

TEXAS BOARD OF WATER ENGINEERS

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BULLETIN 5613

RECORDS OF WATER-LEVEL MEASUREMENTS IN CHILDRESS, COTTLE,
HARDEMAN, AND KING COUNTIES, TEXAS

1940 TO JANUARY 1956

Compiled by

C. R. Follett, Engineer

Texas Board of Water Engineers

From records of the Texas Board of Water Engineers
and the
Geological Survey, United States Department of the Interior

July 1956



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INTRODUCTION

The Texas Board of Water Engineers is charged with making independently, or in cooperation with other state and federal agencies, scientific investigations of the source, amount and quality of ground-water supplies. To evaluate effects on ground-water development in relation to available supply, periodic measurements of water levels are made in the principal reservoirs of the state through an observation well program financed cooperatively by the Texas Board of Water Engineers and the United States Geological Survey.

Water levels in some observation wells are published annually in Water-Supply Papers of the Geological Survey. County water-level reports are published periodically by the Texas Board of Water Engineers and include the recorded water levels in selected observation wells. This bulletin contains measurements of the depth to water in feet below land-surface datum in 38 wells in Childress County, 6 in Cottle County, 13 in Hardeman and 2 in King County.

During 1940-41 an inventory of the wells and springs in Childress County was made by the Texas Board of Water Engineers, the Geological Survey, and the City of Childress. The results were published by the Texas Board of Water Engineers in 1942. Part of the water-level measurements made in the City of Childress well field by the city personnel are included in this report. An inventory of the wells in Hardeman County was made and published in 1936 by the Texas Board of Water Engineers and the Geological Survey.

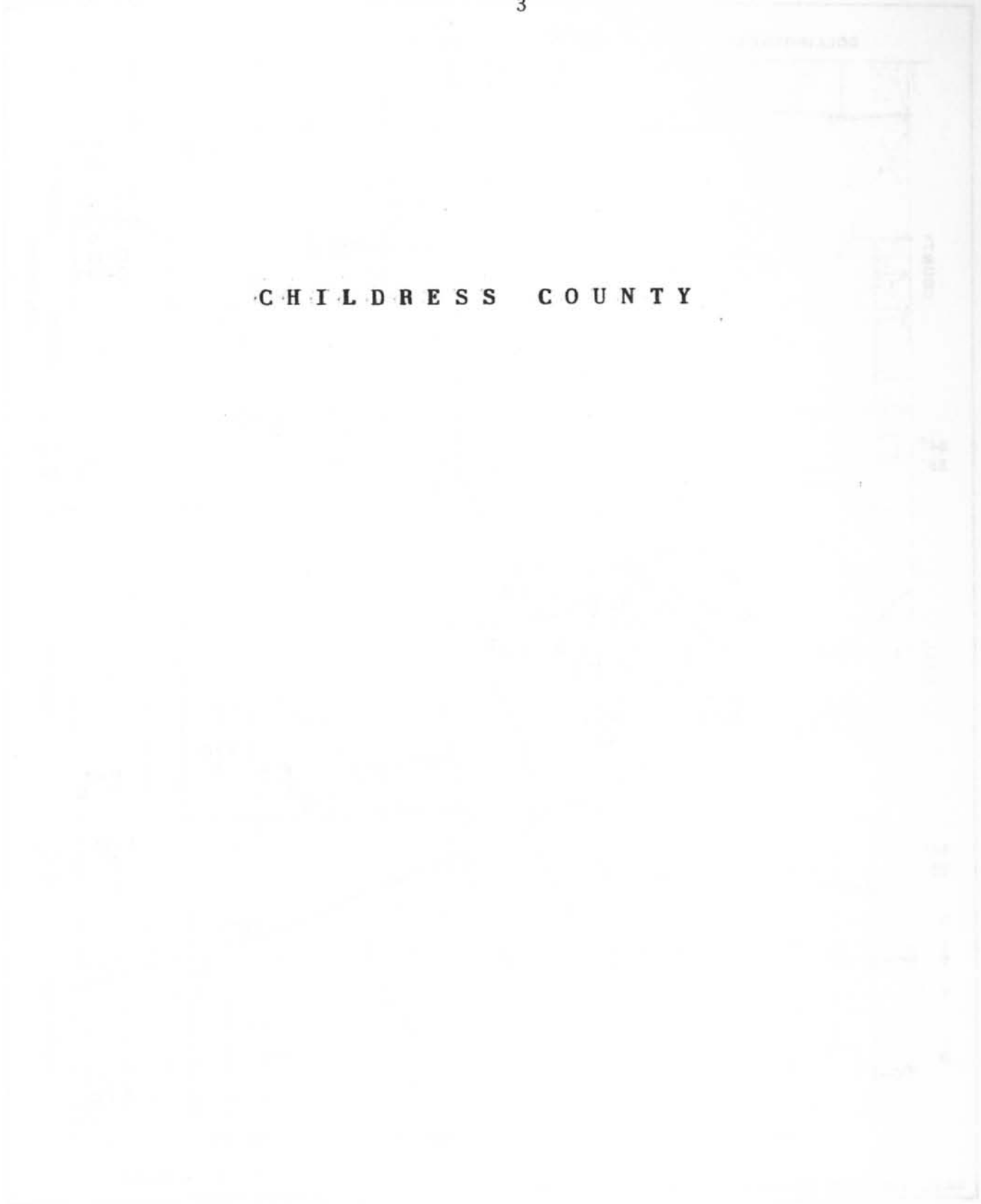
Water levels are reported in feet below land-surface datum. The accompanying maps show the locations of the observation wells. Well numbers on the map correspond to those in the table of measurements. Hydrographs showing the fluctuation of water levels in wells in Childress County are shown on pages 13 and 14, in Cottle County on page 17, and in Hardeman County on page 22. Annual precipitation at Childress, Paducah and Quanah is also shown on the hydrographs. Records of wells, geologic data and discussions of ground water conditions are in the included list of publications.

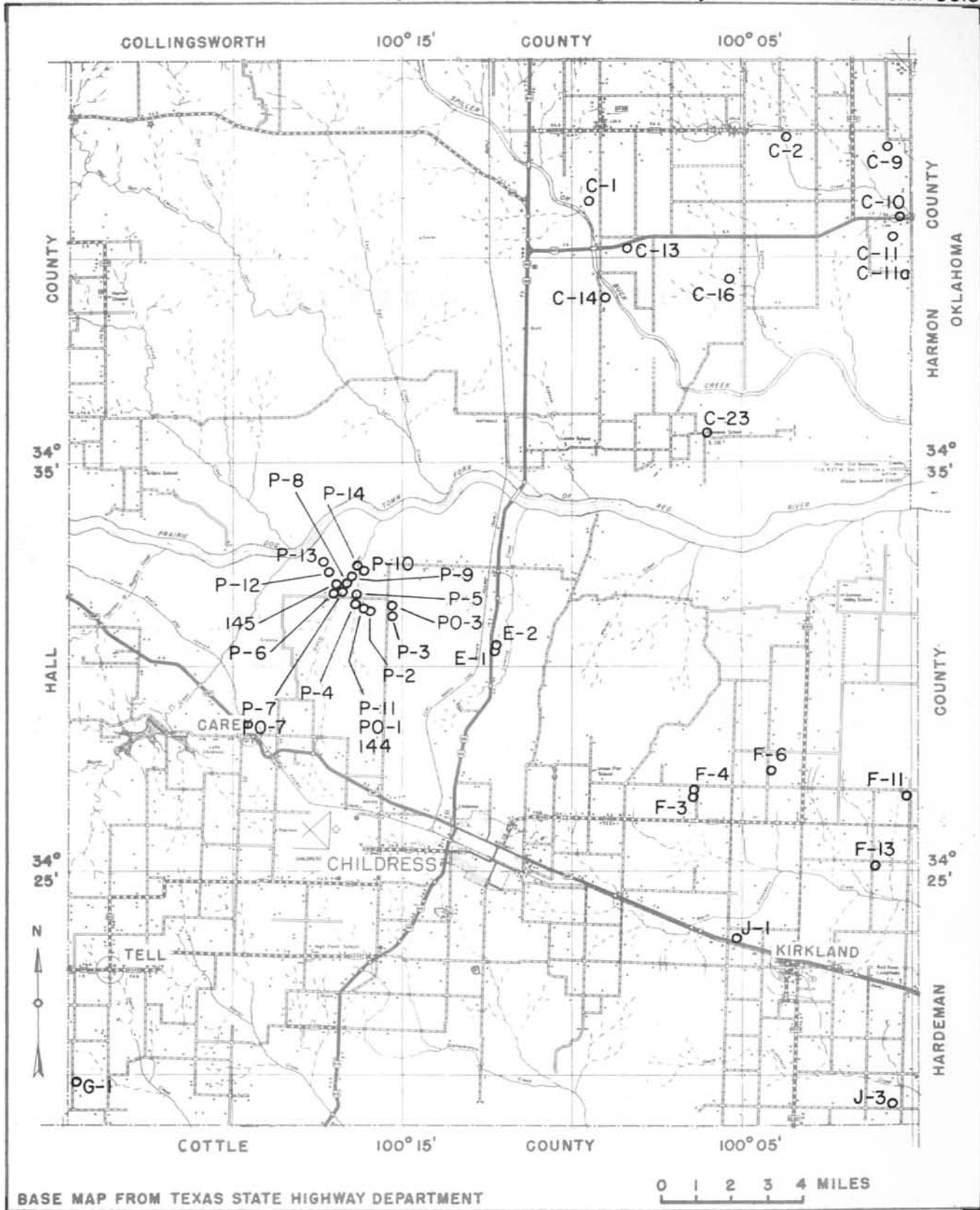
LIST OF PUBLICATIONS

- BROADHURST, W. L., SUNDSTROM, R. W., and WEAVER, D. E., 1949, Public water supplies in western Texas: Texas Board of Water Engineers. Also published by U. S. Geol. Survey as Water Supply Paper 1106, 1951.
- DANTE, J. H., and FOLLETT, C. R., 1945, Ground water in the vicinity of Paducah, Cottle County, Texas: Texas Board of Water Engineers. Memorandum in open file.
- DANTE, J. H., 1946, Progress report, ground water in the vicinity of Paducah, Cottle County, Texas: Texas Board of Water Engineers. Memorandum in open file.
- GEORGE, W. O., and FOSTER, C. V., 1942, Records of wells in Childress County, Texas: Texas Board of Water Engineers.
- GEORGE, W. O., 1945, Progress Report, exploration for ground-water for City of Childress, Childress County, Texas: Texas Board of Water Engineers. Memorandum in open file.
- GEORGE, W. O., BARNES, B. A., and BROADHURST, W. L., 1946, Exploration of the Michie Sand Hills area, Childress County, Texas: Texas Board of Water Engineers. Memorandum in open file.
- GORDON, C. H., 1913, Geology and underground waters of the Wichita region, north-central Texas: U. S. Geol. Survey Water-Supply Paper 317.*
- LANG, J. W., 1945, Memorandum on ground-water resources in the Acme area, (Hardeman County), Texas: Texas Board of Water Engineers.
- RUSSELL, F. E. and HUGGINS, L. P., 1936, Records of wells in Hardeman County, Texas: Texas Board of Water Engineers.
- SHAFER, G. H., The use of ground water for irrigation in Childress County, Texas: Pending publication by Texas Board of Water Engineers.
- SUNDSTROM, R. W., BROADHURST, W. L., and DWYER, B. C., 1947, Public water supplies in central and north-central Texas: Texas Board of Water Engineers.* Also published by U. S. Geol. Survey as Water Supply Paper 1069, 1949.

*Out of print. Copies available for reference in some public libraries and at the Austin offices of the Texas Board of Water Engineers and the U. S. Geological Survey.

CHILDRESS COUNTY





BKW

OBSERVATION WELLS IN CHILDRESS COUNTY, TEX.
JANUARY 1956

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY, TEXAS

144. T. W. Deerman. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 4 inches, depth 82 feet.

Date	Water level	Date	Water level	Date	Water level
Nov. 28, 1940	62.59	Feb. 8, 1952	66.21	Jan. 10, 1955	73.61
Apr. --, 1946	59.0	Jan. 10, 1953	68.40	Jan. 12, 1956	75.38
Feb. 22, 1951	61.21	Jan. 11, 1954	72.02		

145. Mrs. R. Greer. Lat. $34^{\circ}13'$, long. $100^{\circ}16'$. Diameter 6 inches, depth 45 feet.

Sept. 18, 1940	29.53	Feb. 22, 1951	33.87	Jan. 10, 1953	38.04
Apr. --, 1946	24.5	Feb. 8, 1952	36.13	Jan. 11, 1954	39.56

C-1. Mrs. W. D. Durfey. Lat. $34^{\circ}41'$, long. $100^{\circ}09'$. Diameter 16 inches, depth 178 feet, cased to 67 feet.

Sept. 26, 1953	47.5	Jan. 12, 1955	43.92	Jan. 11, 1956	41.60
Jan. 11, 1954	42.06				

C-2. John Sherman. Lat. $34^{\circ}43'$, long. $100^{\circ}03'$. Diameter 16 inches, depth 206 feet, cased to 146 feet.

Sept. 28, 1953	82.8	Jan. 11, 1954	73.64	Jan. 11, 1956	75.62
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C-9. Hugh Painter. Lat. $34^{\circ}42'$, long. $100^{\circ}00'$. Diameter 16 inches, depth 196 feet, not cased.

Sept. 29, 1953	102.92	Jan. 11, 1954	90.19	Jan. 11, 1956	97.78
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C-10. Ray Fitzer. Lat. $34^{\circ}41'$, long. $100^{\circ}00'$. Diameter 14 inches.

Jan. 9, 1954	59.57	Jan. 11, 1956	72.88		
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WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

C-11. G. C. Richardson. Lat. $34^{\circ}40'$, long. $100^{\circ}00'$. Diameter 16 inches, depth 185 feet, cased to 100 feet.

Date	Water level	Date	Water level	Date	Water level
Sept. 28, 1953	80.03	Jan. 9, 1954	73.94	Jan. 11, 1956	81.91

C-11a. G. C. Richardson. Lat. $34^{\circ}40'$, long. $100^{\circ}00'$. Diameter 14 inches.

Jan. 9, 1954	56.25	Jan. 11, 1956	64.95		
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C-13. L. M. Bartlett. Lat. $34^{\circ}40'$, long. $100^{\circ}08'$. Diameter 16 inches, depth 177 feet, cased to 6 feet.

Sept. 26, 1953	72.75	Jan. 12, 1955	61.94	Jan. 11, 1956	55.72
Jan. 9, 1954	65.75				

C-14. C. A. Mitchell. Lat. $34^{\circ}39'$, long. $100^{\circ}09'$. Diameter 12 inches, depth 170 feet, cased to 70 feet.

Sept. 26, 1953	46.39	Jan. 12, 1955	46.90	Jan. 10, 1956	44.85
Jan. 9, 1954	45.37				

C-16. G. E. Clark. Lat. $34^{\circ}39'$, long. $100^{\circ}05'$. Diameter 14 inches, depth 150 feet.

Sept. 26, 1953	21.15	Jan. 9, 1954	17.61	Jan. 11, 1956	18.46
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C-23. C. A. Mitchell. Lat. $34^{\circ}35'$, long. $100^{\circ}05'$. Diameter 14 inches, depth 170 feet, cased to 6 feet.

Sept. 26, 1953	89.7	Jan. 12, 1955	88.84	Jan. 11, 1956	85.60
Jan. 9, 1954	87.15				

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

E-1. Harry J. Mitchell. Lat. $34^{\circ}30'$, long. $100^{\circ}21'$. Diameter 16 inches, depth 100 feet, casing slotted at 60-100 feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 12, 1955	50.26	Jan. 11, 1956	48.03		

E-2. Harry J. Mitchell. Lat. $34^{\circ}30'$, long. $100^{\circ}12'$. Diameter 10 inches, depth 73 feet.

Jan. 12, 1955	48.37	Jan. 11, 1956	46.55		
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F-3. Wilbur Rutledge. Lat. $34^{\circ}26'$, long. $100^{\circ}06'$. Diameter 10 inches, depth 122 feet, 40 feet slotted.

Sept. 24, 1953	94.5	Jan. 9, 1955	90.78	Jan. 10, 1956	88.0
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F-4. Wilbur Rutledge. Lat. $34^{\circ}27'$, long. $100^{\circ}06'$. Diameter 24 inches, depth 305 feet, cased to 10 feet.

Sept. 24, 1953	100.14	Jan. 9, 1954	91.20		
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F-6. Clyde Nippert. Lat. $34^{\circ}27'$, long. $100^{\circ}04'$. Diameter 16 to 8 inches, depth 180 feet, casing slotted 140-180 feet.

Sept. 23, 1953	112.6	Jan. 9, 1954	100.53	Jan. 9, 1955	104.46
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F-11. J. H. Garner. Lat. $34^{\circ}26'$, long. $100^{\circ}00'$. Diameter 16 inches, depth 152 feet, cased to 15 feet.

Sept. 24, 1953	111.64	Jan. 9, 1955	105.96	Jan. 10, 1956	101.56
Jan. 9, 1954	101.18				

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

F-13. G. W. Hale. Lat. $34^{\circ}25'$, long. $100^{\circ}01'$. Diameter 18 inches, depth 120 feet, casing slotted at 50-120 feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 10, 1953	43.20	Jan. 9, 1955	51.01	Jan. 10, 1956	47.68
Jan. 9, 1954	45.94				

G-1. Ray Grimes. Lat. $34^{\circ}19'$, long. $100^{\circ}24'$. Depth 278 feet, diameter 16 inches, cased to 150 feet, slotted below 20 feet.

Sept. 25, 1953	55.4	Jan. 12, 1955	43.92	Jan. 12, 1956	49.63
Jan. 12, 1954	50.52				

J-1. Ralph Sides. Lat. $34^{\circ}23'$, long. $100^{\circ}05'$. Diameter 14 inches, depth 335 feet.

Sept. 25, 1953	91.09	Jan. 9, 1955	92.70	Jan. 9, 1956	90.98
Jan. 9, 1954	90.78				

J-3. Virgil Ellis. Lat. $34^{\circ}19'$, long. $100^{\circ}00'$. Diameter 16 inches, depth 168 feet, cased to 70 feet.

Jan. 8, 1954	76.49	Jan. 9, 1955	81.05	Jan. 9, 1956	67.06
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P-1. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 inches, depth 81 feet, screen at 48-80 feet.

Sept. 26, 1946	47	Sept. 16, 1947	65.74	Jan. 11, 1954	71.35
Sept. 26	a 62	Feb. 22, 1951	61.68	Jan. 10, 1955	73.20
Feb. 10, 1947	49	Feb. 8, 1952	67.73		
Feb. 10	56	Jan. 10, 1953	68.70		

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

P-2. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 inches, depth 145 feet, screen at 101-143 feet.

Date	Water level	Date	Water level	Date	Water level
Oct. 10, 1946	60	Mar. 6, 1950	a 84.5	Jan. --, 1951	a 89.5
Oct. 10	a 98	May 2	a 89.5	Feb. 8, 1952	78.81
Dec. 24, 1948	69	June 19	a 88.5	Jan. 10, 1953	82.33
Dec. 24	a 75	July 25	a 88.5	Jan. 11, 1954	85.90
Apr. 19, 1949	67.2	Aug. 7	a 91.5	Jan. 10, 1955	88.47
Apr. 19	a 76.5	Sept.25	a 87.5	Jan. 12, 1956	90.67

P-3. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}15'$. Diameter 16 to 8 inches, depth 204 feet, screen at 170-202 feet.

Oct. 25, 1946	88	June 8, 1949	a124	Sept.25, 1950	a160
Oct. 25	a146	Mar. 7, 1950	a181	Jan. --, 1951	a173
Sept.16, 1947	a113.37	May 2	a174	Feb. 22	94.83
Dec. 27, 1948	91	June 19	a176	Feb. 28, 1952	98.13
Dec. 27	a108	July 24	a173	Jan. 10, 1953	101.72
June 8, 1949	94	Aug. 7	a175	Jan. 11, 1954	104.78

PO-3. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}15'$. Diameter 4 inches.

Feb. 8, 1952	97.67	Jan. 11, 1954	104.15	Jan. 12, 1956	c116.71
Jan. 10, 1953	101.20	Jan. 10, 1955	c110.03		

P-4. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 100 feet, screen at 58-100 feet.

Feb. 22, 1947	35	Mar. 3, 1950	a 56	Feb. 22, 1951	46.96
Feb. 22	a 76	May 2	a 57	Feb. 8, 1952	52.21
Sept.16	46.4	June 19	a 68	Jan. 10, 1953	55.18
Dec. 20, 1948	38	July 26	a 68	Jan. 11, 1954	58.39
Dec. 20	a 52	Aug. 7	a 60	Jan. 10, 1955	58.53
Apr. 23, 1949	43.4	Sept.25	a 60	Jan. 12, 1956	55.64
Apr. 23	a 53	Jan. --, 1951	a 58		

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

P-5. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 18 to 8 inches, depth 133 feet, screen at 93-136 feet.

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	48	May 2, 1950	a 85	Feb. 8, 1952	83.62
Dec. 5	a 86	June 20	a 92	Jan. 10, 1953	89.46
Sept. 16, 1947	57.65	July 26	a 85	Jan. 11, 1954	93.60
Dec. 28, 1948	60	Aug. 7	a 87	Jan. 10, 1955	90.32
Apr. 26, 1949	59.6	Sept. 26	a 96	Jan. 12, 1956	86.25
Apr. 26	a 75	Jan. --, 1951	a 88		
Mar. 4, 1950	a 87	Feb. 22	70.69		

P-6. City of Childress. Lat. $34^{\circ}30'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 111 feet, screen at 77-109 feet.

Dec. 31, 1946	28	Jan. 5, 1949	34	Sept. 26, 1950	a 45
Dec. 31	a 76	Mar. 7, 1950	a 52	Jan. --, 1951	40
Mar. 21, 1947	28.5	May 3	a 52	Feb. 22	37.45
Mar. 21	a 45	June 20	a 50	Jan. 10, 1955	47.30
Sept. 16	a 44.92	July 25	a 50	Jan. 12, 1956	45.59
Jan. 5, 1949	a 47	Aug. 7	a 51		

P-7. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 92 feet, screen at 53-92 feet.

Nov. 8, 1946	30	Dec. 29, 1948	a 46	July 25, 1950	a 50
Nov. 8	a 65	Dec. 29	41	Aug. 8	a 48
Feb. 4, 1947	31	Mar. 7, 1950	a 50	Sept. 26	a 51
Feb. 4	a 39	May 3	a 50	Jan. --, 1951	a 52
Sept. 16	a 39.58	June 20	a 50	Feb. 8, 1952	a 55

PO-7. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 4 inches.

Feb. 8, 1952	c 43.39	Jan. 11, 1954	c 48.22	Jan. 11, 1956	c 47.94
Jan. 10, 1953	c 44.78	Jan. 10, 1955	c 49.87		

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

P-8. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 113 feet, screen at 69-112 feet.

Date	Water level	Date	Water level	Date	Water level
Nov. 27, 1946	32.5	Dec. 30, 1948	44	June 21, 1950	a 54
Nov. 27	a 88	Apr. 27	44.3	July 26	a 54
Aug. 30, 1947	41	Apr. 27	a 56.5	Aug. 8	a 55
Sept. 16	47.17	Mar. 7, 1950	a 56	Sept. 26	a 56
Dec. 30, 1948	a 53	May 3	a 54	Jan. --, 1951	a 52

P-9. City of Childress. Lat. $34^{\circ}32'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 88 feet, screen at 56-88 feet.

Jan. 16, 1947	36	Jan. 2, 1949	a 53	June 21, 1950	a 46
Jan. 16	a 56	Apr. 28	43.2	July 24	a 47
Aug. 30	a 42.5	Apr. 28	a 47	Aug. 8	a 46
Sept. 16	a 40.17	Mar. 6, 1950	a 46	Sept. 26	a 46
Jan. 2, 1949	43	May 3	a 46	Jan. --, 1951	a 47

P-10. City of Childress. Lat. $34^{\circ}32'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 117 feet, screen at 74-115 feet.

Mar. 12, 1947	53	Mar. 6, 1950	a 80	Sept. 26, 1950	a 81
Mar. 12	a 81	May 3	a 80	Jan. --, 1951	a 82
Sept. 16	a 66.4	June 21	a 80	Jan. 10, 1953	64.58
Dec. 31, 1948	a 80	July 24	a 81		
Dec. 31	67	Aug. 8	a 81		

P-11. City of Childress. Lat. $34^{\circ}31'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 115 feet, screen at 70-110 feet.

Mar. 10, 1949	60	July 25, 1950	a 71	Jan. 10, 1953	72.05
Mar. 10	a 69	Aug. 7	a 69	Jan. 11, 1954	74.76
Mar. 7, 1950	a 70	Sept. 25	a 71	Jan. 10, 1955	76.58
May 4	a 70	Jan. --, 1951	a 71	Jan. 12, 1956	a 82.64
June 22	a 71	Feb. 22	64.98		

WATER-LEVEL MEASUREMENTS IN CHILDRESS COUNTY--CONTINUED

P-12. City of Childress. Lat. $34^{\circ}32'$, long. $100^{\circ}17'$. Diameter 16 to 8 inches, depth 115 feet, screen at 83-123 feet.

Date	Water level	Date	Water level	Date	Water level
May 30, 1949	33	May 4, 1950	a 40	Aug. 8, 1950	a 60
May 30	a 77	June 22	a 60	Sept. 26	a 61
Mar. 7, 1950	a 62	July 25	a 60	Jan. --, 1951	a 62

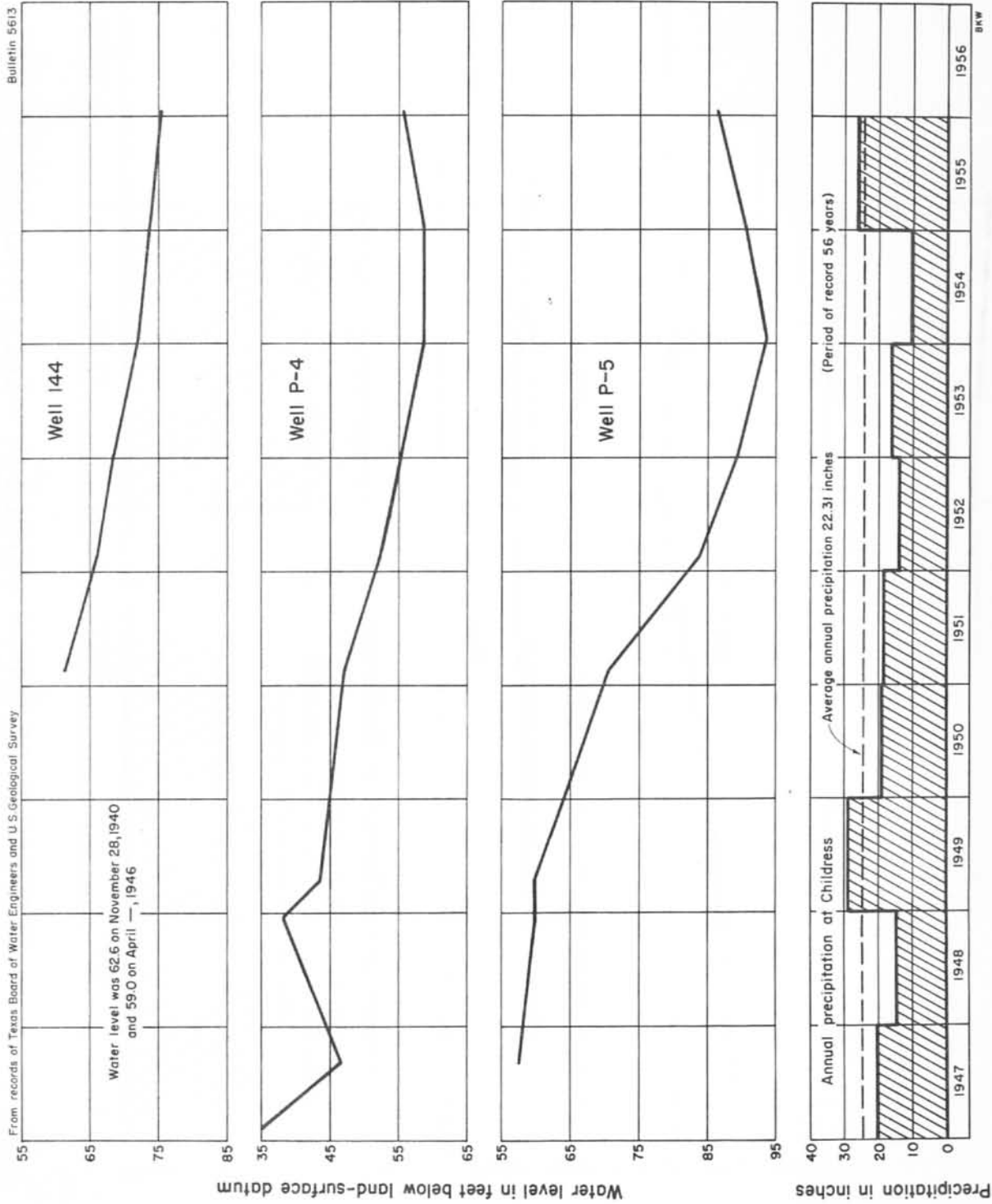
P-13. City of Childress. Lat. $34^{\circ}32'$, long. $100^{\circ}17'$. Diameter 16 to 8 inches, depth 103 feet, screen at 69-99 feet.

Mar. 30, 1949	49	May 4, 1950	a 60	Aug. 8, 1950	a 60
Mar. 30	a 80	June 23	a 60	Sept. 26	a 61
Mar. 8, 1950	a 59	July 24	a 60	Jan. --, 1951	a 62

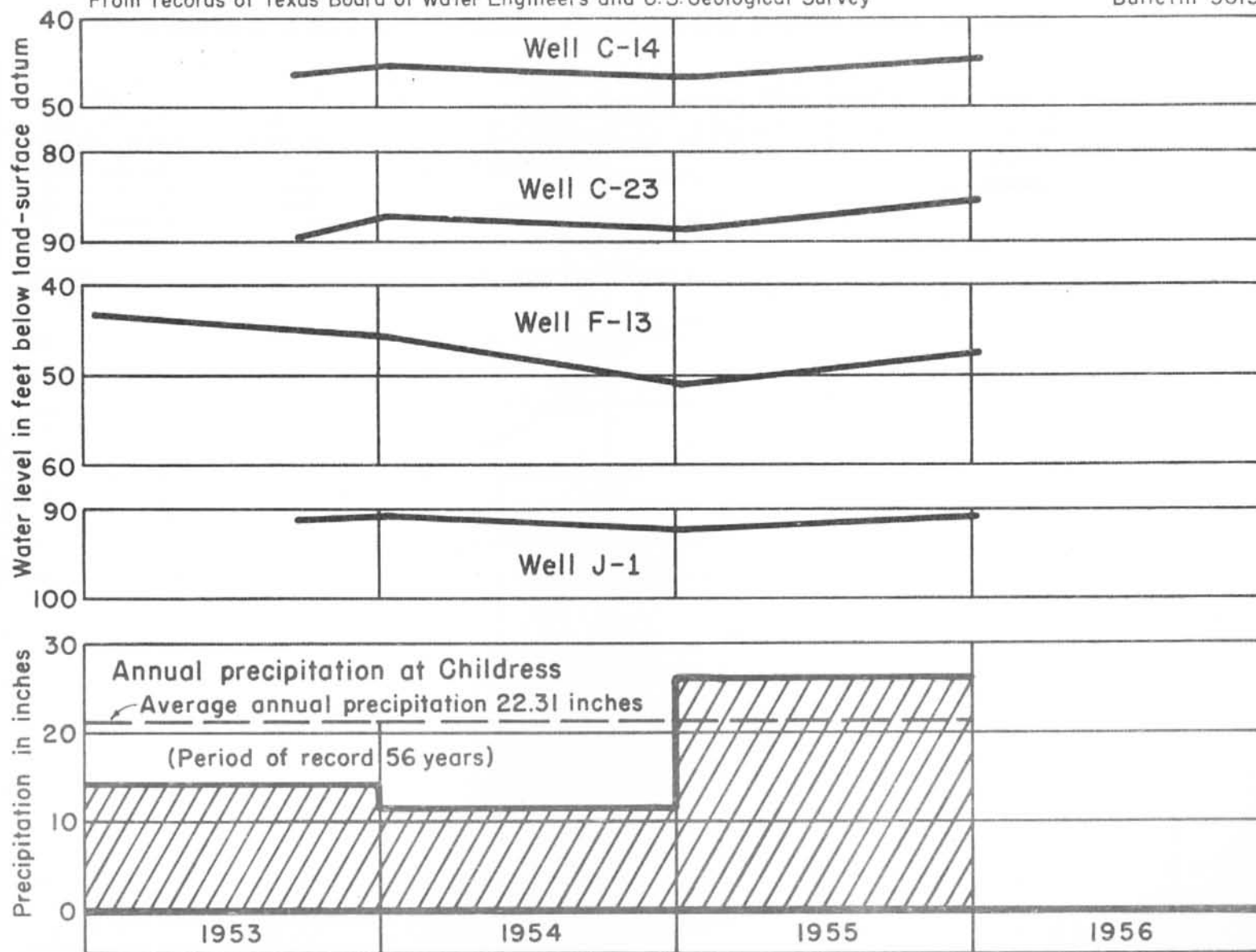
P-14. City of Childress. Lat. $34^{\circ}32'$, long. $100^{\circ}16'$. Diameter 16 to 8 inches, depth 110 feet, screen at 56-86 feet.

Apr. 14, 1949	31	May 4, 1950	a 35	Aug. 8, 1950	a 35
Apr. 14	a 58	June 23	a 35	Sept. 26	a 35
Mar. 8, 1950	a 34	July 26	a 34	Jan. --, 1951	a 36

- a Pumping
- b Pumped recently
- c Nearby well pumping



Hydrographs of water levels in wells in the Michie well field, Childress County, and annual precipitation at Childress, Texas



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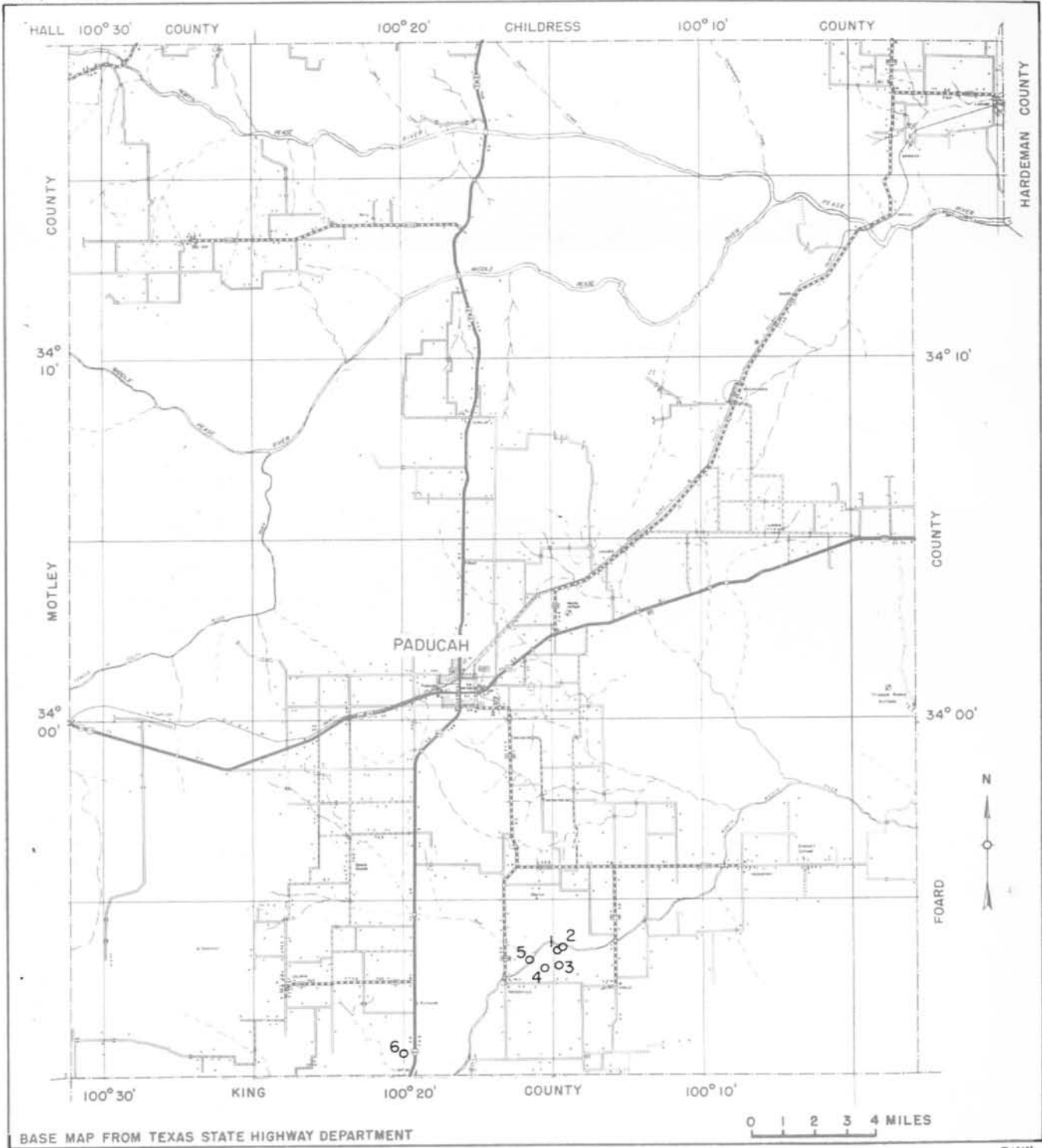
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HYDROGRAPHS OF WATER LEVELS IN WELLS, CHILDRESS COUNTY,
AND ANNUAL PRECIPITATION AT CHILDRESS, TEXAS

COTTLE COUNTY

From records of Texas Board of Water Engineers and U.S. Geological Survey

Bulletin 5613



OBSERVATION WELLS IN COTTLE COUNTY, TEX.
 JANUARY 1956

WATER-LEVEL MEASUREMENTS IN COTTLE COUNTY, TEXAS

1. O. T. Owens. Lat. $33^{\circ}53'$, long. $100^{\circ}14'$. Diameter 16 inches, depth 165 feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 17, 1953	65.99	Jan. 12, 1955	65.01	Jan. 16, 1956	61.04
Jan. 14, 1954	65.33				

2. O. T. Owens. Lat. $33^{\circ}53'$, long. $100^{\circ}14'$. Diameter 16 inches, depth 150 feet.

Jan. 17, 1953	62.85	Jan. 12, 1955	61.96	Jan. 16, 1956	57.83
Jan. 14, 1954	62.15				

3. Clyde Perkins. Lat. $33^{\circ}53'$, long. $100^{\circ}14'$. Diameter 16 inches.

Jan. 17, 1953	61.01	Jan. 12, 1955	60.02	Jan. 16, 1956	55.76
Jan. 14, 1954	60.78				

4. Buster Kippen. Lat. $33^{\circ}53'$, long. $100^{\circ}15'$. Diameter 16 inches, depth 170 feet.

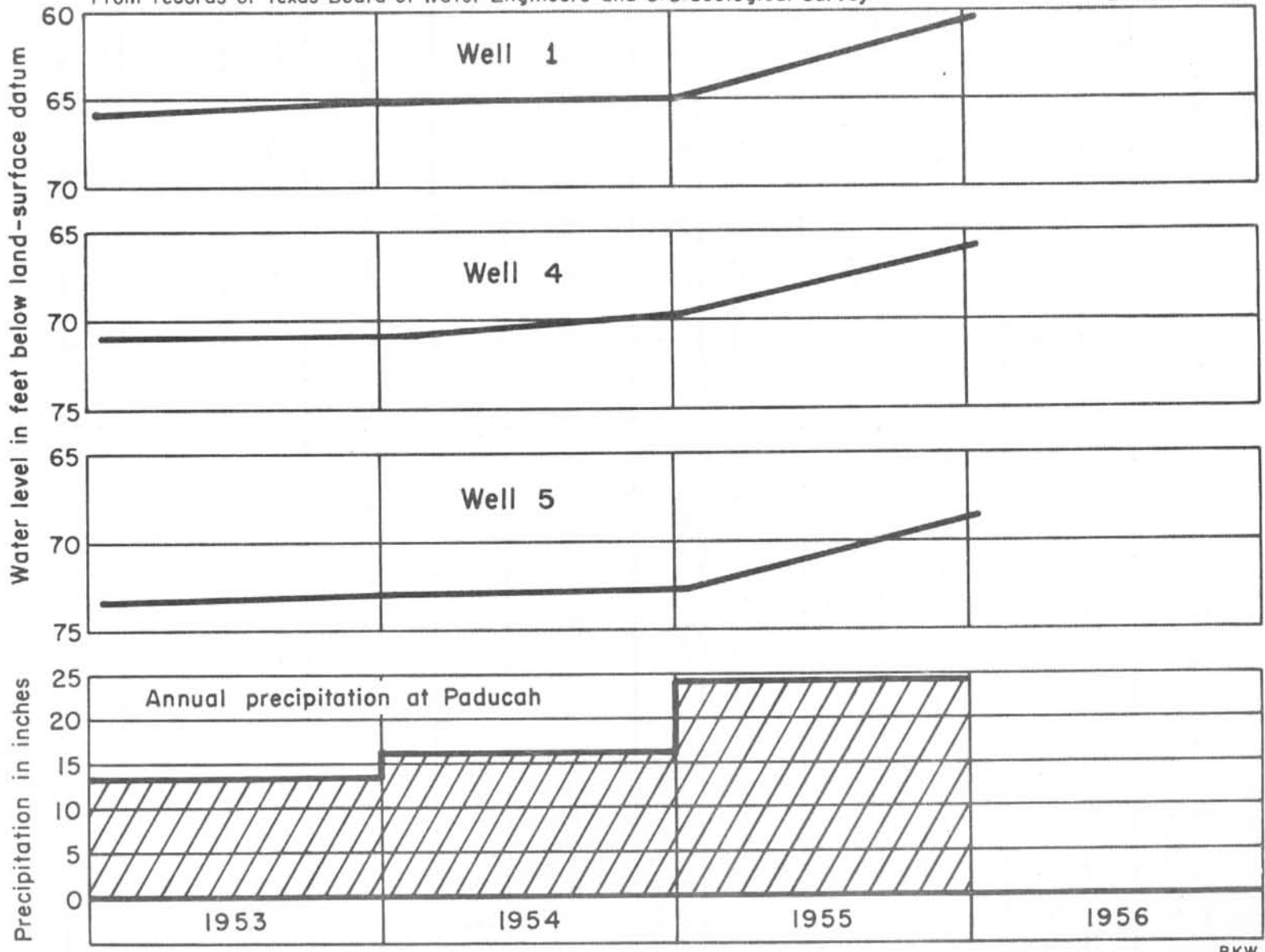
Jan. 17, 1953	71.54	Jan. 12, 1955	69.61	Jan. 16, 1956	65.91
Jan. 14, 1954	71.54				

5. L. L. Goodman. Lat. $33^{\circ}53'$, long. $100^{\circ}15'$. Diameter 16 inches, depth 157 feet.

Jan. 17, 1953	73.48	Jan. 12, 1955	72.70	Jan. 16, 1956	68.63
Jan. 14, 1954	73.13				

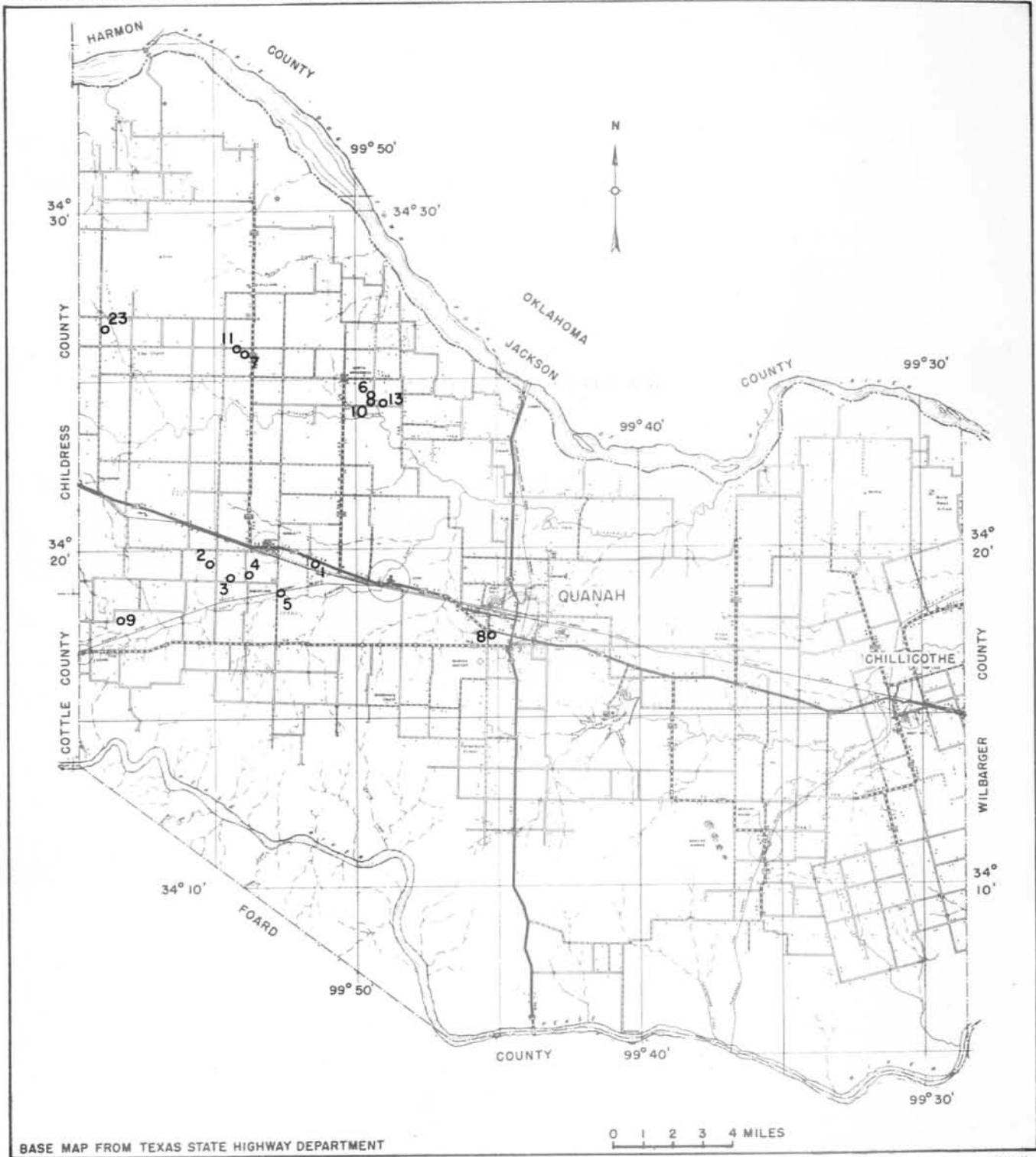
6. Earnest Goodwin. Lat. $33^{\circ}50'$, long. $100^{\circ}20'$. Diameter 16 inches.

Jan. 17, 1953	60.8	Jan. 14, 1954	40.20		
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HYDROGRAPHS OF WATER LEVELS IN WELLS, COTTLE COUNTY,
AND ANNUAL PRECIPITATION AT PADUCAH, TEXAS

HARDEMAN COUNTY



BKW

OBSERVATION WELLS IN HARDEAMAN COUNTY, TEX.
JANUARY 1956

WATER-LEVEL MEASUREMENTS IN HARDEMAN COUNTY, TEXAS

1. Chas. Butts. Lat. $34^{\circ}19'$, long. $99^{\circ}51'$. Diameter 10 inches, depth 100 feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 9, 1953	60.89	Jan. 9, 1955	64.04	Jan. 9, 1956	60.55
Jan. 8, 1954	60.46				

2. Percy Ratlif. Lat. $34^{\circ}19'$, long. $99^{\circ}55'$. Diameter 16 inches, depth 129 feet, cased to 17 feet.

Jan. 10, 1953	87.90	Jan. 9, 1955	89.03	Jan. 9, 1956	83.35
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3. D. J. Newman. Lat. $34^{\circ}19'$, long. $99^{\circ}54'$. Diameter 16 inches, depth 125 feet.

Jan. 10, 1953	63.80	Jan. 9, 1955	65.23	Jan. 9, 1956	61.09
Jan. 8, 1954	61.85				

4. D. J. Newman. Lat. $34^{\circ}19'$, long. $99^{\circ}53'$. Diameter 14 inches, depth 115 feet, slotted casing to 110 feet.

Jan. 10, 1953	50.14	Jan. 9, 1955	52.15	Jan. 9, 1956	48.63
Jan. 8, 1954	48.66				

5. Lat. $34^{\circ}18'$, long. $99^{\circ}52'$. Diameter 16 inches, depth 88 feet.

Jan. 10, 1953	46.58	Jan. 9, 1955	49.28	Jan. 9, 1956	46.10
Jan. 8, 1954	46.10				

6. Jack Hunter. Lat. $34^{\circ}24'$, long. $99^{\circ}49'$. Diameter 16 inches, depth 126 feet, casing slotted below 35 feet.

Jan. 10, 1953	37.25	Jan. 9, 1954	38.06	Jan. 10, 1956	38.90
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WATER-LEVEL MEASUREMENTS IN HARDEMAN COUNTY--CONTINUED

7. - Bailey. Lat. $34^{\circ}25'$, long. $99^{\circ}53'$. Diameter 14 inches.

Date	Water level	Date	Water level	Date	Water level
Jan. 10, 1953	75.32	Jan. 9, 1955	84.45	Jan. 10, 1956	81.98
Jan. 9, 1954	77.44				

8. E. B. McBay. Lat. $34^{\circ}17'$, long. $99^{\circ}45'$. Diameter 14 inches, depth 105 feet.

Jan. 8, 1954	73.10	Jan. 9, 1955	74.34	Jan. 9, 1956	70.79
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9. Robert Nippert. Lat. $34^{\circ}17'$, long. $99^{\circ}58'$.

Jan. 8, 1954	65.85	Jan. 9, 1955	69.32	Jan. 9, 1956	61.73
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10. Jack Hunter. Lat. $34^{\circ}24'$, long. $99^{\circ}49'$. Diameter 14 inches, depth 100 feet, casing slotted below 40 feet.

Jan. 9, 1954	38.74	Jan. 9, 1955	41.05	Jan. 10, 1956	39.84
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11. Lat. $34^{\circ}25'$, long. $99^{\circ}54'$.

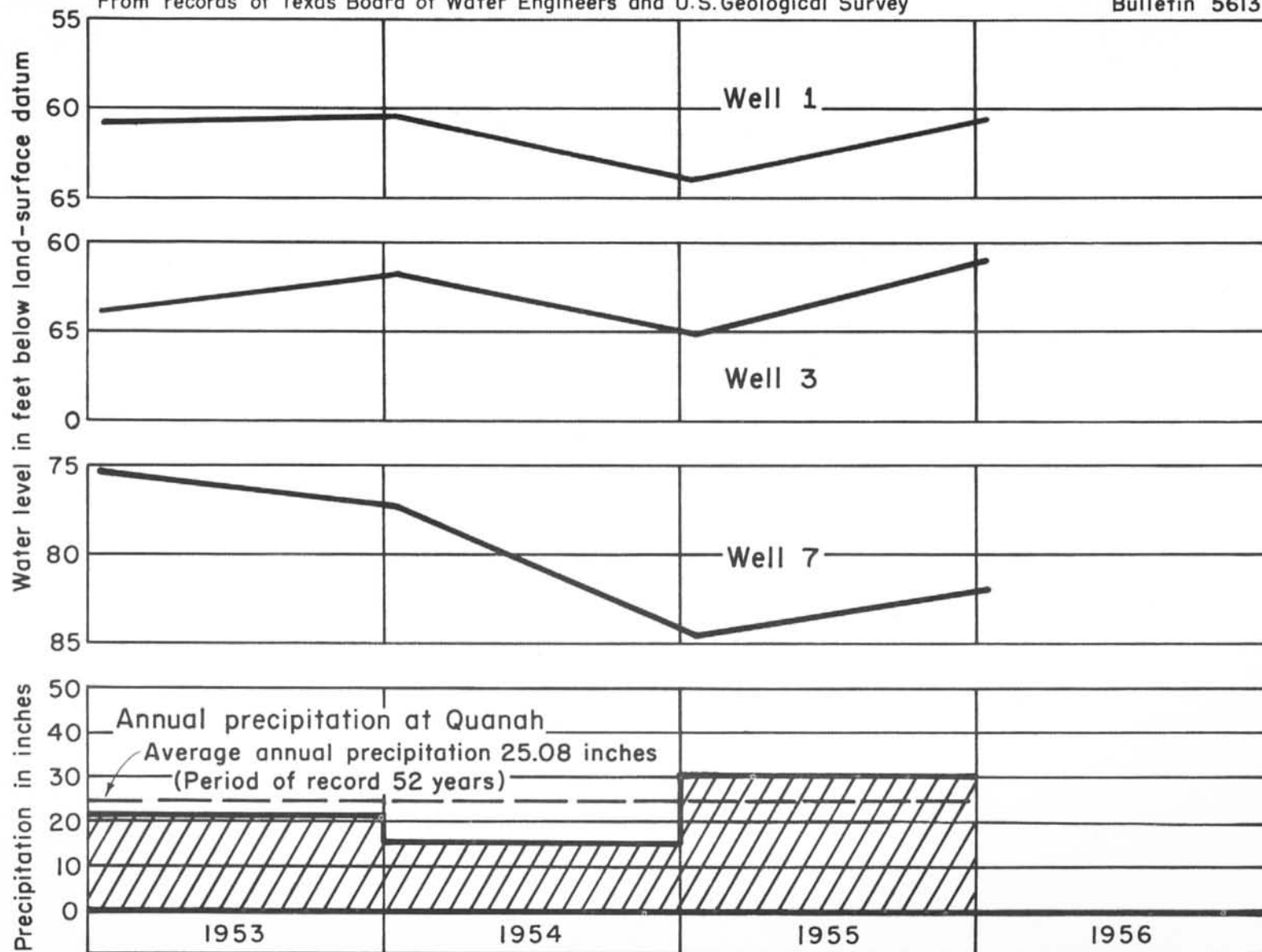
Jan. 9, 1954	78.91	Jan. 9, 1955	85.83	Jan. 10, 1956	83.98
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13. Jack Hunter well 3. Lat. $34^{\circ}24'$, long. $99^{\circ}48'$. Diameter 14 inches, depth 100 feet, casing slotted below 40 feet.

Jan. 9, 1955	36.92	Jan. 10, 1956	35.00		
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23. Joe B. Howard. Lat. $34^{\circ}26'$, long. $99^{\circ}58'$. Diameter 12 inches, depth 269 feet, cased to 230 feet, slotted below 100 feet.

Dec. 5, 1955	104.6	Jan. 10, 1956	79.19	Jan. 12, 1956	79.13
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BKW

HYDROGRAPHS OF WATER LEVELS IN WELLS, HARDEMAN COUNTY,
AND ANNUAL PRECIPITATION AT QUANAH, TEXAS

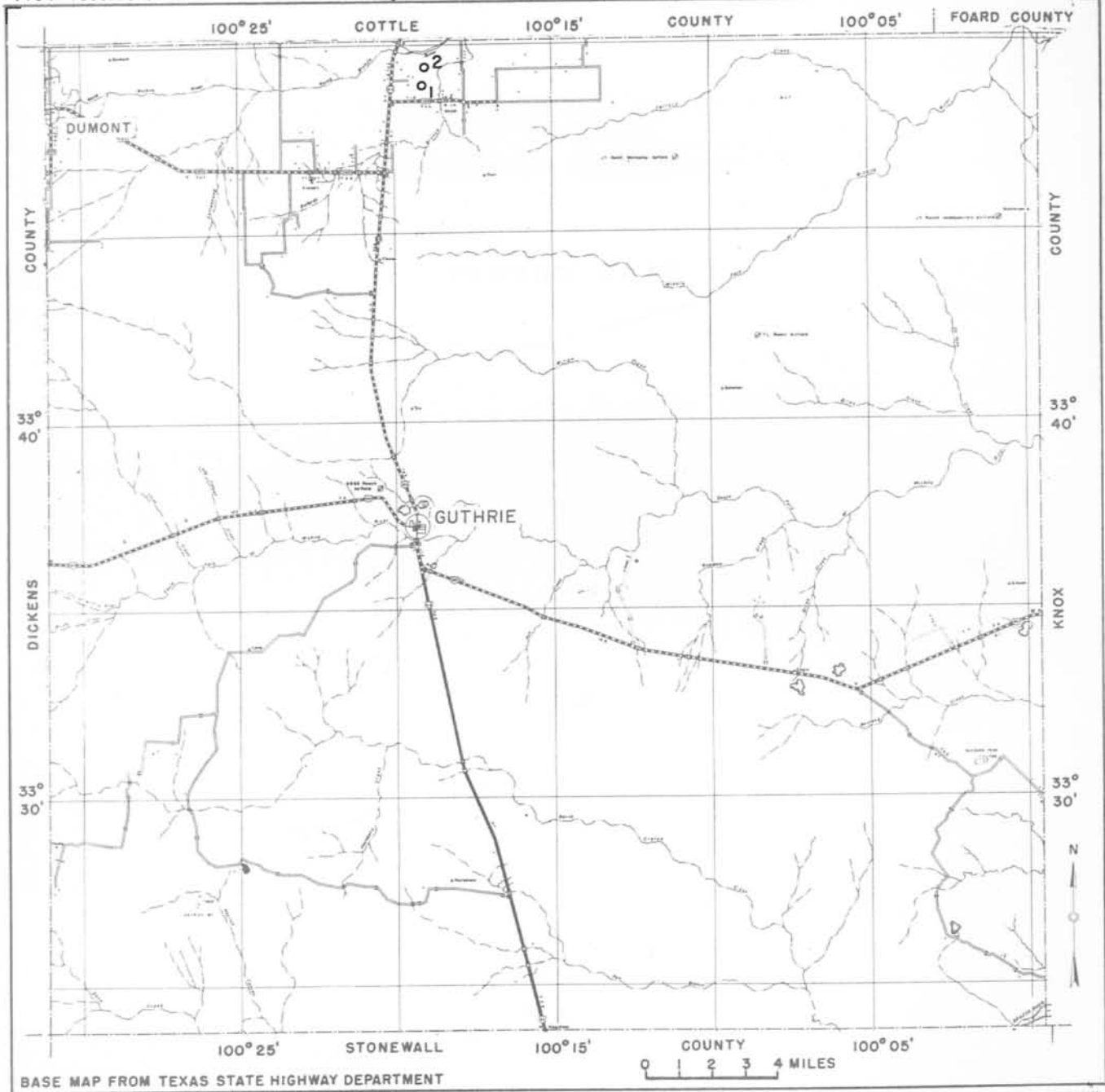
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KING COUNTY

From records of Texas Board of Water Engineers and U.S. Geological Survey

Bulletin 5613



BKW

OBSERVATION WELLS IN KING COUNTY, TEX.
 JANUARY 1956

WATER LEVEL MEASUREMENTS IN KING COUNTY, TEXAS

1. Mrs. Mamie Greathouse. Lat. $33^{\circ}48'$, long. $100^{\circ}18'$. Diameter 16 inches, depth 230 feet.

Date	Water level	Date	Water level	Date	Water level
Jan. 14, 1954	148.55	Jan. 12, 1955	147.1	Jan. 16, 1956	143.03

2. T. E. Long. Lat. $33^{\circ}49'$, long. $100^{\circ}18'$.

Jan. 14, 1954	80.92	Jan. 12, 1955	82.72	Jan. 16, 1956	78.0
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STATE OF NEW YORK

IN SENATE
January 15, 1908

NAME	RESIDENCE	EDUCATION
ALBION B. KENT	Albany	Yale University
ALFRED W. BROWN	Albany	Yale University
ALFRED W. BROWN	Albany	Yale University

NAME	RESIDENCE	EDUCATION
ALFRED W. BROWN	Albany	Yale University
ALFRED W. BROWN	Albany	Yale University