

TEXAS WATER DEVELOPMENT BOARD

REPORT 16

WATER-LEVEL DATA FROM  
OBSERVATION WELLS IN  
CULBERSON, JEFF DAVIS, PRESIDIO  
AND BREWSTER COUNTIES, TEXAS

By

W. Ralph Muse

February 1966

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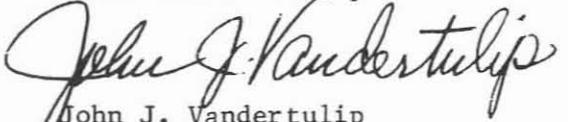
## FOREWORD

On September 1, 1965 the Texas Water Commission (formerly, before February 1962, the State Board of Water Engineers) experienced a far-reaching realignment of functions and personnel, directed toward the increased emphasis needed for planning and developing Texas' water resources and for administering water rights.

Realigned and concentrated in the Texas Water Development Board were the investigative, planning, development, research, financing, and supporting functions, including the reports review and publication functions. The name Texas Water Commission was changed to Texas Water Rights Commission, and responsibility for functions relating to water-rights administration was vested therein.

For the reader's convenience, references in this report have been altered, where necessary, to reflect the current (post September 1, 1965) assignment of responsibility for the function mentioned. In other words credit for a function performed by the Texas Water Commission before the September 1, 1965 realignment generally will be given in this report either to the Water Development Board or to the Water Rights Commission, depending on which agency now has responsibility for that function.

Texas Water Development Board



John J. Vandertulip  
Chief Engineer



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WATER - LEVEL DATA FROM  
OBSERVATION WELLS IN  
CULBERSON, JEFF DAVIS, PRESIDIO  
AND BREWSTER COUNTIES, TEXAS

INTRODUCTION

This report has been prepared to present water-level records to interested individuals and to maintain a current published record of the water-level data collected by the Texas Water Development Board in Culberson, Jeff Davis, Presidio, and Brewster Counties, Texas. Water-level data contained in this report is from observation wells located principally in areas of large withdrawals of ground water for irrigation and public use. Water-level measurements, related data, and interpretation of these data are presented in tabulations, location maps, hydrographs of special representative wells, and contoured water-level-decline maps. The water-level data presented in this report were obtained from the statewide network of observation wells measured by the Water Level Observation Section of the Texas Water Development Board.

Because water levels in an aquifer provide the key for all ground-water investigations, compilation of water-level data from selected wells on a long-term basis is essential. Water levels are particularly important for determining the amount of ground-water in storage, changes in storage, and direction of movement. Water-level data is as essential to ground-water studies as stream-gage data is to surface-water studies. Excessive declines of water levels, due primarily to over development, are a principal cause of increased pumping costs, decreased well yields, abandonment of shallower wells, and in some areas an undesirable change in water quality due to salt-water encroachment.

WATER-LEVEL OBSERVATION PROGRAM OF THE TEXAS WATER DEVELOPMENT BOARD

Observation wells are maintained by the Water Development Board in areas throughout the State for the purpose of observing changes in water levels in the principal aquifers. The Board's Water-Level Observation Program is directed toward the accomplishment of several objectives. These objectives are: (1) the selection, in every major aquifer, of a network of wells that are spaced to afford adequate data for preparation of piezometric maps or water-table contour maps referenced to sea-level datum; (2) annual or periodic measurement of water levels in each well in this network made at the time of year when water levels have recovered from the effect of pumping during the season of peak water demand; (3) the operation of continuous water-stage recorders in representative wells where a continuous record of water-level changes is needed; (4) preparation of maps and graphs that show the fluctuation of water levels as revealed

by water-level measurement, and (5) publication of water-level information and the evaluation of the data.

Prior to September, 1960, the water-level observation program for Texas was maintained by the U.S. Geological Survey in cooperation with the Texas Water Development Board. After that date direction of most of this program was assumed by the Board. The water-level observation program of the Texas Water Development Board is conducted by personnel of the Ground Water Division, a Board Technical Service Division, under the general direction of John J. Vander-tulip, Chief Engineer, and R. C. Peckham, Director of the Ground Water Division. This report was prepared under the supervision of Bernard B. Baker, Coordinator, Ground Water Availability Program, and Robert L. Bluntzer, Head, Water Level Section. Tabulations of water-level data contained in this report were prepared by the Board's Electronic Data Processing Division under the general supervision of Ivan Stout, Director.

The following personnel have participated in the collection of data in Culberson, Jeff Davis, Presidio, and Brewster Counties since 1960:

Curtis Andrews	Charles E. Ferguson
Robert L. Bluntzer	Sam Gammon
Joe Dillard	W. Ralph Muse
Don Draper	Jerry T. Thornhill

Appreciation is expressed to the city of Alpine Water Department and to the many landowners in Culberson, Jeff Davis, Presidio, and Brewster Counties for their interest and cooperation in allowing their wells to be used in the Board's observation well program.

#### METHODS FOR COLLECTION OF WATER-LEVEL DATA

Water levels in most of the observation wells maintained by the Board are measured annually. If possible, wells selected for annual observation purposes should not be equipped with a pump, and should be located a reasonable distance from heavily pumped wells. However, in areas of intense ground-water development, usually the only wells available for measurement are equipped with large-capacity turbine pumps. It is standard practice to measure the water levels in these wells only after sufficient time has lapsed following cessation of pumping for water levels to recover to a level representative of the general area. For irrigated areas it is most desirable to measure water levels during the winter months when pumping is at a minimum or nonexistent and when water levels have recovered to their highest level.

The depth to water in a well is obtained by measuring the distance from a known measuring point near the land surface to the water level in the well. The water level below land surface is then calculated by subtracting the vertical distance between the measuring point and the land surface from the depth to water below the measuring point. Water-level measurements are obtained by one of the following methods:

##### (1) Wetted Steel Tape Method

A calibrated steel tape is lowered into the well until a portion of the lower end of the tape is submerged in water. The depth to water below the

well's measuring point is obtained by subtracting the tape's wetted portion at the lower end from the footmark held at the well's measuring point.

Water levels measured with a steel tape are recorded in the Texas Water Development Board's records to the nearest hundredth of a foot. The wetted steel tape method for obtaining water-level measurements is considered the most accurate, and is the method most commonly used by the Board.

#### (2) Electric-Line Method

An electric line for measuring water levels operates on the principle of a completed electric circuit. When the electrode on the end of the electric line contacts the water surface in the well, the electric circuit is completed and is indicated on a current meter at the surface. Calibrated markings on the electric line provide a means for direct readings of the water level. The electric-line method is used when water-level measurements are unobtainable with a steel tape; such as in wells having leaky casing.

Water-level measurements obtained by this method are recorded in the Water Development Board's records to the nearest tenth of a foot.

#### (3) Air-Line Method

An air line is a metal tube attached to the outside of the pump column, and extends from the surface to some precisely known depth which is below the lowest water level to be measured. The air line is equipped with a pressure gage and an ordinary tire valve at the top of the well. The gage and tire valve are attached to the pump at some convenient place. The pressure required to force all the water out of the air line is equal to the pressure exerted by the column of water standing outside the air line. Some air-line gages read directly in feet of water; others, which are equipped with gages that read in pounds per square inch, must be converted to feet of water by multiplying the gage reading by 2.31. In both cases the resulting figure must be subtracted from the known vertical air-line length to determine the depth to water from the center of the gage. Air lines are usually installed on industrial and municipal wells, which have large capacity turbine pumps.

Water-level measurements obtained by the air-line method are recorded to the nearest foot in the Water Development Board's records.

The advantage of the air line is that water levels can be measured conveniently in wells that will not safely admit other measuring devices. Water levels can be safely measured by air line while a well is pumping and can be obtained in a sealed well which assures the owner that no contamination will take place by foreign matter falling into the well. The disadvantage of the air line is its accuracy. Since the air-line method is accurate only to the nearest foot, it cannot be used reliably where more precise measurements are required or desired.

#### (4) Automatic Recorder Method

An automatic water-level recorder consists of a float suspended by a metal tape or cable from a recording instrument installed over the well. As the float rises and falls with the water surface in the well, the motion is transferred to a pen which graphs the fluctuation on a clock-driven chart. The

continuous recording of water levels affords the best means for observing rapid and irregular water-level fluctuations in areas of large ground-water development.

Recorders must be visited at frequent intervals for purposes of maintenance, accuracy checks, and collecting of the water-level record. Water-level readings taken from the recorder charts are generally tabulated in the Water Development Board's records to the nearest hundredth of a foot.

#### (5) Flowing Well Method

When measuring water levels in flowing wells (water level above land surface), it is necessary that the well be shut-in so that a desired static pressure can be observed at some convenient measuring point near the ground. The static pressure is then converted to feet to give the water level above land surface. Flowing wells can be measured with a pressure gage, a mercury U-tube manometer, or a water manometer.

The accuracy for determination of the shut-in pressure of flowing wells is considerably less than the accuracy obtained when measuring wells with water levels below land surface. Most pressure gages cannot be read accurately to less than the nearest foot. Furthermore, unless the well is shut-in for a sufficient period of time, the measured pressure will be somewhat less than the true static pressure. Pressure measurements are recorded in the Water Development Board's records to the nearest foot.

Records of water-level measurements for wells in Culberson County date from 1946 to 1965; in Jeff Davis County, from 1950 to 1965; in Presidio County, from 1954 to 1965; and in Brewster County, from 1948 to 1965. Prior to 1960-61 most of the water-level measurements were made by personnel of the U.S. Geological Survey, but since then, the measurements have been made by personnel of the Texas Water Development Board. In general the measurements have been obtained annually, usually during the winter months.

### PRESENTATION OF DATA

For each water-level observation well in the Board's program, the water-level measurement, date of measurement, pertinent remarks, and initials of the person taking the measurement are recorded in the field on standard forms. The field data is later transferred to punch cards by the Board's Data Processing Division. By use of computers and other data processors, the water-level measurements can be statistically analyzed and the results printed in a concise tabular form. In this report, Tables 1, 2, 3, and 4 present well data, water-level measurements and changes from previous measurements for wells in Culberson, Jeff Davis, Presidio, and Brewster Counties. These tables were reproduced from direct print-outs of electronic data processing equipment.

Although water-level information can be presented in an efficient and orderly manner when using data-processing equipment, interpretation can be made much easier when the information is illustrated on graphs and maps.

A hydrograph is a diagram that shows the variation of the level, flow, velocity, or other property of water with respect to time. Hydrographs showing subsequent water-level measurements in a particular well afford a convenient means of illustrating seasonal or long-term water-level fluctuations and provide

a means of comparing the effects of precipitation, pumpage, and stream flow on water levels.

A water-level decline map shows the amount water levels are lowered throughout a particular area for a given time interval. Various magnitudes of water-level declines are shown on the map by contours representing the amount of decline for the selected time interval. The accuracy represented by each contour depends mainly on the accuracy, distribution, and completeness of water-level data throughout the area. Water-level decline maps are particularly useful for showing areas of pronounced water-level declines.

#### WELL-NUMBERING SYSTEM

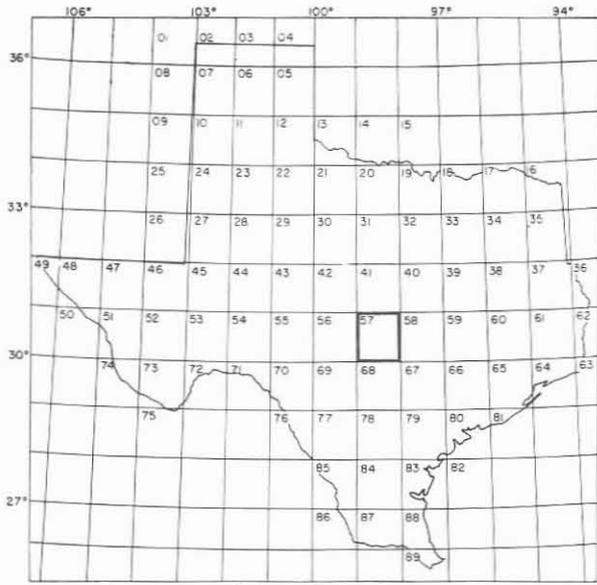
To facilitate the location of wells and to avoid duplication of well numbers in present and future studies, the Texas Water Development Board has adopted a statewide well-numbering system. This system is based on division of the State into grids formed by degrees of latitude and longitude and the repeated division of these grids into smaller ones, as shown in Figure 1.

The largest grid, a 1-degree grid, is divided into sixty-four  $7\frac{1}{2}$ -minute grids, each of which is further subdivided into nine  $2\frac{1}{2}$ -minute grids. Each 1-degree grid in the State has been assigned an identification number. The sixty-four  $7\frac{1}{2}$ -minute grids are numbered consecutively from left to right, beginning in the upper left corner of the 1-degree grid; and the nine  $2\frac{1}{2}$ -minute grids within the  $7\frac{1}{2}$ -minute grid are similarly numbered. The first 2 digits of a well number identify the 1-degree grid; the 3rd and 4th, the  $7\frac{1}{2}$ -minute grid; the 5th digit identifies the  $2\frac{1}{2}$ -minute grid; and the last 2 digits identify the well within the  $2\frac{1}{2}$ -minute grid.

State well numbers have been assigned to wells used in this report, and are presented in numerical order by counties in Tables 1, 2, 3, and 4. Corresponding well numbers previously published in Bulletins 5102 (Hood and Scalapino, 1951), 5415 (Follett, 1954a), 5712 (Littleton and Audsley, 1957), and 6111 (DeCook, 1961) are also presented in the tables.

#### FLUCTUATIONS OF WATER LEVELS

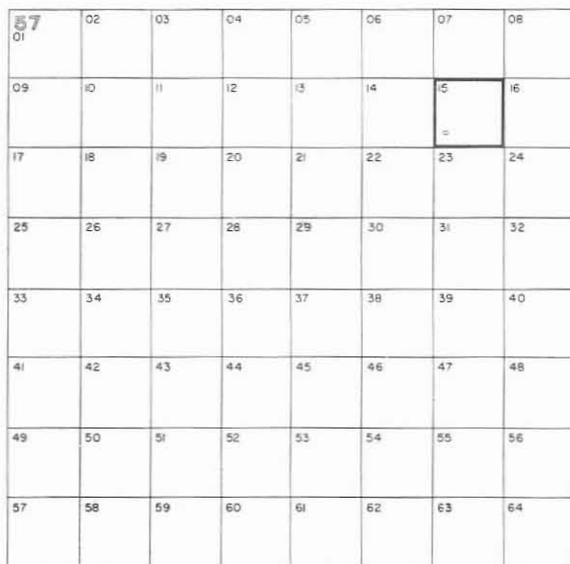
Changes in water levels are due to many causes. Some are of regional significance whereas others are local. The principal cause of water-level fluctuations are changes in recharge and discharge and reflect changes in the volume of water stored in an aquifer. When recharge is reduced, as in the case of drought, some of the water discharged from the aquifer must be withdrawn from storage, and water levels decline. When adequate precipitation resumes, however, the volume of water drained from storage in the aquifer during the drought may be replaced and water levels will rise accordingly. When a water well is pumped, the water table or the piezometric surface in the vicinity of the well is drawn down in the shape of an inverted cone with its apex at the pumped well. This cone is commonly referred to as the cone of depression. The development or growth of this cone depends on the aquifer's physical and hydraulic characteristics, and on the rate of pumping. As pumping continues, the cone expands and continues to do so until it intercepts a source of replenishment capable of supplying sufficient water to satisfy the pumping demand. This source of replenishment can be either intercepted natural discharge or induced recharge. If the quantity of water received from these sources is sufficient to compensate



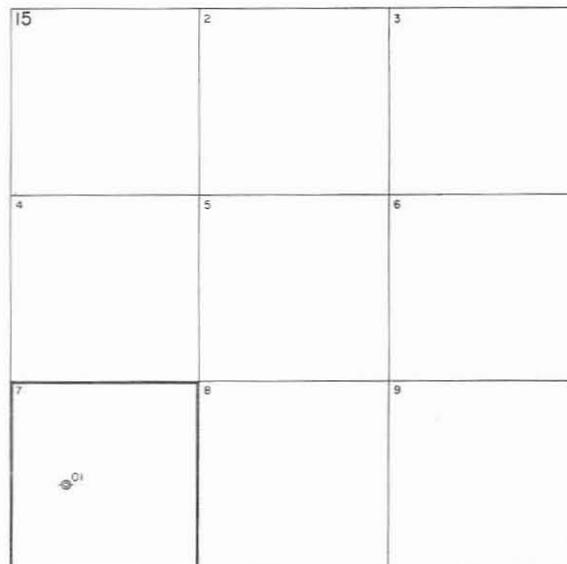
1-degree Quadrangles

Location of Well 57-15-701

- 37 1-degree quadrangle
- 15 7 1/2 minute quadrangle
- 7 2 1/2 minute quadrangle
- 01 Well number within 2 1/2 minute quadrangle



7 1/2-minute Quadrangles



2 1/2-minute Quadrangles

Figure 1  
Well-Numbering System

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for the water pumped, the growth of the cone of depression will cease, and new balances between recharge and discharge will be achieved. In areas where recharge is less than the amount of water pumped from wells, water is removed from storage in the aquifer to supply the deficiency, and water levels will continue to decline.

Where extensive development takes place in an aquifer, each well superimposes its individual cone of depression on the cones of neighboring wells. This results in the development of a regional cone of depression. When the cone of one well overlaps the cone of another, interference occurs and an additional lowering of water levels takes place as the wells compete for more water. The amount or extent of interference between these cones of depression depends on the rate of pumping from each well, the spacing between wells, and the hydraulic characteristic of the aquifer.

Water levels in some wells, especially those completed in artesian aquifers, have been known to fluctuate in response to such phenomena as changes in barometric pressure, tidal force, and earthquakes; however, the magnitude of these fluctuations is usually very small.

#### WATER-LEVEL FLUCTUATIONS IN CULBERSON, JEFF DAVIS, PRESIDIO, AND BREWSTER COUNTIES

Culberson, Jeff Davis, Presidio, and Brewster Counties occupy the central part of the area west of the Pecos River that is commonly referred to as Trans-Pecos Texas. Their location within the State and with respect to adjacent counties is shown on Figure 2.

The climate of Culberson, Jeff Davis, Presidio, and Brewster Counties is arid to semiarid, having hot summers, cold winters, scant precipitation, and a high rate of evaporation. The annual precipitation ranges from 6 to 16 inches. Nearly all of the precipitation in these four counties is rainfall, most of which is derived from local intermittent thunderstorms occurring during the summer months. The net annual lake surface evaporation is more than ten times the annual rainfall.

Despite generally inadequate rainfall, crops are successfully grown in certain areas of Culberson, Jeff Davis, and Presidio Counties by utilizing ground water for irrigation. Water-level data indicates that extensive pumping in the irrigated areas has considerably lowered the water table or piezometric surface of the underlying aquifers. Of particular significance are water-level declines in the Lobo Flats area of Culberson and Jeff Davis Counties. According to the land owners and to the farmers the annual fluctuations of water levels, caused primarily by pumpage in this area during the growing season, approach 70 to 90 feet. Also, the growing of certain grain crops has resulted in some withdrawals of ground water throughout the year causing additional decline in water levels.

The major portion of ground water pumped in Culberson and Jeff Davis Counties is for irrigation in the Wildhorse Flats area of Culberson County and in the Lobo Flats area of Culberson and Jeff Davis Counties. According to Gillett and Janca (1965), approximately 32,000 acre-feet of water was pumped in 1958 and about 27,000 acre-feet was pumped in 1964 in the two counties for irrigation. Davis (1961) reported that 36,000 acre-feet was pumped for irrigation in 1960 in the Wildhorse Flats and Lobo Flats areas.



On the basis of data presented by Gillett and Janca (1965), it is estimated that in 1964 about 4,400 acre-feet of water was pumped for irrigation purposes in Presidio County. Most of the irrigation development in the county occurs along the Rio Grande between the cities of Candelaria and Presidio. According to figures presented by Davis and Leggat (1965) more than 7,700 acre-feet of water was pumped for irrigation and public supply purposes in Presidio County in 1960. Of this total, 6,900 acre-feet was pumped for irrigation purposes, 5,400 acre-feet was pumped for irrigation purposes in the Candelaria-Presidio area. In contrast to Culberson, Jeff Davis, and Presidio Counties, Brewster County produced only 20 acre-feet of ground water for irrigation in 1964 (Gillett and Janca, 1965).

A relatively small amount of ground water is produced for industrial, domestic, and livestock use in scattered areas of the four counties. In those areas not characterized by heavy pumpage, water levels have not changed significantly.

Records of water levels from observation wells for Culberson County are presented in Table 1; for Jeff Davis County, in Table 2; for Presidio County, in Table 3; and for Brewster County, in Table 4. These tabular listings provide the following information: assigned State well numbers; well numbers used in earlier related bulletins; depth of well; completion interval (the data in this column indicates, in feet, that portion of the well casing that is open to the well bore to receive water from the aquifer); elevation of land surface, in feet above mean sea level; dates of measurements; measurements of water levels, in feet below land surface; and changes (decline or rise) in water levels from the previous year's measurement.

The locations of the water-level observation wells, listed in Tables 1 through 4, are shown on Plate 1, for Culberson County; on Plate 2, for Jeff Davis County; on Plate 3, for Presidio County; and on Plate 4, for Brewster County.

Hydrographs of selected representative wells are included in this report. They illustrate the long-term declines and (or) rises of water levels in the Wildhorse Flats area of Culberson County, the Lobo Flats area of Culberson and Jeff Davis Counties, the Candelaria district of Presidio County, and the Alpine area of Brewster County. These hydrographs include continuations of the hydrographs in Texas Water Commission Bulletin 6502 (Davis and Leggat, 1965) where water-level measurements were continued after the completion of that reconnaissance study. Precipitation data is also plotted in relation to water-level data for the Wildhorse Flats area of Culberson County (see Figure 3); for the Lobo Flats area in Culberson County (see Figure 4); and for the Alpine area, Brewster County (see Figure 7).

Hydrographs of Wells 47-51-403, 47-51-801, 47-59-104, 47-59-203, and 47-59-302, shown in Figure 3, illustrate typical water-level declines in the Wildhorse Flats irrigated area of Culberson County. Hydrographs of Wells 47-51-801, 47-59-104, and 47-59-203 were published in Bulletin 6502 (Davis and Leggat, 1965) for the period 1950-61. In this report the period of record has been extended to 1965. The water levels in these five wells show declines ranging from 13.7 feet in Well 47-51-801 to 32.0 feet in Well 47-51-403 since 1955, or an average decline of from 1.2 feet to about 2.9 feet per year during the period 1955-65. The last three digits of the State well number assigned these five wells are underlined on Plate 1 in order that the reader can easily locate them.

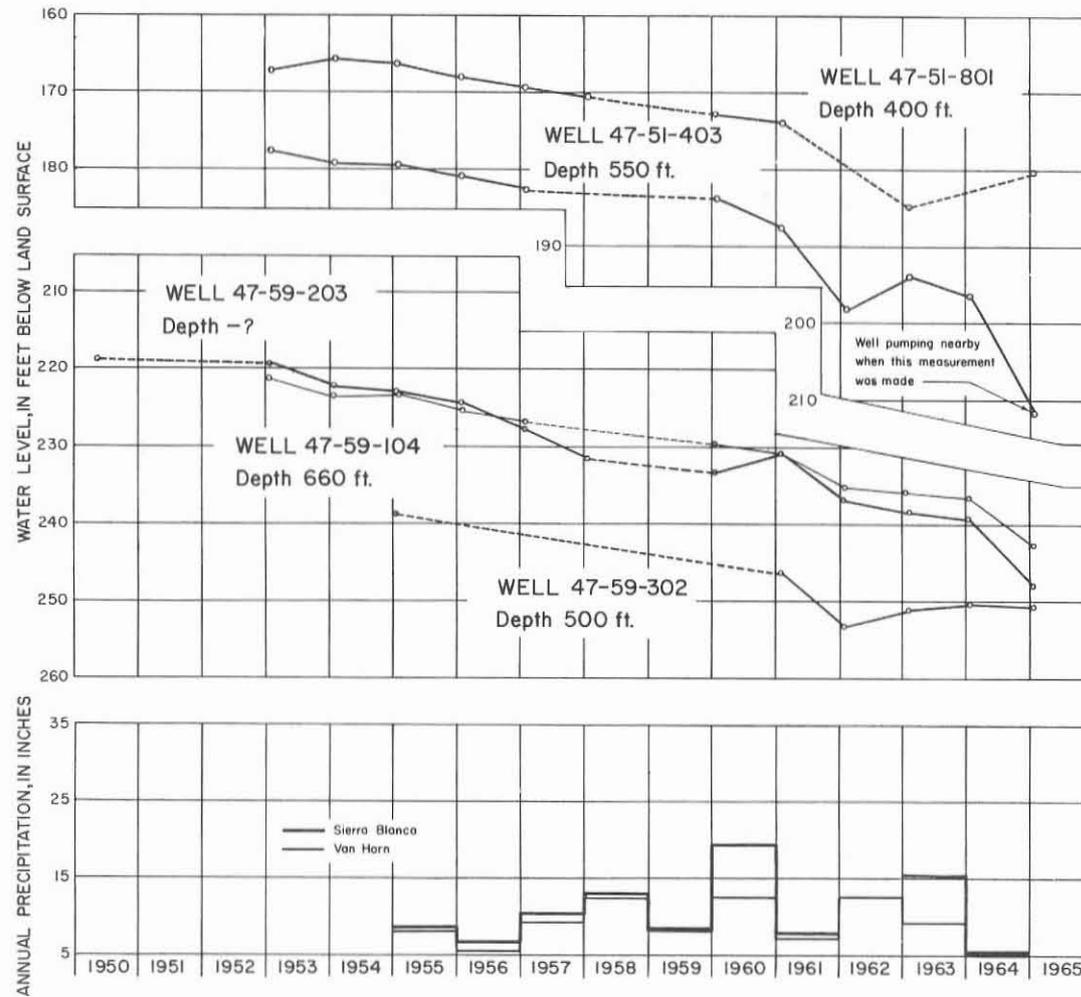


Figure 3  
Hydrographs of Selected Wells in the Wildhorse Flats Area, Culberson County, and Annual Precipitation at  
Van Horn and Sierra Blanca Reporting Stations  
(Precipitation Data from Records of the U.S. Weather Bureau)

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Hydrographs of Wells 51-02-903, 51-10-323, 51-10-901, and 51-11-101 (see Figure 4) illustrate typical water-level declines in the Lobo Flats irrigated area of Culberson County. Hydrographs of Wells 51-02-903, 51-10-901, and 51-11-101, were published in Texas Water Commission Bulletin 6502 (Davis and Leggat, 1965) for the period 1950-61. In this report the period of coverage has been extended to 1965. Well 51-10-323 with a period of record from 1953 to 1965 has been added to provide additional information on water-level changes in this area. Since 1955, the water-level declines in these four wells ranged from 28.5 feet in Well 51-10-901 to 87.1 feet in Well 51-02-903, or an average of 2.6 to more than 7.9 feet per year during the period of 1955-65. These water-level declines are considerably greater than those in the Wildhorse Flats area for the same time period. The last three digits of the State well number assigned these four wells are underlined on Plate 1 in order to assist the reader in locating them.

The same general conditions of water-level declines and precipitation that occur in the Lobo Flats area of Culberson County also occur in the Lobo Flats area of Jeff Davis County. However, the amount and extent of the decline is somewhat less as shown by hydrographs of Wells 51-19-101 and 51-19-301 in Figure 5 and by the water-level decline map (Figure 9).

A hydrograph of Well 51-51-803 illustrates typical water-level fluctuations in the Candelaria district of Presidio County. (See Figure 6.)

Hydrographs of Wells 52-43-202, 52-43-304, and 52-43-601 in Figure 7 illustrate typical water-level fluctuations in the Alpine area of Brewster County. Figure 7 also shows the annual precipitation at the Mount Locke and Alpine reporting stations. According to Littleton and Audsley (1957), the aquifers in the Alpine area are of local extent. Consequently, recharge in the area is entirely from local precipitation.

The water-level decline contour map (Figure 8) was prepared by utilizing the 1955 and 1965 annual measurement data from observation wells in the Wildhorse Flats area of Culberson County. The net change in the water level in each control well was determined by computing the difference between the water-level measurements obtained at the beginning and end of the period 1955-65. Declines average less than 0.5 feet per year near the margins of the area, and about 2.5 feet per year in the areas of heavy irrigation development. The map also shows two areas of depression created by the concentration of pumpage since 1955. The declines have averaged about 2.9 feet per year in the area of maximum decline in the northwest depression and about 2.2 feet per year in the southern depression.

The water-level decline contour map (Figure 9) was prepared by utilizing 1955 to 1965 annual measurement data from observation wells in the Lobo Flats area of Culberson and Jeff Davis Counties. The net change in the water level in each control well was determined by computing the differences in water-level measurements obtained at the beginning and end of the period 1955-65. Declines average about 2.3 feet per year near the margins of the area, and almost 8 feet per year in the areas of heavy irrigation development. This water-level decline contour map shows two areas of maximum decline created by the concentration of wells and pumpage since 1955.

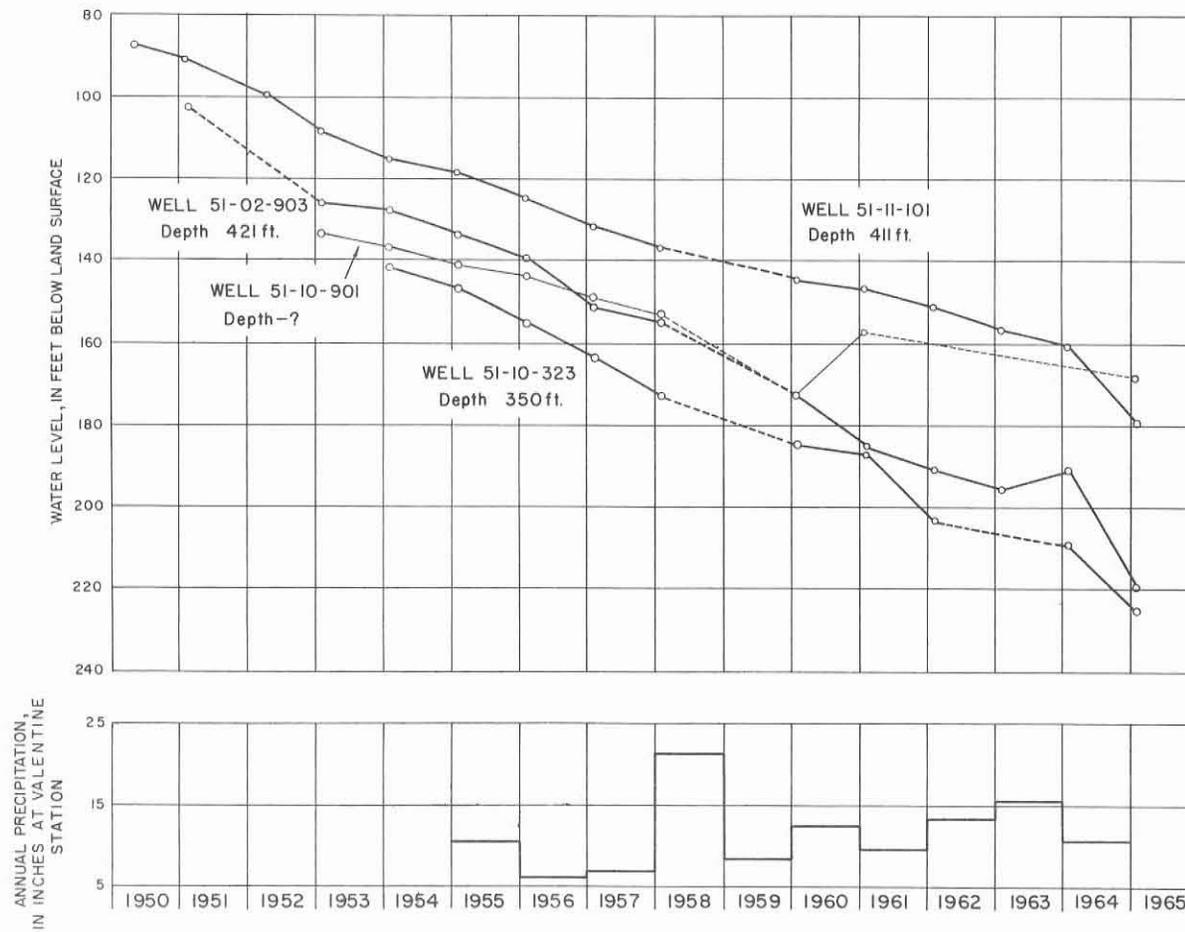


Figure 4  
Hydrographs of Selected Wells in the Lobo Flats Area, in Culberson County,  
and Annual Precipitation at Valentine Reporting Station  
(Precipitation Data from Records of the U.S. Weather Bureau)

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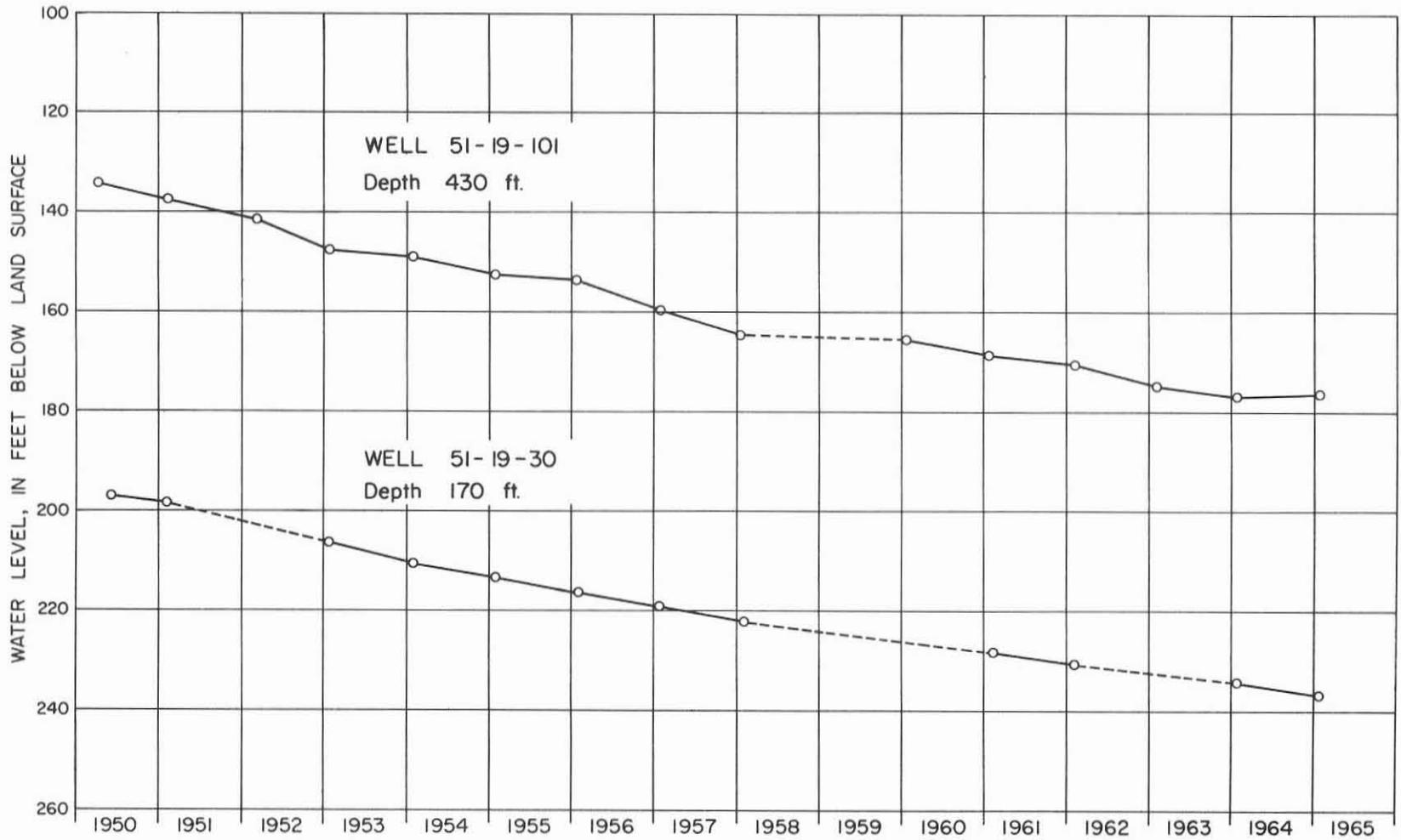


Figure 5  
Hydrographs of Selected Wells in the Lobo Flats Area, in Jeff Davis County

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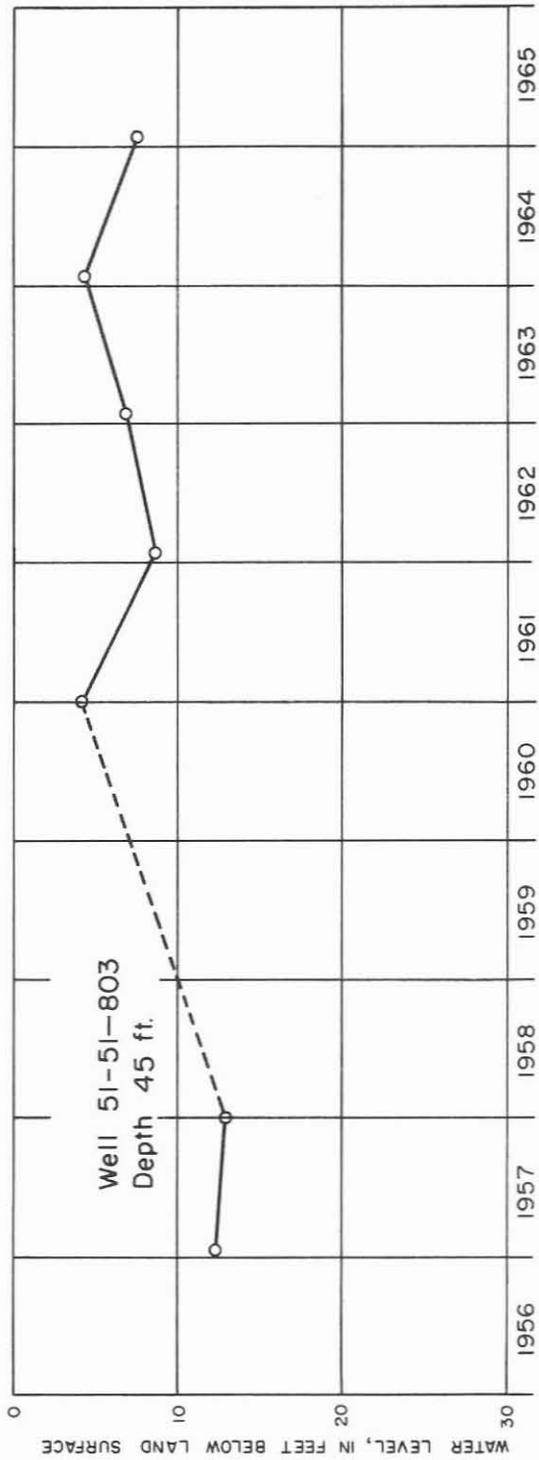


Figure 6  
 Hydrograph of Selected Well in the Candelaria Area, Presidio County  
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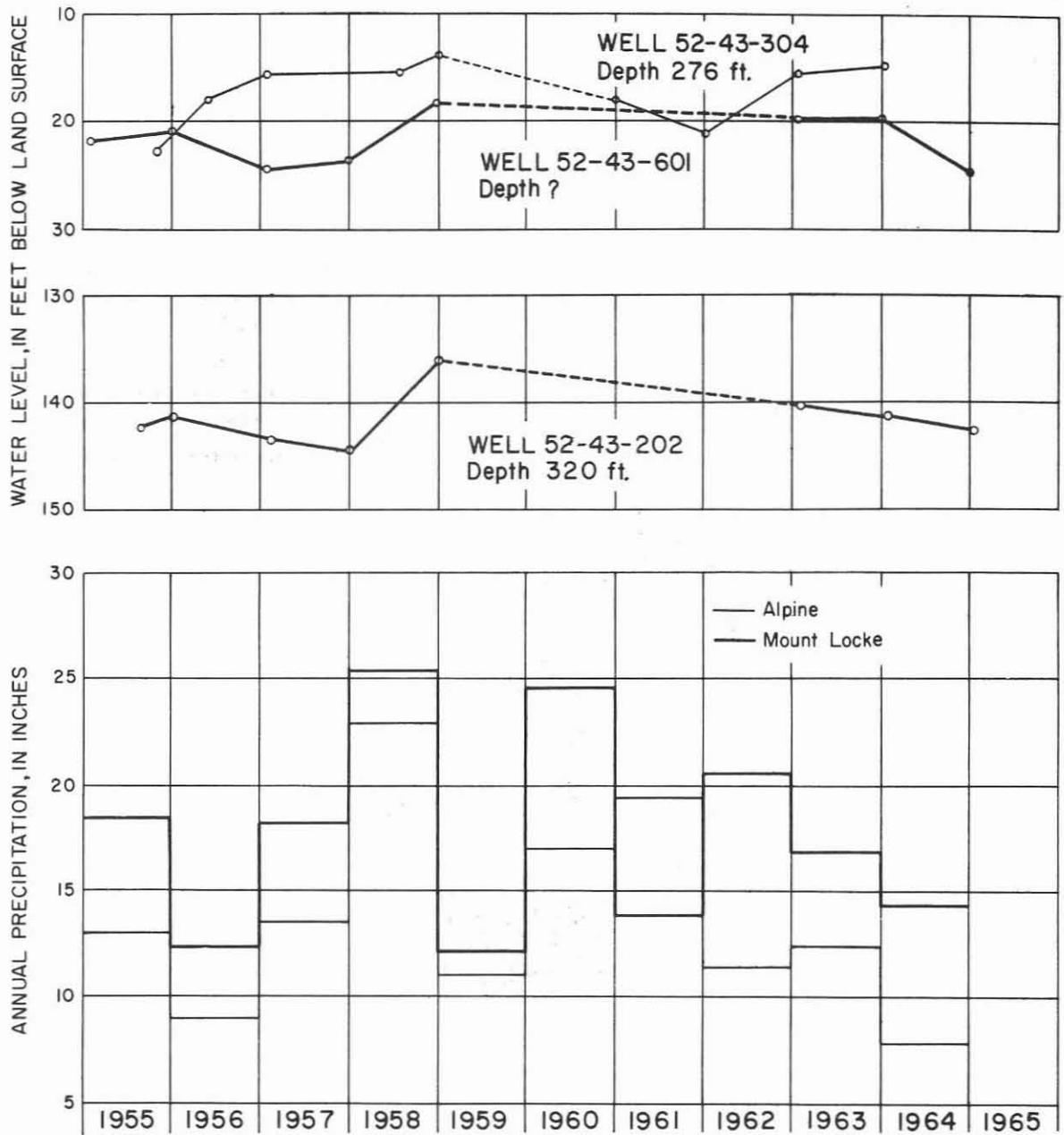


Figure 7  
 Hydrographs of Selected Wells in the Alpine Area, Brewster County,  
 and Annual Precipitation at Alpine and  
 Mount Locke Reporting Stations  
 (Precipitation Data from Records of the U.S. Weather Bureau)

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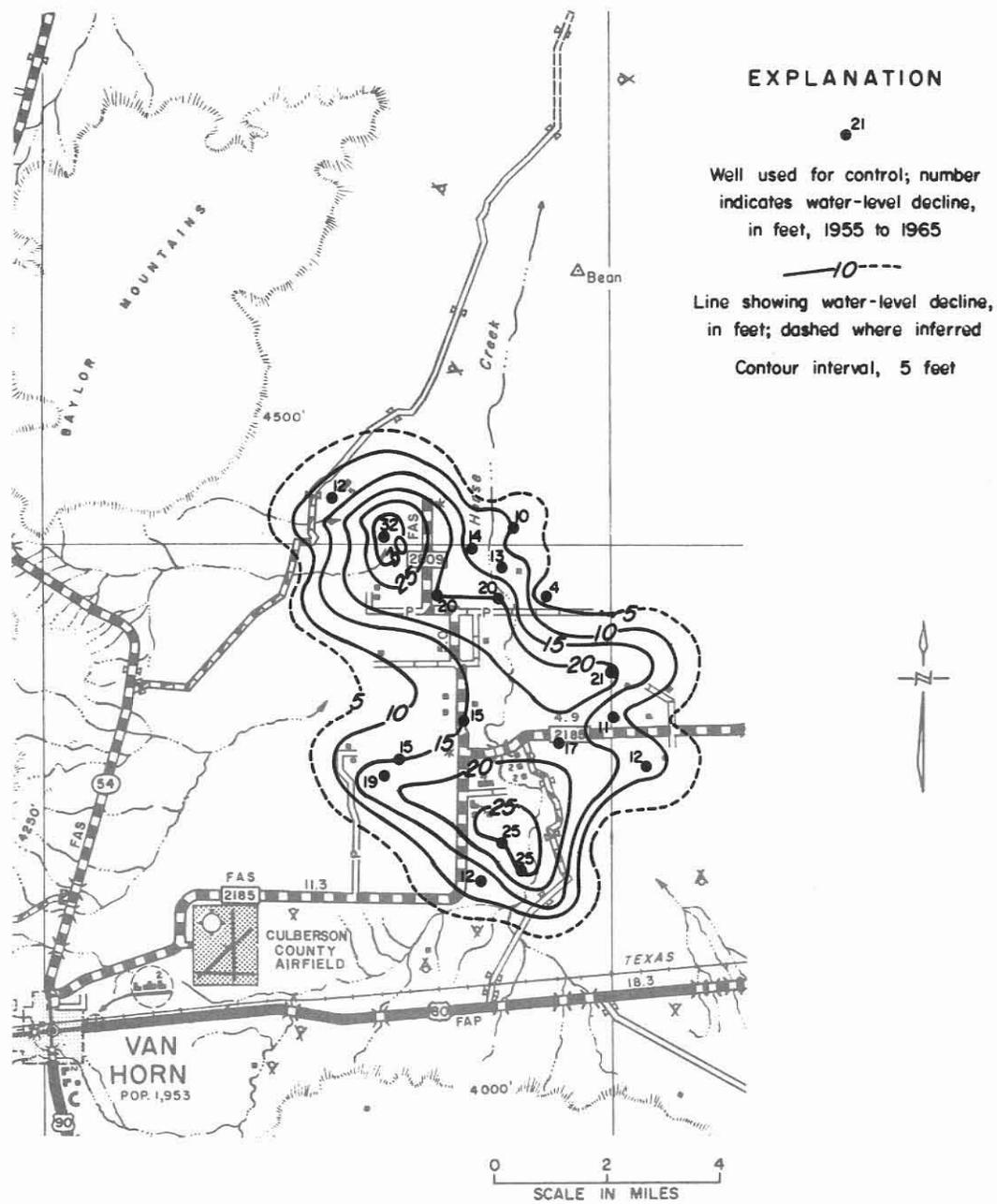


Figure 8  
 Water-Level Declines in the Wildhorse Flats Area,  
 Culberson County, 1955 to 1965

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Base Map from Texas Highway Department

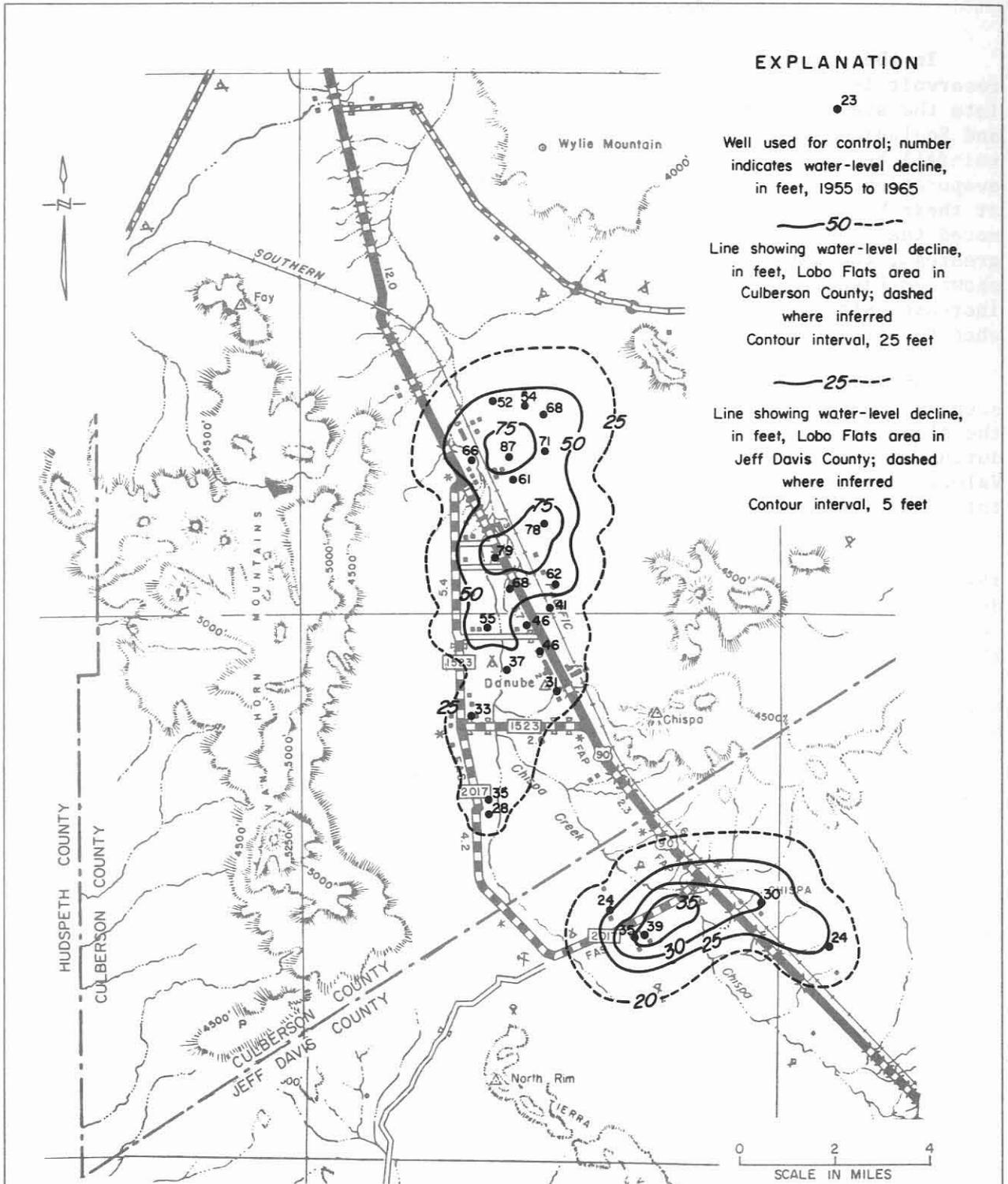


Figure 9  
Water-Level Declines in the Lobo Flats Area, in Culberson  
and Jeff Davis Counties, 1955 to 1965

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Base Map from Texas Highway Department

## INTERPRETATION OF WATER-LEVEL DATA

In the Wildhorse Flats area, most of the recharge to the ground-water reservoir is from seepage along the small intermittent streams that discharge into the area from the slopes of the surrounding mountains. According to Hood and Scalapino, (1951, p. 5) "Recharge occurs primarily during and after heavy rainfall because only then is the rate of precipitation greater than the rate of evaporation." The yearly precipitation, as reported by the U.S. Weather Bureau at their Van Horn and Sierra Blanca stations, is shown in Figure 3. It is to be noted that during 1960, when a precipitation reported at these two stations was greatest, the rate of decline during that period was somewhat less for the wells shown on Figure 3. The average rate of decline for all wells shown on Figure 3 increased steeply after 1960. The rate of decline increased even more in 1964 when the precipitation at these two stations was less than 6 inches.

Recharge to the ground-water reservoir in the Lobo Flats area is also from seepage along the small intermittent streams that discharge into the area from the slopes of the surrounding mountains. This recharge also occurs primarily during and immediately after heavy rainfall. The precipitation reported at the Valentine station from 1955 to 1964 is shown on Figure 4. The annual precipitation at this station rarely exceeds 13 inches per year.

The decline of 2.5 feet per year in the areas of heaviest development in the Wildhorse Flats area contrasts sharply with the more than 8 feet per year decline in the heavily developed Lobo Flats area. One explanation for the difference in rate of decline between the two areas is believed to be related to the difference in the permeability of the aquifer. Hood and Scalapino (1951, p. 21) pointed out that in the Lobo Flats area, sand and gravel zones form only a fraction of the total volume of the alluvium. Consequently, the relatively high clay and silt content results in lower permeability. The low permeability of the aquifer at Lobo Flats not only would cause greater declines during growing season pumpage but would also hinder recharge, resulting in an even greater annual rate of decline.

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TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-43-301 <i>202</i>	C-141 ✓	550		3780. <i>3750</i>	1-21-54	223.54		
					1-22-55	224.58	1.04	
					1-19-56	225.67	1.09	
					1-27-60	229.80	4.13	
					2-07-61	230.76	0.96	
					2-10-62	232.12	1.36	
					2-06-63	233.51	1.39	
					1-24-64	234.45	0.94	
					1-23-65	235.24	0.79	
					47-43-502	C-134 ✓		
1-21-54	154.03	0.01						
1-22-55	154.23	0.20						
1-19-56	153.90		0.33					
1-27-60	154.20	0.30						
2-07-61	154.39	0.19						
2-10-62	154.28		0.11					
2-06-63	153.31		0.97					
1-24-64	154.59	1.28						
1-23-65	154.66	0.07						
47-43-701	C-135 ✓	190		3960. <i>3710</i>				
					1-21-54	131.07		0.24
					1-22-55	131.91	0.84	
					1-23-56	131.96	0.05	
					1-27-60	134.70	2.74	
					2-07-61	136.57	1.87	
					2-10-62	142.95	6.38	
					2-06-63	162.23	19.28	
					1-24-64	171.31	9.08	
					1-23-65	140.58		30.73

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-43-801	C-104 ✓	150		3690. <i>3690</i>	1-29-53	137.72		
					1-21-54	138.92	1.20	
					1-22-55	138.05		0.87
					1-23-56	138.24	0.19	
					1-27-60	138.92	0.68	
					2-07-61	142.12	3.20	
					2-10-62	138.91		3.21
					1-06-63	139.69	0.78	
					1-23-65	139.51		0.18
47-51-401	C-132 ✓	230		3840.	1-29-53	207.77		
					1-21-54	209.38	1.61	
					1-22-55	210.06	0.68	
					1-19-56	211.24	1.18	
					1-27-60	215.86	4.62	
					2-07-61	216.30	0.44	
					2-06-63	220.09	3.79	
47-51-403	C-131 ✓	550		3730.	1-27-53	177.78		
					1-21-54	179.15	1.37	
					1-22-55	179.56	0.41	
					1-23-56	180.97	1.41	
					1-27-57	182.54	1.57	
					1-27-60	183.75	1.21	
					2-08-61	187.67	3.92	
					2-10-62	198.18	10.51	
					2-06-63	193.84		4.34
					1-24-64	196.27	2.43	
					1-23-65	211.52	15.25	
47-51-501	C-103 ✓			3700. <i>3700</i>	5-11-50	151.56		
					1-27-53	156.86	5.30	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM	
							PREVIOUS DECLINE	MEASUREMENTS RISE
47-51-501	C-103 ✓			3700.	1-21-54	154.03		2.83
					1-22-55	154.03	0.00	
					1-23-56	156.22	2.19	
					1-27-57	156.59	0.37	
					1-15-58	158.03	1.44	
					1-28-60	159.60	1.57	
					2-10-62	165.10	5.50	
					2-06-63	164.83		0.27
					1-24-64	166.32	1.49	
					1-23-65	164.42		1.90
47-51-704	C-128 ✓	450		3720.	1-27-53	179.05		
					1-21-54	180.01	0.96	
					1-22-55	181.86	1.85	
					1-28-60	197.10	15.24	
					2-07-61	176.20		20.90
					2-06-63	196.90	20.70	
47-51-801	C-130 ✓	400		3705.	1-27-53	167.05		
					1-21-54	165.66		1.39
					1-22-55	166.38	0.72	
					1-23-56	168.00	1.62	
					1-27-57	169.30	1.30	
					1-15-58	170.43	1.13	
					1-27-60	172.70	2.27	
					2-08-61	173.94	1.24	
					2-06-63	184.87	10.93	
					1-23-65	180.12		4.75
47-51-802	C-124 ✓	414		3720.	1-27-53	187.35		
					1-21-54	176.03		11.32
					1-22-55	176.77	0.74	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-51-802	C-124 ✓	414		3720. <i>180</i> <i>35-45</i>	1-23-56	178.11	1.34	
					1-27-57	178.10		0.01
					1-15-58	179.93	1.83	
					1-26-60	181.80	1.87	
					2-08-61	183.70	1.90	
					2-10-62	191.98	8.28	
					2-06-63	189.92		2.06
					1-23-65	189.60		0.32
47-51-803	C-124 AV ✓	384		3715. <i>175</i> <i>37-40</i>	1-27-53	171.84		
					1-21-54	173.34	1.50	
					1-22-55	174.14	0.80	
					1-23-56	175.36	1.22	
					1-27-57	176.82	1.46	
					1-15-58	178.21	1.39	
					1-26-60	180.00	1.79	
					2-08-61	181.32	1.32	
					2-10-62	186.40	5.08	
					2-06-63	186.56	0.16	
					1-24-64	186.73	0.17	
					1-23-65	178.09		8.64
					47-51-804	C-129 ✓	450	350-450
1-21-54	179.47	0.63						
1-22-55	180.18	0.71						
1-23-56	181.52	1.34						
1-27-57	182.86	1.34						
1-15-58	185.13	2.27						
1-26-60	187.35	2.22						
2-08-61	188.25	0.90						
2-10-62	208.27	20.02						
2-06-63	201.36		6.91					
1-24-64	198.03		3.33					

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-51-804	C-129 ✓	450	350-450	3720.	1-23-65	199.80	1.77	
47-51-902	C-125 ✓	500		3745.	1-29-53	199.9		
					1-21-54	200.63	0.7	
					1-22-55	201.55	0.92	
					1-23-56	202.84	1.29	
					1-27-57	204.36	1.52	
					1-15-58	205.20	0.84	
					1-27-60	214.64	9.44	
					2-08-61	216.42	1.78	
					2-10-62	218.20	1.78	
					2-06-63	220.80	2.60	
					1-24-64	221.71	0.91	
					1-27-65	222.78	1.07	
47-58-902	C-159 ✓			3900.	2-07-61	333.56		
					2-10-62	328.56		5.00
					2-08-63	335.59	7.03	
					1-24-64	339.47	3.88	
					1-27-65	337.54		1.93
47-59-101	C-137 ✓	625	425-625	3760.	1-29-53	212.96		
					1-24-54	213.73	0.77	
					1-22-55	214.30	0.57	
					1-23-56	215.77	1.47	
					1-27-57	217.30	1.53	
					1-26-60	220.77	3.47	
					2-09-61	222.00	1.23	
					2-10-62	228.19	6.19	
					1-24-64	229.65	1.46	
					1-27-65	229.09	0.56	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-59-104	C-139 ✓	660	460-660	3775.	1-27-53	221.27		
					1-24-54	223.45	2.18	
					1-22-55	223.38		0.07
					1-23-56	225.22	1.84	
					1-27-57	226.70	1.48	
					1-26-60	229.48	2.78	
					2-09-61	230.95	1.47	
					2-10-62	235.11	4.16	
					1-06-63	235.78	0.67	
					1-24-64	236.18	0.40	
					1-27-65	242.64	6.46	
47-59-106	C-126 ✓	500		3745.	1-27-53	198.35		
					1-21-54	199.53	1.18	
					1-22-55	200.22	0.69	
					1-23-56	201.65	1.43	
					1-15-58	204.61	2.96	
					1-26-60	209.15	4.54	
					2-08-61	208.26		0.89
					2-10-62	203.04		5.22
					2-06-63	214.07	11.03	
					1-24-64	214.25	0.18	
					1-27-65	214.86	0.61	
47-59-201	C-120 ✓	552		3765.	1-24-54	221.39		
					1-22-55	222.72	1.33	
					1-23-56	223.37	0.65	
					1-28-57	224.73	1.36	
					1-27-60	232.47	7.74	
					2-09-61	228.35		4.12
					2-06-63	232.46	4.11	
					1-24-64	237.32	4.86	
					1-27-65	247.68	10.36	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-59-203	C-100			3775.	5-11-50	218.91		
					1-27-53	219.34	0.43	
					1-21-54	222.28	2.94	
					1-20-55	223.00	0.72	
					1-23-56	224.21	1.21	
					1-28-57	227.80	3.59	
					1-15-58	231.46	3.66	
					1-27-60	233.32	1.86	
					2-09-61	230.94		2.38
					2-09-62	231.99	1.05	
					2-06-63	233.10	1.11	
					1-24-64	234.09	0.99	
					1-27-65	247.90	13.81	
47-59-205	C-122	550	235-360	3760.	1-27-60	227.37		
					2-09-61	229.15	1.78	
					2-10-62	238.17	9.02	
					2-06-63	242.95	4.78	
					1-24-64	232.47		10.48
					1-27-65	233.90	1.43	
47-59-206	C-118	599			3-03-51	230.96		
					3-08-52	231.64	0.68	
					2-06-63	245.26	13.62	
					1-24-64	246.59	1.33	
					1-27-65	247.14	0.55	
47-59-301	C-116	410		3765.	3-03-51	218.34		
					3-08-52	219.90	1.56	
					1-27-53	226.33	6.43	
					1-21-54	223.11		3.22
					1-22-55	224.18	1.07	

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TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
47-59-301	C-116	410		3765. <i>220</i> <i>3765</i>	1-23-56	225.80	1.62	
					1-27-60	231.55	5.75	
					2-09-61	230.55		1.00
					2-10-62	233.44	2.89	
					2-06-63	238.03	4.59	
					1-24-64	233.49		4.54
					1-27-65	235.16	1.67	
47-59-302	C-144	500		3780. <i>380</i> <i>3780</i>	1-22-55	238.90		
					2-09-61	246.18	7.28	
					2-10-62	253.09	6.91	
					2-06-63	251.		2.
					1-24-64	250.32		1.
					1-27-65	250.60	0.28	
51-02-903	S-24	421		3947.6	5-03-50	138.4		
					2-28-51	102.4		36.0
					1-26-53	125.77	23.4	
					1-23-54	127.86	2.09	
					1-23-55	132.70	4.84	
					1-24-56	139.52	6.82	
					1-28-57	151.01	11.49	
					1-16-58	155.23	4.22	
					1-27-60	172.45	17.22	
					2-10-61	175.60	3.15	
					2-09-62	190.7	15.1	
					2-07-63	195.9	5.2	
					1-24-64	191.07		4.8
					1-23-65	219.85	28.78	
51-02-906	S-12	405	205-405	3936.6	6-22-49	132.24		
					5-03-50	139.31	7.07	

TABLE 1. CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS						
							DECLINE	RISE					
51-02-906	S-12	405	205-405	3936.6	6-02-50	150.99	11.68						
					2-08-51	144.44		6.55					
					1-26-53	147.91	3.47						
					1-23-54	152.34	4.43						
					1-23-55	154.89	2.55						
					1-24-56	158.54	3.65						
					1-28-57	163.57	5.03						
					1-16-58	168.93	5.36						
					1-27-60	180.10	11.17						
					2-10-61	180.50	0.40						
					2-09-62	198.65	18.15						
					2-07-63	194.76		3.89					
					1-24-64	198.71	3.95						
					1-23-65	206.78	8.07						
					51-02-911	S-15A			3955.66	1-24-56	164.3		
										1-28-57	170.26	6.0	
1-16-58	177.19	6.93											
1-27-60	195.80	18.61											
2-10-61	187.40		8.40										
2-09-62	205.50	18.10											
2-07-63	198.94		6.56										
1-24-64	201.52	2.58											
1-23-65	211.82	10.30											
51-02-912	S-26A			3952.4						1-27-60	180.05		
					2-10-61	183.90	3.85						
					2-09-62	198.99	15.09						
					2-07-63	202.65	3.66						
					1-24-64	194.55		8.10					
					1-23-65	226.12	31.57						

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-03-701	S-19A ✓	300		3960.7 <del>3770</del>	1-28-57	162.05		
					1-16-58	170.90	8.85	
					1-27-60	182.05	11.15	
					2-10-61	184.32	2.27	
					2-09-62	195.27	10.95	
					2-07-63	205.08	9.81	
					1-24-64	209.40	4.32	
	1-23-65	224.84	15.44					
51-03-702	S-16A ✓			3959.6 <del>3770</del>	1-16-58	162.60		
					1-27-60	179.80	17.20	
					2-10-61	182.05	2.25	
					2-09-62	196.54	14.49	
					2-07-63	203.05	6.51	
					1-24-64	206.90	3.85	
					1-23-65	219.95	13.05	
51-10-307	S-34A ✓			3955.3	1-28-57	156.72		
					1-16-58	160.59	3.87	
					1-27-60	170.20	9.61	
					2-07-63	198.10	27.90	
					1-24-64	194.		4.
					1-23-65	213.0	19.	
51-10-309	S-49 ✓			3985.76	6-21-49	105.		
					11-17-50	121.72	17.	
					2-09-51	116.58		5.14
					3-07-52	126.81	10.23	
					1-23-54	147.48	20.67	
					1-23-55	152.22	4.74	
					1-24-56	160.14	7.92	
					1-29-57	168.20	8.06	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM	
							PREVIOUS MEASUREMENTS	DECLINE RISE
51-10-309	S-49			3985.76	1-16-58	176.44	8.24	
					1-27-60	187.10	10.66	
					2-10-61	191.10	4.00	
					2-10-62	201.67	10.57	
					2-07-63	207.89	6.22	
					1-24-64	214.28	6.39	
51-10-323	S-43A ✓	350	150-350	3971.3	1-23-54	141.78		
					1-23-55	146.57	4.79	
					1-24-56	155.08	8.51	
					1-29-57	163.58	8.50	
					1-16-58	171.71	8.13	
					1-27-60	184.35	12.64	
					2-10-61	186.60	2.25	
					2-10-62	203.50	16.90	
					1-24-64	209.23	5.73	
					1-23-65	225.49	16.26	
					51-10-601	S-54 /	375	
11-17-50	99.72	5.						
2-28-51	97.34		2.38					
1-26-53	115.06	17.72						
1-23-54	121.10	6.04						
1-23-55	124.03	2.93						
1-24-56	129.86	5.83						
1-29-57	136.68	6.82						
1-17-58	142.14	5.46						
1-27-60	146.20	4.06						
2-10-61	149.21	3.01						
2-10-62	154.39	5.18						
2-07-63	157.61	3.22						
1-24-64	162.34	4.73						
1-23-65	170.18	7.84						

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS						
							DECLINE	RISE					
51-10-603	S-65 ✓			4037.7	2-28-51	116.08							
					1-24-54	134.9	18.8						
					1-24-56	143.95	9.1						
					1-29-57	150.80	6.85						
					1-17-58	155.36	4.56						
					1-27-60	160.70	5.34						
					2-10-61	159.18		1.52					
					2-10-62	179.4	20.2						
					2-07-63	175.4		4.0					
					1-24-64	170.60		4.8					
					1-27-65	172.10	1.50						
51-10-604	S-53 ✓	368		3987.3	1-15-46	86.							
					5-02-50	92.52	7.						
					2-28-51	88.5		4.0					
					1-26-53	111.55	23.1						
					1-23-54	120.69	9.14						
					1-23-55	125.87	5.18						
					1-24-56	133.65	7.78						
					1-29-57	143.20	9.55						
					1-17-58	147.73	4.53						
					1-27-60	156.90	9.17						
					2-10-61	160.53	3.63						
					1-24-64	176.75	16.22						
					51-10-608	S-58A ✓			4015.	2-10-61	131.86		
										5-17-61	141.05	9.19	
1-24-64	155.36	14.31											
1-23-65	149.80		5.56										
51-10-901	S-68A ✓			4046.3	1-26-53	133.60							
					1-23-54	136.54	2.94						

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM	
							PREVIOUS MEASUREMENTS DECLINE	RISE
51-10-901	S-68A			4046.3	1-23-55	140.42	3.88	
					1-24-56	143.95	3.53	
					1-29-57	148.61	4.66	
					1-17-58	153.10	4.49	
					1-27-60	172.10	19.00	
					2-10-61	157.00		15.10
					1-27-65	168.90	11.90	
51-10-902	S-68	400		4046.3	6-11-50	129.80		
					2-28-51	117.42		12.38
					1-26-53	132.62	15.20	
					1-23-54	135.07	2.45	
					1-23-55	138.70	3.63	
					1-24-56	142.40	3.70	
					1-29-57	147.78	5.38	
					1-17-58	151.25	3.47	
					1-27-60	155.10	3.85	
					2-10-61	155.50	0.40	
					2-10-62	170.20	14.70	
					2-07-63	157.27		12.93
					1-24-64	150.15		7.12
					1-27-65	173.30	23.15	
51-11-101	S-46	411		3985.1	6-22-49	79.74		
					5-10-50	86.81	7.07	
					2-09-51	90.90	4.09	
					3-07-52	99.12	8.22	
					1-26-53	108.13	9.01	
					1-23-54	115.00	6.87	
					1-23-55	118.22	3.22	
					1-24-56	124.46	6.24	
					1-29-57	131.30	6.84	
					1-16-58	136.66	5.36	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-11-101	S-46	411		3985.1	1-27-60	144.20	7.54	
					2-10-61	146.69	2.49	
					2-10-62	151.55	4.86	
					2-07-63	157.34	5.79	
					1-24-64	160.90	3.56	
					1-23-65	179.80	18.90	
51-11-102	S-48			4001.5	9-15-49	95.0		
					5-04-50	105.56	10.6	
					6-01-50	102.59		2.97
					2-09-51	103.41	0.82	
					2-10-61	161.15	57.74	
					2-07-63	171.11	9.96	
					1-24-64	174.26	3.15	
					1-23-65	184.32	10.06	
51-11-103	S-36A			3985.1	2-10-61	190.46		
					1-24-64	214.79	24.33	
					1-23-65	254.57	39.78	
51-11-401	S-57	383		4022.1	4-15-49	114.		
					11-17-50	116.20	2.	
					2-28-51	113.80		2.40
					1-26-53	129.31	15.51	
					1-23-54	134.98	5.67	
					1-23-55	137.82	2.84	
					1-24-56	143.06	5.24	
					1-29-57	149.51	6.45	
					1-17-58	155.98	6.47	
					1-27-60	157.20	1.22	
					2-10-61	161.74	4.54	
					2-10-62	164.58	2.84	

TABLE 1 CULBERSON COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102 OR 5415	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM	
							PREVIOUS MEASUREMENTS DECLINE	RISE
51-11-401	S-57	383		4022.1	2-07-63	167.03	2.45	
					1-24-64	172.18	5.15	
					1-23-65	184.14	11.96	
51-11-403	S-64 ✓	422		4036.0	6-22-49	105.78		
					2-28-51	115.02	9.24	
					1-26-53	129.32	14.30	
					1-23-54	134.62	5.30	
					1-23-55	137.13	2.51	
					1-24-56	141.73	4.60	
					2-10-62	158.98	17.25	
					2-07-63	161.25	2.27	
					1-24-64	163.32	2.07	
1-23-65	167.90	4.58						
51-11-701	S-68C ?			4050.	2-10-61	161.07		
					1-24-64	154.02	7.05	
					1-27-65	150.96	3.06	

TABLE 2 JEFF DAVIS COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-19-101	F-3 ✓	430		4086.1	4-18-50	134.0		
					5-02-50	134.49	0.5	
					2-28-51	137.66	3.17	
					3-07-52	141.50	3.84	
					1-26-53	147.85	6.35	
					1-23-54	148.60	0.75	
					1-24-55	152.35	3.75	
					1-19-56	153.82	1.47	
					1-29-57	159.46	5.64	
					1-17-58	164.35	4.89	
					1-27-60	165.25	0.90	
					2-10-61	168.42	3.17	
					2-10-62	170.29	1.87	
					2-07-63	175.10	4.81	
					1-24-64	176.60	1.50	
					1-27-65	176.10		0.50
					51-19-104	F-8 ✓	480	
5-10-50	136.51	0.16						
2-28-51	137.07	0.56						
1-23-54	151.64	14.57						
1-24-55	154.42	2.78						
1-19-56	156.07	1.65						
1-29-57	162.47	6.40						
1-17-58	168.98	6.51						
1-27-60	166.70		2.28					
2-10-61	169.28	2.58						
2-10-62	182.48	13.20						
1-24-64	191.00	8.52						

TABLE 2 JEFF DAVIS COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5102	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-19-105	F-9	500	429-500	4095.0	4-18-50	154.0		
					5-02-50	141.14		12.9
					5-10-50	141.18	0.04	
					2-09-51	142.56	1.38	
					3-07-52	147.73	5.17	
					1-27-53	155.09	7.36	
					1-23-54	156.22	1.13	
					1-24-55	159.93	3.71	
					1-19-56	161.65	1.72	
					1-29-57	167.95	6.30	
					1-17-58	174.70	6.75	
					1-27-60	172.45		2.25
					2-10-61	175.40	2.95	
					1-24-64	142.42		32.98
					51-19-203	F-6	447	
3-07-52	161.25	2.0						
1-27-53	165.57	4.32						
1-24-54	169.57	4.00						
1-23-55	172.34	2.77						
1-19-56	175.20	2.86						
1-29-57	176.70	1.50						
1-17-58	181.77	5.07						
1-27-60	194.90	13.13						
2-10-61	187.32		7.58					
2-10-62	190.43	3.11						
2-07-63	192.21	1.78						
1-24-64	194.12	1.91						
1-27-65	201.96	7.84						
51-19-301	F-7			4141.4	6-13-50	197.29		
					2-28-51	198.48	1.19	
					1-27-53	206.63	8.15	

TABLE 2 JEFF DAVIS COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5102	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-19-301	F-7			4141.4	1-24-54	210.55	3.92	
					1-23-55	213.25	2.70	
					1-19-56	216.09	2.84	
					1-29-57	219.26	3.17	
					1-17-58	222.27	3.01	
					2-10-61	228.32	6.05	
					2-10-62	230.82	2.50	
					1-24-64	234.68	3.86	
					1-27-65	237.00	2.32	
51-27-301	F-15	170			1-24-55	109.35		
					2-17-56	108.51		0.84
					1-31-57	109.79	1.28	
					1-14-58	110.53	0.74	
					2-12-61	110.48		0.05
					2-13-62	111.77	1.29	
					1-25-64	112.30	0.53	
51-27-604	F-13	425		4275.	1-24-55	78.31		
					2-17-56	79.75	1.44	
					1-31-57	80.06	0.31	
					1-14-58	83.85	3.79	
					2-12-61	80.57		3.28
					2-13-62	81.45	0.88	
					1-25-64	77.49		3.96
					1-27-65	80.62	3.13	



TABLE 3 PRESIDIO COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN NONE	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
51-51-803	A-2				1-30-57	12.49		
					2-27-58	12.70	0.21	
					4-22-61	4.10		8.60
					2-13-62	8.59	4.49	
					2-05-63	6.87		1.72
					1-28-64	4.28		2.59
					1-26-65	7.48	3.20	
51-51-902	A-6				1-30-57	49.90		
					2-27-58	49.75		0.15
					4-22-61	49.2		0.6
					2-13-62	50.50	1.3	
					2-05-63	50.81	0.31	
					1-28-64	50.24		0.57
					1-26-65	50.44	0.20	
51-56-902	3	99		4338.	2-28-58	28.58		
					2-05-63	31.27	2.69	
					1-27-64	32.47	1.20	
					1-26-65	35.70	3.23	
74-06-901	1	380			8-11-54	131.62		
					1-25-55	131.53		0.09
					1-23-56	131.14		0.39
					1-31-57	131.33	0.19	
					1-22-58	130.87		0.46
					2-12-61	131.10	0.23	
					2-05-63	130.81		0.29
					1-27-64	130.70		0.11
					1-26-65	130.85	0.15	



TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
X 52-43-102	C-74 ?	400	77-377		8-06-57	83.72		
					10-01-57	82.98		0.74
					12-02-57	89.33	6.35	
					1-11-58	84.63		4.70
					2-14-58	90.03	5.40	
					3-17-58	91.05	1.02	
					4-21-58	90.49		0.56
					5-19-58	90.95	0.46	
					6-16-58	107.14	16.19	
					7-15-58	96.94		10.20
					8-19-58	96.31		0.63
					9-16-58	95.87		0.44
					11-07-58	96.01	0.14	
					12-08-58	96.00		0.01
					1-07-59	95.00		1.00
					2-06-59	94.35		0.65
					3-06-59	94.25		0.10
					4-06-59	95.15	0.90	
					5-06-59	97.35	2.20	
					6-05-59	134.62	37.27	
					7-06-59	118.38		16.24
8-03-59	117.73		0.65					
1-15-62	116.00		1.73					
1-27-64	133.88	17.88						
1-25-65	131.00		2.88					
✓ 52-43-103	C-73 ?	400	22-352		5-22-57	78.9		
					7-08-57	81.56	2.7	
					8-07-57	81.63	0.07	
					9-03-57	81.75	0.12	
					10-01-57	82.16	0.41	
					10-19-57	152.7	70.5	

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TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-103	C-73	400	22-352		10-22-57	185.5	32.8	
					10-31-57	165.6		19.9
					11-01-57	164.1		1.5
					11-08-57	167.8	3.7	
					11-12-57	171.8	4.0	
					11-18-57	168.5		3.3
					11-21-57	93.6		74.9
					11-27-57	88.35		5.2
					12-02-57	86.69		1.66
					1-11-58	83.49		3.20
					2-14-58	83.16		0.33
					3-17-58	83.28	0.12	
					4-21-58	83.00		0.28
					5-19-58	82.95		0.05
					7-15-58	84.97	2.02	
					8-19-58	85.02	0.05	
					9-16-58	84.64		0.38
					11-07-58	85.13	0.49	
					12-08-58	84.75		0.38
					1-07-59	84.26		0.49
					2-06-59	83.70		0.56
					3-06-59	83.72	0.02	
					4-06-59	84.53	0.81	
					5-06-59	86.07	1.54	
					6-05-59	94.45	8.38	
					7-06-59	176.3	81.8	
					8-03-59	139.60		36.7
					12-15-61	90.00		49.60
					11-15-62	98.00	8.00	
					2-05-63	120.85	22.85	
1-15-64	108.00		12.85					
1-25-65	122.10	14.10						

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
X 52-43-105	C-75	400			5-29-58	104.7		
					6-01-58	217.2	112.5	
					6-04-58	219.5	2.3	
					6-05-58	219.7	0.2	
					6-06-58	220.2	0.5	
					6-07-58	221.	1.	
					6-09-58	229.5	9.	
					6-10-58	221.4		8.1
					6-11-58	221.5	0.1	
					6-12-58	104.		118.
					6-13-58	221.20	117.	
					6-16-58	222.14	0.94	
					6-18-58	222.27	0.13	
					6-20-58	229.40	7.13	
					6-23-58	224.84		4.56
					6-24-58	224.34		0.50
					6-27-58	131.20		93.14
					6-30-58	222.72	91.52	
					7-15-58	231.58	8.86	
					7-16-58	235.30	3.72	
					7-23-58	247.52	12.22	
					7-24-58	247.62	0.10	
					8-19-58	251.80	4.18	
					9-16-58	241.47		10.33
					11-07-58	109.23		132.24
					12-08-58	99.11		10.12
					1-07-59	90.42		8.69
					2-06-59	85.87		4.55
					3-06-59	83.30		2.57
					4-06-59	202.35	119.05	
5-06-59	207.23	4.88						
6-05-59	212.63	5.40						
7-06-59	204.10		8.53					
8-03-59	222.57	18.47						
1-15-61	97.00		125.57					

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-105	C-75	400			1-15-62	97.00	0.00	
					1-15-63	95.00		2.00
					1-15-64	102.00	7.00	
					1-15-65	109.28	7.28	
X 52-43-107	C-20	300		4615.76	1-08-57	63.20		
					2-01-57	62.56		0.64
					2-28-57	62.59	0.03	
					3-29-57	63.21	0.62	
					4-17-57	63.46	0.25	
					5-01-57	63.63	0.17	
					6-01-57	70.90	7.27	
					10-01-57	78.50	7.60	
					10-22-57	97.74	19.24	
					10-31-57	103.80	6.06	
					11-01-57	104.27	0.47	
					11-08-57	104.50	0.23	
					11-12-57	105.77	1.27	
					11-18-57	106.66	0.89	
					12-02-57	84.38		22.28
					1-11-58	79.65		4.73
					2-14-58	81.14	1.49	
					12-08-58	83.76	2.62	
					1-07-59	83.27		0.49
					2-06-59	82.75		0.52
					3-07-59	83.61	0.86	
					4-06-59	83.10		0.51
					6-05-59	99.58	16.48	
					7-06-59	113.66	14.08	
					8-03-59	112.76		0.90
					2-05-63	120.73	7.97	
					1-27-64	127.67	6.94	
					1-25-65	121.39		6.28

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
X 52-43-108	C-21	190		4576.39	1-26-55	71.84		
					2-15-55	86.59	14.75	
					2-23-55	70.80		15.79
					2-24-55	71.07	0.27	
					2-25-55	71.19	0.12	
					3-14-55	71.70	0.51	
					3-21-55	71.98	0.28	
					3-28-55	71.54		0.44
					4-04-55	71.25		0.29
					4-11-55	72.32	1.07	
					6-20-55	72.10		0.22
					8-01-55	74.04	1.94	
					9-01-55	75.25	1.21	
					10-03-55	75.64	0.39	
					11-01-55	76.13	0.49	
					12-01-55	76.80	0.67	
					1-02-56	77.50	0.70	
					6-05-56	80.75	3.25	
					7-02-56	81.14	0.39	
					8-01-56	81.98	0.84	
					9-01-56	82.94	0.96	
					10-01-56	83.06	0.12	
					11-30-56	84.14	1.08	
					12-31-56	84.60	0.46	
					2-01-57	85.09	0.49	
					2-28-57	85.28	0.19	
					3-29-57	85.64	0.36	
					4-17-57	85.82	0.18	
					6-02-57	86.38	0.56	
					8-07-57	86.89	0.51	
10-01-57	87.54	0.65						
11-01-57	88.26	0.72						
1-11-58	86.90		1.36					
2-14-58	85.95		0.95					
3-17-58	85.97	0.02						

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-108	C-21	190		4576.39	4-21-58	86.28	0.31	
					5-19-58	86.38	0.10	
					6-15-58	87.55	1.17	
					7-15-58	94.04	6.49	
					8-19-58	97.24	3.20	
					9-16-58	95.42		1.82
					11-07-58	94.18		1.24
					12-08-58	89.01		5.17
					1-07-59	84.50		4.51
					2-06-59	83.27		1.23
					3-06-59	81.15		2.12
					4-06-59	81.38	0.23	
					5-06-59	87.48	6.10	
					6-05-59	93.35	5.87	
					7-06-59	90.20		3.15
					8-03-59	90.65	0.45	
					52-43-109	C-28 ✓	592	307-592
8-02-55	113.7	1.1						
9-03-57	155.7	42.0						
11-08-57	146.6		9.1					
12-02-57	142.44		4.2					
1-10-58	136.48		5.96					
2-14-58	131.96		4.52					
3-18-58	129.16		2.80					
4-07-58	127.84		1.32					
4-14-58	134.82	6.98						
4-21-58	136.29	1.47						
4-28-58	138.78	2.49						
5-19-58	146.77	7.99						
6-16-58	156.75	9.98						
7-15-58	168.04	11.29						
8-19-58	315.27	147.23						
9-16-58	162.20		153.07					

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS						
							DECLINE	RISE					
52-43-109	C-28	592	307-592	4573.41	11-07-58	146.07		16.13					
					12-08-58	135.09		10.98					
					1-07-59	127.23		7.86					
					2-06-59	122.45		4.78					
					3-06-59	118.03		4.42					
					4-06-59	117.08		0.95					
					5-06-59	117.44	0.36						
					6-05-59	120.30	2.86						
					7-06-59	122.91	2.61						
					8-03-59	122.80		0.11					
					1-15-61	147.00	24.20						
					1-15-62	146.00		1.00					
					2-05-63	137.04		8.96					
					1-15-64	154.00	16.96						
					1-15-65	144.00		10.00					
					52-43-201	C-31 ✓	503	426-503	4509.69	8-22-55	65.55		
										8-30-55	64.72		0.83
11-01-55	61.68		3.04										
11-30-55	61.89	0.21											
1-02-56	64.15	2.26											
3-04-56	66.16	2.01											
6-05-56	69.20	3.04											
7-02-56	70.16	0.96											
8-01-56	71.00	0.84											
9-01-56	71.50	0.50											
10-01-56	71.60	0.10											
11-01-56	71.54		0.06										
11-30-56	72.40	0.86											
12-31-56	72.53	0.13											
2-01-57	72.67	0.14											
2-28-57	72.59		0.08										
3-29-57	72.54		0.05										
5-01-57	72.61	0.07											

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-201	C-31	503	426-503	4509.69	5-30-57	73.03	0.42	
					7-06-57	74.31	1.28	
					8-07-57	74.97	0.66	
					9-03-57	75.25	0.28	
					10-01-57	75.54	0.29	
					11-01-57	75.50		0.04
					12-02-57	74.40		1.10
					1-10-58	72.83		1.57
					2-14-58	71.92		0.91
					3-18-58	71.73		0.19
					4-21-58	71.62		0.11
					5-19-58	72.12	0.50	
					6-16-58	72.47	0.35	
					7-15-58	73.15	0.68	
					8-19-58	75.05	1.90	
					9-16-58	72.44		2.61
					11-07-58	66.98		5.46
					12-08-58	65.03		1.95
					1-07-59	63.23		1.80
					2-06-59	62.75		0.48
					3-06-59	63.12	0.37	
					4-06-59	63.39	0.27	
					5-06-59	64.29	0.90	
6-05-59	65.90	1.61						
7-06-59	67.40	1.50						
8-03-59	67.72	0.32						
52-43-202	C-46 ✓	320		4659.91	8-16-48	141.40		
					8-30-55	142.35	0.95	
					10-03-55	141.31		1.04
					11-01-55	141.05		0.26
					12-01-55	141.15	0.10	
					1-02-56	141.47	0.32	
					3-04-56	141.94	0.47	

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-202	C-46	320		4659.91	6-05-56	142.26	0.32	
					7-02-56	142.39	0.13	
					8-01-56	142.66	0.27	
					9-01-56	142.97	0.31	
					10-01-56	143.17	0.20	
					11-01-56	143.13		0.04
					11-30-56	143.20	0.07	
					12-31-56	143.36	0.16	
					2-01-57	143.47	0.11	
					2-28-57	143.54	0.07	
					3-29-57	143.42		0.12
					5-01-57	143.00		0.42
					6-03-57	142.67		0.33
					7-06-57	142.85	0.18	
					8-06-57	143.28	0.43	
					9-03-57	143.57	0.29	
					10-01-57	143.73	0.16	
					11-01-57	144.19	0.46	
					12-02-57	144.18		0.01
					1-09-58	144.33	0.15	
					2-14-58	144.58	0.25	
					3-18-58	143.70		0.88
					4-21-58	144.15	0.45	
					5-19-58	143.77		0.38
					6-16-58	143.54		0.23
					7-15-58	143.37		0.17
					8-19-58	142.78		0.59
					9-16-58	141.27		1.51
					11-07-58	140.53		0.74
					12-08-58	138.15		2.38
1-07-59	136.01		2.14					
2-06-59	134.99		1.02					
3-06-59	135.15	0.16						
4-06-59	136.15	1.00						
5-06-59	137.31	1.16						

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-202	C-46	320		4659.91	6-05-59	138.78	1.47	
					7-06-59	139.70	0.92	
					8-03-59	139.9	0.2	
					2-05-63	140.25	0.4	
					1-27-64	141.29	1.04	
					1-25-65	142.31	1.02	
X 52-43-204	C-38	540	528-540	4629.00	1-19-55	81.89		
					7-17-55	82.08	0.19	
					8-01-55	81.95		0.13
					9-01-55	86.50	4.55	
					10-03-55	86.33		0.17
					11-01-55	86.15		0.18
					12-01-55	85.66		0.49
					6-05-56	85.12		0.54
					7-02-56	86.19	1.07	
					8-01-56	87.75	1.56	
					9-01-56	89.33	1.58	
					10-01-56	89.20		0.13
					11-01-56	88.24		0.96
					11-30-56	87.08		1.16
					12-31-56	86.34		0.74
					2-01-57	85.81		0.53
					2-28-57	85.34		0.47
					3-29-57	85.06		0.28
					5-01-57	85.70	0.64	
					6-02-57	86.49	0.79	
7-08-57	88.58	2.09						
8-06-57	88.52		0.06					
9-03-57	88.01		0.51					
10-01-57	88.08	0.07						
11-01-57	87.34		0.74					
12-02-57	86.67		0.67					
1-10-58	85.87		0.80					

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-204	C-38	540	528-540	4629.00	2-14-58	85.18		0.69
					3-18-58	83.35		1.83
					4-07-58	86.25	2.90	
					4-08-58	167.15	80.90	
					4-09-58	177.44	10.29	
					4-14-58	222.72	45.28	
					4-21-58	211.72		11.00
					4-28-58	212.89	1.17	
					5-19-58	251.70	38.81	
					5-20-58	251.89	0.19	
					6-16-58	259.15	7.26	
					7-15-58	270.50	11.35	
					8-19-58	272.74	2.24	
					9-16-58	266.27		6.47
					11-07-58	96.76		169.51
					12-08-58	89.17		7.59
					1-07-59	86.47		2.70
					2-06-59	84.98		1.49
					3-06-59	84.41		0.57
					4-06-59	165.30	80.89	
					5-06-59	192.15	26.85	
6-05-59	201.28	9.13						
7-06-59	195.00		6.28					
8-03-59	199.00	4.00						
X 52-43-304	D-13	276		4401.89	2-16-55	83.72		
					2-20-55	49.62		34.10
					2-23-55	45.70		3.92
					2-24-55	44.83		0.87
					2-25-55	43.94		0.89
					2-26-55	43.23		0.71
					2-28-55	42.03		1.20
					3-02-55	40.96		1.07
					3-04-55	40.10		0.86

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-304	D-13	276		4401.89	3-06-55	39.47		0.63
					3-07-55	39.10		0.37
					3-08-55	38.80		0.30
					5-27-55	53.60	14.80	
					6-20-55	84.89	31.29	
					8-01-55	38.66		46.23
					9-01-55	29.33		9.33
					10-03-55	23.08		6.25
					11-01-55	22.68		0.40
					11-30-55	22.50		0.18
					1-02-56	22.14		0.36
					3-03-56	18.14		4.00
					6-05-56	17.90		0.24
					7-02-56	19.29	1.39	
					8-01-56	17.29		2.00
					10-01-56	17.26		0.03
					11-01-56	17.07		0.19
					11-30-56	17.56	0.49	
					12-31-56	17.32		0.24
					2-01-57	17.62	0.30	
					2-28-57	15.48		2.14
					3-29-57	15.74	0.26	
					5-01-57	16.54	0.80	
					6-01-57	17.18	0.64	
					8-07-57	17.80	0.62	
					10-01-57	22.81	5.01	
					11-01-57	18.48		4.33
					3-17-58	32.11	13.63	
					4-21-58	25.79		6.32
					5-14-58	24.69		1.10
6-16-58	20.64		4.05					
8-19-58	15.36		5.28					
9-16-58	13.68		1.68					
11-07-58	12.99		0.69					
12-08-58	13.55	0.56						

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS						
							DECLINE	RISE					
52-43-304	D-13	276		4401.89	1-07-59	13.80	0.25						
					2-06-59	13.99	0.19						
					3-06-59	14.19	0.20						
					4-06-59	64.62	50.43						
					5-06-59	14.42		50.20					
					6-05-59	48.13	33.71						
					7-06-59	15.87		32.26					
					8-03-59	52.4	36.5						
					1-15-61	18.00		34.4					
					1-15-62	21.00	3.00						
					2-05-63	15.40		5.60					
					1-27-64	14.69		0.71					
					X 52-43-601	D-63			4580.95	2-17-55	21.80		
										2-21-55	21.80	0.00	
2-28-55	21.84	0.04											
3-07-55	21.91	0.07											
3-14-55	21.99	0.08											
3-21-55	22.04	0.05											
3-28-55	22.20	0.16											
4-04-55	22.21	0.01											
4-11-55	22.25	0.04											
6-20-55	23.21	0.96											
8-01-55	21.66		1.55										
9-01-55	21.73	0.07											
10-03-55	22.22	0.49											
11-01-55	22.50	0.28											
11-30-55	21.86		0.64										
1-02-56	21.21		0.65										
3-04-56	21.70	0.49											
6-05-56	23.28	1.58											
7-02-56	23.95	0.67											
8-01-56	24.25	0.30											
9-01-56	24.69	0.44											

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-42-601	D-63			4580.95	10-01-56	24.48		0.21
					11-01-56	23.81		0.67
					11-30-56	24.15	0.34	
					12-31-56	24.03		0.12
					2-01-57	24.11	0.08	
					2-28-57	22.55		1.56
					3-29-57	22.30		0.25
					5-01-57	23.31	1.01	
					6-03-57	22.99		0.32
					7-06-57	24.17	1.18	
					8-07-57	22.93		1.24
					9-03-57	23.54	0.61	
					10-01-57	24.06	0.52	
					11-01-57	24.44	0.38	
					12-02-57	23.83		0.61
					1-09-58	23.46		0.37
					2-14-58	22.61		0.85
					3-18-58	22.37		0.24
					4-21-58	22.39	0.02	
					5-19-58	22.77	0.38	
					6-16-58	22.80	0.03	
					7-15-58	21.20		1.60
					8-19-58	20.23		0.97
					9-16-58	19.97		0.26
					11-07-58	18.89		1.08
					12-08-58	18.39		0.50
					1-07-59	18.11		0.28
					2-06-59	17.76		0.35
					3-06-59	18.11	0.35	
					4-06-59	19.72	1.61	
5-06-59	20.17	0.45						
6-05-59	20.30	0.13						
7-06-59	20.44	0.14						
8-03-59	20.55	0.11						
2-05-63	19.94		0.61					

TABLE 4 BREWSTER COUNTY  
WELL DATA AND WATER-LEVEL MEASUREMENTS, IN FEET  
BELOW LAND SURFACE -- CONTINUED

STATE WELL NO.	WELL NO. BULLETIN 5712 OR 6111	DEPTH OF WELL	COMPLETION INTERVAL	ELEVATION OF LAND SURFACE	DATE	MEASUREMENT	CHANGE IN WATER LEVEL IN FEET FROM PREVIOUS MEASUREMENTS	
							DECLINE	RISE
52-43-601	D-63			4580.95	1-26-64	19.60	5.00	0.34
					1-25-65	24.60		
X 52-62-601	R-16	120	40-120		2-05-63	22.41	0.21	
					1-28-64	22.62		

