TEXAS BOARD OF WATER ENGINEERS

Durwood Manford, Chairman R. M. Dixon, Member O. F. Dent, Member

BULLETIN 5806

RECORDS OF WATER-LEVEL MEASUREMENTS IN COLLINGSWORTH, HEMPHILL, ROBERTS, AND WHEELER COUNTIES, TEXAS

1937 THROUGH JULY 1958

Compiled by
Frank A. Rayner, Geological Engineer
Texas Board of Water Engineers

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

December 1958

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INTRODUCTION

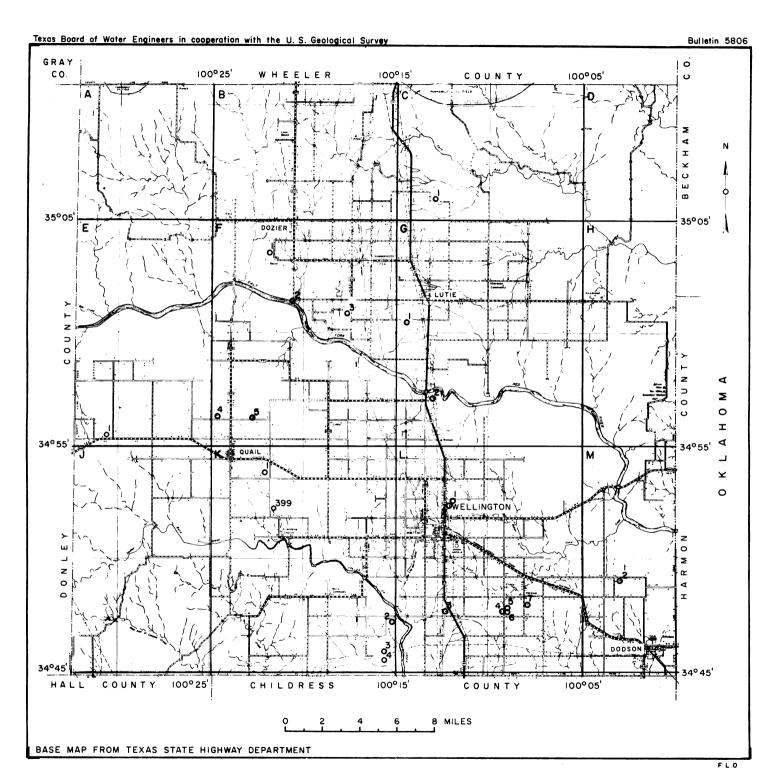
The Texas Board of Water Engineers is charged with making, independently or in cooperation with other state and federal agencies, scientific investigations of the source, amount, and quality of ground-water supplies. To evaluate effects of ground-water development in relation to available supply, periodic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

This bulletin contains measurements of the depth to water in feet below land-surface datum in 23 wells in Collingsworth County, 12 wells in Hemphill County, 7 wells in Roberts County, and 36 wells in Wheeler County. The period of record covers measurements made in observation wells from 1937 through July 1958.

An observation well location map precedes each county's table of water-level measurements. Hydrographs illustrating the fluctuation of water levels in selected wells in Collingsworth, Roberts, and Wheeler Counties follow the associated table of water-level measurements. Annual precipitation charts for Wellington, Miami, and Shamrock are combined with their respective hydrographs.

COLLINGSWORTH COUNTY

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OBSERVATION WELLS IN COLLINGSWORTH COUNTY, TEXAS DECEMBER 1958

WATER-LEVEL MEASUREMENTS IN COLLINGSWORTH COUNTY, TEXAS

399•	Lat. 34°52',	long. 100°22'.	Diameter 5 inches,	depth 56 feet.
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	399•	Lat	· 34°52',	long.	100°	221.	Diameter	5 inche	es, c	lepth	56	feet.
Date			Water level	Date	e		Water level	Date	· ·			Water level
Aug.	2 6, 1	1938	27.10	Jan	. 7,	1958	22.52					
	C-1.		. 35°05', ed to 60 :		100°	12'.	Diameter	8 inche	es, d	lepth	80	feet,
Jan.	13,	1956 1	o 68.71	Jan	. 21,	1957	a 72.08	Jan.	7,	1958	5	60.24
	E-1.						Diameter O to 210 a					
Jan.	13,	1956	122.71	Jan	. 21 ,	1957	123.06	Jan.	7,	1958		21.70
	F-1.	Lat	. 35°03',	long.	100°	221.		•				
Jan.	21,	L957	60.46	Jan	. 7,	1958	60.01					
	F-2.	Lat	. 35°01',	long.	100°	20'.	Diameter	l4 inch	es,	depth	53	feet.
Jan.	13,	L956_	26.86	Jan	. 21 ,	1957	27.46	Jan.	7,	1958)	26.77
	F-3.		. 35°00',			17'.	Diameter	8 inche	s, đ	lepth	198	}
Jan.	13,	1956	91.80	Jan	. 21,	1957	92.23	Jan.	7,	1958	.	92,63
	F-4.						Diameter to 123 fe		es,	depth	. 12	23
Jan.	13,	1956	48.06	Jan	. 21,	1957	47.02	Jan	<u>. 7</u>	1958	<u> </u>	46.72
	F-5.						Diameter 6 to 196 f		es,	depth	19	96

Jan. 21, 1957 80.63

Jan. 7, 1958 80.34

Jan. 13, 1956 81.62

WATER-LEVEL MEASUREMENTS IN COLLINGSWORTH COUNTY -- CONTINUED

G-1. Lat. 35°00', long. 100°14'. Diameter 16 inches, depth 185 feet, cased to 15 feet.

Date	Water level	Date		Water level	Date		Water level
Jan. 13, 1956		Jan. 2	1 , 1957	53.31	Jan.	.7 , 1958	
				Diameter 1 41 to 60		s, depth	
Jan. 13, 1956	25.28	Jan. 2	1 , 1957	30.76	Jan.	7 , 1958	24.00
K-l. La	t. 34°53',	long. 100	o°22'.		4		
Jan. 13, 1956	61.97	Jan. 2	1 , 1957	60.35	Jan.	7, 1958	59.94
				Diameter 1 to 123 fee		es, depth	123
Jan. 12, 1955 Jan. 13, 1956		Jan. 22	2, 1957	54.89	Jan.	7, 1958	53.98
K-3. La	t. 34°45',	long. 100	0°15'.				
Sept.26, 1938	68.70	Jan.	7 , 1958	71.17			
K-4. La	t. 34°45',	long. 100	0°15'.	Depth 174	feet.		
Jan. 13, 1956	99.87	Jan. 22	2 , 1957	103.35	Jan.	7 , 1958	101.30
				Diameter 8		, depth 1	08
Jan. 13, 1956	26.72	Jan. 2	l , 1957	27.64	Jan.	7 , 1958	25.86
L-2. Lat	t. 34°52', et, casing	long. 100	0°12'. From 98	Diameter I to 128 fee	l2 inche et.	s, depth	128
Jan. 13, 1956	29.92	Jan. 2	L , 1957	31.63			

WATER-LEVEL MEASUREMENTS IN COLLINGSWORTH COUNTY -- CONTINUED

L-3. Lat. 34°47', long. 100°12'. Diameter 16 inches, depth 238 feet, casing slotted from 188 to 238 feet.

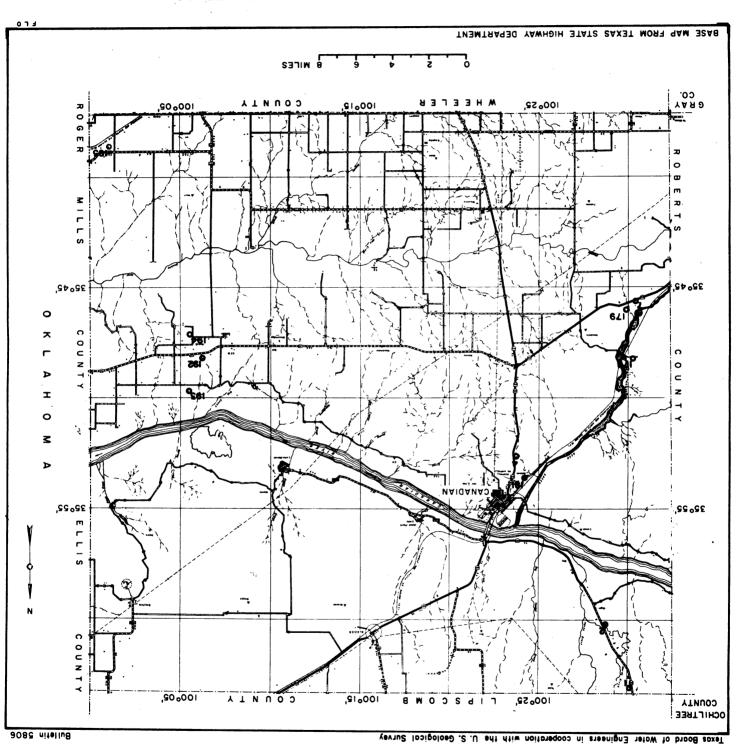
						+		
Date	:		Water	Date	Water	Date		Water
			level		level			level
Jan.	11.	1954	81.40	Jan. 13. 19	956 81.19	Jan	7, 1958	81 61
		1955	81.81	Jan. 22, 19		0 411.	1, 1900	. 01.01
			34°48',	long. 100°09		00, feet.		
Jan.	13,	1956	71.46	Jan. 22, 19	957 73.03	Jan.	7 , 1958	72.26
	L - 5			long. 100°09' sing slotted i			es, depth	
			64.12 70.04	Jan. 22, 19	957 71.31	Jan.	7, 1958	70,67
	L-6			long. 100°09' sing slotted f			es, depth	
		1955 1956	64.75 70.89	Jan. 22, 19	957 72.32	Jan.	7, 1958	71.62
	L-7			long. 100°07' sing slotted f				
		1955 1956	61.63 63.80	Jan. 22, 19	957 70.85	Jan.	7, 1958	74.02
	M-l			long. 100°03' ing slotted fr			es, depth	
Jan.	11,	1956	53.20	Jan. 22, 19	957 56.12	Jan.	7 , 1958	56.25
	M- 2	. Lat.	34°49',	long. 100°03'	. Depth 10	06 feet.		
Jan.	11,	1956_	54.58	Jan. 22, 19	957 57.83	Jan.	7, 1958	57.87

a Pumpingb Pumped recently

HEMPHILL COUNTY

OBSERVATION WELLS IN HEMPHILL COUNTY, TEXAS

DECEMBER 1958



WATER-LEVEL MEASUREMENTS IN HEMPHILL COUNTY, TEXAS

1. Lat. 36°03', long. 100°30'. Diameter 4 inches, depth 142 feet.

		142 :	feet.		•			
Date			Water level	Date	Water level	Date		Water level
Jan. May	15, 13	1937 1938 1939	136.30 135.48	July 1, 193 Dec. 22 Apr. 9, 19 ¹ Aug. 6	136.66		4, 1940 5, 1941	
	2.	Lat.	36°00', lo	ong. 100°28'.	Diameter 6	inches, d	epth 46	feet.
July			42.04	Jan. 15, 193			6, 1940	
	T•					1		
		1937 1938	49.44 49.45	July 1, 193 Dec. 22		Apr.	9, 1940	49.85
	6.	Lat.	35°45', 10	ong. 100°30'.	Diameter 4	inches, d	epth 18	feet.
-	-	1937 1938	12.70 11.54	Mar. 11, 193 July 1			9, 1940 6	12.71 14.15
	7.	Lat.	35°45', lo	ong. 100°30'.	Diameter 6	inches, d	epth 20	feet.
•	11,	1938 1939	8.69 9.89 9.51	Dec. 22, 193 Apr. 9, 19 ¹ Aug. 6	+O 9.87	Dec.	4, 1940	10.64
	178			long. 100°30', to 120 feet, sl				393
Jan.	19,	1957	15.52				1	
	179	. Lat	5. 35°46',	long. 100°29°	Depth 90	feet.		
July	15,	1958	33.94					
	181	. Lat	5. 35°53', et, casing	long. 100°24's slotted from	. Diameter 54 to 114 fe	l2 inches et.	, depth	114

19.88

Jan. 19, 1957

Jan. 14, 1956 19.22

July 15, 1958

WATER-LEVEL MEASUREMENTS IN HEMPHILL COUNTY -- CONTINUED

192. Lat. 35°48', long. 100°06'. Diameter 12 inches, depth 156 feet, casing slotted from 81 to 156 feet.

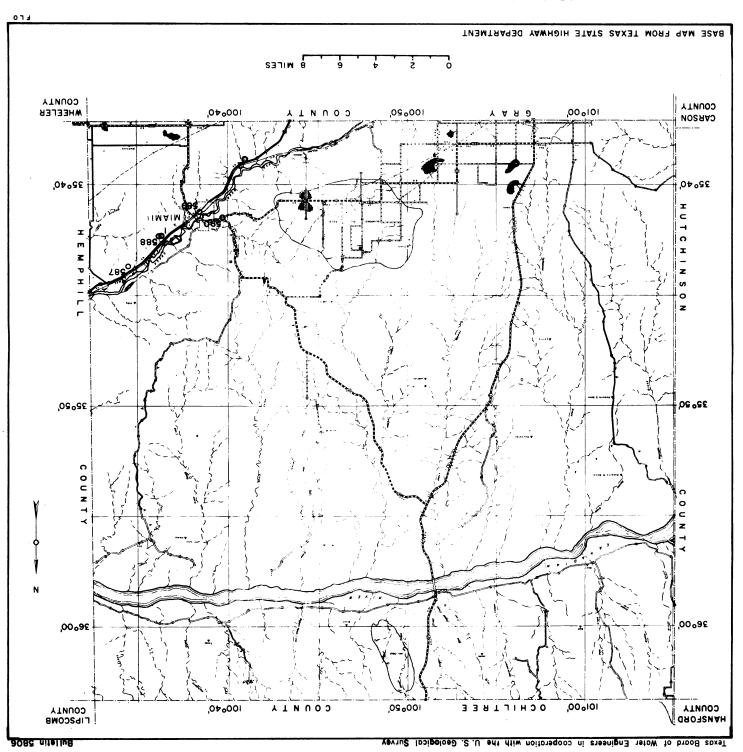
Date			Water	Date		Water	Date		Water
			level			level			level
Jan.	20, 1	957	84.53	July 14,	1958	82.58			
	193.			long. 100° slotted fr				depth	193
Jan.	14, 1	.956	94.54	Jan. 20,	1957	96.23	July 14	, 1958	93.96
	194.	Lat feet	-	long. 100°	°05'.	Diameter	12 inches,	depth	256
Jan.	14, 1	.956	199.43	Jan. 20,	1957	199.92	July 14	, 1958	199.80
	195.			long. 100° slotted fr				depth	216

July 14, 1958 144.94

Jan. 20, 1957 148.60

ROBERTS COUNTY

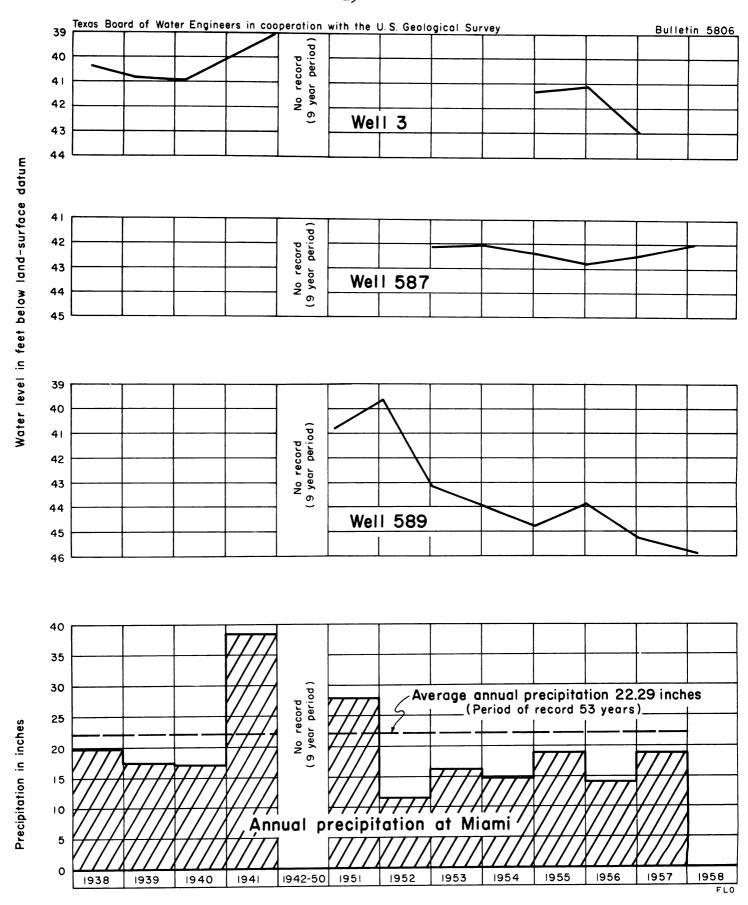
OBSERVATION WELLS IN ROBERTS COUNTY, TEXAS



WATER-LEVEL MEASUREMENTS IN ROBERTS COUNTY, TEXAS

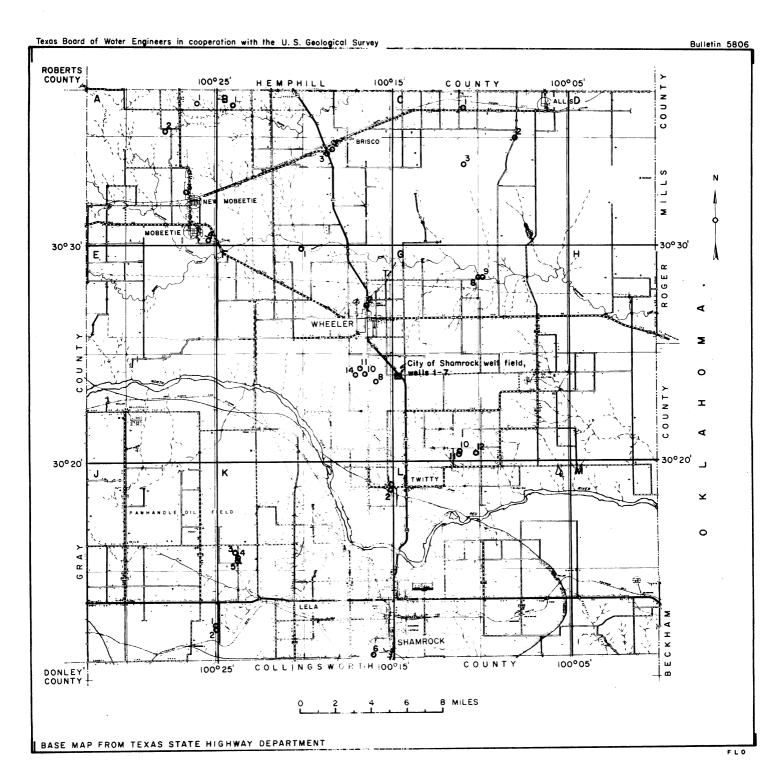
1.	Lat.	35°42',	long.	100°36′.	Diameter 4	inches,	depth	25	feet.
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				• -	
Date	Water level	Date	Water level	Date	Water level
July 8, 1937 Jan. 15, 1938 May 13 Mar. 11, 1939 July 1	5.66 5.60 5.06 5.55 2.44	Dec. 25, 1939 Jan. 11, 1940 30 Feb. 24 Mar. 25	6.16 6.17 6.10	Apr. 9, 1940 16 Aug. 6 Dec. 4 Dec. 6, 1941	5.97 6.40 4.60
2. Lat.	35°38', lo	ong. 100°41'. Di	ameter 6 :	inches, depth 86	feet.
July 9, 1937 Mar. 11, 1939		Jan. 29, 1940 Mar. 7		Aug. 6, 1940 Dec. 4	
3. Lat.	35°43', lo	ong. 100°34'. De	epth 62 fee	et.	
May 13, 1938 Mar. 11, 1939 Jan. 13, 1940		Mar. 14, 1940 Dec. 6, 1941 Jan. 11, 1955	39.07	Jan. 14, 1956 Jan. 19, 1957	
587. Lat	· 35°44',	long. 100°33'.			
Jan. 11, 1953 Jan. 12, 1954	42.14 42.10	Jan. 11, 1955 Jan. 14, 1956	42.40 42.81	Jan. 19, 1957 Feb. 14, 1958	42.50 42.06
588. Lat	· 35°42′,	long. 100°36'.	<u> </u>	•	
Feb. 22, 1951 Feb. 8, 1952	68.26 68.53	Jan. 11, 1953	69.33	Jan. 18, 1957	71.70
		long. 100°38'.	Diameter 1	l2 inches, depth	75 feet.
Feb. 21, 1951 Feb. 8, 1952 Jan. 11, 1953	40.80 39.63 43.16	Jan. 12, 1954 Jan. 11, 1955 Jan. 14, 1956	43.97 44.77 43.84	Jan. 19, 1957 Feb. 14, 1958	
590. Lat	. 35°41',	long. 100°39'.	Diameter 6	Sinches.	
Feb. 21, 1951 Feb. 8, 1952	110.36 109.10	Jan. 11, 1953 Jan. 12, 1954		Dec. 17, 1954 Jan. 11, 1955	



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

WHEELER COUNTY



OBSERVATION WELLS IN WHEELER COUNTY, TEXAS
DECEMBER 1958

WATER-LEVEL MEASUREMENTS IN WHEELER COUNTY, TEXAS

A-1. Lat. 35°36', long. 100°26'. Diameter 16 inches, depth 280 feet, casing slotted from 110 to 150 feet.

Date		Water level	Date			Water level	Date		Water level
Jan. 15, 1	9 5 6	140.22	Jan.	20,	1957	139.61	Apr.	16 , 1958	139.38
A-2.	Lat.	35°35', ng slotte	long.	100° 170	38'. to 3	Diameter 10 feet.	16 inche	s, depth	350 feet
Jan. 15, 19	956	162.73	Jan.	20,	1957	163.24	Apr.	16 , 1958	163.10
A-3.						Diameter From 262 t			458
July 15, 19 Jan. 15, 19		107.08 107.88	Jan.	20,	1957	104.72	Apr.	16, 1958	104.03
A-4.		35°30', ng slotte				Diameter feet.	10 inche	s, depth	83 feet,
Jan. 15, 19	956	17.05	Apr.	16,	1958	17.41			
B-1.						Diameter 5 to 335 i		s, depth	335
Jan. 15, 19	956	120.30	Jan.	20,	1957	122.13	Apr.	16 , 1958	121.81
B-2.	Lat.	35°34¹,	long.	100°	18'.	Diameter	6 inches	, depth	91 feet.
Jan. 11, 19 Jan. 12, 19		70.63 71.51			1955 1956		Jan.	20, 1957	76.88
В-3.	Lat.	35°34′,	long.	100°	181.	Diameter	6 inches	, depth	109 feet.
Jan. 11, 19 Jan. 12, 19 Jan. 11, 19	954	97.59 98.32 98.86	Jan.	20,	1956 1957 1958	100.41	July	15, 1958	101.82
C-1.	Lat.	35°36′,	long.	100°	10'.	Diameter	5 inches	, depth	157 feet.
Jan. 11, 19	953	111.86	Jan.	11,	1955	111.66	Jan.	20, 1957	112.11

WATER-LEVEL MEASUREMENTS IN WHEELER COUNTY -- CONTINUED

C-2. Lat. 35°35', long. 100°08'. Diameter 16 inches, depth 220 feet, casing slotted below 60 feet.

Date			Water	Date			Water	Date		Water
			level				level			level
	8, I		63.15 62.49				62.44 61.60	Jan. 14,	1956	61.52
	C-3.	Lat	. 35°33',	long.	100°.	10'.	Diameter	16 inches.		
			36.88 37.85				37•76 37•69	Jan. 14, July 15,	_	
	F-1.						Diameter to 140 fee	12 inches, d	epth :	140
Jan.	15, 1	1956	1.91	Jan.	20,	1957	2.35	July 15,	1958	2.14
	F-2.			_			Diameter to 95 fee	16 inches, d	epth (95
			11.46 32.82	Jan.	20,	1957	18.77	July 15,	1958	12.13
	F-8.	Lat	. 35°23',	long.	100°	15'.	Depth 64	feet.		
Jan.	12,	1955	20.65	Jan.	19,	1957	33.70			
	F-10	. La	t. 35°23'.	, long.	100	°16'.				
Jan.	14,	1956	118.20	Jan.	19,	<u>1957</u>	120.75	July 16,	1958	123.18
	F-11	. La	t. 35°24'	, long.	100	°16'.				
Jan.	14,	1956	86.90	Jan.	19,	1957	96.71			
	F-14	• La	t. 35°24',	, long.	100	°17'.				
Jan.	11,	1955	73.54	Jan.	19,	1957	80.98			

WATER-LEVEL MEASUREMENTS IN WHEELER COUNTY -- CONTINUED

G-l.	Lat.	35°23',	long.	100°14'.	Diameter	18	inches.	depth	50 feet.
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	G-l	. Lat.	35°23′,	long.	100°	14'.	Diameter	18	inches,	depth	50 feet.
Date			Water level	Date	Э		Water level		Date		Water level
Feb.	22,	1946 1951 1952	26.5 24.25 28.64	Jan.	. 10,	1953 1955 1956	32.59				28.57 29.47
	G-2	· Lat.	35°23',	long.	100°	14'.	Diameter	18	inches,	depth	36 feet.
	14	1946 1951	21.28	Jan	. 10,	1955	24.19 27.47 22.47		Jan. 19	, 1957	22.33
	G-3	. Lat.	35°23',	long.	100°	14'.	Diameter	18	inches,	depth	45 feet.
Feb.	22,	1946 1951 1952	32.1 27.75 32.20	Jan.	, 10,	1953 1955 1956	35.29 36.03 31.59		Jan. 19	, 1957	31,23
	G-4	. Lat.	35°23',	long.	100°	14'.	Diameter	18	inches,	depth	66 feet.
		1946 1951	34.88 33.36	Jan	. 10,	1955	41,72		Jan. 19	, 1957	42.55
	G-5	. Lat.	35°23',	long.	100°	14'.	Diameter	18	inches,	depth	73 feet.
		1946 1951	42.8 40.70	Jan	11,	1953	52.17		Jan. 19	, 1957	51.10
	G- 6	. Lat.	35°23',	long.	100°	14'.	Diameter	16	inches,	depth	121 feet.
	•	1952 1953	66.79 70.16			1955 1956	72.57 67.01		Jan. 19	, 1957	66.90
	G-7	. Lat.	35°23',	long.	100°	14'.	Diameter	16	inches,	depth	128 feet.
Feb.	8,	1951 1952 1953	85.71 84.48 88.27	Jan.	. 10,	1954 1955 1956	92.45		Jan. 19	, 1957	86.27
	G- 8		35°28', ng slotte				Diameter feet.	12	inches,	depth	44 feet,

Jan. 20, 1957 9.02

Jan, 15, 1956 8.90

July 15, 1958 6.46

WATER-LEVEL MEASUREMENTS IN WHEELER COUNTY--CONTINUED

Diameter 6 inches, depth 44 feet Tat. 35°28' long. 100°09'

	G - 9。	Lat. casi	35°28', ng slotte	long. ed from	100° 1 24	09'. to 44	Diamete feet.	er 6	inches,	depth	44 feet,
Date			Water level	Date)		Water level		Date		Water level
	21, 1 15, 1		9.78 10.20	Jan.	20,	1957	8.43	3	July 1	5, 1958	5.54
	G-10.		. 35°20'.								
Jan.	14, 1	956	11.15	Jan.	20,	1957	12.52	2	July 1	5 , 1958	10.89
	G-11.	Lat	· 35°20'	, long.	100	°11'.					
Jan.	14, 1	.956	5.40	Jan.	21,	1957	7•58	8	July 1	5 , 1958	5.74
	G-12.		. 35°20' t, casing							s, dept	h 202
Jan.	14, 1	956	25.11	Jan.	20,	1957	23.93	3	July 1	5, 1958	21.68
	J-1.	Lat.	35°12',	long.	100°2	25'.	Diamete	er 12	2 inches	, depth	160 feet
Jan.	21, 1	957	28.65	July	16,	1958	28.20				
	J-2.	Lat.	35°12',	long.	100°2	25'.	Depth 3	37 f∈	eet.		
Jan.	15, 1	956	16.40	Jan.	21,	1957	17.62	2	July 16	5 , 1958	16.54
	K-1.		35°18', , casing							, depth	132
Jan.	15 , 1	956	34.84	Jan.	20,	1957	37.26	5	July 1	5 , 1958	34.71
	K-2.		35°18', , casing							, depth	120
	12, 1 15, 1		28.08 29.77	Jan.	. 20,	1957	32.28	3	July 15	5, 1958	29.26
	K-3.	Lat.	35°15',	long.	100°2	241.	Diamete	er 16	inches	, depth	60 feet.

July 16, 1958

7.92

8.65

Jan. 20, 1957

July 16, 1955 Jan. 15, 1956

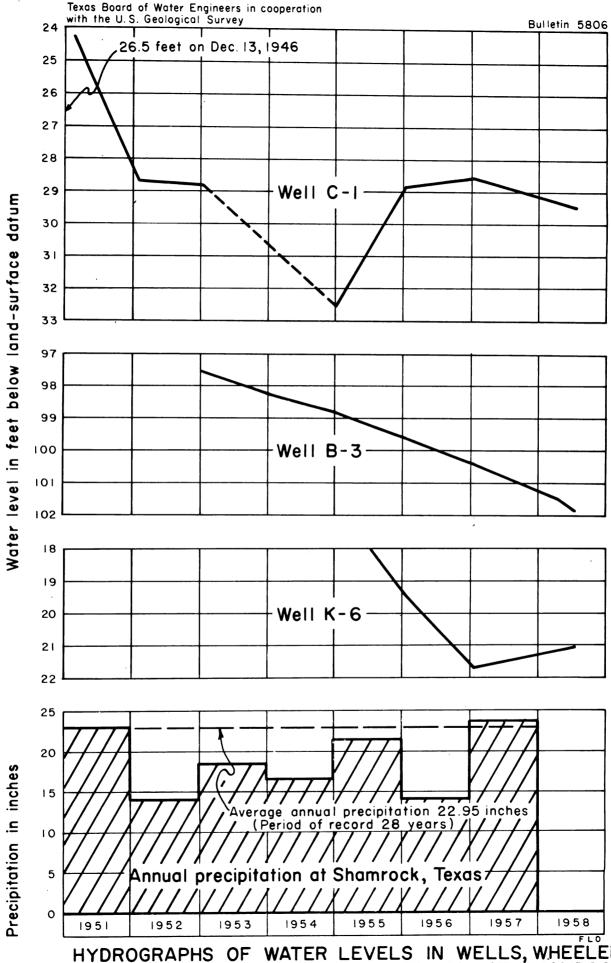
8.70

8.00

WATER-LEVEL MEASUREMENTS IN WHEELER COUNTY -- CONTINUED

K-4. Lat. 35°15', long. 100°24'. Diameter 16 inches.

Date			Water	Date		Water	Date		Water
			level			level		·	level
Jan.	15,	1956	6.30	Jan. 20,	1957_	7.02	July	16 , 1958	5 . 89
	K-5	. Lat.	35°15',	long. 100°21	ļ+¹.				
Jan.	15,	1956	26.38	Jan. 20, 1	1957	27.54	July	16 , 1958	25.99
	к-6			long. 100°16 slotted from				es, depth	74
•		1955 1956	18.08 19.39	Jan. 21,	1957	21.67	July	16, 1958	21.08



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