0	190	735	8.0	4.2	.....	1,620	2.20	326	222	76	.....	2,880	....	
	5/ 5/53	490	31	....	....	.....	.....	143	0	.....	680	....	....	.55	.....	....	.....	.....	....	.....	2,710	....	
	6/ 4/54	490	30	....	....	.....	.....	134	5	.....	670	....	....	.....	.....	....	.....	.....	....	.....	2,700	....	
	6/16/55	490	30	....	....	.....	.....	142	0	.....	705	....	....	.....	.....	....	.....	.....	....	.....	2,760	6.8	
	8/22/56	490	31	....	....	.....	.....	140	0	.....	705	....	....	.....	.....	....	332	218	....	.....	2,770	7.1	
	9/11/57	490	....	....	....	.....	.....	140	15	.....	677	....	....	.89	.....	....	310	170	....	.....	2,730	8.7	
	9/21/60	490	31	....	....	.....	.....	142	0	.....	720	....	....	.....	.....	....	370	254	....	.....	2,990	7.4	
9caa	4/ 1/52	500	29	....	....	.....	.....	201	0	.....	495	....	....	.....	.....	....	.....	.....	....	.....	2,210	....	
	5/ 8/53	500	29	....	....	.....	.....	188	0	.....	515	....	....	.72	.....	....	.....	.....	....	.....	2,220	....	
10caa1	4/ 1/52	.....	.....	29	99	8.3	530	117	0	191	795	4.8	6.7	.....	1,720	2.34	281	185	80	.....	3,030	....	
	5/ 5/53	.....	28	....	....	.....	.....	118	0	.....	805	....	....	.86	.....	....	.....	.....	....	.....	3,060	....	
14aad	8/ 5/65	600	31	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,500 F	....	
15bdd	5/ 5/53	465	28	28	114	14	469	138	0	179	740	3.6	10	.31	1,630	2.22	342	229	75	.....	2,870	....	
	6/23/65	465	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,700 F	....	
15daa	5/ 5/53	420	28	....	....	.....	.....	123	0	.....	625	....	....	.86	.....	....	.....	.....	....	.....	2,560	....	
	12/ 1/65	420	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,300 F	....	
16daa	5/ 5/53	412	29	....	....	.....	.....	190	0	.....	510	....	....	.21	.....	....	.....	.....	....	.....	2,130	....	
17add	4/10/46	302	23	....	....	.....	.....	242	0	.....	795	....	....	.....	.....	....	.....	.....	....	.....	3,160	....	
	5/ 8/53	302	24	....	....	.....	.....	246	0	.....	500	....	....	.10	.....	....	.....	.....	....	.....	2,180	....	
19bbb	9/18/53	460	22	27	332	98	396	254	0	367	1,060	.2	9.4	.....	2,410	3.28	1,230	1,020	63	.....	4,160	....	
	6/17/65	1,200	24	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,500 F	....	Deepened to 1,200 feet in 1957.
20daa	6/17/65	.....	24	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,100 F	....	
21bba	4/10/46	300	23	....	134	46	361	186	0	205	660	1.1	11	.....	1,510	2.05	524	371	....	.....	2,690	....	
21bdb	5/ 8/53	.....	25	27	132	39	315	248	0	176	555	.9	4.8	.17	1,370	1.86	490	287	58	.....	2,400	....	
21cab	4/10/46	550	....	....	....	.....	.....	254	0	.....	620	....	....	.....	.....	....	.....	.....	....	.....	2,610	....	
22ddd1	4/ 1/52	465	28	25	76	6.3	444	128	0	179	615	4.4	14	.....	1,430	1.94	216	110	82	.....	2,500	....	
	9/ 9/53	465	28	....	....	.....	.....	127	0	.....	585	....	....	.....	.....	....	.....	.....	....	.....	2,420	....	
22ddd2	6/23/65	600	29	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	3,100 F	....	
23baa	4/ 2/52	372	29	....	....	.....	.....	114	0	.....	480	....	....	.....	.....	....	.....	.....	....	.....	2,090	....	
	5/ 5/53	372	29	....	....	.....	.....	125	0	.....	530	....	....	.....	.....	....	.....	.....	....	.....	2,280	....	
23bba	10/ 7/65	397	29	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,700 F	....	
27baa	9/ 9/53	.....	28	....	....	.....	.....	173	0	.....	565	....	....	.....	.....	....	.....	.....	....	.....	2,370	....	
28abb	5/ 8/53	918	27	27	110	27	310	236	0	150	498	1.4	5.5	.....	1,240	1.69	386	192	64	.....	2,180	....	
28acc	5/27/46	1,000	26	....	....	.....	.....	246	0	.....	620	....	....	.....	.....	....	.....	.....	....	.....	2,660	....	
	4/24/53	1,000	27	26	92	23	295	239	0	124	448	2.0	4.5	1.0	1,130	1.54	324	128	66	.....	1,980	....	
28dbb	4/24/53	332	26	....	....	.....	.....	277	0	.....	335	....	....	.....	.....	....	.....	.....	....	.....	1,620	....	
	6/17/65	332	26	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	3,100 F	....	
	4/20/66	332	25	....	....	.....	.....	.....	....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,600 F	....	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-3-4)33aba	5/27/46	800	26	....	92	21	346	240	0	157	495	2.0	4.9	.....	1,240	1.69	316	120	....	.....	2,220	....	
	4/24/53	800	27	....	....	.....	.....	235	0	.....	592	....	....	.....	.....	....	.....	.....	....	.....	2,440	....	
	9/26/60	800	28	37	173	34	393	221	0	205	725	1.4	6.6	.....	1,680	2.28	572	391	60	7.2	2,910	7.1	
33adb	4/24/53	775	28	26	118	24	348	225	0	156	562	1.6	6.1	1.6	1,350	1.84	393	208	66	.....	2,370	....	
33adc	5/27/46	800	....	....	....	.....	.....	246	0	.....	540	....	....	.....	.....	....	.....	.....	....	.....	2,330	....	
	4/24/53	800	28	....	....	.....	.....	226	0	.....	555	....	....	.....	.....	....	.....	.....	....	.....	2,320	....	
33dab	6/17/65	400	26	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	3,100 F	....	
	4/20/66	400	25	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	3,200 F	....	
33ddd	5/27/46	640	27	....	....	.....	.....	240	0	.....	660	....	....	.....	.....	....	.....	.....	....	.....	2,780	....	
	4/24/53	640	29	25	99	20	329	230	0	138	498	2.2	5.0	.....	1,230	1.67	329	140	69	.....	2,160	....	
	6/ 4/54	640	28	....	....	.....	.....	234	0	.....	485	....	....	.....	.....	....	.....	.....	....	.....	2,140	....	
	9/21/55	640	28	....	....	.....	.....	226	0	.....	485	....	....	.....	.....	....	.....	.....	....	.....	2,090	7.2	
	8/27/56	640	28	....	....	.....	.....	224	0	.....	485	....	....	.....	.....	....	352	168	....	.....	2,120	7.4	
(C-3-5)1aaa	5/ 6/53	490	23	27	194	58	334	204	0	178	774	.4	5.8	.....	1,670	2.27	722	556	50	.....	2,980	....	
13bac	6/18/65	1,007	24	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,450 F	....	
(C-4-4)3abb	9/ 9/53	350	30	....	....	.....	.....	177	0	.....	505	....	....	.....	.....	....	.....	.....	....	.....	2,150	....	
	8/ 6/65	350	30	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,500 F	....	
4bdd	4/24/53	316	24	29	351	112	865	273	0	553	1,700	.7	23	2.2	3,770	5.13	1,340	1,110	58	.....	6,200	....	
	6/17/65	316	26	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,950 F	....	
9baa1	9/ 9/53	300	24	27	92	27	268	232	0	99	445	.2	3.8	.....	1,080	1.47	340	150	63	.....	1,950	....	
10cdc	4/20/66	613	....	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,700 F	....	
48-A 15acc	4/20/66	977	33	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,700 F	....	
-B 15cba	6/17/65	707	32	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,350 F	....	
-C 15ddd	9/26/60	846	31	36	117	12	398	170	0	191	605	3.3	5.6	.....	1,450	1.97	340	200	72	9.4	2,530	7.0	
	4/20/66	846	30	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,600 F	....	
16dad	6/15/65	.....	29	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,200 F	....	
18aab	9/ 4/53	378	27	30	63	30	305	283	15	114	400	.2	3.0	.....	1,100	1.50	280	24	70	.....	1,960	....	
22dab	4/20/66	915	29	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,600 F	....	
22ddc	4/20/66	982	29	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,600 F	....	
27daa	4/20/66	880	29	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,600 F	....	
27ddc	4/20/66	936	30	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,600 F	....	
32bba	9/ 4/53	260	24	30	502	183	798	215	0	492	2,150	.7	23	.....	4,280	5.82	2,000	1,830	....	.....	7,340	....	
	6/16/65	260	26	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	2,500 F	....	
34aac	4/20/66	953	30	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,750 F	....	
(C-4-6)27bdb	7/24/53	350	28	34	139	16	289	143	0	150	535	3.2	6.7	.....	1,240	1.69	413	296	60	.....	2,210	....	
	6/10/65	350	28	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,900 F	....	
28dac	10/ 1/65	600	27	....	....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	....	.....	.....	....	.....	1,400 F	....	
29aaa1	4/12/46	340	26	....	135	62	580	230	0	280	965	2.7	5.4	.....	2,140	2.91	592	404	....	.....	3,720	....	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-4-6)29aaa2	9/12/50	948	30	28	109	36	441	122	0	224	730	3.2	9.3	.....	1,640	2.23	420	320	70	.....	2,920	....	
	7/24/53	948	28	....	....	.....	.....	129	0	.....	760	....	....	.....	....	....	....	....	....	.....	2,980	....	
	6/ 4/54	948	....	....	....	.....	.....	125	0	.....	755	....	....	.....	....	....	....	....	....	.....	2,980	....	
	6/16/55	948	30	33	134	47	463	122	0	266	810	3.2	9.3	.....	1,830	2.49	528	428	66	8.7	3,170	7.6	
	8/24/56	948	30	....	....	.....	.....	130	0	.....	855	....	....	.....	....	....	620	514	....	.....	3,310	7.2	
	8/ 8/57	948	31	....	....	.....	.....	136	0	.....	850	....	....	.76	....	....	558	446	....	.....	3,290	8.1	
	9/24/65	948	31	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	2,200 F	....	
29dac	7/24/53	1,000	27	31	68	11	312	138	0	128	448	4.0	5.1	.....	1,080	1.47	214	102	76	.....	1,920	....	
	10/ 1/65	1,000	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,200 F	....	
31cdd	4/15/53	804	24	37	52	21	643	152	0	305	822	3.0	5.9	2.3	1,960	2.67	216	92	87	.....	3,350	....	
36adc1	4/16/53	960	28	29	116	22	358	150	0	142	618	3.2	8.8	.....	1,370	1.86	380	257	67	.....	2,440	....	
WW151 (C-4-7)34cdc	8/23/54	830	31	....	....	.....	.....	69	0	.....	450	....	....	.....	....	....	....	....	....	.....	1,800	....	
	10/ 8/65	830	31	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,200 F	....	
34ddd	9/11/52	463	29	40	35	3.5	346	77	0	123	460	5.2	2.1	.....	1,050	1.43	102	39	88	.....	1,860	....	
	4/15/53	463	29	....	....	.....	.....	75	0	.....	470	....	....	.....	....	....	....	....	....	.....	1,880	....	
	6/ 4/54	463	29	....	....	.....	.....	97	0	.....	470	....	....	.....	....	....	....	....	....	.....	1,920	....	
	6/18/65	463	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,500 F	....	
35dcd	6/18/65	700	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,400 F	....	
(C-5-3)8bbc	4/23/53	.....	32	21	67	6.1	418	90	0	165	595	5.0	4.5	.....	1,330	1.81	192	118	83	.....	2,360	....	
(C-5-4)3acc	4/20/66	986	30	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,600 F	....	
3cda	4/20/66	841	30	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,600 F	....	
8dbd	4/23/53	135	26	37	307	82	1,110	327	0	575	1,820	2.5	82	3.2	4,180	5.68	1,110	835	69	.....	6,860	....	Well destroyed later.
WW158 9ddd	4/20/66	1,400	30	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,750 F	....	
10bac	9/26/60	1,031	33	34	73	5.4	447	144	0	169	615	4.5	3.9	.....	1,420	1.93	204	86	83	14	2,520	7.1	
	4/20/66	1,031	32	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,600 F	....	
10cbc	4/20/66	1,133	31	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,600 F	....	
16dba	4/20/66	1,090	28	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,700 F	....	
16dcc	4/20/66	1,036	27	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,800 F	....	
18add	7/ 3/53	501	26	24	30	3.5	316	132	0	100	392	4.0	2.2	.....	937	1.27	90	0	88	.....	1,690	....	
	6/ 3/54	501	26	....	....	.....	.....	131	0	.....	390	....	....	.....	....	....	....	....	....	.....	1,690	....	
	6/16/55	501	26	....	....	.....	.....	138	0	.....	405	....	....	.....	....	....	....	....	....	.....	1,700	7.3	
	8/22/56	501	26	....	....	.....	.....	132	0	.....	405	....	....	.....	....	....	98	0	....	.....	1,700	7.5	
	8/ 8/57	501	26	....	....	.....	.....	106	62	.....	400	....	....	.80	....	....	127	0	....	.....	1,800	9.3	
	7/14/58	501	26	....	....	.....	.....	133	0	.....	405	....	....	.....	....	....	90	0	....	.....	1,740	7.3	
	8/ 5/65	501	26	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,500 F	....	
	4/17/66	501	26	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,400 F	....	
19ddd	4/23/53	926	28	28	65	6.3	423	106	0	155	600	4.0	1.7	1.2	1,340	1.82	188	101	83	.....	2,390	....	
	6/16/65	926	27	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	2,000 F	....	
	4/18/66	926	27	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	2,000 F	....	
WW159 21bdc	4/20/66	1,200	27	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,750 F	....	
21cbd	6/16/55	1,009	26	39	143	15	564	132	6	277	865	2.8	1.4	.....	1,990	2.71	418	300	73	.....	3,380	8.5	
	4/20/66	1,009	27	....	....	.....	.....	.....	....	.....	.....	....	....	.....	....	....	....	....	....	.....	1,800 F	....	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-5-4)31add	7/16/65	1,217	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,200 F	...	
	4/18/66	1,217	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,000 F	...	
31cac1	7/ 3/53	1,746	35	32	49	3.5	391	62	0	141	545	5.6	8.7	...	1,210	1.65	137	86	86	...	2,170	...	City water supply well.
31cac2	2/ 5/46	1,746	42	39	22	1.6	365	47	0	130	465	6.9	8.8	3.0	1,060	1.44	62	23	...	...	1,850	...	City water supply well.
WW160 31cbd	4/17/53	1,752	...	...	...	...	...	42	0	...	475	...	...	...	...	...	...	...	...	...	1,910	...	City water supply well.
32bcb2	4/24/53	955	29	33	24	3.7	310	78	0	107	390	4.4	15	...	925	1.26	75	11	90	...	1,650	...	
(C-5-5)18dcb	4/16/53	960	27	35	192	63	767	172	0	356	1,320	3.1	30	2.0	2,850	3.88	192	63	69	...	4,830	...	
18dda	4/16/53	550	24	30	242	72	626	219	0	283	1,240	2.1	40	1.4	2.640	3.59	900	720	60	...	4,490	...	
18ddc1	9/12/50	1,031	26	33	160	43	606	234	0	233	1,020	2.0	20	...	2,230	3.03	576	384	70	...	3,920	...	Caved in and destroyed in 1956.
	4/16/53	1,031	...	...	...	...	...	224	0	...	995	...	...	...	...	...	...	...	...	...	3,780	...	
22cdd	2/16/66	1,447	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,500 F	...	
	4/18/66	1,447	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,800 F	...	
23cdd	8/ 4/65	1,307	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,400 F	...	
	4/17/66	1,307	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,300 F	...	
24bba	4/17/53	130	24	26	114	40	268	238	0	136	484	.6	14	...	1,200	1.63	449	254	56	...	2,130	...	
	8/22/56	130	29	25	248	97	368	235	0	227	980	.4	8.9	...	2,070	2.22	1,020	826	44	5.0	3,830	7.1	
24cdd	6/ 9/65	1,400	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,700 F	...	
(C-5-6)1cdd	6/ 9/65	900	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,300 F	...	
2bbc	6/ 9/65	600	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,500 F	...	
	4/20/66	600	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,200 F	...	
2dbb	4/10/46	425	24	...	50	9.4	293	191	0	92	382	2.6	2.9	...	926	1.26	164	7	...	...	1,680	...	
3acc	4/16/53	534	25	34	89	43	628	164	0	282	930	7.0	7.8	...	2,100	2.86	399	264	77	...	3,630	...	
4ddd	6/25/65	700	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,400 F	...	
	4/20/66	700	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,200 F	...	
6ada	9/12/50	956	26	...	...	...	...	148	0	...	630	...	...	...	...	...	...	...	...	...	2,580	...	
	4/15/53	956	24	45	176	101	1,080	340	0	525	1,670	2.1	12	3.1	3,780	5.14	854	576	73	...	6,180	...	
	6/22/65	956	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5,800 F	...	
11cda	7/24/53	920	27	36	42	5.7	327	162	0	98	422	3.0	2.8	...	1,020	1.39	128	0	85	...	1,820	...	
	6/24/65	920	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,400 F	...	
	4/20/66	920	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,200 F	...	
12ddd	4/16/53	525	24	32	210	49	580	183	12	262	1,080	2.0	19	1.4	2,340	3.18	726	556	63	...	4,000	...	
	6/24/65	525	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,500 F	...	
13adc	4/10/46	280	23	...	118	39	565	236	0	181	915	2.3	5.9	...	1,940	2.64	455	262	...	...	3,460	...	
	10/ 3/51	280	22	29	222	74	672	244	0	305	1,270	1.9	8.2	...	2,700	3.67	858	658	63	...	4,770	...	
	9/11/52	280	24	37	296	90	811	257	0	399	1,580	1.9	16	...	3,360	4.57	1,110	898	61	...	5,680	...	
	9/ 4/53	280	24	...	...	...	...	244	0	...	1,600	...	...	...	...	...	...	...	...	...	5,850	...	
	8/23/54	280	24	38	461	131	1,170	263	0	619	2,370	1.1	23	...	4,940	6.72	1,690	1,470	60	12	8,050	...	
	6/16/55	280	25	44	304	122	840	257	0	425	1,710	1.9	21	...	3,590	4.88	1,260	1,050	59	10	6,020	7.9	
	8/24/56	280	24	...	...	...	...	241	0	...	1,770	...	...	...	...	...	1,400	1,200	...	...	6,320	7.7	
	8/ 8/57	280	24	...	...	...	...	190	0	...	1,800	...	...	1.2	...	...	1,200	1,040	...	...	6,290	7.9	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-5-6)34ccd	6/16/55	1,000	26	44	290	69	1,270	179	0	981	1,800	4.0	51	.....	4,600	6.26	1,010	860	73	17	7,160	7.8	
(C-5-7)1aaa2	4/16/53	700	31	36	38	13	427	124	0	142	580	3.2	1.5	.75	1,300	1.77	148	47	86	.....	2,290	....	
	6/18/65	700	25	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3,200 F	....	
1abd2	10/ 8/65	825	28	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,400 F	....	
1baa	10/ 5/51	700	....	42	36	7.0	364	113	0	113	490	3.2	2.0	.....	1,110	1.52	119	26	87	.....	1,990	....	
	9/11/52	700	26	....	....	....	....	112	0	....	495	....	....	....	....	....	....	....	....	....	1,990	....	
	4/15/53	700	26	....	....	....	....	99	0	....	495	....	....	....	....	....	....	....	....	....	1,960	....	
	6/16/55	700	27	38	33	9.5	387	113	0	126	515	4.0	3.6	.....	1,170	1.59	122	29	87	15	2,040	6.9	
	8/31/56	700	26	....	....	....	....	112	0	....	500	....	....	....	....	....	126	34	....	....	2,030	7.8	
	8/ 8/57	700	26	....	....	....	....	115	0	....	500	....	....	1.4	....	....	108	14	....	....	2,010	7.2	
(C-6-4)5aba	4/14/53	229	28	....	....	....	....	82	0	....	620	....	....	....	....	....	....	....	....	....	2,380	....	
7ccc	4/17/53	236	27	34	82	15	234	109	0	85	406	2.2	22	.77	934	1.27	266	176	66	.....	1,660	....	
29acc	4/17/53	302	31	34	62	14	364	126	0	164	500	4.0	18	1.00	1,220	1.66	212	109	79	.....	1,220	....	
49-A (C-6-5)2adb	6/16/55	1,000	33	44	138	25	468	76	0	226	810	4.0	17	.....	1,770	2.41	448	358	69	9.6	3,060	7.6	
	6/11/65	1,000	35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,800 F	....	
-B 2bdc	9/22/55	985	38	31	48	4.3	459	66	0	197	608	5.6	5.8	.....	1,390	1.89	138	84	88	17	2,400	6.9	
50 3cbd	6/11/65	1,000	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,600 F	....	
51 ww 16/9 4dcb	7/29/65	1,061	34	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,400 F	....	
6dad	4/17/53	.....	19	35	25	4.8	211	79	0	153	208	7.0	5.2	1.8	688	.94	82	18	85	.....	1,170	....	
C 6ddd	7/30/65	1,017	29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,500 F	....	
11cda	4/24/53	.....	28	5.1	46	20	289	43	0	88	486	4.4	1.8	.46	961	1.31	197	162	76	.....	1,800	....	
23dda	5/ 8/51	405	30	31	50	3.1	331	62	0	152	445	5.2	8.0	.....	1,060	1.44	138	86	84	.....	1,060	7.4	U.S. Air Force base supply.
	4/22/53	405	28	....	....	....	....	63	0	....	445	....	....	....	....	....	....	....	....	....	1,870	....	
25bbb1	5/ 8/51	400	31	39	54	3.3	331	64	0	151	450	5.2	11	.....	1,080	1.47	148	96	83	.....	1,910	7.1	
(C-6-6)8dba	4/16/53	296	24	32	56	7.6	360	57	0	178	490	4.4	23	.....	1,180	1.60	170	124	82	.....	2,030	....	
9bca	4/17/53	275	27	31	36	4.3	319	57	0	138	415	6.0	12	.....	989	1.35	108	61	87	.....	1,750	....	
11dcd	5/ /63	1,130	21	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2,100 F	....	Quality data during drilling available.
18dcc	4/17/53	300	25	....	....	....	....	85	0	....	492	....	....	....	....	....	....	....	....	....	2,090	....	
32cdd	12/ 5/65	.....	28	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,400 F	....	
32ddd	12/ 2/65	.....	28	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,100 F	....	
per Table 1 (C-7-4)3aba	4/17/53	385	31	35	63	7.0	392	62	0	225	520	5.0	8.2	.....	1,290	1.75	186	135	82	.....	2,230	....	
(C-7-5)6aab	1/31/46	280	....	....	23	4.4	227	107	0	124	236	6.9	2.0	10	676	.92	76	0	....	.....	1,200	....	
	4/22/53	280	....	....	....	....	....	134	0	....	242	....	....	....	....	....	....	....	....	....	1,280	....	
(C-7-6)4add	12/ 2/65	895	29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,150 F	....	
4bdc	9/23/65	900	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,240 F	....	

Table 3. --Chemical analyses of ground water in selected wells in the Gila Bend basin—Continued

Well location	Date of collection	Depth of well (feet)	Temperature (°C)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Milligrams per liter	Dissolved solids: Tons per acre-foot	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Remarks
(C-7-6)4ddd	12/ 2/65	986	28	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,200 F	....	
9add	12/ 2/65	950	29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,150 F	....	
9dca	9/23/65	960	29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,100 F	....	

Table 4. --Drillers' logs of selected wells in the Gila Bend basin

(1)	Thickness (feet)	Depth (feet)
(C-2-4)25ccc		
Sandy gravel fill	287	287
Gravel, marble-size, water	27	314
Clay	19	333
Granite rock	4½	337½
Water, gravel, and sand	32½	370
Sandy clay	19	389
Rock granite	2	391
Water, gravel, and sand	7	398
Clay	25	423
Water, gravel, and coarse sand	21	444
Shale	6	450
[Log of deepened well]		
Hard shale	9	459
Coarse gravel	29	488
Granite rock	6	494
Clay	16	510
Granite	4	514
Fine sand	10	524
Granite	7	531
Coarse gravel	33	564
Granite	7	571
Sand gravel	17	588
Gravel	31	619
Granite	2	621
TOTAL DEPTH		621
(C-2-4)26add		
Sandy clay	68	68
Hard granite	8	76
Granite gravel	188	264
Gravel, sand, and water	25	289
Granite boulders	4	293
Granite gravel	38	331
Boulders and rock	36	367
Decomposed granite	64	431
Sandy clay	34	465
Granite rock	16	481
Gravel, sand, and water	31	512
TOTAL DEPTH		512
(C-2-4)29dda		
Sandy soil	50	50
Conglomerate	170	220
Sand	12	232
Boulder—hard sand and gravel	143	375
Gravel and boulders	45	420
TOTAL DEPTH		420
(C-2-4)31daa		
Surface soil with streaks of gravel	170	170
Gravel	86	256
Clay	34	290
Gravel with streaks of clay	145	435
Hard clay and gravel mix	17	452
TOTAL DEPTH		452
(C-2-4)32ada		
Surface clay	160	160
Gravel, streaks of cemented gravel	240	400
Cemented gravel	12	412
Water gravel	33	445
Cemented gravel	5	450
TOTAL DEPTH		450
(C-2-4)32caa		
Surface soil	140	140
Dry gravel and rocks	25	165
Gravel with streaks of clay	295	460
TOTAL DEPTH		460

(2)	Thickness (feet)	Depth (feet)
(C-2-4)33bca		
Surface sand	20	20
Coarse sand and gravel	80	100
Coarse gray sand and boulders	120	220
Gravel with sand streaks	60	280
Cemented conglomerate	160	440
Loose coarse decomposed granite	140	580
Decomposed granite and loose sand	240	820
Fine gray sand imbedded in boulders	140	960
Cemented conglomerate	37	997
TOTAL DEPTH		997
(C-2-5)28aab		
River sand and gravel—salty water	45	45
Alternating hard and soft lava layers	645	690
Granitic fill and rounded gravel	240	930
Granite	50	980
TOTAL DEPTH		980
(C-3-4)4baa		
Sand and gravel—hit granite at 250 feet	250	250
TOTAL DEPTH		250
(C-3-4)4bdd		
Surface sand and gravel	100	100
Sand and gravel	380	480
Rock and granite	12	492
TOTAL DEPTH		492
(C-3-4)6bba		
Sandy clay and gravel	60	60
Quicksand	12	72
Cemented sand, hard clay, and gravel	46	118
Cemented clay and gravel and cemented sand	252	370
Round wash gravel to 4 inches	25	395
Decomposed granite	88	483
Hard clay and gravel	17	500
Cemented boulders and gravel	45	545
TOTAL DEPTH		545
(C-3-4)6caa		
Sandy silt	39	39
Gravel to 8 inches	31	70
Clay, sand, and gravel to 6 inches	20	90
Clay and small gravel	130	220
Hard clay and gravel	276	496
Cemented gravel	34	530
[Log of deepened well]		
Granitic fill	285	815
TOTAL DEPTH		815
(C-3-4)6dab		
Surface silt and sand	20	20
Brown sand with streaks of gravel	80	100
Coarse gray sand, streaks of malpais	40	140
Fine gray sand	20	160
Gray sand with streaks of malpais	40	200
Waterworn gravel, streaks of gray sand	40	240
Gray sand, malpais streaks	120	360
Fine gray sand, gravel streaks	120	480
Fine gray sand	20	500
TOTAL DEPTH		500
(C-3-4)7aaa		
Sandy silt	9	9
Caliche	6	15

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-3-4)7aaa—Continued		
Coarse sand	33	48
Clay and gravel	12	60
Sandy clay, hard	82	142
Gravel to 2 inches	53	195
Clay and gravel	7	202
Sandy clay	24	226
Clay and gravel	39	265
Gravel to 2 inches	30	295
Hard clay and gravel	37	332
TOTAL DEPTH		332
(C-3-4)8bab		
Soil	15	15
Gravel, streaks of sandstone	105	120
Water gravel	280	400
Cemented gravel	6	406
TOTAL DEPTH		406
(C-3-4)8caa		
Clay sand	18	18
Hard packed	4	22
Gravel to 6 inches	4	26
Clay, gravel to 5 inches	12	38
Clay, sand	19	57
Gravel to $\frac{3}{4}$ inch	22	79
Clay caliche	7	86
Clay, gravel	50	136
Gravel, clay, streaks of conglomerate	38	174
Gravel to $1\frac{1}{2}$ inches	5	179
Gravel, clay, streaks of conglomerate	25	204
Cemented gravel	5	209
Gravel to 1 inch, clay cemented gravel	17	226
Coarse sand, gravel to 2 inches	48	274
Cemented sand, gravel	2	276
Coarse sand, gravel to 8 inches	94	370
TOTAL DEPTH		370
(C-3-4)9aad		
Sand, clay	65	65
Hard sand, gravel, water	125	190
Gravel	214	404
Hard gravel	70	474
TOTAL DEPTH		474
(C-3-4)9baa		
Surface sand and clay	130	130
Sand and gravel	46	176
Clay with streaks of gravel	29	205
Gravel	49	254
Tight gravel with streaks of clay	71	325
Clay	55	380
Gravel	46	426
Clay and gravel mix	64	490
TOTAL DEPTH		490
(C-3-4)9caa		
Hard clay and sandstone	30	30
Tough clay	28	58
Clay streaks and gravel	20	78
Hard sandy clay	24	102
Gravel	16	118
Hard cemented gravel	17	135
Gravel, water	127	262
Gravel and clay mix	13	275
Gravel	119	394
Clay, gravel, and boulders	32	426
Gravel and boulders	28	454
Clay and gravel mix	46	500
TOTAL DEPTH		500

	Thickness (feet)	Depth (feet)
(C-3-4)10caa2		
Topsoil	4	4
Sand and small gravel	121	125
Gravel and some clay binder	175	300
Conglomerate—cemented	90	390
Granite—very hard	110	500
TOTAL DEPTH		500
(C-3-4)14aad		
Surface sand	145	145
Sand and boulders	325	470
Sand	130	600
TOTAL DEPTH		600
(C-3-4)15adc		
Soil	4	4
Clay and decomposed granite gravel (gray)	166	170
Decomposed granite gravel and boulders	65	235
Decomposed granite gravel and boulders	50	285
Decomposed granite gravel	65	350
Decomposed granite gravel and some sand	50	400
Gray clay	2	402
Decomposed granite gravel and boulders with clay streaks	22	424
Decomposed granite gravel	21	445
Decomposed granite gravel and boulders with layers of clay	60	505
Decomposed granite boulders	22	527
(Yellow) decomposed granite gravel with layers of clay	43	570
Yellow, decomposed granite rock	46	616
Yellow, decomposed granite gravel with layers of clay	34	650
TOTAL DEPTH		650
(C-3-4)15bdd		
Surface sand	60	60
Sand and gravel	110	170
Sand	173	343
Gray sand and streaks of gravel	107	450
Decomposed granite	15	465
TOTAL DEPTH		465
(C-3-4)15daa		
Sand and gravel	20	2[illegible]
Sand	25	4[illegible]
Tight sand	70	11[illegible]
Sand, gravel	85	20[illegible]
Sand, boulders	70	27[illegible]
Sand, gray	140	41[illegible]
Granite formation	10	42[illegible]
TOTAL DEPTH		42[illegible]
(C-3-4)16daa		
Surface clay	160	1[illegible]
Water gravel	246	4[illegible]
Cemented gravel	6	4[illegible]
TOTAL DEPTH		4[illegible]
(C-3-4)17aab		
Gravel	55	
Caliche	47	1
Sand and gravel	26	1
Caliche, clay, and gravel	14	1
Soft clay and gravel	288	4
Gravel	140	[illegible]
Gravel and boulders	90	[illegible]
Tight sand and gravel with big boulders	120	[illegible]
TOTAL DEPTH		

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-3-4)17add		
Soil	3	3
Sandy clay	3	6
Clay	6	12
Gravel	4	16
Clay and sand	16	32
Clay	3	35
Clay and sand	34	69
Sandy sheet	1	70
Gravel—first water	10	80
Clay and gravel	5	85
Caliche	2	87
Clay and gravel	48	135
Gravel	167	302
TOTAL DEPTH		302
(C-3-4)19bbb		
Silt soil	6	6
Gravel (Gila), first water at 56 feet	58	64
Gravel (granite)	16	80
Shows of gravel	22	102
Gravel	8	110
Shell	2	112
Gravel in clay	112	224
Gravel	4	228
Gravel in clay	22	250
Shell	4	254
Gravel in clay	28	282
Gravel	40	322
Gravel in clay and shells	68	390
Gravel in clay	60	450
Shell	4	454
Gravel in clay	6	460
TOTAL DEPTH		460
	T.D	1200'
(C-3-4)19ccd		
Soil	6	6
Gravel boulders	56	62
Sand and gravel	88	150
Sandy shale	210	360
Clay and gravel	75	435
Conglomerate rock with layers of clay	672	1,107
TOTAL DEPTH		1,107
(C-3-4)20aaa		
Surface soil	22	22
Sand	41	63
Pea gravel and boulders	21	84
Sand, coarse gravel and boulders	208	292
Coarse sand and boulders	122	414
Sand and boulders	267	681
TOTAL DEPTH		681
(C-3-4)21cab		
Soil silt	5	5
Gravel	4	9
Sand	5	14
Gravel	4	18
Clay and gravel	17	35
Clay and sand	21	56
Clay	4	60
Clay and sand	11	71
Clay and gravel	3	74
Clay and sand	21	95
Gravel	6	101
Clay and gravel	61	162
Gravel	12	174
Clay and gravel	11	185
Gravel	103	288
Clay and shells	4	292
Gravel	8	300
Sand and gravel	10	310
Tight sand and gravel	140	450
(C-3-4)21cab—Continued		
Decomposed granite	100	550
TOTAL DEPTH		550
(C-3-4)21cda		
Clay and soil	4	4
Clay and sand	2	6
Sand	4	10
Clay and sand	20	30
Sand and gravel	35	65
Clay and sand	45	110
Coarse sand and gravel	10	120
Clay	10	130
Clay sand, gravel	30	160
Sand and gravel	16	176
Sand, gravel, some cement streaks	104	280
Sand and gravel, small streaks of clay	296	576
Granite	236	812
TOTAL DEPTH		812
(C-3-4)22ddd1		
Surface sand	35	35
Sand, gravel	45	80
Boulders, gravel	65	145
Sand, gravel with some boulders	25	170
Sand with streaks of clay	105	275
Sand, clay	55	330
Sand, gravel	13	343
Gray sand	107	450
Hard granite formation	15	465
TOTAL DEPTH		465
(C-3-4)22ddd2		
Topsoil	6	6
Clay and gravel	444	450
Conglomerate, cemented	35	485
Granite—very hard	115	600
TOTAL DEPTH		600
(C-3-4)23baa		
Surface sand	60	60
Sand, gravel	140	200
Sand, boulders	100	300
Hard gray sand	60	360
Decomposed granite	12	372
TOTAL DEPTH		372
(C-3-4)23bba		
Surface soil	22	22
Sand and gravel	79	101
Clay	3	104
Coarse sand and gravel	64	168
Clay	4	172
Coarse sand and gravel	32	204
Sandy clay	7	211
Coarse gravel and boulders	45	256
Sandy clay	3	259
Coarse gravel	136	395
Hard rock	2	397
TOTAL DEPTH		397
(C-3-4)28abb		
Clay and sand	6	6
Clay	9	15
Sand and gravel	15	30
Tight sand and gravel	20	50
Clay and sand gravel	20	70
Clay	10	80
Sand and gravel	32	112

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-3-4)28abb—Continued		
Sand	18	130
Clay	10	140
Clay and sand gravel	30	170
Sand and gravel, small streaks of clay	370	540
Coarse sand and gravel, streaks of cement	206	746
Cement	4	750
Coarse sand and gravel	44	794
Cemented gravel	6	800
Coarse sand and gravel, boulders	118	918
TOTAL DEPTH		918
(C-3-4)28acc C		
Sandy soil	9	9
Sand and gravel to 6 inches in diameter	143	152
Clay and gravel to 3 inches	138	290
Sand and gravel to 6 inches	322	612
Sand—gravel, some cemented	388	1,000
TOTAL DEPTH		1,000
(C-3-4)33aba		
Sandy gravel	8	8
Sandy clay	19	27
Gravel	34	61
Gravel No. 2	59	120
Clay	14	134
Decomposed granite not loose	466	600
Decomposed tight granite with loose streaks	200	800
TOTAL DEPTH		800
(C-3-4)33adb		
Sand gravel	5	5
Caliche and tight sand gravel	13	18
Clay and sand gravel	17	35
Tight sand and gravel	5	40
Clay and sand gravel	110	150
Sand gravel and small streaks of clay	170	320
Sand and gravel	8	328
Sand gravel and streaks of clay	74	402
Sand and gravel and hard streaks	84	486
Sand and gravel and cemented streaks	218	704
Clay	2	706
Sand and gravel and hard streaks	64	770
Cement and boulders	5	775
TOTAL DEPTH		775
(C-3-4)33adc		
Sandy gravel	8	8
Sandy clay	19	27
Gravel	34	61
Gravel to 2 inches	59	120
Clay	14	134
Decomposed granite with loose streaks	466	600
Light decomposed granite with loose streaks	200	800
TOTAL DEPTH		800
(C-3-4)33dab		
Caliche, coarse sand, and gravel	18	18
Clay, sand, and gravel	17	35
Tight sand and gravel	5	40
Clay sand and gravel—water at 120 feet	100	140
Sand gravel, small streaks of clay	180	320
Sand and gravel	10	330
Sand and gravel—small streaks of clay	70	400
Bottom clay		
TOTAL DEPTH		400
(C-3-4)33ddd		
Loose gravel	40	40
Caliche	68	108
(C-3-4)33ddd—Continued		
Gravel	16	124
Clay—gravel	56	180
Caliche, clay, and gravel	75	255
Sand and gravel	15	270
Clay and gravel	40	310
Soft clay and gravel	90	400
Decomposed granite	220	620
Granite	20	640
TOTAL DEPTH		640
(C-3-5)1aaa		
Silt soil	2	2
Sandy clay	8	10
Coarse sand	4	14
Sandy clay	15	29
Gravel (Gila)	22	51
Gravel in clay	12	63
Gravel	19	82
Clay	38	120
Gravel	23	143
Shell	2	145
Gravel in clay	11	156
Gravel	20	176
Gravel in clay	26	202
Gravel	160	362
Gravel in clay	28	390
Stratas of shell and gravel	10	400
Gravel	10	410
Stratas of shell and gravel	60	470
Gravel in clay	20	490
TOTAL DEPTH		490
(C-3-5)2cbb		
Sandy soil	6	6
Clay	3	9
Sandy clay	1	10
Clay	2	12
Gravel (coarse), first water at 25 feet	20	32
Decomposed granite gravel	150	182
Granite gravel in clay	38	220
Decomposed granite gravel	25	245
Granite gravel in clay	3	248
Decomposed granite gravel	8	256
Conglomerate (hard)	64	320
TOTAL DEPTH		320
(C-3-5)13bac Pass		
Soil	15	15
Rock and boulders	40	55
Sandy shale	10	65
Sand and gravel	35	100
Sand and gravel with clay streaks	110	210
Sticky clay	28	238
Sand gravel and clay	65	303
Rock and clay	37	340
Conglomerate (clay, granite, quartz, etc.)	531	871
Streaks of sticky clay with layers of granite rock; some very hard and some of loose granite gravel	46	917
Granite gravel	8	925
Conglomerate with streaks of sticky clay	42	967
Sand	6	973
Unknown	34	1,007
TOTAL DEPTH		1,007
(C-4-4)3abb		
Surface formation, streaks of sandstone	90	90
Fine gravel	60	150
Clay and gravel—water at 165 feet	40	190
Gravel	22	212
Silt	6	218
Gravel	22	240
Silt	5	245
Gravel and silt streaks	35	280

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-4-4)3abb—Continued		
Gravel	16	296
Silt	4	300
Gravel	25	325
Clay and gravel	11	336
Clay	6	342
Gravel (clay bottom)	8	350
TOTAL DEPTH		350
(C-4-4)4bdd		
Silt soil	3	3
Gravel (dry)	7	10
Clay	2	12
Gravel (dry)	6	18
Clay	2	20
Gravel in clay	8	28
Clay	10	38
Gravel (first water)	8	46
Sand	11	57
Gravel, Gila (coarse)	11	68
Gravel, granite	16	84
Clay	2	86
Gravel in clay	2	88
Gravel	4	92
Clay	4	96
Gravel	12	108
Clay	8	116
Gravel	12	128
Clay and sand	30	158
Clay	4	162
Sandy clay	11	173
Shell	2	175
Clay and sand, mucky	15	190
Clay	26	216
Show of gravel	30	246
Clay	3	249
Gravel in clay	17	266
Stratas of clay and gravel	18	284
Clay	4	288
Gravel and clay stratas	15	303
Clay	3	306
Mucky sand	10	316
Clay	0	
TOTAL DEPTH		316
(C-4-4)10bba		
Soil to sand	241	241
Sand and gravel	139	380
Hard gravel	180	560
Sand and gravel	340	900
Rock, conglomerate	41	941
TOTAL DEPTH		941
(C-4-4)10bcd		
Surface sand and silt	40	40
Sand with streaks of clay	28	68
Sand and gravel	96	164
Sand and boulders	157	321
Sand, boulders, and streaks of gravel	80	401
Hard sand	34	435
Boulders with streaks of hard sand	77	512
Sand and boulders with streaks of clay	58	570
Sand and boulders	34	604
Sand and gravel	76	680
Sand and boulders	62	742
Gravel and boulders	40	782
Sand and gravel	14	796
Hard sand	60	856
Sand embedded boulders	90	946
Hard sand with some black malpais	69	1,015
TOTAL DEPTH		1,015
(C-4-4)10cdc		
Surface silt and sand	35	35
(C-4-4)10cdc—Continued		
Sand and gravel	91	126
Boulders and sand	148	274
Boulders and gravel	146	420
Black, red, and green malpais	39	459
Gravel and malpais	121	580
Hard sand with embedded boulders	6	586
Decomposed granite	27	613
TOTAL DEPTH		613
(C-4-4)15cba		
Soil	14	14
Sand and gravel	186	200
Cemented granite wash	24	224
Granite wash, loose	166	390
Granite wash with cemented streaks	135	525
Sand and gravel	115	640
Cemented granite wash	30	670
Decomposed granite (hard)	37	707
TOTAL DEPTH		707
(C-4-4)15ddd		
Surface sand and soil	40	40
Gravel and small rock, 2 inches	25	65
Sand and gravel	125	190
Sand	290	480
Cemented conglomerate	15	495
Sand	351	846
TOTAL DEPTH		846
(C-4-4)18aab		
Surface soil	18	18
Sand and gravel (water)	20	38
Tight sandy clay	56	94
Tight sand and gravel	80	174
Gravel and streaks of boulders	76	250
Cemented gravel	10	260
Gravel and boulders	118	378
TOTAL DEPTH		378
(C-4-4)22dab		
Topsoil	12	12
Cemented sand and hard boulders	388	400
Fine sand	180	580
Sand and sand fill	195	775
Hard sand and conglomerate	140	915
TOTAL DEPTH		915
(C-4-4)22ddc		
Surface sand and soil	18	18
Hard cemented gravel	29	47
Sand	178	225
Pea gravel with sand	265	490
Sand	480	970
Shale	12	982
TOTAL DEPTH		982
(C-4-4)27daa		
Surface sand and soil	28	28
Coarse sand and gravel	86	114
Sand	248	362
Cemented conglomerate	39	401
Sand	479	880
TOTAL DEPTH		880
(C-4-4)27ddc		
Surface sand and soil	20	20
Gravel	66	86

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-4-4)27ddc—Continued		
Sand and gravel	424	510
Hard cemented sand	22	532
Sand and gravel	393	925
Shale	11	936
TOTAL DEPTH		936
(C-4-4)32bba		
Hill	28	28
Boulders	32	60
Gray granite	8	68
Boulders	32	100
Sand	14	114
Clay and gravel	19	133
Sandy clay	20	153
Conglomerate	25	178
Red clay and rock	30	208
Brown clay and rock	43	251
Lava rock	9	260
TOTAL DEPTH		260
(C-4-4)34aac		
Topsoil	50	50
Coarse	50	100
Silt and clay	90	190
Sand	60	250
Coarse sand and gravel	130	380
Sandy clay	120	500
Fine sand	90	590
Cemented sand	60	650
Sand and gravel	150	800
Coarse sand	153	953
TOTAL DEPTH		953
(C-4-4)34dcb		
Surface sand and soil	30	30
Sand and gravel (continuous—no formation break)	778	808
TOTAL DEPTH		808
(C-4-6)28dac		
Sand	20	20
Sharp lava rock	55	75
Sharp lava rock in clay	185	260
Cemented clay and lava	8	268
Soft sandy clay	5	273
Hard clay and lava	7	280
Soft sandy clay and gravel	20	300
Gravel and some clay	20	320
Gravel in clay	60	380
Concrete or cemented gravel	4	384
Gravel in soft clay	16	400
Gravel in hard clay	5	405
Caliche	5	410
Gravel to 6 inches	15	425
Cemented gravel	9	434
Gravel to 4 inches	11	445
Cemented gravel	2	447
Sticky clay	5	452
Hard clay and sharp gravel	13	465
Short shells 2 to 4 feet apart. Gravel between 4 inches	135	600
TOTAL DEPTH		600
(C-4-6)29aaa1		
Soil	5	5
Gravel in clay	7	12
Clay	24	36
Gravel (first water) rose to 30 of surface	4	40
Shells and gravel in clay	196	236
Gravel	6	242
Shells and gravel in clay	44	286
(C-4-6)29aaa1—Continued		
Gravel	16	302
Shell	8	310
Gravel in clay	14	324
Clay, hard	6	330
Gravel in clay	10	340
TOTAL DEPTH		340
(C-4-6)31cdd		
Surface soil	10	10
Quicksand	5	15
Boulders, streaks of gravel	53	68
Yellow clay	152	220
Sandy clay, soft with small gravel	21	241
Yellow clay	174	415
Gravel, thin streaks of yellow clay	20	435
Fine sand and gravel, streaks of clay	85	520
Gravel, fine sand, some clay	69	589
Coarse gravel and boulders	21	610
Coarse gravel with clay streaks	160	770
Coarse gravel, boulders, and clay streaks	34	804
TOTAL DEPTH		804
(C-4-7)35dcd		
Surface sand and clay	100	100
Clay	100	200
Clay streaks, sand, and coarse gravel	180	380
Fine sand, gravel, and streaks of clay	100	480
Clay with sand streaks	80	560
Clay streaks and coarse gravel	80	640
Riverbed gravel and sand	60	700
TOTAL DEPTH		700
(C-4-7)36daa		
Sandy loam, some boulders	30	30
Coarse river-worn gravel	50	80
Sandy clay loam (compact) with frequent gravel streaks from 5 to 20 feet thick	316	396
TOTAL DEPTH		396
(C-5-4)3acc		
Surface sand and soil	38	38
Sand and gravel	164	202
Shale	23	225
Sand	761	986
TOTAL DEPTH		986
(C-5-4)3cda		
Surface sand and soil	30	30
Sand and gravel (continuous, no formation break)	811	841
TOTAL DEPTH		841
(C-5-4)10bac		
Surface sand and soil	38	38
Sand and gravel	164	202
Shale	23	225
Sand	806	1,031
TOTAL DEPTH		1,031
(C-5-4)10cbc		
Topsoil	40	40
Fine sand	130	170
Sandy clay	120	290
Sand and gravel	140	430
Clay and coarse sand	290	720
Coarse sand	150	870
Sand and cement	150	1,020

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-5-4)10cbc—Continued		
Hard sand and boulders	113	1,133
TOTAL DEPTH		1,133
(C-5-4)16dba		
Surface sand and soil	30	30
Sand	240	270
Small gravel	40	310
Shale	16	326
Sand and gravel	249	575
Shale	16	591
Sand and gravel	319	910
Gravel	26	936
Sand	154	1,090
TOTAL DEPTH		1,090
(C-5-4)18add		
Sandy silt	18	18
Sand	6	24
Sand and gravel with a little clay	6	30
Sand, gravel, and boulders	24	54
Stratas of clay and sand (water bearing from 24 to 100 feet)	46	100
Dry clay	22	122
Clay and stratas of sand (water)	82	204
Dry clay	6	210
Sandy clay with small gravel (water)	40	250
Dry clay	10	260
Stratas of clay, pack sand, and sand	20	280
Stratas of cemented sand and sand	20	300
Sandy clay	20	320
Stratas of cemented sand, sand, and small gravel	10	330
Stratas of clay and sand	14	344
Sandy clay	66	410
Stratas of dry clay and sandy clay (some water, 280 to 422 feet)	12	422
Stratas of sandy clay and sandstone	18	440
Dry clay	12	452
Sandy clay (water ?)	18	470
Clay with small gravel (dry)	31	501
TOTAL DEPTH		501
(C-5-4)19ddd		
Soil	3	3
Silt, gravel, and clay	15	18
Sand, small gravel	16	34
Sand, gravel, and boulders	6	40
Sand, sandstone, and clay	50	90
Strata of sand, clay	74	164
Sand, small gravel with strata of cemented sand	21	185
Strata of sand, gravel, clay, and cemented sand	51	236
Dry clay	19	255
Sandy clay with strata of sand rock	71	326
Dry clay	14	340
Strata of clay, sand, and cemented sand	42	382
Dry clay	9	391
Strata of clay, sand, and sandstone (water)	49	440
Dry clay	11	451
Sand, clay with strata of dry clay, some water in sandy clay	49	500
Dry clay with small gravel	20	520
Dry clay	58	578
Strata of sand, clay, and cemented sand, some water	6	584
Dry clay	46	630
Silty clay, a little water	20	650
Dry clay	6	656
Strata of clay, pack sand, and small gravel, water	34	690
Dry clay	10	700
Strata of sand, gravel, cemented sand gravel	38	738
Strata of clay, sand, gravel, cemented sand, gravel	20	758
Strata of sand gravel, clay with mountain rock	43	801
Mountain wash sand and mountain rock	125	926
TOTAL DEPTH		926
(C-5-4)21bdc		
Surface sand	70	70
Sand and boulders	74	144
Sand with a few streaks of boulders	229	373
Clay	107	480
Sand with gravel streaks	233	713
Sand with coarse gravel	187	900
Boulders and sand	71	971
Sandy clay	35	1,006
Clay	50	1,056
Tight sand with boulders	144	1,200
TOTAL DEPTH		1,200
(C-5-4)21cbd		
Surface silt and sand	65	65
Sand with streaks of clay	82	147
Gravel with streaks of clay	213	360
Boulders and gravel with streaks of clay	143	503
Boulders and gravel	243	746
Boulders and streaks of clay	87	833
Boulders and sand	61	894
Clay	26	920
Sand and boulders	51	971
Hard sand with some black malpais	22	993
Sand and red and black malpais	16	1,009
TOTAL DEPTH		1,009
(C-5-4)29dbb		
Surface sand and silt	60	60
Sand and gravel	40	100
Sand and boulders	45	145
Coarse sand and gravel	139	284
Sand with streaks of clay	106	390
Gravel with streaks of clay	200	590
Sand and gravel with small streaks of clay	94	684
Clay	116	800
Sand	96	896
Sand and gravel with streaks of clay	55	951
Sand and gravel	86	1,037
TOTAL DEPTH		1,037
(C-5-4)31add		
Surface silt and sand	76	76
Sand and gravel	28	104
Sand with streaks of gravel	102	206
Coarse sand	77	283
Gravel with streaks of sand	92	375
Gravel with streaks of clay	89	464
Sand with streaks of clay	126	590
Clay with streaks of fine sand	115	705
Clay with streaks of sand and gravel	210	915
Gravel with streaks of clay	149	1,064
Sand and gravel	123	1,187
Sand with streaks of clay	30	1,217
TOTAL DEPTH		1,217
(C-5-4)31cac1		
Dry gravel	30	30
Clay	20	50
Sand	20	70
Dry gravel	4	74
Cemented gravel	16	90
Sandy clay	150	240
Clay	860	1,100
Shale and mud	25	1,125
Clay and malpais	15	1,140
Rock	35	1,175
Fine sand (water struck at 1,175 feet)	1	1,176
Rock	83	1,259
Clay with gravel	12	1,271
Rock	13	1,284
Clay and gravel	23	1,307
Rock	5	1,312
Clay and gravel	10	1,322
Red rock	9	1,331

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-5-4)31cac1—Continued		
Clay and gravel	24	1,355
Light rock	6	1,361
Clay and gravel	32	1,393
Quartz rock	5	1,398
Cement gravel	18	1,416
Clay	11	1,427
Cement gravel	18	1,445
Clay	20	1,465
Boulders in clay	9	1,474
Clay and gravel	21	1,495
Boulders and clay	15	1,510
Clay and gravel	20	1,530
Rock	25	1,555
Clay	13	1,568
Hard rock	33	1,601
Clay	11	1,612
Rock	9	1,621
Clay	19	1,640
Rock	7	1,647
Clay	17	1,664
Rock	9	1,673
Clay	8	1,681
Rock	13	1,694
Clay	14	1,708
Rock	6	1,714
Sand carrying water	18	1,732
Clay	8	1,740
Rock	6	1,746
TOTAL DEPTH		1,746
(C-5-4)31cac2		
Sand and gravel	25	25
Clay—boulder	20	45
Fine sand	20	65
Fine gravel	15	80
Coarse gravel	12	92
Clay	53	145
Fine sand, water bearing	30	175
Sandy clay	50	225
Fine sand	10	235
Sandy clay	235	470
Clay and hot mud	410	880
Cemented clay	20	900
Coarse sand	5	905
Hard clay	215	1,120
Hard clay and rock	50	1,170
Sand	15	1,185
Sand—rock	25	1,210
Rock	49	1,259
Clay with gravel	12	1,271
Rock	13	1,284
Clay and gravel	23	1,307
Rock	5	1,312
Clay and gravel	10	1,322
Red rock	9	1,331
Clay—gravel	24	1,355
Light rock	6	1,361
Clay and gravel	32	1,393
Quartz rock	5	1,398
Cement gravel	18	1,416
Clay	11	1,427
Cement gravel	18	1,445
Clay	20	1,465
Boulders in clay	9	1,474
Clay—gravel	21	1,495
Boulders—clay	15	1,510
Clay—gravel	20	1,530
Rock	25	1,555
Clay	13	1,568
Hard rock	33	1,601
Clay	11	1,612
Rock	9	1,621
Clay	19	1,640
Rock	7	1,647
Clay	17	1,664
Rock	9	1,673
Clay	8	1,681
Rock	13	1,694
Clay	14	1,708
Rock	6	1,714
(C-5-4)31cac2—Continued		
Sand	18	1,732
Clay	8	1,740
Rock	6	1,746
TOTAL DEPTH		1,746
(C-5-4)31dac		
Gravel	300	300
Sand and gravel	176	476
Sand and clay	73	549
Malpais	71	620
Sand	155	775
Sand and gravel	201	976
Sand	24	1,000
TOTAL DEPTH		1,000
(C-5-4)32bcb2		
Soil	2	2
Gravel and sand	9	11
Caliche	19	30
Silt and sand	43	73
Sand and small boulders	7	80
Sand and gravel	10	90
Clay	25	115
Sand and small gravel (water-bearing sand at 115 feet)	35	150
Sand	15	165
Clay	2	167
Sand and clay	23	190
Silt and sand	20	210
Sand and clay	8	218
Sand	29	247
Clay	10	257
Sand	38	295
Clay	5	300
Sand	47	347
Clay	5	352
Sand	13	365
Clay	15	380
Sand	7	387
Clay	8	395
Sand	25	420
Clay	15	435
Small gravel	5	440
Coarse sand	4	444
Alternate, sand, gravel, and clay	16	460
Sandy clay	12	472
Hard clay	108	580
Fine sand and clay—gain in water	230	810
Coarse sand, gravel, and clay	20	830
Clay, less sand, and gravel	35	865
Clay, less sand, and gravel	35	900
Unknown	55	955
TOTAL DEPTH		955
(C-5-4)32dcd1		
Surface soil	8	8
Caliche and fill	157	165
Water sand and gravel	4	169
Caliche, clay, and shells	26	195
Shells and water sand	25	220
TOTAL DEPTH		220
(C-5-4)32dcd2		
Dirt, gravel, and caliche	5	5
Sand, gravel	3	8
Caliche	4	12
Sandy, gravelly formation	48	60
Fine sand	5	65
Clay, some gravel	5	70
Sandy, gravelly loam	30	100
Clay	20	120
Sandy loam	20	140
Clay and gravel	25	165
Clay	5	170

Table 4.--Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-5-4)32dcd2—Continued		
Water sand	2	172
Clay	2	174
Sandstone in dirt formation	6	180
Sand, gravel, and clay	10	190
Sandy gravelly loam	10	200
Coarse sand and gravel, bedded in heavy loam	15	215
TOTAL DEPTH		215
(C-5-5)16cdd		
Topsoil	12	12
Loose gravel and sand	142	154
Packed sand and gravel	462	616
TOTAL DEPTH		616
(C-5-5)18bdd		
Clay	40	40
Boulders and gravel	42	82
Gravel	480	562
Clay with streaks of sand	212	774
Clay	21	795
Hard sand, dark	20	815
Dark sand	10	825
Clay	10	835
Hard sandy shale	30	865
TOTAL DEPTH		865
(C-5-5)18dcb		
Surface sand and gravel	45	45
Small gravel with streaks of clay	195	240
Clay	20	260
Light-colored sand and gravel	20	280
Clay	80	360
Sand and gravel with streaks of clay	170	530
Gray clay embedded with gravel	40	570
Sand with streaks of clay	200	770
Sand and gravel	70	840
Black sand and gravel	100	940
Red gravel	20	960
TOTAL DEPTH		960
(C-5-5)18ddc1 C		
Surface sand and gravel	312	312
Fine sand with streaks of clay	178	490
Sand	105	595
Coarse sand	20	615
Clay	125	740
Sand, coarse, with streaks of clay	49	789
Sand and gravel	44	833
Hard sand	16	849
Black sand, hard	37	886
Brown sand	55	941
Dark sand	59	1,000
Clay	31	1,031
TOTAL DEPTH		1,031
(C-5-5)18ddc2		
Sandy clay	45	45
Gravel and boulders	30	75
Sand, gravel, and boulders	80	155
Gravel and clay	50	205
Gravel and clay	95	300
Sand and gravel	125	425
Sand and gravel	175	600
Sand and gravel with some rock and clay	200	800
TOTAL DEPTH		800
(C-5-5)22cdd		
Topsoil	5	5
Gravel and boulders	70	75
(C-5-5)22cdd—Continued		
Sand with clay streaks	225	300
Mildly rocky, dark in color	120	420
Solid red rock, mild	217	637
Hard packed sand	313	950
Coarse sand, some gravel	80	1,030
Clay with sand	220	1,250
Sand with gravel streaks	60	1,310
Sandy clay	73	1,383
Cemented sand	64	1,447
TOTAL DEPTH		1,447
(C-5-5)23cdd		
Soil	5	5
Boulders and gravel	77	82
Shale	28	110
Sand	46	156
Shale	94	250
Sand	166	416
Sand and gravel	107	523
Shale	35	558
Sand	152	710
Shale	25	735
Sand and gravel	185	920
Shale	22	942
Small gravel—some sand	158	1,100
Sand	193	1,293
Shale	14	1,307
TOTAL DEPTH		1,307
(C-5-5)24cdd		
Topsoil	30	30
Coarse sand and gravel	240	270
Sandy clay	220	490
Cemented sand	120	610
Sand and boulders	250	860
Sandy clay and gravel	225	1,085
Clay	145	1,230
Gravel and cemented sand	170	1,400
TOTAL DEPTH		1,400
(C-5-5)36cda		
Topsoil and sand	18	18
Brown clay	8	26
Gravel	4	30
Streaks of fine sand in gravel	39	69
Coarse sand, gravel, and boulders—first water	11	80
Sand	13	93
Clay	15	108
Sandy clay with boulders	42	150
Sticky clay	10	160
Quicksand	5	165
Sandy clay	17	182
Coarse water sand	3	185
Sandy clay	25	210
Sand and gravel	30	240
Sandy clay	32	272
Sand, gravel, boulders, and streaks of clay	36	308
TOTAL DEPTH		308
(C-5-6)3acc		
Sandy soil	18	18
Sand, gravel, and boulders	17	35
Dry clay and caliche	15	50
Strata of sandy clay and sandstone	20	70
Dry clay	30	100
Strata of sandy clay, small gravel, and sandstone	40	140
Dry clay	20	160
Strata of sand, cemented sand, and small gravel	21	181
Sandy clay	19	200
Dry clay	13	213
Strata of sandy clay, sand and small gravel, and cemented sand	51	264
Dry clay	16	280

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-5-6)3acc—Continued		
Sandy clay with small gravel	27	307
Dry clay	7	314
Sandy clay with small gravel and strata of cemented sand	46	360
Dry clay	12	372
Strata of clay, with small gravel, and cemented sand and gravel	68	440
Mountain wash sand and rock and cemented sand	60	500
Mountain wash and mountain rock with a little clay	10	510
Dry clay with mountain wash and mountain rock	24	534
TOTAL DEPTH		534
(C-5-6)11cda		
Surface sand and clay	40	40
Clay	435	475
Small gravel	122	597
Clay	13	610
Small gravel	80	690
Clay and gravel	38	728
Small gravel	172	900
Hard fine sand	20	920
TOTAL DEPTH		920
(C-5-7)1aaa2		
Silty loam—boulders	40	40
Sandy clay with some pea gravel. Slightly water-bearing	420	460
Water-worn riverbed gravel. Abundant good water	240	700
TOTAL DEPTH		700
(C-5-7)1abd1		
Sandy silt—boulders	40	40
Sandy clay pea gravel, slightly water-bearing	60	100
TOTAL DEPTH		100
(C-5-7)1baa		
Silty loam and boulders	40	40
Sandy clay with pea gravel, slightly water-bearing	420	460
Water-worn riverbed gravel, abundant good water	240	700
TOTAL DEPTH		700
(C-6-5)2adb		
Gravel	278	278
Sand and gravel	197	475
Sand and clay	75	550
Malpais	80	630
Sand	151	781
Sand and gravel	214	995
Sand	5	1,000
TOTAL DEPTH		1,000
(C-6-5)2bdc		
Topsoil	6	6
Gravel	285	291
Gravel and sand	228	519
Sandy clay	41	560
Malpais	79	639
Sand	162	801
Gravel—sandy streaks	184	985
TOTAL DEPTH		985
(C-6-5)3cbd		
Gravel	280	280
Sand and gravel	179	459
Sand and clay	67	526
Malpais	152	678
Sand	215	893
(C-6-5)3cbd—Continued		
Sand and gravel	93	986
Sand	14	1,000
TOTAL DEPTH		1,000
(C-6-5)3dac		
Gravel	271	271
Sand and gravel	189	460
Sand and clay	95	555
Malpais	88	643
Sand	146	789
Sand and gravel	192	981
Sand	19	1,000
TOTAL DEPTH		1,000
(C-6-5)4dcb C		
Sand and soil	56	56
Gravel	62	118
Shale	18	136
Sand	74	210
Shale	31	241
Sand	279	520
Shale	43	563
Sand	312	875
Shale	33	908
Sand	153	1,061
TOTAL DEPTH		1,061
(C-6-5)25bbb2		
Gravel and boulders, some clay in hardpan	9	9
Less gravel, more clay (soft)	57	66
Harder, conglomerate, caliche-looking	18	84
Softer with more clay	21	105
Sandy clay	12	117
Soft sandy clay	19	136
Gravel in sandy clay	3	139
Very soft sandy clay	20	159
Sandy clay with pebbles	20	179
Firm; some gravel and boulders in clay	13	192
Soft sandy clay with pebbles	19	211
Gravel in clay	11	222
Soft clay with pebbles	9	231
Firm boulders in clay	5	236
Soft clay with pebbles and sand	39	275
Very soft and sandy (hole caving)	26	301
Gravelly clay, sandy	31	332
Gravelly, hard to drill	48	380
Loose gravel (hole caving)	7	387
Hard; boulders in clay	11	398
Loose material; 60 percent gravel	30	428
Gravel and loose sand in clay; 50 percent gravel	3	431
Gravel; 75 percent loose gravel	48	479
Firm; gravel with clay binder	62	541
40 percent gravel, streaks of sticky and sandy clay	19	560
Sticky clay with 30 percent gravel	16	576
Firm, hard; 30 percent gravel	11	587
Gravel	4	591
Sticky clay	3	594
Hard; 33 percent gravel in tough clay	3	597
Sandy clay with pebbles	4	601
Sticky clay	19	620
Sandy clay	6	626
Clay, with some sand and some gravel	6	632
Malpais with some clay (clay may be contaminant)	7	639
Harder; malpais, very little clay	7	646
TOTAL DEPTH		646
(C-6-6)2dcc C		
Topsoil	35	35
Sand and clay	115	150
Coarse sand	110	260
Clay	190	450
Fine sand	330	780
Sand and clay	170	950
Coarse sand and gravel	160	1,110

over

Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-6-6)2dcc—Continued		
Sand and clay	270	1,380
Sand and gravel	80	1,460
Clay, sand, and gravel	88	1,548
Unknown	12	1,560
TOTAL DEPTH		1,560
(C-6-6)4aaa		
Soil	4	4
Caliche	20	24
Fine dry sand and packed gravel	50	74
Caliche	15	89
Conglomerate gravel	64	153
Red clay	15	168
Quicksand	5	173
Red clay	19	192
Fine sand	27	219
Red clay and sand (2- and 3-foot streaks)	25	244
TOTAL DEPTH		244
(C-6-6)4dda		
Yellow clay	74	74
Sand to 2-inch gravel	64	138
Yellow clay	202	340
Sandy clay and gravel	4	344
Yellow sandy clay	118	462
Brown sandy clay and gravel	11	473
Yellow clay	19	492
Hard brown clay, layers of sand, and small gravel	128	620
Yellow sandy clay	62	682
Hard brown clay, sand, and small gravel	39	721
Clay and small gravel	3	724
Brown sandy clay	12	736
TOTAL DEPTH		736
(C-6-6)9cbc		
Clay	56	56
Sand and gravel	9	65
Clay	35	100
Sand	19	119
Sand and some gravel	71	190
Clay	22	212
Sand and clay	26	238
Sand and ½-inch gravel	7	245
Clay	55	300
Clay, sand, and gravel to ½ inch	50	350
Clay	35	385
Clay and caliche	30	415
Clay	135	550
Hard sandy clay	18	568
Clay	40	608
Hard sand and clay	292	900
Hard clay, streaked	178	1,078
Hard clay	22	1,100
Hard shell	10	1,110
Hard clay	32	1,142
Hard clay and hard shells	24	1,166
Sandstone	29	1,195
Hard clay	35	1,230
Hard clay	126	1,356
Hard clay and sand rock mix	32	1,388
Sandy clay	12	1,400
Volcanic rock	25	1,425
Hard clay	24	1,449
Hard clay and volcanic rock	113	1,562
Conglomerate	30	1,592
Hard clay	288	1,880
Conglomerate and volcanic rock	185	2,065
TOTAL DEPTH		2,065
(C-6-6)11dcd		
Soil and clay	40	40
Sand and clay	79	119
Sand and gravel (water at 150 feet)	56	175
Clay	55	230
(C-6-6)11dcd—Continued		
Gravel in clay	50	280
Dry clay	15	295
Gravel in clay	27	322
Sandy clay	90	412
Sand and gravel	13	425
Sandy clay	80	505
Sandy clay with some gravel	55	560
Sand and gravel	50	610
Clay and gravel	5	615
Sand and gravel	5	620
Clay, sand, and gravel	25	645
Sand and gravel	21	666
Clay and gravel	7	673
Stiff clay (20-foot drive shoe sealed in this clay)	127	800
Clay, sand, and gravel	10	810
Stiff clay	80	890
Sand	5	895
Sand and gravel	25	920
Streaks of sand and gravel with some sticky clay	50	970
Chatty gravel and silt, caving	20	990
Streaks of silt and sticky clay	55	1,045
Black volcanic wash	8	1,053
Cemented sand (soft sandstone)	7	1,060
Streaks of cemented sand with hard streaks becoming more solid	63	1,123
Rock—hard	7	1,130
TOTAL DEPTH		1,130
(C-7-5)6aab		
Soil	14	14
Caliche	244	258
Boulders and gravel	22	280
TOTAL DEPTH		280
(C-7-6)4ddd		
Topsoil—dry gravel	128	128
Schist	72	200
Clay and sand	130	330
Sand and gravel	150	480
Clay and silt	120	600
Clay and sand	40	640
Sand and gravel	20	660
Clay	30	690
Sand and gravel	20	710
Clay and silt	30	740
Sand and gravel	20	760
Sand and gravel	50	810
Clay and silt	30	840
Sand and gravel	46	886
All of the above sand and gravel beds are water bearing		
TOTAL DEPTH		886
(C-7-6)8ddd		
Sandy loam soil	6	6
Clay	89	95
Lava rock	55	150
Clay, silt, and sand	120	270
Sandy clay, water stands 280 feet	50	320
Clay, silt, and sand with light clay	80	400
Clay and sand, some water	80	480
Runny clay and sand	40	520
Hard silty clay, water level 268	160	680
Silt, clay, sand, and gravel, hard	50	730
Silt, sand, and heavy float water	35	765
Rock	20	785
TOTAL DEPTH		785
(C-7-6)9add		
Caliche	6	6
Hard clay	50	56
Malpais	70	126
Clay	139	265

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Table 4. --Drillers' logs of selected wells in the Gila Bend basin—Continued

	Thickness (feet)	Depth (feet)
(C-7-6)9add—Continued		
Sand (water)	5	270
Clay	317	587
Conglomerate	363	950
TOTAL DEPTH		950

	Thickness (feet)	Depth (feet)
(C-7-6)9ccc		
Caliche	15	15
Hard clay	34	49
Malpais	80	129
Clay	261	390
Sand	5	395
Clay	165	560
Conglomerate	200	760
Red rock (hard)	200	960
TOTAL DEPTH		960