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BULLETIN 5408

RECORDS OF WATER-LEVEL MEASUREMENTS IN LOVING AND WARD COUNTIES, TEXAS

Compiled by

C. R. Follett, Engineer

Texas Board of Water Engineers

Prepared in cooperation with the Geological Survey,
United States Department of the Interior

May 1954

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RECORDS OF WATER-LEVEL MEASUREMENTS IN LOVING AND WARD COUNTIES, TEXAS

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This bulletin contains measurements of the depth-to-water in feet below land-surface datum in 8 wells in Loving County and 60 wells or test holes in Ward County. It is one of a series of publications by the Texas Board of Water Engineers which contains measurements of the water levels in selected observation wells. Measurements are made as a part of the cooperative program of ground-water investigations in Texas by the United States Geological Survey and the Texas Board of Water Engineers. The records cover the period from 1939 to 1942 in Loving County and from 1930 to January 1954 in Ward County. No measurements were made in Ward County during the 1933-38 or 1943-45 periods.

During 1939 and 1940 an inventory of water wells was made in Loving and Ward Counties as part of the Pecos River Joint Investigation which covered part or all of Crane, Loving, Pecos, Reeves and Ward Counties in Texas and also part of Southeastern New Mexico. The results of the Texas part were published by the Texas Board of Water Engineers in 1941. Water-level measurements made during the time of the inventory are included in this bulletin.

If more than one water-level measurement was made during a month, only the highest water level is given in this report. The accompanying maps show the locations of the observation wells. Hydrographs showing fluctuation of water levels in Ward County wells and the precipitation at Pecos are given on page 24. Records of water wells, geologic data, pumpage data, and discussion of water levels are given in the following list of publications.

LIST OF PUBLICATIONS

BROADHURST, W. L., SUNDSTROM, R. W., and WEAVER, D. E., 1949, Public water supplies in western Texas, U. S. Geol. Survey Water-Supply Paper 1106.

DENNIS, P. E., and LANG, JOE W., 1941, Pecos River Joint Investigation, Vol. 1, Geology and ground-water resources, Texas Board of Water Engineers*.

_____, 1941, Pecos River Joint Investigation, Vol. 2, Records of wells, Texas Board of Water Engineers*.

_____, 1941, Pecos River Joint Investigation, Vol. 3, Records of auger holes, Texas Board of Water Engineers*.

HOOD, J. W., and KNOWLES, D. B., 1952, Summary of ground-water development in the Pecos area, Reeves and Ward Counties, Texas, Bulletin 5202.

HOWARD, C. S., 1942, Quality of stored water available for use in the Lower Basin of the Pecos River, Texas.

LANG, JOE W., Memorandum concerning pumping test of Ward County Improvement District No. 3, large-capacity well, 6 miles northwest of Barstow, Texas. Manuscript. Open file U. S. Geological Survey,Austin, Texas.

LIVINGSTON, PENN P., 1946, Office memorandum regarding the drilling of wells by Ward County Irrigation District No. 1 near Barstow, Texas. Manuscript. Open file U. S. Geological Survey, Austin, Texas.

MEINZER, O. E., and WENZEL, L. K., 1943, Water levels and artesian pressure in observation wells in the United States in 1941, Part 4, U. S. Geol. Survey Water-Supply Paper 939.

_____, 1944, Water levels and artesian pressure in observation wells in the United States in 1942, Part 4, U. S. Geol. Survey Water-Supply Paper 947.

WHITE, W. N., 1947, Ground water in Ward County, Texas, Manuscript. Open file U. S. Geol. Survey, Austin, Texas.

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*Out of print. Copies available for reference in some public libraries and the Austin office of the United States Geological Survey.

LOVING COUNTY

LOVING COUNTY, TEXAS
OBSERVATION WELLS
January 1954

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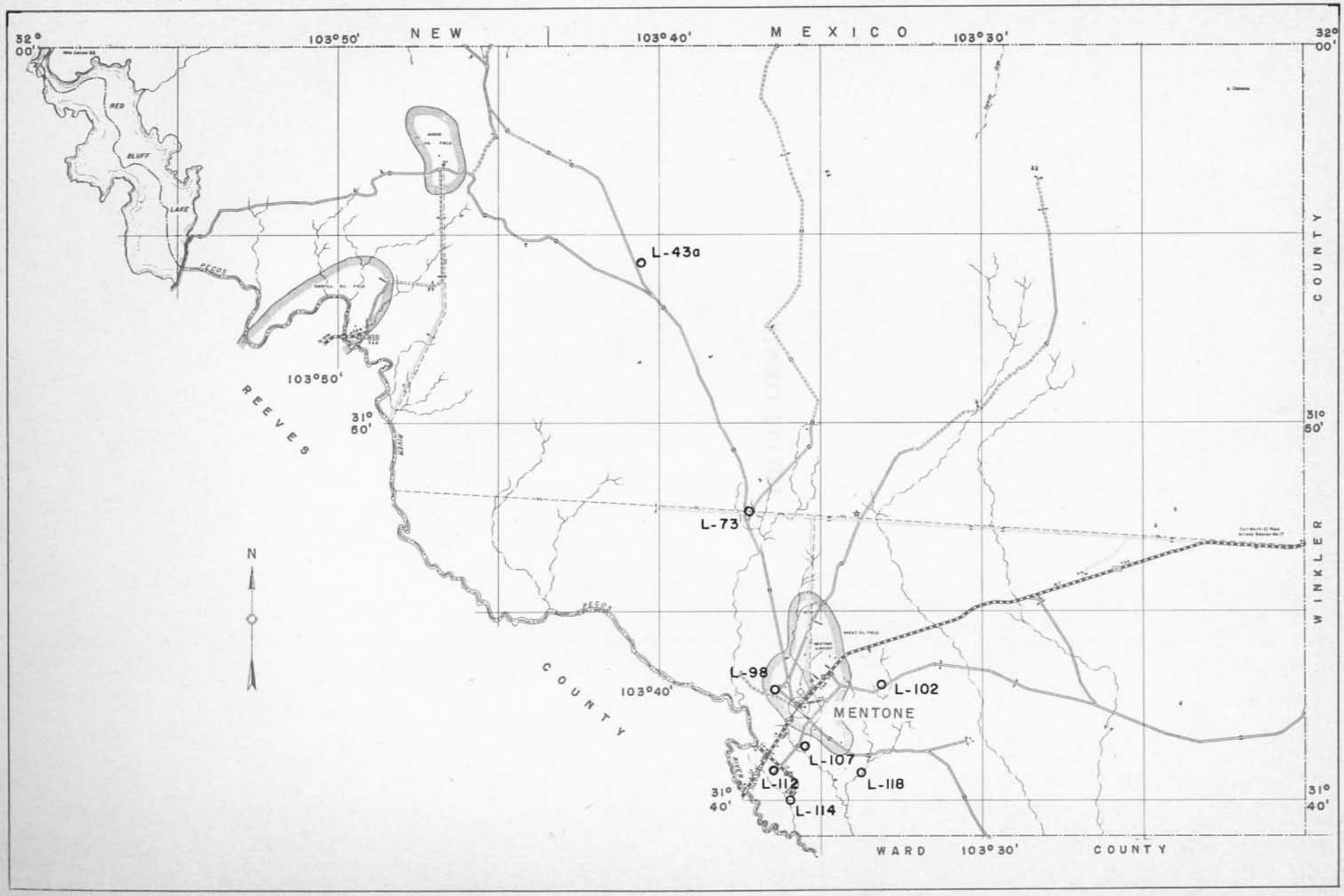


Base map from Texas State Highway Department

1 0 1 2 3 4 5 MILES

LOVING COUNTY

L-43a. Lat. 31°54', long. 103°40'. Depth 190 feet.

Date	Water level	Date	Water level	Date	Water level
Sept.20, 1940	166.54	May 13, 1941	167.70	Mar. 14, 1942	164.82
Mar. 20, 1941	166.73	Aug. 14	166.21		

L-73. Lat. 31°47', long. 103°37'. Depth 118 feet.

Sept. 1, 1939	91.10	Mar. 20, 1941	93.61	Mar. 14, 1942	82.68
June 28, 1940	92.41	May 13	94.10	Aug. 19	83.41
Aug. 8	93.26	Aug. 14	85.17	Dec. 28	82.81
Dec. 7	93.00	Jan. 20, 1942	82.81		

L-98. Lat. 31°42', long. 103°36'. Depth 143 feet.

July 23, 1940	33.97	May 13, 1941	33.11	Aug. 19, 1942	28.00
Dec. 7	34.26	Aug. 14	31.00	Dec. 28	27.67
Mar. 20, 1941	33.20	Mar. 14, 1942	26.62		

L-102. Lat. 31°43', long. 103°33'. Depth 175 feet.

Nov. 21, 1939	106.22	Dec. 7, 1940	105.66	Mar. 14, 1942	103.81
June 28, 1940	105.90	Mar. 20, 1941	105.13	Aug. 19	104.01
Aug. 8	105.79	May 13	105.33	Dec. 28	103.82
Sept.11	105.88	Aug. 14,	105.00		

L-107. Lat. 31°41', long. 103°35'. Depth 17 feet.

Feb. 27, 1940	13.67	Sept.11, 1940	13.90	Aug. 14, 1941	6.12
Apr. 24	13.76	Dec. 7	14.01	Mar. 14, 1942	3.88
June 28	14.16	Mar. 31, 1941	13.78	Aug. 19	6.91
Aug. 8	14.37	May 13	13.60	Dec. 28	8.80

LOVING COUNTY

L-112. Lat. 31°40', long. 103°36'. Depth 80 feet.

Date	Water level	Date	Water level	Date	Water level
Feb. 27, 1940	18.62	Dec. 7, 1940	18.91	Mar. 14, 1942	9.32
June 28	20.12	Mar. 31, 1941	18.73	Aug. 19	12.76
Aug. 8	19.19	May 13	18.53	Dec. 28	13.83
Sept.11	19.33	Aug. 14	11.21		

L-114. Lat. 31°40', long. 103°35'. Depth 53 feet.

Feb. 27, 1940	12.53	Aug. 8, 1940	12.88	Dec. 7, 1940	13.41
June 28	13.62	Sept.11	13.01	Mar. 3, 1941	12.88

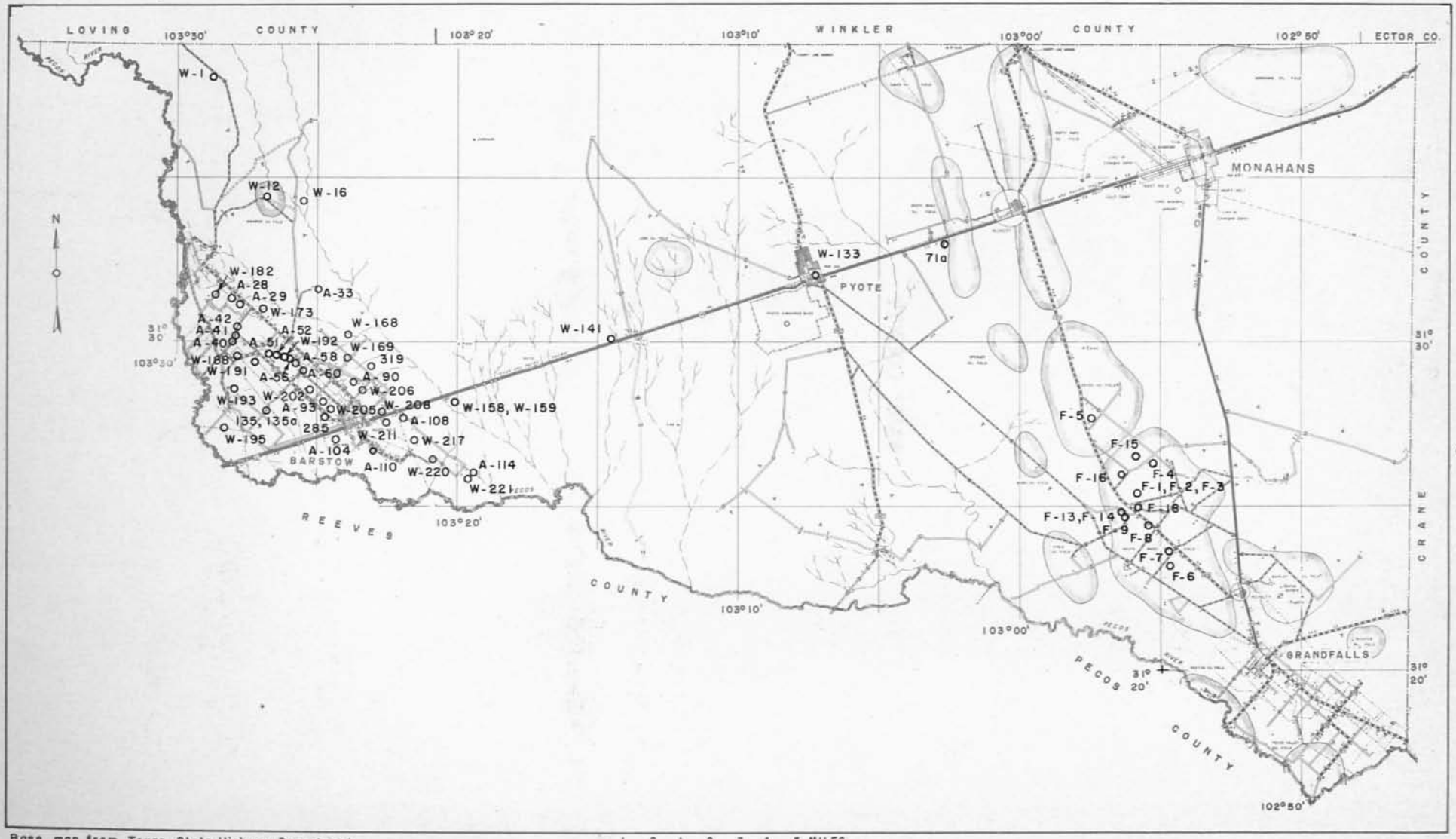
L-118. Lat. 31°40', long. 103°33'. Depth 44 feet.

Dec. 7, 1940	31.11	Aug. 14, 1941	29.68	Dec. 28, 1942	28.38
Mar. 31, 1941	31.05	Mar. 14, 1942	27.59		
May 13	31.09	Aug. 19	27.54		

WARD COUNTY

WARD COUNTY, TEXAS
OBSERVATION WELLS
January 1954

Bulletin 5408
Texas Board of Water Engineers
in cooperation with
U. S. Geological Survey



Base map from Texas State Highway Department

1 0 1 2 3 4 5 MILES

WARD COUNTY

71a. Lat. 31°33', long. 103°02'. Depth 143± feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 31, 1952	106.42	Feb. 7, 1953	107.08	Jan. 24, 1954	107.74

135. Lat. 31°27', long. 103°26'. Depth 31 feet.

Feb. 14, 1940	3.3	Feb. 10, 1941	*3.10	Jan. 1, 1942	*1.44
July 30	*3.55	Mar. 2	*3.28	Feb. 1	*1.65
Aug. 15	*3.13	Apr. 30	*2.53	Nov. 1	*1.75
Sept. 2	*3.75	May 24	*1.71	Apr. 21	*1.44
Oct. 15	*1.37	June 23	*1.44	May 10	*1.78
Nov. 9	*2.31	July 1	*1.54		
Dec. 1	*2.91	Aug. 1	*1.44		
Jan. 5, 1941	*3.15	Sept.19	*1.48		

135a. Lat. 31°27', long. 103°26'. Depth 13 feet.

July 16, 1940	*5.25	June 6, 1941	*2.69	May 1, 1942	*3.28
Aug. 14	*5.48	July 8	*3.08	June 5	*3.72
Sept. 1	*5.90	Aug. 1	*3.47	July 4	*4.50
Oct. 15	*2.79	Sept.24	*3.22	Aug. 6	*5.03
Nov. 10	*3.24	Oct. 26	*1.26	Sept. 4	*3.12
Dec. 2	*3.89	Nov. 1	*1.88	Oct. 1	*3.79
Jan. 15, 1941	*4.12	Dec. 13	*2.88	Nov. 1	*4.10
Feb. 13	*4.06	Jan. 1, 1942	*3.21	Dec. 29	*3.42
Mar. 1	*4.13	Feb. 1	*3.37		
Apr. 30	*4.15	Mar. 10	*3.47		
May 27	*2.60	Apr. 27	*3.18		

285. Lat. 31°27', long. 103°24'. Depth 11 feet.

Mar. 7, 1940	*9.98	Mar. 1, 1941	*10.25	Mar. 28, 1942	*5.63
Apr. 13	*7.80	Apr. 22	*8.24	Apr. 30	*2.96
May 3	*8.17	May 31	*7.68	May 1	*2.80
June 21	*8.00	June 30	*5.85	June 17	*2.20
July 3	*7.50	July 2	*3.86	July 26	*5.21
Aug. 2	*8.30	Aug. 1	*5.18	Aug. 22	*3.90
Sept. 8	*8.56	Sept. 7	*5.19	Sept. 3	*4.92
Oct. 17	*7.75	Oct. 28	*6.97	Oct. 23	6.31
Nov. 1	*7.95	Nov. 1	*7.08	Nov. 22	6.83
Dec. 1	*9.20	Dec. 16	*6.27	Dec. 29	7.67
Jan. 1, 1941	*9.76	Jan. 31, 1942	*6.35		
Feb. 1	*10.06	Feb. 1	*3.10		

*Monthly highest from recorder graph.

WARD COUNTY

319. Lat. 31°29', long. 103°23'. Depth 65 feet.

Date	Water level	Date	Water level	Date	Water level
Feb. 8, 1940	7.11	Jan. 1, 1941	*7.50	Dec. 16, 1941	*4.81
Mar. 8	7.60	Feb. 1	*8.00	Jan. 1, 1942	*5.45
Apr. 24	6.30	Mar. 1	*8.19	Feb. 28	*4.82
May 13	6.50	Apr. 30	*7.22	Mar. 1	*4.75
June 13	6.68	May 31	*5.76	Apr. 6	4.61
July 30	*6.32	June 9	*5.73	May 16	4.52
Aug. 29	*6.16	July 21	*3.16	June 13	4.22
Sept. 1	*6.38	Aug. 27	*3.57	July 21	2.50
Oct. 19	*5.44	Sept. 1	*3.80	Dec. 29	5.66
Nov. 1	*5.96	Oct. 28	*4.10		
Dec. 1	*6.82	Nov. 1	*4.37		

A-28. Lat. 31°31', long. 103°28'. Depth 152 feet.

Oct. 28, 1946	15.01	Mar. 3, 1948	20.08	Mar. 3, 1950	23.63
Dec. 4	16.00	Feb. 8, 1949	21.44		
Jan. 29, 1947	17.07	Jan. 23, 1950	22.64		

A-29. Lat. 31°31', long. 103°27'. Depth 115 feet.

Nov. 2, 1946	10.44	Feb. 8, 1949	16.80	Jan. 29, 1952	20.35
Dec. 4	11.21	Jan. 23, 1950	18.28	Feb. 4, 1953	20.62
Jan. 29, 1947	12.19	Mar. 3	18.82	Jan. 23, 1954	23.74
Mar. 3, 1948	14.87	Feb. 14, 1951	15.50		

A-33. Lat. 31°31', long. 103°25'. Depth 130 feet.

Nov. 25, 1946	17.70	Jan. 24, 1950	19.26	Jan. 28, 1952	21.85
Dec. 4	17.40	Mar. 3	19.29	Feb. 4, 1953	22.39
Jan. 29, 1947	16.64	Feb. 14, 1951	19.81	Jan. 23, 1954	22.36

A-40. Lat. 31°30', long. 103°28'. Depth 186 feet.

Sept. 30, 1946	13.73	Jan. 23, 1950	21.59	Feb. 4, 1953	21.92
Dec. 4	16.77	Mar. 3	20.61	Jan. 23, 1954	24.77
Jan. 29, 1947	14.94	Feb. 14, 1951	16.90		
Feb. 8, 1949	18.50	Jan. 29, 1952	18.74		

*Monthly highest from recorder graph.

WARD COUNTY

A-41. Lat. 31°30', long. 103°27'. Depth 162 feet.

Date	Water level	Date	Water level	Date	Water level
Sept.30, 1946	11.36	Jan. 29, 1947	12.67	Jan. 23, 1950	19.57
Dec. 4	13.42	Feb. 8, 1949	16.67	Mar. 3	18.50

A-42. Lat. 31°30', long. 103°27'. Depth 195 feet.

Sept.30, 1946	9.24	Jan. 29, 1947	10.94	Jan. 23, 1950	18.86
Dec. 4	10.92	Feb. 28, 1949	15.20	Mar. 3	17.32

A-51. Lat. 31°29', long. 103°27'. Depth 112 feet.

Sept.30, 1946	13.19	Feb. 8, 1949	15.76	Feb. 4, 1953	19.05
Dec. 4	15.32	Jan. 23, 1950	19.15	Jan. 23, 1954	22.20
Jan. 29, 1947	13.02	Mar. 3	17.86		

A-52. Lat. 31°29', long. 103°26'. Depth 172 feet.

Sept.30, 1946	10.97	Feb. 8, 1949	16.28	Feb. 14, 1951	13.06
Dec. 4	12.08	Jan. 23, 1950	18.49	Feb. 4, 1953	20.00
Jan. 29, 1947	13.32	Mar. 3	18.48	Jan. 23, 1954	22.35

A-56. Lat. 31°29', long. 103°26'. Depth 97 feet.

Sept.30, 1946	9.50	Jan. 23, 1950	17.72	Feb. 4, 1953	17.32
Dec. 4	10.95	Mar. 3	16.75	Jan. 23, 1954	19.19
Jan. 29, 1947	10.83	Feb. 14, 1951	9.34		

A-58. Lat. 31°29', long. 103°25'. Depth 71 feet.

Sept.30, 1946	10.85	Jan. 23, 1950	18.26	Feb. 4, 1953	19.06
Dec. 4	12.22	Mar. 3	17.64	Jan. 23, 1954	21.21
Jan. 29, 1947	12.47	Aug. 17	10.54		
Feb. 8, 1949	15.66	Feb. 14, 1951	11.76		

WARD COUNTY

A-60. Lat. 31°29', long. 103°25'. Depth 71 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 4, 1946	14.67	Feb. 8, 1949	17.79	Feb. 14, 1951	17.22
Jan. 29, 1947	15.96	Jan. 23, 1950	19.85	Jan. 29, 1952	18.16
Mar. 3, 1948	17.75	Mar. 3	20.22	Jan. 23, 1954	30.29

A-90. Lat. 31°28', long. 103°23'. Depth 100 feet.

Mar. 3, 1948	15.22	Feb. 14, 1951	14.56	Jan. 23, 1954	29.80
Feb. 8, 1949	15.29				

A-93. Lat. 31°28', long. 103°25'. Depth 110 feet.

Oct. 28, 1946	13.83	Feb. 8, 1949	15.51	Jan. 29, 1952	16.96
Dec. 4	14.41	Jan. 23, 1950	16.68	Feb. 4, 1953	20.67
Jan. 29, 1947	14.71	Mar. 3	17.21	Jan. 23, 1954	34.18
Mar. 3, 1948	15.37	Feb. 14, 1951	14.68		

A-104. Lat. 31°27', long. 103°24'. Depth 155 feet.

Aug. 19, 1949	10.75	Jan. 18, 1950	7.87	Feb. 4, 1953	12.74
Sept.20	10.84	Jan. 29, 1952	10.78	Jan. 23, 1954	15.52

A-108. Lat. 31°27', long. 103°22'. Depth 110 feet.

May 20, 1940	14.90	Jan. 30, 1947	16.96	Mar. 3, 1950	18.91
June 5	14.81	Mar. 3, 1948	17.35	Feb. 14, 1951	16.09
Nov. 2, 1946	15.74	Feb. 8, 1949	17.61	Jan. 29, 1952	19.14
Dec. 4	15.98	Jan. 18, 1950	18.46	Jan. 23, 1954	24.34

A-110. Lat. 31°26', long. 103°23'. Depth 80 feet.

Aug. 30, 1939	0.64	Nov. 2, 1946	2.88	Feb. 8, 1949	3.40
Mar. 11, 1940	2.54	Dec. 4	3.14	Jan. 18, 1950	3.46
May 13	1.70	Jan. 30, 1947	3.33	Mar. 3	3.42
June 14	1.78	Mar. 3, 1948	3.43		

A-114. Lat. 31°26', long. 103°19'. Depth 100 feet.

Jan. 23, 1950	18.68	Feb. 14, 1951	18.39	Feb. 4, 1953	19.81
Mar. 1	18.87	Jan. 29, 1952	18.60	Jan. 23, 1954	22.30

WARD COUNTY

F-1. Lat. 31°25', long. 102°56'. Depth 157 feet.

Date	Water level	Date	Water level	Date	Water level
June 23, 1948	60.95	Mar. 2, 1949	62.17	Oct. 2, 1949	61.74
Sept.27	63.50	Apr. 2	62.09	Mar. 2, 1950	62.43
Nov. 6	61.77	May 2	62.02	Aug. 2	62.08
Dec. 2	61.75	June 2	61.57	Sept. 2	61.68
Jan. 3, 1949	61.79	Aug. 3	61.83	Oct. 3	61.72
Feb. 2	61.96	Sept. 2	61.74	Jan. 31, 1952	66.01

F-2. Lat. 31°25', long. 102°56'. Depth 157 feet.

June 23, 1948	61.95	Apr. 2, 1949	62.64	Nov. 2, 1949	62.89
Sept.27	62.47	May 2	62.61	Dec. 7	62.92
Nov. 6	62.44	June 2	62.41	Jan. 2, 1950	62.93
Dec. 2	62.41	July 2	62.48	Feb. 2	62.76
Jan. 3, 1949	63.21	Aug. 3	62.58	Aug. 2	62.98
Feb. 2	62.72	Sept. 2	62.49	Sept. 2	62.78
Mar. 2	62.96	Oct. 1	62.52	Oct. 3	62.90

F-3. Lat. 31°25', long. 102°56'. Depth 157 feet.

June 23, 1948	58.83	Dec. 7, 1948	60.18	Sept. 2, 1950	60.13
Sept.27	62.91	Jan. 2, 1950	58.98	Oct. 3	60.31
Jan. 3, 1949	59.48	Feb. 2	59.82		
Apr. 2	59.84	Aug. 2	60.87		

F-4. Lat. 31°26', long. 102°55'. Depth 170± feet.

June 23, 1948	49.13	Aug. 3, 1949	49.29	Sept. 2, 1950	49.42
Sept.23	49.17	Sept. 2	49.23	Oct. 3	49.69
Nov. 6	49.23	Oct. 1	49.20	Nov. 2	49.74
Dec. 2	49.20	Nov. 2	49.24	Dec. 2	49.52
Jan. 3, 1949	49.15	Dec. 7	49.19	Jan. 2, 1951	49.55
Feb. 2	49.17	Jan. 2, 1950	49.23	Jan. 31, 1952	50.15
Mar. 2	49.19	Feb. 2	49.26	Feb. 7, 1953	50.80
Apr. 2	49.18	May 2	49.31	Jan. 24, 1954	51.38
May 2	49.19	June 2	49.35		
June 2	49.19	July 1	49.42		
July 2	49.19	Aug. 2	49.42		

WARD COUNTY

F-5. Lat. 31°27', long. 102°57'. Depth 157 feet.

Date	Water level	Date	Water level	Date	Water level
June 23, 1948	79.16	Aug. 3, 1949	79.28	Aug. 2, 1950	79.22
Sept.27	79.14	Sept. 2	79.14	Sept. 2	79.17
Nov. 6	79.19	Oct. 1	79.15	Oct. 3	79.25
Dec. 2	79.19	Nov. 2	79.32	Nov. 2	79.26
Jan. 3, 1949	79.27	Dec. 7	79.16	Dec. 2	79.35
Feb. 2	79.14	Jan. 2, 1950	79.19	Jan. 2, 1951	79.35
Mar. 2	79.15	Feb. 2	79.31	Jan. 31, 1952	79.51
Apr. 2	79.17	Mar. 2	79.10	Feb. 7, 1953	80.16
May 2	79.18	May 2	79.18	Jan. 24, 1954	80.92
June 2	79.18	June 2	79.18		
July 2	79.21	July 1	79.18		

F-6. Lat. 31°23', long. 102°54'. Depth 100± feet.

June 23, 1948	40.34	July 2, 1949	40.77	June 2, 1950	42.19
Sept.27	40.55	Aug. 3	41.02	July 1	41.41
Nov. 6	40.76	Sept. 2	41.10	Aug. 2	41.26
Dec. 2	40.70	Oct. 1	40.90	Sept. 3	41.66
Jan. 3, 1949	40.40	Nov. 2	40.87	Oct. 3	41.69
Feb. 2	40.57	Dec. 7	40.75	Nov. 2	41.70
Mar. 2	40.31	Jan. 2, 1950	40.73	Dec. 2	41.68
Apr. 2	40.44	Feb. 2	40.70	Jan. 2, 1951	41.75
May 2	40.51	Mar. 2	40.75		
June 2	40.56	May 5	40.82		

F-7. Lat. 31°23', long. 102°54'. Depth 112 feet.

June 23, 1948	40.59	July 2, 1949	40.86	June 2, 1950	40.94
Sept.27	40.80	Aug. 3	41.05	July 1	41.00
Nov. 6	40.85	Sept. 9	41.12	Aug. 2	41.13
Dec. 2	40.85	Oct. 1	41.15	Sept. 2	41.23
Jan. 3, 1949	40.78	Nov. 2	41.19	Oct. 3	41.30
Feb. 2	40.77	Dec. 7	41.19	Nov. 2	41.34
Mar. 2	40.75	Jan. 2, 1950	41.22	Dec. 2	41.47
Apr. 2	40.76	Feb. 2	41.28	Jan. 2, 1951	41.43
May 2	40.77	Mar. 2	41.26		
June 2	40.88	May 2	41.31		

WARD COUNTY

F-8. Lat. 31°24', long. 102°55'. Depth 113 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1948	64.45	Oct. 1, 1949	65.17	Aug. 2, 1950	65.75
Jan. 3, 1949	64.46	Nov. 2	65.43	Sept. 2	65.96
Mar. 2	64.49	Dec. 7	65.01	Oct. 3	67.67
Apr. 2	64.53	Jan. 2, 1950	65.24	Nov. 2	74.20
May 2	64.70	Feb. 2	65.57	Dec. 2	71.76
June 2	64.60	Mar. 2	62.31	Jan. 31, 1952	73.91
July 2	64.52	May 2	65.47	Feb. 7, 1953	72.23
Aug. 3	64.96	June 2	65.50	Jan. 24, 1954	72.00
Sept. 2	65.08	July 1	65.48		

F-9. Lat. 31°24', long. 102°56'. Depth 135± feet.

Dec. 3, 1948	60.78	Sept. 2, 1949	60.89	July 1, 1950	61.26
Jan. 3, 1949	60.66	Oct. 1	61.06	Aug. 2	61.32
Feb. 2	60.70	Nov. 2	61.15	Sept. 2	61.31
Mar. 2	60.66	Dec. 7	60.95	Oct. 3	61.33
Apr. 2	60.93	Jan. 2, 1950	60.98	Nov. 2	61.42
May 2	60.95	Feb. 2	61.06	Dec. 2	61.47
June 2	60.82	Mar. 2	61.11	Jan. 2, 1951	61.49
July 2	60.98	May 2	61.12	Jan. 31, 1952	63.23
Aug. 3	61.12	June 2	61.2	Feb. 7, 1953	64.61

F-13. Lat. 31°24', long. 102°56'. Depth 105 feet.

Dec. 3, 1948	26.76	Oct. 1, 1949	25.43	Sept. 2, 1950	25.04
Jan. 3, 1949	26.83	Nov. 2	25.27	Oct. 3	24.69
Feb. 2	26.56	Dec. 7	25.33	Nov. 2	24.72
Mar. 2	26.54	Jan. 2, 1950	25.32	Dec. 2	24.83
Apr. 2	26.66	Feb. 2	25.51	Jan. 2, 1951	24.94
May 2	26.35	Mar. 2	25.56	Jan. 31, 1952	24.30
June 2	26.22	May 2	25.74	Feb. 7, 1953	22.50
July 2	26.75	June 2	25.43	Jan. 24, 1954	22.43
Aug. 3	25.78	July 1	25.47		
Sept. 2	25.83	Aug. 2	25.00		

WARD COUNTY

F-14. Lat. 31°24', long. 102°56'. Depth 117 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1948	58.86	Oct. 1, 1949	51.00	Sept. 3, 1950	56.19
Jan. 3, 1949	58.90	Nov. 2	50.43	Oct. 3	55.09
Feb. 2	56.76	Dec. 7	52.85	Nov. 2	56.52
Mar. 2	56.83	Jan. 2, 1950	54.45	Dec. 2	57.80
Apr. 2	57.31	Feb. 2	55.56	Jan. 2, 1951	58.76
May 2	54.93	Mar. 2	56.37	Jan. 31, 1952	64.67
June 2	55.22	May 2	58.43	Feb. 7, 1953	65.50
July 2	51.99	June 2	56.57	Jan. 24, 1954	65.40
Aug. 3	53.40	July 1	57.61		
Sept. 2	54.56	Aug. 2	54.90		

F-15. Lat. 31°26', long. 102°55'. Depth 71 feet.

Jan. 3, 1949	46.88	Oct. 1, 1949	47.22	Aug. 2, 1950	47.02
Feb. 2	46.88	Nov. 2	46.93	Sept. 2	47.95
Mar. 2	46.87	Dec. 7	46.95	Oct. 3	47.09
Apr. 2	47.12	Jan. 2, 1950	47.03	Nov. 2	47.08
May 2	47.02	Feb. 2	47.09	Dec. 2	47.15
June 2	47.01	Mar. 2	47.12	Jan. 2, 1951	47.37
July 2	47.10	May 2	47.05	Jan. 31, 1952	47.28
Aug. 3	46.97	June 2	46.97	Jan. 24, 1954	48.09
Sept. 2	47.07	July 1	46.99		

F-16. Lat. 31°25', long. 102°56'. Depth 200 feet.

Jan. 3, 1949	68.27	Oct. 1, 1949	68.35	Aug. 2, 1950	68.67
Feb. 2	68.27	Nov. 2	68.46	Sept. 2	69.65
Mar. 2	68.05	Dec. 7	68.38	Oct. 3	68.73
Apr. 2	68.31	Jan. 2, 1950	68.38	Nov. 2	68.85
May 2	68.34	Feb. 2	68.50	Dec. 2	68.98
June 2	68.34	Mar. 2	68.43	Jan. 2, 1951	69.05
July 2	68.36	May 2	68.61	Jan. 31, 1952	71.02
Aug. 2	68.44	June 2	68.61	Feb. 7, 1953	71.65
Sept. 2	68.33	July 1	68.75	Jan. 24, 1954	72.22

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F-18. Lat. 31°24', long. 102°55'. Depth 95 feet.

Date	Water level	Date	Water level	Date	Water level
Mar. 2, 1949	58.69	Nov. 2, 1949	59.00	Aug. 2, 1950	58.84
Apr. 2	61.02	Dec. 7	58.68	Sept. 2	59.16
May 2	60.48	Jan. 2, 1950	59.44	Oct. 3	58.54
June 2	60.44	Feb. 2	59.48	Nov. 2	58.83
July 2	60.35	Mar. 2	58.90	Jan. 2, 1951	58.88
Aug. 3	60.62	May 2	58.75	Jan. 31, 1952	60.36
Sept. 2	60.00	June 2	58.49	Feb. 7, 1953	61.10
Oct. 1	59.90	July 1	58.55	Jan. 24, 1954	62.02

W-1. Lat. 31°38', long. 103°28'. Depth 105 feet.

Feb. 5, 1940	93.50	Mar. 25, 1941	93.26	May 13, 1942	90.96
Sept. 14	93.04	May 13	93.24	Aug. 14	91.23
Oct. 8	93.14	Aug. 11	92.56	Dec. 28	91.31
Nov. 12	93.19	Mar. 12, 1942	90.93		

W-12. Lat. 31°34', long. 103°27'. Depth 87 feet.

Nov. 6, 1939	57.40	May 13, 1941	57.04	Aug. 14, 1942	56.41
Dec. 5, 1940	57.28	Aug. 11	56.99	Dec. 28	56.50
Mar. 25, 1941	57.18	Mar. 12, 1942	56.23		

W-16. Lat. 31°34', long. 103°25'. Depth 90 feet.

Oct. 25, 1939	47.05	May 14, 1941	46.80	Dec. 28, 1942	46.48
Dec. 5, 1940	47.06	Aug. 11	46.78		
Mar. 25, 1941	46.88	Mar. 12, 1942	46.37		

W-133. Lat. 31°33', long. 103°07'. Depth 106 feet.

Feb. 23, 1940	77.74	Aug. 9, 1940	74.24	Aug. 11, 1941	73.64
Apr. 16	75.20	Dec. 5	73.93	Mar. 12, 1942	72.82
June 20	74.72	May 15, 1941	73.91		

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W-141. Lat. 31°30', long. 103°14'. Depth 82 feet.

Date	Water level	Date	Water level	Date	Water level
Sept.26, 1939	62.94	Mar. 26, 1941	59.71	May 8, 1942	63.13
Mar. 11, 1940	66.43	Apr. 17	60.68	June 13	64.11
Apr. 16	61.30	May 15	57.70	July 24	63.66
May 15	60.20	June 16	55.57	Aug. 29	62.50
June 14	62.14	July 31	57.91	Sept.18	57.07
July 12	57.42	Aug. 10	58.68	Oct. 24	60.11
Aug. 9	60.60	Dec. 27	57.98	Nov. 12	61.43
Sept.10	61.81	Jan. 17, 1942	58.21	Dec. 28	63.06
Oct. 8	63.81	Mar. 12	60.79		
Feb. 25, 1941	55.33	Apr. 7	61.80		

W-158. Lat. 31°28', long. 103°20'. Depth 115 feet.

Sept.26, 1939	94.28	Mar. 23, 1950	97.03	Feb. 4, 1953	97.27
Aug. 8, 1949	96.67	Feb. 14, 1951	96.77	Jan. 24, 1954	99.35
Jan. 23, 1950	96.94	Jan. 28, 1952	97.30		

W-159. Lat. 31°28', long. 103°20'. Depth 107 feet.

Sept.26, 1939	96.01	Aug. 9, 1940	96.42	Jan. 17, 1942	94.20
Jan. 9, 1940	95.98	Mar. 26, 1941	95.81	Mar. 12	94.11
Mar. 11	95.97	May 15	95.60	Dec. 28	94.62
June 14	96.10	Dec. 27	94.28		

W-168. Lat. 31°30', long. 103°24'. Depth 23 feet.

Oct. 23, 1939	20.41	Oct. 8, 1940	22.22	Aug. 11, 1941	18.86
Jan. 8, 1940	22.71	Dec. 5	21.43	Mar. 12, 1942	19.92
Aug. 9	21.91	Mar. 25, 1941	21.26	Dec. 28	18.62
Sept.10	21.78	May 14	20.22		

W-169. Lat. 31°29', long. 103°24'. Depth 15 feet.

Aug. 29, 1939	6.04	Mar. 8, 1940	9.61	Dec. 5, 1940	10.11
Sept.20	7.02	May 13	9.18	Mar. 25, 1941	11.32
Oct. 20	7.51	June 13	10.07	May 14	8.58
Nov. 8	8.62	July 11	10.78	Aug. 11	6.53
Dec. 9	8.87	Aug. 5	9.56	Oct. 2	7.70
Jan. 8, 1940	9.30	Sept.10	9.44	Mar. 12, 1942	9.03
Feb. 8	9.60	Oct. 8	10.52	Dec. 29	4.97

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W-173. Lat. 31°31', long. 103°27'. Depth 78 feet.

Date	Water level	Date	Water level	Date	Water level
Sept.19, 1939	4.10	June 26, 1940	6.84	Sept. 8, 1941	3.89
Oct. 26	5.02	July 12	7.15	Oct. 2	4.69
Nov. 8	5.47	Aug. 5	7.62	Nov. 22	5.06
Dec. 9	5.76	Sept.10	7.47	Jan. 8, 1942	5.53
Jan. 8, 1940	6.13	Oct. 8	7.83	Mar. 12	4.41
Feb. 8	6.66	Dec. 5	7.70	Dec. 28	4.82
Mar. 8	7.06	Mar. 25, 1941	9.13		
Apr. 23	5.53	May 14	6.52		
May 13	5.98	Aug. 11	3.64		

W-182. Lat. 31°31', long. 103°28'. Depth 54 feet.

Sept.19, 1939	7.90	Mar. 26, 1941	17.70	Oct. 2, 1941	9.00
Oct. 19	6.92	May 14	13.00	Mar. 12, 1942	11.22
Jan. 8, 1940	11.71	Aug. 11	8.28	Aug. 14	6.82
Apr. 30	10.65	Sept. 5	7.84	Dec. 28	12.77

W-188. Lat. 31°29', long. 103°28'. Depth 103 feet.

Dec. 17, 1930	4.11	Apr. 1, 1932	3.36	June 13, 1940	6.72
Mar. 6, 1931	3.04	May 2	2.91	Aug. 5	6.86
Apr. 6	2.80	June 1	2.22	Sept.10	7.38
May 6	1.25	Sept.19, 1939	4.47	Oct. 8	7.76
June 2	2.90	Oct. 19	5.20	Dec. 5	7.73
July 2	3.27	Nov. 8	5.64	Mar. 25, 1941	8.70
Aug. 6	5.03	Dec. 9	6.02	May 13	5.97
Sept. 3	4.76	Jan. 8, 1940	6.36	Aug. 11	4.24
Oct. 27	3.99	Feb. 8	6.74	Mar. 12, 1942	6.21
Dec. 31	4.45	Mar. 8	7.18	Dec. 28	5.40
Feb. 2, 1932	5.12	Apr. 10	6.46		
Mar. 1	3.73	May 14	6.22		

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W-191. Lat. 31°20', long. 103°27'. Depth 80 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 17, 1930	5.97	Mar. 1, 1932	5.20	Apr. 10, 1940	8.33
Mar. 6, 1931	3.47	Apr. 1	4.98	May 4	9.80
Apr. 6	3.61	May 2	3.12	Sept. 7	9.70
May 6	1.91	June 1	2.02	Oct. 8	10.17
June 2	3.20	Sept.19, 1939	6.00	Dec. 5	9.87
July 2	2.95	Oct. 20	6.48	Mar. 25, 1941	10.71
Aug. 6	5.14	Nov. 8	7.00	May 13	8.38
Sept. 3	3.89	Dec. 9	7.21	Aug. 11	5.10
Oct. 27	1.84	Jan. 8, 1940	7.60	Mar. 12, 1942	6.98
Dec. 31	3.98	Feb. 8	8.51	Dec. 28	7.76
Feb. 2, 1932	6.19	Mar. 8	9.11		

W-192. Lat. 31°29', long. 103°26'. Depth 58 feet.

Dec. 17, 1930	4.52	Sept.19, 1939	3.82	June 13, 1940	6.97
Mar. 6, 1931	3.23	Oct. 20	4.20	Dec. 5	8.04
Apr. 6	2.80	Nov. 8	5.10	Mar. 25, 1941	9.68
May 6	1.30	Dec. 9	5.91	May 13	6.51
June 2	3.53	Jan. 8, 1940	6.52	Aug. 11	3.90
July 2	3.87	Feb. 8	7.11	Mar. 12, 1942	4.72
Aug. 5	5.15	Mar. 8	7.67	Dec. 28	5.63
Aug. 29, 1939	4.23	May 14	6.62		

W-193. Lat. 31°28', long. 103°28'. Depth 48 feet.

Aug. 31, 1939	7.91	Mar. 26, 1941	10.42	Mar. 12, 1942	6.48
June 13, 1940	9.26	May 14	10.10	Dec. 29	7.60
Oct. 8	9.51	Aug. 11	6.56		
Dec. 5	9.68	Nov. 7	2.73		

W-195. Lat. 31°27', long. 103°28'. Depth 278 feet.

Aug. 31, 1939	2.34	Dec. 5, 1940	2.54	July 31, 1950	*13.60
Sept.20	1.77	Mar. 26, 1941	2.82	Aug. 4	*13.30
Oct. 20	1.62	May 14	2.11	Sept.30	*11.77
Nov. 8	1.57	Aug. 11	1.48	Oct. 24	*10.60
Dec. 9	1.54	Aug. 20	18.21	Nov. 27	9.51
Jan. 8, 1940	2.00	Sept.23	13.44	Dec. 3	9.88
Feb. 10	2.80	Jan. 18, 1950	8.33	Feb. 14, 1951	9.27
Mar. 8	3.00	Feb. 21	7.65	Jan. 29, 1952	13.54
Apr. 10	3.01	Mar. 3	*7.59	Feb. 4, 1953	19.66
May 14	2.93	Apr. 1	*10.14	Jan. 23, 1954	21.40
June 13	3.00	May 29	*12.23		
Aug. 1	3.12	June 12	*13.03		

* Monthly highest from recorder graph.

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W-202. Lat. 31°28', long. 103°25'. Depth 100 feet.

Date	Water level	Date	Water level	Date	Water level
Aug. 30, 1939	7.28	Apr. 23, 1940	7.31	Dec. 5, 1940	7.96
Sept.20	7.06	May 14	7.62	May 13, 1941	7.67
Oct. 20	7.12	June 13	7.32	Aug. 11	1.70
Nov. 8	7.43	Aug. 5	7.38	Mar. 12, 1942	6.66
Dec. 9	7.87	Sept.10	7.71	Dec. 29	7.62
Jan. 8, 1940	8.48	Oct. 8	8.28		

W-205. Lat. 31°27', long. 103°24'. Depth 85 feet.

Dec. 17, 1930	6.53	Sept.20, 1939	5.20	Dec. 1, 1940	*13.54
Mar. 6, 1931	7.01	Oct. 20	9.30	Jan. 1, 1941	*14.08
Apr. 6	5.45	Nov. 8	10.10	Feb. 1	*14.39
May 6	5.15	Dec. 9	10.46	Mar. 1	*14.57
June 2	5.51	Jan. 8, 1940	11.30	Apr. 21	*12.55
July 2	5.95	Feb. 17	*14.23	May 31	*10.91
Sept. 3	9.06	Mar. 1	*14.36	June 30	*9.95
Oct. 27	5.74	Apr. 13	*12.01	July 2	*8.07
Dec. 31	8.23	May 3	*12.34	Aug. 1	*9.55
Feb. 2, 1932	8.57	June 22	*12.31	Sept.13	10.10
Mar. 1	6.78	July 3	*11.87	Oct. 2	11.62
Apr. 1	7.77	Aug. 2	*12.70	Mar. 12, 1942	7.90
May 2	7.51	Sept. 7	*13.01	May 16	4.00
June 1	5.87	Oct. 18	*12.09	July 21	8.30
Aug. 30, 1939	6.48	Nov. 1	*12.20	Dec. 29	9.00

W-206. Lat. 31°28', long. 103°23'. Depth 43 feet.

Aug. 29, 1939	6.67	Aug. 5, 1940	11.02	Aug. 11, 1941	8.42
Feb. 8, 1940	10.80	Sept.10	11.42	Mar. 12, 1942	8.64
Mar. 8	11.70	Dec. 5	11.61	Dec. 28	10.92
June 13	10.77	Mar. 26, 1941	12.51		
July 12	11.34	May 14	10.60		

* Monthly highest from recorder graph.

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W-208. Lat. 31°27', long. 103°22'. Depth 72 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 17, 1930	5.41	Feb. 2, 1932	8.42	Feb. 10, 1940	10.50
Mar. 6, 1931	6.45	Mar. 1	7.19	Mar. 11	12.21
Apr. 6	5.80	Apr. 1	4.72	May 13	11.07
May 6	4.89	May 2	8.50	Dec. 5	10.18
June 2	5.15	June 1	4.19	Mar. 26, 1941	12.70
July 2	7.22	Sept.20, 1939	6.50	May 15	11.40
Aug. 5	9.06	Oct. 20	9.15	Aug. 11	7.66
Sept. 3	5.58	Nov. 8	9.38	Mar. 12, 1942	8.02
Oct. 27	6.85	Dec. 9	9.71	Dec. 29	9.61
Dec. 31	8.59	Jan. 9, 1940	10.13		

W-211. Lat. 31°27', long. 103°22'. Depth 53 feet.

Oct. 25, 1930	5.84	Feb. 2, 1932	9.92	Feb. 10, 1940	10.34
Dec. 17	2.03	Mar. 1	7.55	Mar. 11	10.73
Mar. 6, 1931	6.62	Apr. 1	7.13	May 13	9.20
Apr. 6	8.45	May 2	10.03	June 14	9.91
May 6	8.19	June 1	5.88	Aug. 5	9.36
June 2	7.32	Sept.20, 1939	6.88	Mar. 26, 1941	11.22
Aug. 5	10.58	Oct. 20	8.28	May 15	9.95
Sept. 3	7.97	Nov. 8	8.80	Aug. 11	6.94
Oct. 27	8.50	Dec. 9	9.21	Mar. 12, 1942	7.47
Dec. 31	9.90	Jan. 9, 1940	9.93	Dec. 29	8.92

W-217. Lat. 31°26', long. 103°22'. Depth 13 feet.

Aug. 30, 1939	11.14	Mar. 11, 1940	12.08	Dec. 5, 1940	11.52
Sept.20	9.31	May 13	11.67	Mar. 26, 1941	12.64
Oct. 20	10.23	June 14	11.86	May 14	11.69
Nov. 8	10.03	July 11	12.36	Aug. 11	9.30
Dec. 9	10.38	Aug. 5	11.80	Mar. 12, 1942	10.63
Jan. 9, 1940	11.54	Sept.10	12.22	Dec. 29	11.52
Feb. 10	11.72	Oct. 8	12.04		

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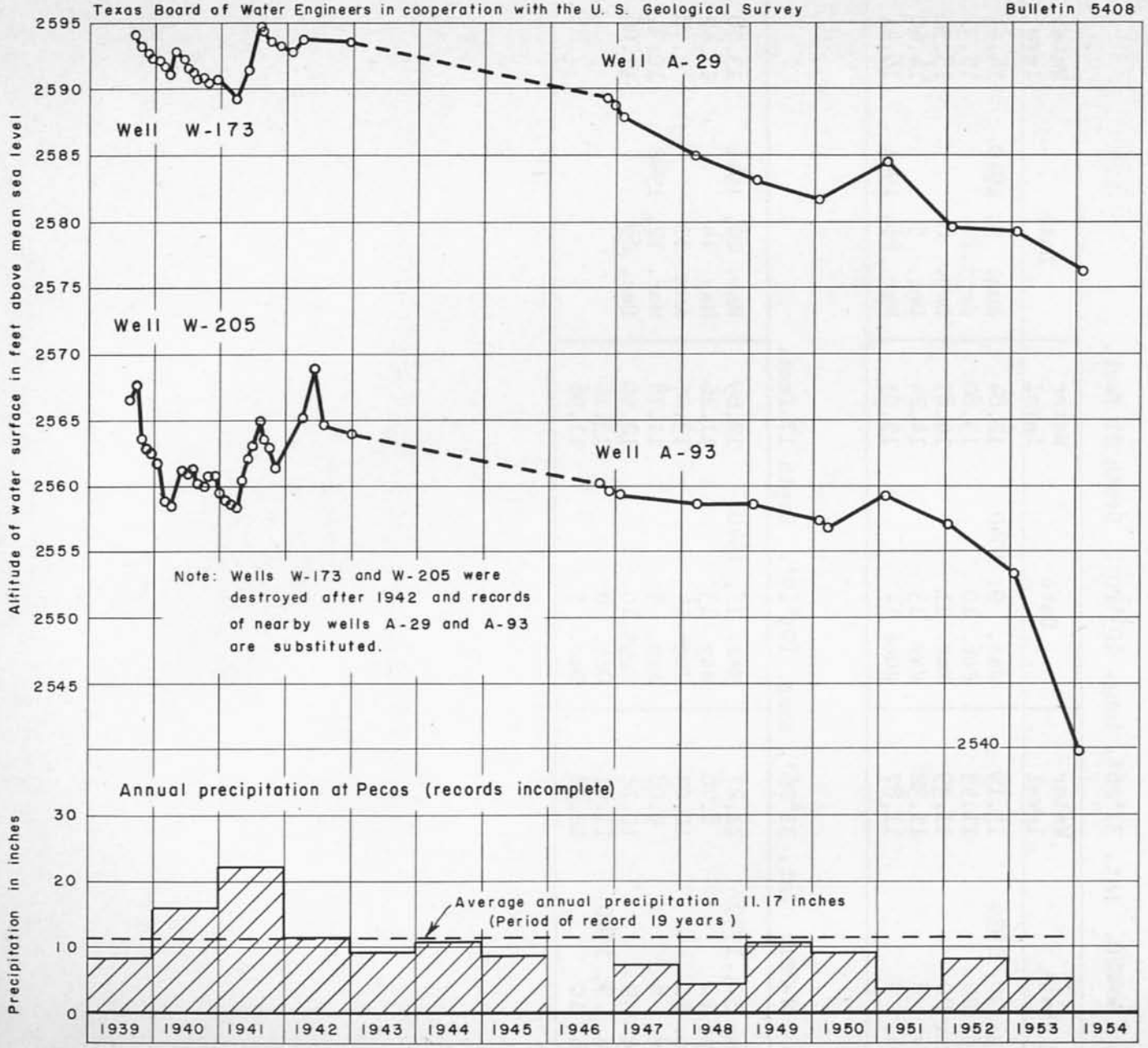
W-220. Lat. 31°26', long. 103°20'. Depth 21 feet.

Date	Water level	Date	Water level	Date	Water level
Aug. 30, 1939	13.19	Jan. 9, 1940	12.84	Aug. 5, 1940	14.53
Sept.20	11.53	Feb. 10	13.60	Sept.10	15.31
Oct. 20	11.39	Mar. 11	14.87	Oct. 8	15.30
Nov. 8	11.32	May 13	14.24	Dec. 5	14.60
Dec. 9	11.87	June 14	15.03	Mar. 26, 1941	16.41

W-221. Lat. 31°26', long. 103°19'. Depth 17 feet.

Aug. 30, 1939	11.27	Mar. 11, 1940	12.69	Mar. 26, 1941	13.78
Sept.20	8.78	May 13	11.26	May 14	12.43
Oct. 20	10.03	June 14	13.07	Aug. 11	5.78
Nov. 8	9.08	Aug. 5	11.78	Mar. 12, 1942	10.31
Dec. 9	10.12	Sept.10	12.90	Dec. 29	11.06
Jan. 9, 1940	11.42	Oct. 8	13.10		
Feb. 10	12.08	Dec. 5	11.96		



Hydrographs showing fluctuation of water levels in Ward County wells and the annual precipitation at Pecos, Texas.