

TEXAS BOARD OF WATER ENGINEERS

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BULLETIN 5416

**RECORDS OF WATER-LEVEL MEASUREMENTS IN ATASCOSA AND
FRIO COUNTIES, TEXAS**

Compiled by

B. W. Swartz, Engineering Aid

United States Geological Survey

Prepared cooperatively by the Geological Survey
United States Department of the Interior

December 1954

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RECORDS OF WATER-LEVEL MEASUREMENTS IN ATASCOSA
AND FRIO COUNTIES, TEXAS

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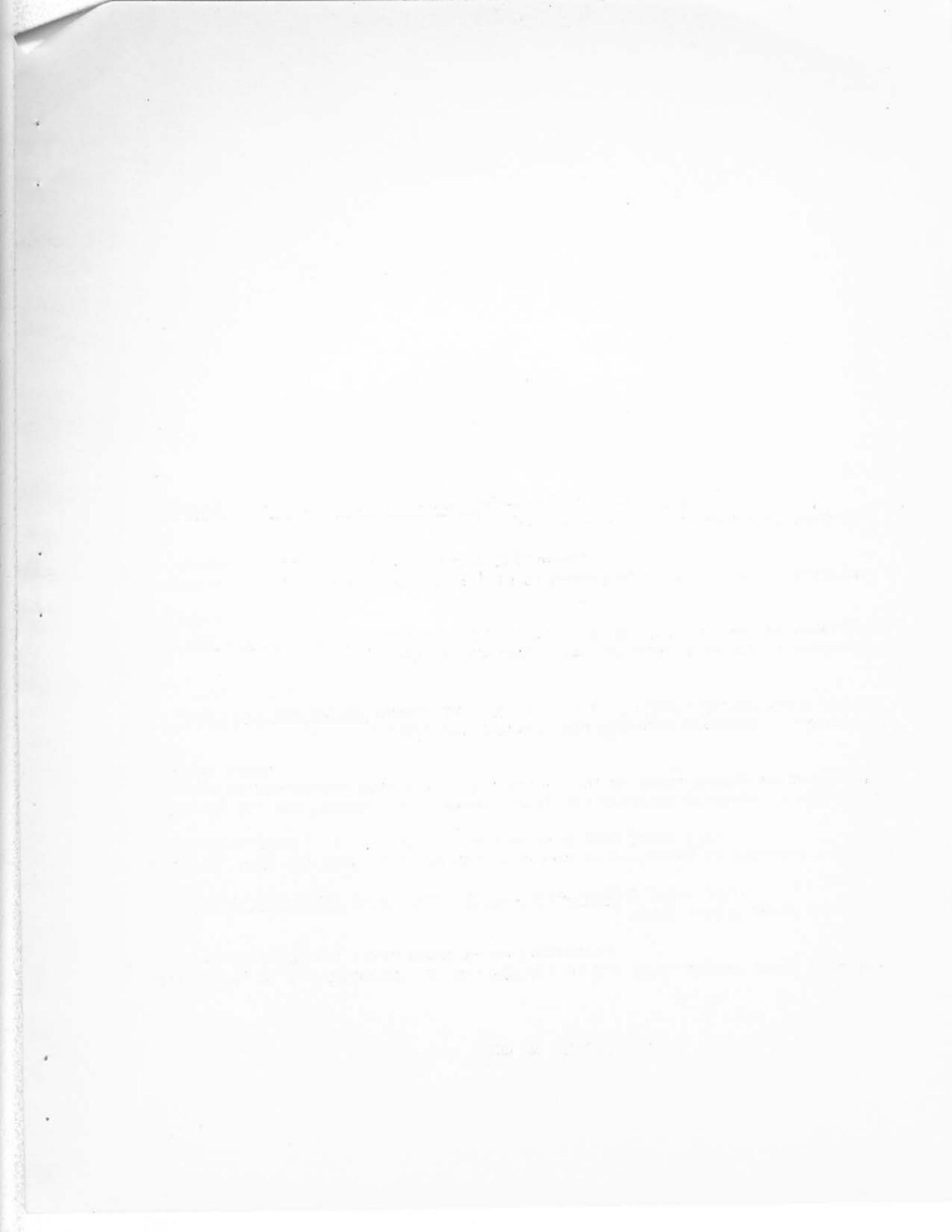
This bulletin contains measurements of the depth to water in feet below or above land-surface datum in 50 wells in Atascosa County and in 24 wells in Frio County, Texas. It is one of a series of publications by the Texas Board of Water Engineers which contain measurements of water levels in selected observation wells made as a part of the cooperative program of ground-water investigations throughout the State by the United States Geological Survey and the Texas Board of Water Engineers. The records cover the period from 1929 through October 1954; however, no measurements were made during the years 1931-43 in Atascosa County and 1931-48 in Frio County.

In 1929-30 an investigation of the geology and ground-water resources of Atascosa and Frio Counties was made, which included water-level measurements in a number of water wells. In 1944 a new inventory of irrigation wells was made in Atascosa County. At the same time figures were compiled on the amount of land under irrigation from wells and the quantities of water used for all purposes. These data were published in August 1945 in U. S. Geological Survey Water-Supply Paper 1079-C, Ground-Water Resources of Atascosa County, Texas.

In 1945 observation wells were selected from the earlier inventories of Atascosa County. A number of observation wells were also selected in Frio County in 1949. The accompanying maps show the locations of the observation wells with the numbers assigned to them in the records. Fluctuation of the water levels in two wells in each county and the annual precipitation at Poteet in Atascosa County and at Pearsall in Frio County are shown in two illustrations. Records of water wells, geologic data, pumpage data, and discussion of water levels are given in the following publications.

LIST OF PUBLICATIONS

- BROADHURST, W. L., SUNDSTROM, R. W., ROWLEY, J. H., 1946, Public water supplies in southern Texas: Texas Board Water Engineers.
-
- _____, 1950, Public water supplies in southern Texas: U. S. Geol. Survey Water-Supply Paper 1070.
- LONSDALE, JOHN T., 1935, Geology and ground-water resources of Atascosa and Frio Counties, Tex.: U. S. Geol. Survey Water-Supply Paper 676.
- SAYRE, A. N., and OTHERS, 1951, Water levels and artesian pressure in observation wells in the United States in 1949, pt. 4: U. S. Geol. Survey Water-Supply Paper 1159.
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- _____, 1952, Water levels and artesian pressure in observation wells in the United States in 1950, pt. 4: U. S. Geol. Survey Water-Supply Paper 1168.
-
- _____, 1954, Water levels and artesian pressure in observation wells in the United States in 1951, pt. 4: U. S. Geol. Survey Water-Supply Paper 1194.
- SUNDSTROM, R. W., and FOLLETT, C. R., 1945, Ground-water resources of Atascosa County, Tex.: Texas Board Water Engineers.
-
- _____, 1950, Ground-water resources of Atascosa County, Tex.: U. S. Geol. Survey Water-Supply Paper 1079-C.



ATASCOSA COUNTY

ATASCOSA COUNTY, TEXAS
OBSERVATION WELLS
September 1954

Bulletin 5416
Texas Board of Water Engineers
in cooperation with
U. S. Geological Survey



ATASCOSA COUNTY

1a. Lat. 29°09', long. 98°33'. Depth 60 feet.

Date	Water level	Date	Water level	Date	Water level
June 27, 1951	54.78	June 24, 1952	55.01	Nov. 12, 1953	54.62
Sept. 26	54.68	Apr. 22, 1953	56.67	Sept. 14, 1954	55.51
Feb. 28, 1952	54.56	July 22	56.42		

4. Lat. 29°09', long. 98°35'. Depth 169 feet.

1930	140	June 24, 1952	141.76	Feb. 18, 1954	144.03
May 31, 1944	138.86	Sept. 25	143.13	June 9	144.41
June 27, 1951	140.47	Apr. 22, 1953	142.46	Sept. 14	144.61
Sept. 26	141.68	July 22	143.91		
Feb. 28, 1952	139.53	Nov. 12	145.09		

5. Lat. 29°05', long. 98°36'. Depth 450 feet.

1931	50	Sept. 27, 1948	62.02	June 27, 1951	63.30
May 31, 1944	59.64	July 19, 1949	62.16	July 21, 1952	64.50
Aug. 6, 1945	60.50	July 12, 1950	62.63	July 15, 1953	65.82

17. Lat. 29°03', long. 98°38'. Depth 300 feet.

June 1, 1944	28.37	July 15, 1949	32.79	July 15, 1953	40.3
Aug. 7, 1945	31.38	July 13, 1950	33.21	Sept. 23, 1954	44.57
Sept. 27, 1948	32.65	July 21, 1952	35.36		

33. Lat. 29°02', long. 98°39'. Depth 800 feet.

July 19, 1940	18.0	July 13, 1950	31.05	July 15, 1953	38.65
May 22, 1944	26.55	July 9, 1951	34.49	Sept. 23, 1954	44.94
July 19, 1949	30.24	July 21, 1952	35.73		

ATASCOSA COUNTY

39. Lat. 29°02', long. 98°37'. Depth 600 feet.

Date	Water level	Date	Water level	Date	Water level
Sept. 28, 1948	6.02	July 12, 1950	7.38	July 15, 1953	14.99
July 19, 1949	2.63	July 21, 1952	6.50		

61. Lat. 29°00', long. 98°32'. Depth 1,010 feet.

Jan. 1, 1925	+28	July 19, 1949	+0.58	July 16, 1953	12.37
Jan. 1, 1926	+25	July 11, 1950	1.13	Sept. 22, 1954	15.54
May 8, 1944	+4.65	July 10, 1951	4.41		
Sept. 28, 1948	0.52	July 21, 1952	6.39		

62. Lat. 29°00', long. 98°32'. Depth 1,090 feet.

Sept. 1, 1937	+4.0	Apr. 8, 1939	+2.5	Sept. 28, 1948	0.73
Jan. 1, 1938	+8.0	Aug. 10	+5.0	July 19, 1949	0.20
June 1	+8.0	Oct. 1	+1.0	July 11, 1950	0.69
Sept. 20	+5.5	Feb. 12, 1940	+6.0	July 10, 1951	5.91
Oct. 27	+5.0	Mar. 11	+4.5	July 21, 1952	7.18
Nov. 28	+7.0	Oct. 1	2.0	July 16, 1953	13.6
Jan. 1, 1939	+7.5	Jan. 1, 1941	+4.5	Sept. 22, 1954	15.74
Mar. 27	+6.0	May 8, 1944	+4.51		

68. Lat. 29°22', long. 98°32'.

June 5, 1944	55.19	Sept. 28, 1948	55.67	July 11, 1950	54.83
Aug. 10, 1945	55.66	July 19, 1949	55.29	July 21, 1952	55.14

72. Lat. 29°07', long. 98°30'. Depth 120 feet.

June 5, 1944	81.89	July 18, 1950	84.58	June 9, 1954	88.92
Aug. 10, 1945	81.86	July 17, 1953	86.94	Sept. 15	90.12
Sept. 29, 1948	83.74	Nov. 11	87.72		
July 19, 1949	84.31	Feb. 18, 1954	87.09		

ATASCOSA COUNTY

73. Lat. 29°04', long. 98°29'. Depth 320 feet.

Date	Water level	Date	Water level	Date	Water level
1942	39	Sept.29, 1948	47.90	Sept.23, 1954	45.43
June 5, 1944	46.21	July 21, 1952	46.72		
Aug. 10, 1945	46.72	July 16, 1953	43.03		

77. Lat. 28°58', long. 98°29'. Depth 1,550 feet.

1929	+96	June -, 1944	+71.5	Apr. 19, 1946	+64.5
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91. Lat. 28°59', long. 98°25'.

May 10, 1944	20.34	July 19, 1949	22.15	July 23, 1952	24.21
Aug. 13, 1945	20.43	July 11, 1950	22.13	July 16, 1953	21.90
Sept.29, 1948	23.46	July 10, 1951	23.60	Sept.23, 1954	23.83

94. Lat. 28°58', long. 98°24'. Depth 1,200 feet.

May 10, 1944	17.54	July 19, 1949	18.34	July 10, 1951	17.50
Sept.29, 1948	19.20	July 10, 1950	16.48		

100. Lat. 28°57', long. 98°22'. Depth 600 feet.

May 18, 1944	16.59	July 11, 1950	14.90	July 16, 1953	19.43
Sept.29, 1948	15.91	July 10, 1951	16.09	Sept.22, 1954	18.28
July 19, 1949	14.70	July 23, 1952	16.35		

ATASCOSA COUNTY

124. Lat. 29°06', long. 98°34'. Depth 84 feet.

Date	Water level	Date	Water level	Date	Water level
June 27, 1951	80.72	June 25, 1952	81.10	July 22, 1953	81.53
Sept. 26	80.23	Sept. 25	80.93	Nov. 12	81.82
Feb. 28, 1952	80.55	Apr. 21, 1953	81.28	Sept. 15, 1954	82.90

125. Lat. 29°06', long. 98°33'. Depth 64 feet.

June 27, 1951	60.70	Apr. 21, 1953	60.95	June 9, 1954	62.86
Sept. 26	60.99	July 22	61.99	Sept. 15	61.43
Feb. 28, 1952	61.02	Nov. 12	61.23		
Sept. 25	61.19	Feb. 18, 1954	61.26		

126. Lat. 29°06', long. 98°35'. Depth 120 feet.

1929	90	Sept. 27, 1948	101.45	July 21, 1952	103.62
May 31, 1944	99.59	July 19, 1949	101.94	Sept. 25	103.89
Aug. 7, 1945	100.23	July 12, 1950	102.4	Sept. 22, 1954	106.10
Apr. 7, 1946	100.46	July 9, 1951	102.82		

127. Lat. 29°07', long. 98°35'. Depth 26 feet.

June 27, 1951	17.62	June 24, 1952	20.28	Nov. 12, 1953	20.47
Sept. 26	16.87	Sept. 25	20.02	Feb. 18, 1954	21.60
Feb. 29, 1952	19.18	July 22, 1953	21.86	June 9	23.43

128. Lat. 29°07', long. 98°35'. Depth 174 feet.

1942	123	June 24, 1952	127.74	Feb. 18, 1954	127.94
June 27, 1951	126.19	Sept. 25	127.07	June 9	130.07
Sept. 26	126.30	July 22, 1953	127.61	Sept. 15	128.47
Feb. 29, 1952	126.59	Nov. 12	128.84		

ATASCOSA COUNTY

129. Lat. 29°08', long. 98°37'. Depth 160 feet.

Date	Water level	Date	Water level	Date	Water level
June 27, 1951	148.97	Sept. 24, 1952	150.0	Feb. 18, 1954	150.35
Sept. 26	151.80	Apr. 22, 1953	150.02	June 9	151.40
Feb. 28, 1952	150.02	July 22	150.41	Sept. 15	151.47
June 24	149.84	Nov. 12	150.39		

130. Lat. 29°09', long. 98°38'. Depth 177 feet.

June 27, 1951	167.13	Sept. 24, 1952	167.17	Feb. 18, 1954	167.40
Sept. 26	167.50	Apr. 22, 1953	167.11	June 9	167.72
Feb. 28, 1952	166.90	July 22	167.44	Sept. 14	167.81
June 24	167.10	Nov. 12	168.07		

131. Lat. 29°09', long. 98°40'. Depth 140 feet.

June 27, 1951	125.79	June 24, 1952	125.60	Nov. 12, 1953	125.73
Sept. 26	126.52	Sept. 24	125.76	Feb. 18, 1954	125.61
Feb. 28, 1952	125.45	July 24, 1953	126.49	Sept. 14	125.67

132. Lat. 29°07', long. 98°40'. Depth 170 feet.

June 27, 1951	141.47	Sept. 24, 1952	142.01	Feb. 18, 1954	143.52
Sept. 26	141.83	Apr. 22, 1953	143.21	June 9	143.19
Feb. 28, 1952	141.54	July 22	143.94	Sept. 14	143.24
June 24	141.86	Nov. 12	142.93		

160. Lat. 29°07', long. 98°41'. Depth 136 feet.

1929	108	June 24, 1952	123.10	Nov. 12, 1953	121.58
June 27, 1951	121.72	Sept. 24	122.23	Feb. 18, 1954	121.34
Sept. 26	122.47	Apr. 22, 1953	122.28	June 9	123.73
Feb. 28, 1952	119.84	July 24	122.48	Sept. 14	123.10

ATASCOSA COUNTY

164. Lat. 29°02', long. 98°44'. Depth 420 feet.

Date	Water level	Date	Water level	Date	Water level
June 2, 1944	+17 +6.15	Aug. 11, 1945 Apr. 17, 1946	+6.97 +5.8	July 21, 1952	+3.5

165. Lat. 29°03', long. 98°42'. Depth 250 feet.

June 2, 1944	1910 25 1929 34.5 38.07	Apr. 17, 1946 Sept. 27, 1948 July 18, 1949 July 13, 1950	39.15 40.18 40.67 39.82	July 9, 1951 July 21, 1952 July 15, 1953 Sept. 23, 1954	42.01 42.52 43.61 46.59
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169. Lat. 29°06', long. 98°30'. Depth 104 feet.

June 5, 1944	1929 69 76.19	Aug. 10, 1945	77.85	Apr. 19, 1946	79.82
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169a. Lat. 29°07', long. 98°30'. Depth 145 feet.

July 19, 1949 June 28, 1951	78.21 79.44	July 21, 1952	80.68	Sept. 22, 1954	83.83
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177. Lat. 29°01', long. 98°42'. Depth 640 feet.

June -, 1944 Apr. 17, 1946 Sept. 27, 1948	+5 +2.0 0.0 0.86	July 18, 1949 July 13, 1950 July 11, 1951 July 21, 1952	+0.24 1.29 3.53 5.1	July 16, 1953 Sept. 23, 1954	8.96 12.78
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179. Lat. 29°01', long. 98°42'. Depth 578 feet.

1929	+18	May 23, 1944	+2.0	Apr. 17, 1946	+0.1
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ATASCOSA COUNTY

187. Lat. 29°03', long. 98°36'. Depth 666 feet.

Date	Water level	Date	Water level	Date	Water level
1929	32	Sept.27, 1948	46.94	July 21, 1952	50.89
June 1, 1944	42.85	July 19, 1949	46.06	July 15, 1953	54.17
Aug. 7, 1945	45.31	July 12, 1950	47.03	Sept.23, 1954	57.84
Apr. 17, 1946	44.50	July 9, 1951	49.35		

188. Lat. 29°03', long. 98°36'. Depth 525 feet.

1929	12	Apr. 17, 1946	30.40	July 12, 1950	32.13
June 1, 1944	30.63				

196. Lat. 29°02', long. 98°38'. Depth 600 feet.

1929	+3	Sept.27, 1948	19.64	July 21, 1952	27.33
May 22, 1944	8.91	July 18, 1949	14.97	July 15, 1953	27.54
Aug. 9, 1945	12.15	July 13, 1950	16.0	Sept.24, 1954	29.83
Apr. 18, 1946	10.30	July 11, 1951	24.45		

197. Lat. 29°02', long. 98°39'. Depth 600 feet.

1929	+23	May 22, 1944	+7.5	Apr. 18, 1946	+7.3
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203. Lat. 29°03', long. 98°35'. Depth 600 feet.

1929	+5	Apr. 18, 1946	0.74	July 21, 1952	8.15
May 24, 1944	0.16	Sept.27, 1948	2.89	July 22, 1953	12.33
Aug. 10, 1945	1.84	July 18, 1950	2.18		

ATASCOSA COUNTY

209. Lat. 29°02', long. 98°35'.

Date	Water level	Date	Water level	Date	Water level
1929	28	Apr. 18, 1946	31.78	July 21, 1952	37.78
June 1, 1944	35.57	Sept. 28, 1948	34.83	Sept. 23, 1954	46.12
Aug. 8, 1945	36.96	July 19, 1949	32.62		

213. Lat. 29°03', long. 98°32'. Depth 850 feet.

1929	5	Aug. 10, 1945	22.03	Sept. 28, 1948	23.61
June 5, 1944	19.27	Apr. 18, 1946	21.30		

213a. Lat. 29°03', long. 98°32'. Depth 735 feet.

Sept. 28, 1948	76.67	Dec. 6, 1950	78.73	Nov. 23, 1952	81.95
Feb. 14, 1949	74.14	Jan. 15, 1951	78.35	Dec. 21	79.07
May 16	74.80	Feb. 8	78.15	Jan. 23, 1953	78.82
July 19	75.56	Mar. 8	77.80	Mar. 23	79.39
Oct. 6	77.00	May 8	79.27	Apr. 21	82.14
Nov. 3	75.54	June 8	76.69	May 24	80.94
Dec. 8	75.09	July 16	79.27	June 23	87.39
Jan. 30, 1950	74.69	Aug. 13	81.85	July 22	86.49
Mar. 9	74.80	Nov. 3	77.85	Aug. 25	85.35
Apr. 3	76.15	Dec. 29	78.25	Sept. 24	82.72
June 7	74.59	Feb. 28, 1952	78.69	Oct. 26	83.48
July 7	77.55	Apr. 25	78.53	Nov. 23	82.73
Aug. 3	78.10	June 3	79.79	Dec. 19	80.86
Sept. 11	78.12	Aug. 25	85.30	Feb. 18, 1954	81.19
Oct. 9	79.75	Sept. 26	82.36	May 25	85.37
Nov. 10	79.49	Oct. 24	84.42	Sept. 22	93.77

214. Lat. 29°02', long. 98°33'.

1929	25	Apr. 18, 1946	33.63	July 11, 1950	36.87
May 12, 1944	32.36	Sept. 28, 1948	35.98	July 21, 1952	42.10
Aug. 10, 1945	34.65	July 19, 1949	35.17		

ATASCOSA COUNTY

215. Lat. 29°02', long. 98°35'.

Date	Water level	Date	Water level	Date	Water level
1929	+6	June --, 1944	2.5	Apr. 17, 1946	18.43

224. Lat. 29°02', long. 98°34'. Depth 840 feet.

June --, 1944	1929 +9 4.2	Aug. --, 1945	6.1	Apr. 18, 1946	4.90
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226. Lat. 29°01', long. 98°34'.

May 24, 1944	1929 +1.5 +0.54	Apr. 18, 1946	3.32	July 21, 1952	9.67
Aug. 10, 1945	3.21	Sept. 28, 1948	3.86		
		July 19, 1949	2.41		

244. Lat. 28°58', long. 98°29'. Depth 1,552 feet.

1929	+96	June --, 1944	+71.5	Apr. 19, 1946	+62
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246. Lat. 28°52', long. 98°40'. Depth 1,692 feet.

May 11, 1944	1929 12 22.82	Sept. 27, 1948	30.11	July 16, 1953	47.59
Aug. 11, 1945	24.73	July 18, 1949	30.15		
Apr. 16, 1946	25.78	July 12, 1950	32.02		
		July 10, 1951	35.20		
				Sept. 22, 1954	55.44

251. Lat. 28°56', long. 98°31'. Depth 1,428 feet.

June 6, 1944	1929 10 49.10	Sept. 27, 1948	49.55	July 10, 1951	49.22
Aug. 13, 1945	49.09	July 18, 1949	48.73		
		July 10, 1950	48.91		
				July 21, 1952	49.60

ATASCOSA COUNTY

253. Lat. 28°59', long. 98°26'. Depth 1,429 feet.

Date	Water level	Date	Water level	Date	Water level
1929	+2.0	July 19, 1949	6.46	July 23, 1952	9.28
Apr. 25, 1944	6.0	July 11, 1950	6.64		
Sept. 29, 1948	8.23	July 10, 1951	9.81		

299. Lat. 29°03', long. 98°36'. Depth 1,000 feet.

1929	27.5	July 19, 1949	39.26	July 15, 1953	59.15
June 1, 1944	36.37	July 12, 1950	40.78	Sept. 23, 1954	59.17
Apr. 17, 1946	37.52	July 9, 1951	42.82		
Sept. 27, 1948	39.98	July 21, 1952	44.19		

337. Lat. 28°56', long. 98°43'. Depth 1,207 feet.

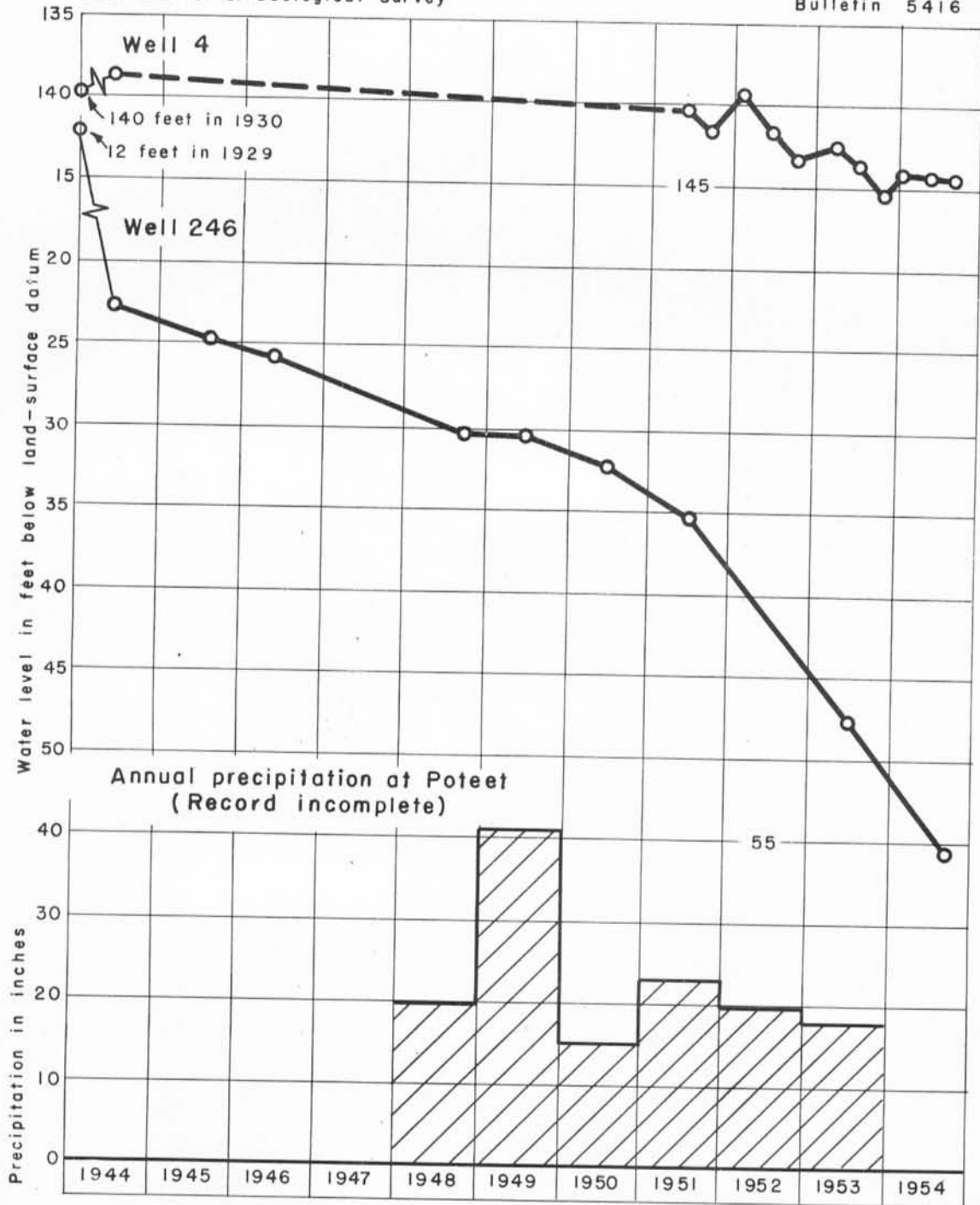
1908	38	Apr. 16, 1946	70.20	July 10, 1951	76.73
1929	60	Sept. 27	73.72	July 21, 1952	81.00
June 2, 1944	67.97	July 18	73.24	July 16, 1953	85.8
Aug. 11, 1945	69.68	July 12, 1950	74.48	Sept. 23, 1954	92.41

342. Lat. 29°02', long. 98°30'. Depth 909 feet.

1929	+15	Sept. 28, 1948	2.34	July 11, 1950	3.07
Apr. 25, 1944	+1.50	July 19, 1949	1.45		

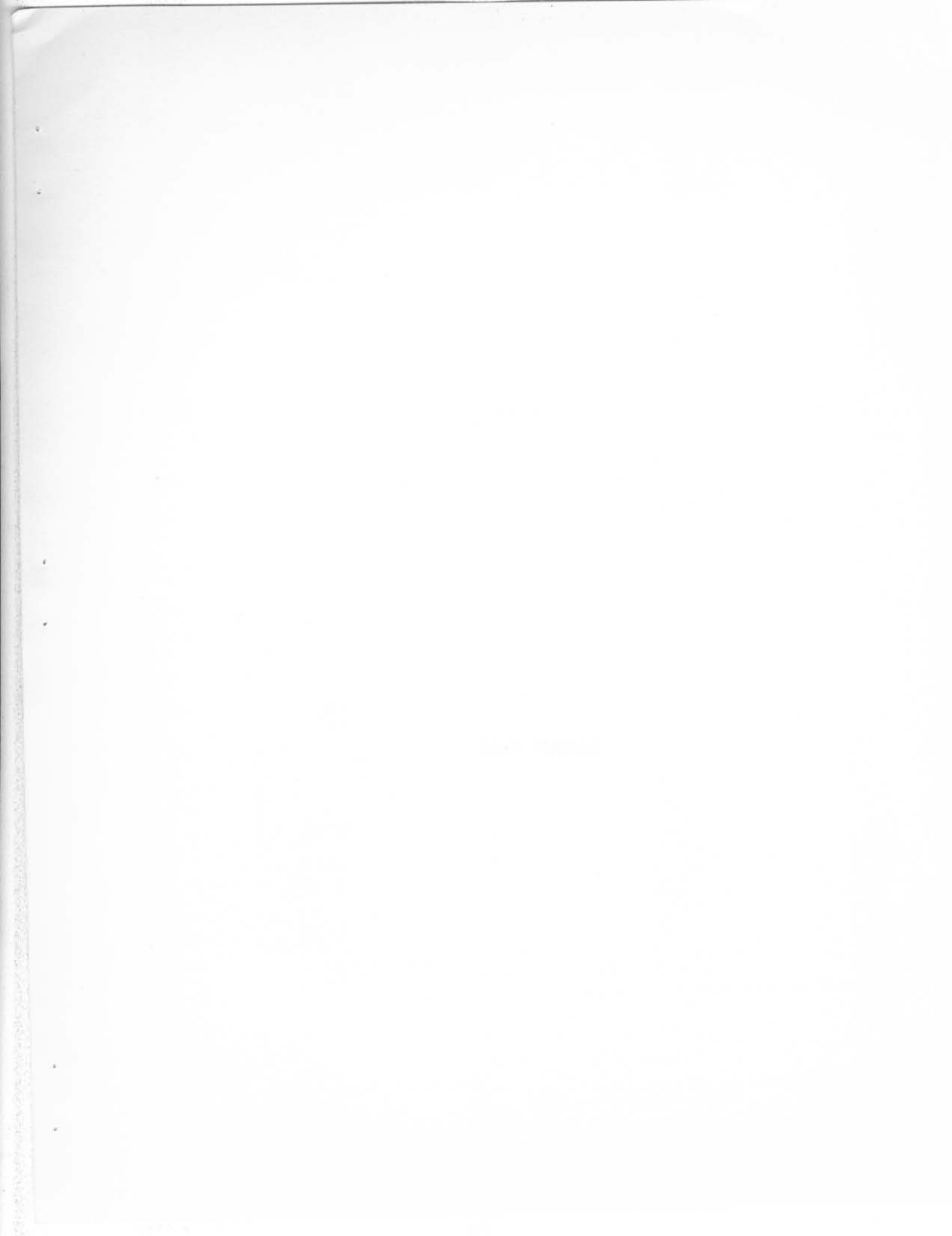
Texas Board of Water Engineers in cooperation
with the U. S. Geological Survey

Bulletin 5416



Hydrographs showing fluctuation of water levels in Atascosa County wells and annual precipitation at Poteet, Tex.

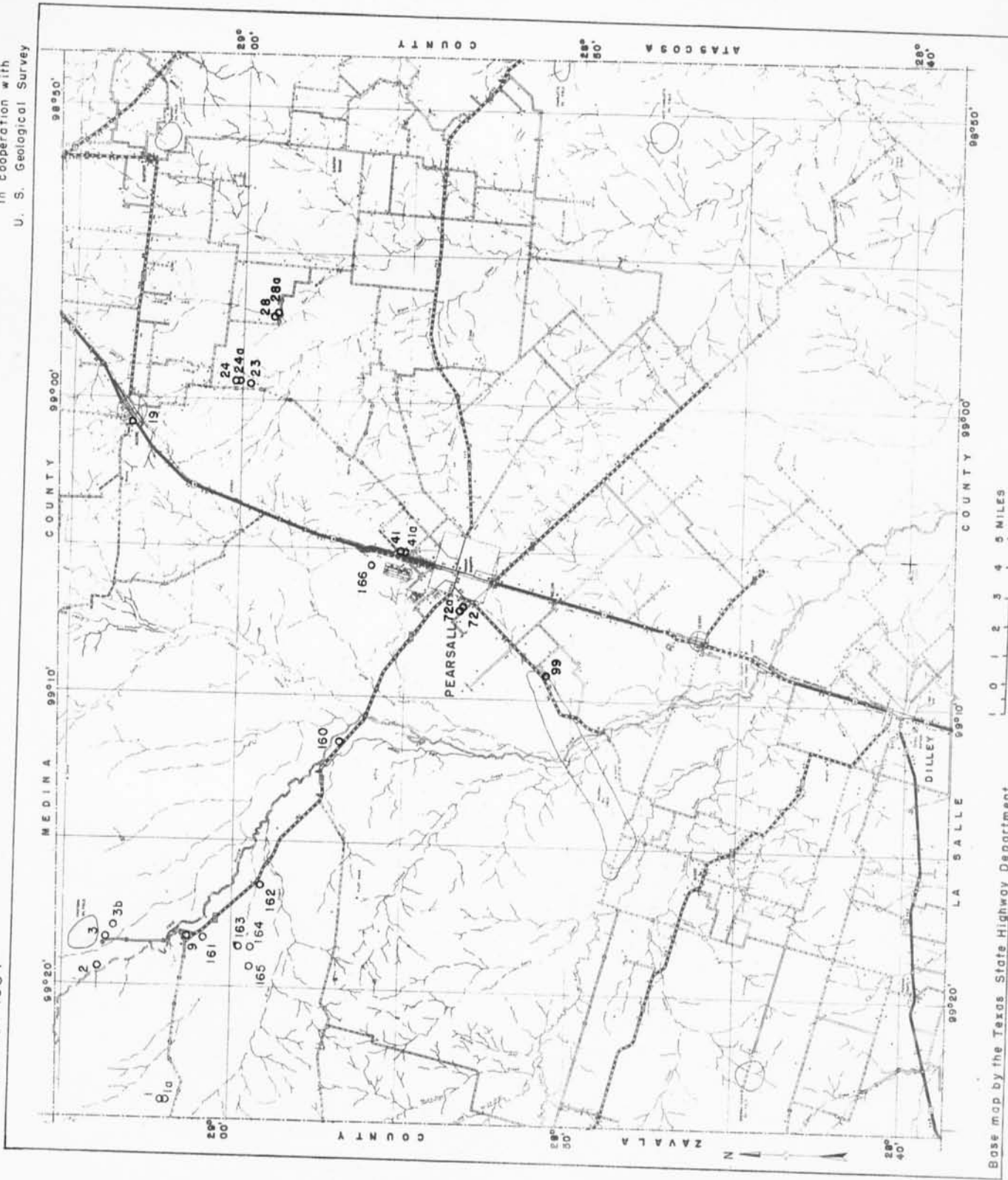
FRIO COUNTY



FRIO COUNTY, TEXAS OBSERVATION WELLS

October 1954

Bulletin 5416
Texas Board of Water Engineers
in cooperation with
U. S. Geological Survey



Base map by the Texas State Highway Department

FRIO COUNTY

1. Lat. 29°02', long. 99°24'.

Date	Water level	Date	Water level	Date	Water level
1929	84.4	July 14, 1953	102.1	Oct. 12, 1954	101.14
July 12, 1951	87.11				

1a. Lat. 29°02', long. 99°24'.

July 12, 1951	85.18	July 14, 1954	98.84	Oct. 12, 1954	97.76
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2. Lat. 29°04', long. 99°15'. Depth 85 feet.

1929	60	July 12, 1951	62.83	Oct. 12, 1954	67.53
July 20, 1949	60.99	July 22, 1952	63.64		
July 17, 1950	63.5	July 14, 1953	65.03		

3. Lat. 29°03', long. 99°18'.

July 12, 1951	80.59	July 14, 1953	85.49	Oct. 12, 1954	90.14
July 22, 1952	82.54				

3b. Lat. 29°03', long. 99°18'.

July 12, 1951	89.16	July 14, 1953	94.64	Oct. 12, 1954	96.47
July 22, 1952	91.14				

9. Lat. 29°01', long. 99°15'. Depth 197 feet.

1929	52	July 12, 1951	53.58	Oct. 12, 1954	59.92
July 20, 1949	50.26	July 22, 1952	57.44		
July 17, 1950	52.55	July 14, 1953	62.14		

FRIO COUNTY

19. Lat. 29°03', long. 99°00'. Depth 200 feet.

Date	Water level	Date	Water level	Date	Water level
1929	101	July 11, 1951	103.5	Oct. 4, 1954	104.68
July 21, 1949	102.11	July 22, 1952	105.06		
July 13, 1950	102.18	July 15, 1953	104.64		

23. Lat. 28°59', long. 98°59'. Depth 150 feet.

1929	20	July 13, 1950	30.82	July 15, 1953	33.43
July 21, 1949	30.98	July 22, 1952	32.2	Oct. 4, 1954	34.28

24. Lat. 29°00', long. 98°59'. Depth 720 feet.

1929	10	July 11, 1951	34.02	Oct. 4, 1954	49.53
July 21, 1949	31.03	July 22, 1952	36.46		
July 13, 1950	31.92	July 15, 1953	42.63		

24a. Lat. 29°00', long. 98°59'.

July 22, 1952	30.42	July 15, 1953	31.39	Oct. 4, 1954	32.51
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28. Lat. 28°59', long. 98°57'. Depth 560 feet.

1929	5	July 13, 1950	15.52	July 11, 1951	15.71
July 21, 1949	14.04				

-21-
FRIO COUNTY

28a. Lat. 28°59', long. 98°57'. Depth 700 feet.

Date	Water level	Date	Water level	Date	Water level
July 15, 1953	18.00	Oct. 4, 1954	20.42		

41. Lat. 28°55', long. 99°05'. Depth 130 feet.

1929	78.3	July 11, 1951	64.88	Oct. 4, 1954	69.68
July 21, 1949	63.63	July 22, 1952	64.53		
July 17, 1950	63.67	July 15, 1953	74.44		

41a. Lat. 28°55', long. 99°05'. Depth 90 feet.

July 21, 1949	63.36	July 11, 1951	64.73	July 15, 1953	75.63
July 17, 1950	63.05	July 22, 1952	64.24	Oct. 4, 1954	69.52

72. Lat. 28°53', long. 99°07'.

1929	48	July 22, 1952	40.73	Oct. 4, 1954	40.10
July 12, 1951	40.90	July 15, 1953	40.23		

72a. Lat. 28°53', long. 99°07'.

July 12, 1951	39.99	July 15, 1953	39.61	Oct. 4, 1954	39.93
July 22, 1952	39.94				

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99. Lat. 28°50', long. 99°09'. Depth 1,324 feet.

Date	Water level	Date	Water level	Date	Water level
1929	9	July 15, 1953	58.45	Oct. 4, 1954	60.98
July 11, 1951	28.3				

160. Lat. 28°56', long. 99°11'.

July 22, 1952	58.08	July 14, 1953	61.32	Oct. 12, 1954	60.65
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161. Lat. 29°00', long. 99°18'. Depth 208 feet.

July 20, 1949	82.03	July 22, 1952	91.77	Oct. 13, 1954	96.41
July 17, 1950	81.5	July 14, 1953	97.85		
July 11, 1951	90.68	Nov. 13	93.02		

162. Lat. 28°59', long. 99°16'.

July 20, 1949	69.53	July 22, 1952	76.42	Oct. 4, 1954	69.17
July 17, 1950	72.23	July 14, 1953	80.87		
July 12, 1951	77.26	Nov. 13	66.68		

163. Lat. 28°59', long. 99°18'. Depth 450 feet, slotted 410-450 feet.

Aug. 19, 1952	95.96	Oct. 13, 1954	93.19		
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164. Lat. 28°59', long. 99°18'. Depth 450 feet, slotted 410-450 feet.

Aug. 19, 1952	98.48	Nov. 13, 1953	92.58	Oct. 13, 1954	95.15
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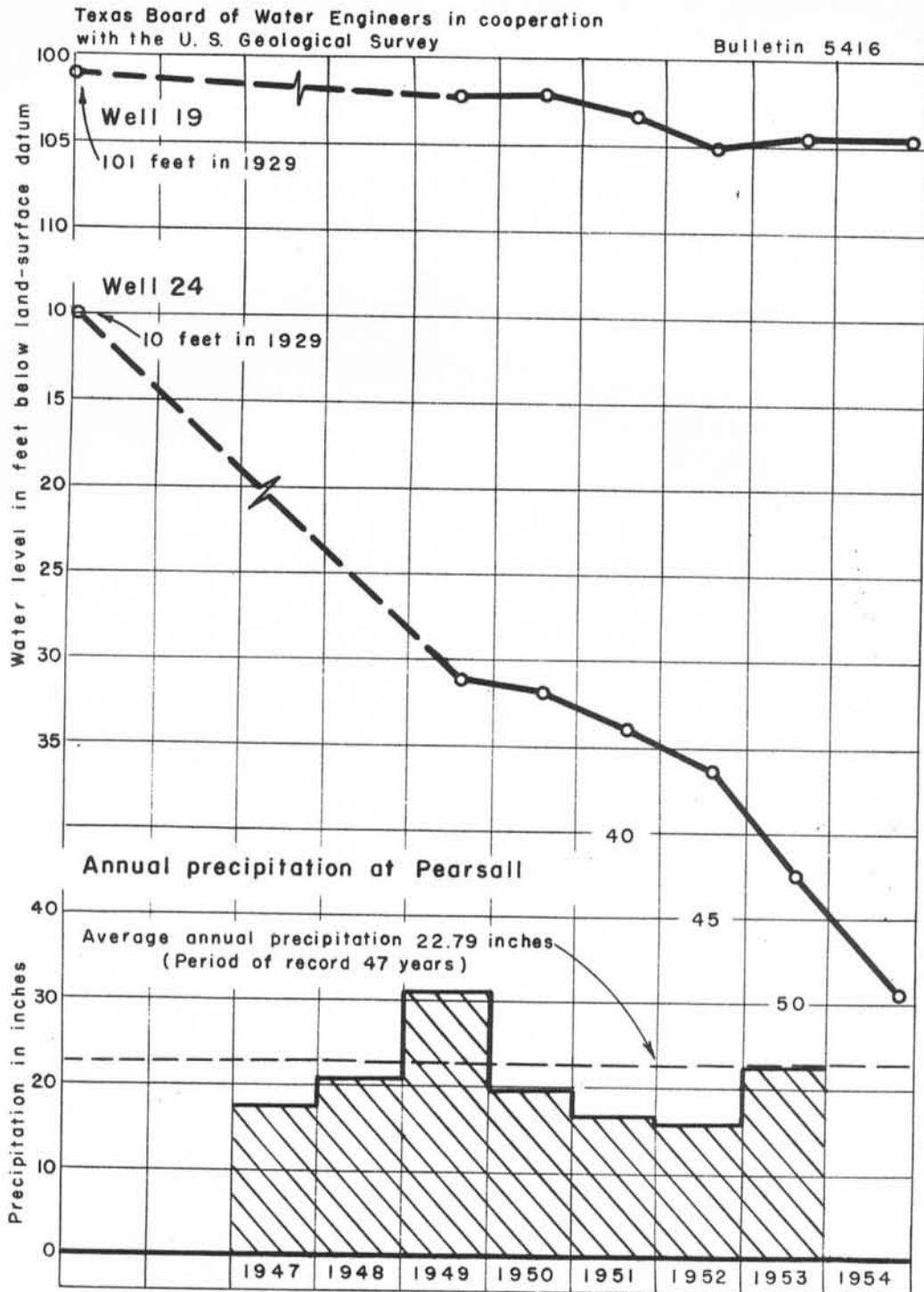
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165. Lat. 28°59', long. 99°19'. Depth 450 feet, slotted 390-450 feet.

Date	Water level	Date	Water level	Date	Water level
Nov. 13, 1953	87.52	Oct. 13, 1954	93.41		

166. Lat. 28°55', long. 99°05'.

July 21, 1949	111.21	July 22, 1952	105.70	July 15, 1953	107.90
July 17, 1950	111.37				



Hydrographs showing fluctuation of water levels in Frio County wells and annual precipitation at Pearsall, Tex.

