

**TEXAS BOARD OF WATER ENGINEERS**

C. S. Clark, Chairman

A. H. Dunlap, Member

J. W. Pritchett, Member



**RAINS COUNTY, TEXAS**

**PREPARED IN COOPERATION WITH THE UNITED STATES  
DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY**

**FEBRUARY 1943**

**REPRINTED MAY 1950**

RAINS COUNTY, TEXAS

Records of wells, springs, drillers' logs, water analyses,  
and map showing locations of wells and springs

TEXAS STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman

A. H. Dunlap, Member

J. W. Pritchett, Member

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

February 1943

# RAINS COUNTY, TEXAS

## Introduction

By

W. L. Broadhurst

This publication contains records of 57 wells and 1 spring, drillers' logs of 8 wells, summary descriptions of electrical logs of 2 wells, and results of chemical analyses of water from 45 wells in Rains County, Texas.

It also includes a map, showing the location of the wells, each well being given a number on the map corresponding to the number assigned to it in the records. The field data were obtained by W. L. Broadhurst in August 1942 in connection with a State-wide program of ground-water investigations in Texas conducted by the State Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey.

The water analyses were made by W. W. Hastings, Chemist of the Quality of Water Division of the Federal Geological Survey, and by chemists employed by the Work Projects Administration under the supervision of Mr. Hastings, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry of The University of Texas. The results of the analyses, which relate only to the mineral constituents in the water, and not to its sanitary character are tabulated in parts per million on pages 11 to 12. For the convenience of those who prefer a different form of expression the analyses of 15 samples are given in milligram equivalents per liter on page 13.

The records serve as a guide to land owners, officials of industrial plants, well drillers and others who need information regarding wells, the depth to ground water in different parts of the county, and the quantity and chemical character of water yielded by the wells.

A limited number of copies of this release are available for free distribution. They may be obtained by addressing a request to Mr. C. S. Clark, Chairman, Texas State Board of Water Engineers, 302 West 15th Street, Austin, Texas.

Records of wells and springs in Rains County, Texas  
All wells are drilled unless otherwise stated under remarks

Well	Distance from Emory	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
1	10 miles northwest	Texas Pacific Coal and Oil Co.	1922	3,802	--	--
2	7½ miles northwest	W. H. Hurst	1941	82	6	--
3	6 miles northwest	Tom Edwards	1940	110	6	2.0
4	do.	Fidelity Loan Co.	Old	90	6	1.0
5	7½ miles north	G. S. Holman	Old	150	--	--
6	7 miles northeast	D. W. Alexander	1939	16	30	0.0
7	5½ miles northeast	Poscy Wan Landingham	1918	48	8	2.5
8	5 miles northeast	Mrs. Camilla Gray	1935	69	6	2.0
9	7½ miles northeast	Scottish American Mortgage and Title Co.	1938	41	6	1.5
10	6 miles northeast	--	Old	13	--	2.5
11	4¾ miles northeast	Greer and McGlothlin	1932	4,402	--	--
12	5 miles east	Pilgrim Rest School	1937	21	36	3.5
13	3½ miles east	Luther Hulsey	Old	19	--	1.0
14	1½ miles east	Olen Gilley	Old	24	24	2.0
15	1¾ miles northeast	E. B. Germany	1941	4,510	--	--
16	2½ miles northeast	Fayett Wallace	Old	43	30	0.0
17	In Emory	Emory Public School	1942	21	30	2.0
18	do.	do.	Old	31	36	0.5
19	do.	G. W. Alexander	1915	21	26	2.0
20	¾ mile south	Mrs. M. J. S. Flemmons	1930	23	24	2.0
21	1½ miles northwest	W. H. Love	Old	22	48	3.0
22	1¼ miles northwest	The Harvey Oil Co.	1941	4,614	--	--
23	3½ miles northwest	Waskom School	--	40	24	0.5
24	4 miles northwest	G. R. Kerr	1920	171	8	2.0
25	5 miles northwest	B. M. Harpole	--	81	8	3.0

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift; C, cylinder; Cf, centrifugal; H, hand pump or bucket and rope. Power: E, electric; W, windmill.

Chemical analyses of water from some of these wells and springs are shown in a table of analyses on pages 11 to 13.

Well	Water level		Method of lift b/	Use of water c/	Remarks
	Below measuring point (ft.) a/	Date of measurement			
1	--	--	--	--	Oil test. A. A. Humphrey lease. See log.
2	--	--	H	D	Temperature 69° F.
3	98.05	Aug. 13, 1942	H	D,S	Temperature 70° F.
4	52.50	do.	H	D,S	Do.
5	--	--	C,E	L,S	Temperature 69° F.
6	9.72	Aug. 10, 1942	H	D	Dug. Temperature 72° F.
7	43.84	Aug. 13, 1942	H	D,S	Temperature 68° F.
8	64.43	Aug. 10, 1942	H	D,S	Temperature 70° F.
9	34.06	do.	H	D,S	Temperature 67° F.
10	12.17	do.	H	D,S	Dug. Temperature 74° F.
11	--	--	--	--	Oil test. Roy Harper lease. See log.
12	17.76	Aug. 10, 1942	Cf,E	P	Dug. Temperature 67° F.
13	12.01	do.	H	D	Do.
14	18.92	Aug. 12, 1942	H	D	Dug. Temperature 66° F.
15	--	--	--	--	Oil test. J. L. Collins lease, See log.
16	25.91	Aug. 10, 1942	H	D,S	Dug. Temperature 65° F.
17	19.50	Aug. 19, 1942	Cf,E	P	Dug. Temperature 66° F.
18	23.67	do.	Cf,E	P	Dug. Temperature 68° F.
19	19.83	do.	Cf,E	P	Dug.
20	20.18	Aug. 17, 1942	H	N	Dug. Temperature 67° F.
21	16.47	Aug. 12, 1942	Cf,E	D,S	Dug. Temperature 68° F.
22	--	--	--	--	Oil test. E. R. Hall lease. No important fresh water sand shown in electrical log, starting at 195 feet, in files of <sup>1</sup> exas
23	33.03	Aug. 12, 1942	Cf,E	P	Dug. Temperature 70° F. Board of Water Engineers.
24	48.90	do.	H	D,S	Temperature 71° F.
25	33.11	Aug. 11, 1942	H	D,S	Temperature 70° F.

c/ D, domestic; P, public supply; S, stock; N, not used.

## Records of wells and springs in Rains County--Continued

Well	Distance from Emory	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
26	6 miles northwest	H. Spencer	1934	190	6	--
27	7 miles northwest	C. M. Abernathy	1915	53	8	2.5
28	do.	O. E. McAdams	1915	90	8	2.0
29	7½ miles northwest	Mrs. W. D. Armstrong	Old	33	8	4.0
30	do.	do.	1898	191	5	3.0
31	11 miles west	Jones and Yost	1924	3,450	--	--
32	8 miles southwest	Oscar Harland	Old	150	--	--
33	5½ miles west	H. J. Daniel	Old	131	6	2.0
34	3 miles west	W. M. Burchett	Old	43	36	0.0
35	4½ miles southwest	Vernie Lockett	1941	27	--	3.0
36	6 miles southwest	--	--	30	24	3.0
37	4 miles southwest	James Dorn	1913	48	8	1.5
38	3½ miles south	Rocky Point School	1930	17	36	0.0
39	2½ miles southwest	C. R. Northcutt	1941	27	36	3.0
40	4½ miles southeast	H. C. Armstrong	--	Spring	--	--
41	5½ miles southeast	-- Green	--	47	60	2.0
42	7 miles east	E. N. Shivers	1940	57	6	2.5
43	8 miles southeast	T. F. Bell	--	43	48	2.0
44	6½ miles southeast	C. D. McCollum	1929	50	6	2.0
45	4¼ miles southeast	J. J. Jenkins	--	54	48	--
46	3½ miles southeast	Fraser Brick Co.	1914	1,100	6	--
47	3 miles southeast	J. J. Jenkins	Old	27	36	3.0
48	4¼ miles southeast	Godwin Estate	1939	93	6	2.0
49	6 miles southeast	Bert McKocwn	1938	100	6	2.0
50	7 miles southeast	Dr. R. A. Farrington	Old	86	6	2.0
51	8½ miles southeast	Plain Production Co.	1941	4,752	--	--

Well	Water level		Method of lift b/	Use of water c/	Remarks
	Below measuring point (ft.) a/	Date of measurement			
26	--	--	C,W	D	
27	34.07	Aug. 11, 1942	H	D	Temperature 70° F.
28	30.75	Aug. 13, 1942	H	D,S	Do.
29	16.43	do.	H	D,S	Do.
30	11.87	do.	H	S	Temperature 73° F.
31	--	--	--	--	Oil test. Guaranty State Bank lease. See log.
32	--	--	None	N	Abandoned, reported to have yielded salty water
33	70.46	Aug. 13, 1942	H	D	Temperature 71° F.
34	40.35	Aug. 12, 1942	H	D,S	Dug. Temperature 68° F.
35	25.75	do.	H	D,S	Dug. Temperature 66° F.
36	27.35	do.	H	D,S	Dug. Temperature 65° F.
37	43.00	do.	H	D,S	Temperature 69° F.
38	9.98	do.	H	P	Dug. Temperature 69° F.
39	19.93	do.	H	D,S	Dug. Temperature 66° F.
40	+	do.	Flows	S	Estimated flow one gallon a minute.
41	27.1	Aug. 14, 1942	C,W	D,S	Dug. Temperature 69° F.
42	53.48	do.	H	N	Water reported unfit for drinking. Temperature 70° F.
43	40.90	Aug. 17, 1942	C,W	D,S	Dug.
44	12.30	do.	H	D,S	Temperature 67° F.
45	--	--	C,W	S	Dug.
46	--	--	None	N	Formerly supplied water for title plant and about 30 residences.
47	8.50	Aug. 18, 1942	Cf,E	D,S	Dug. Temperature. 68° F.
48	60.13	do.	H	D,S	Temperature 69° F.
49	79.21	do.	H	D,S	Temperature 71° F.
50	64.87	do.	H	D,S	Temperature 69° F.
51	--	--	--	--	Oil test. Homer Foster lease. Electrical log, starting at 105 feet, in files of the Texas Board of Water Engineers, shows thin sands between 100 and 500 feet. See driller's log.

Records of wells and springs in Rains County--Continued

Well	Distance from Emory	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
52	9 miles southeast	--	--	119	6	1.0
53	9½ miles southeast	H. D. Byrd et al.	1930	4,562	--	--
54	9 miles southeast	H. H. Panter	--	57	--	3.3
55	9½ miles southeast	T. F. Bell	1932	--	--	--
56	10½ miles southeast	J. K. Wadley et al.	1934	4,632	--	--
57	12 miles southeast	M. C. Robinson	1934	257	8	--

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift: C, cylinder; Cf, centrifugal; H, hand pump or bucket and rope.  
Power: E, electric; W, windmill.



Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.) a/	Date of measurement			
52	82.29	Aug. 18, 1942	H	D,S	Temperature 70° F.
53	--	--	--	--	Oil test. J. D. Hill lease. See log.
54	55.04	Aug. 17, 1942	H	D,S	Temperature 66° F.
55	+	Aug. 14, 1942	Flows	D,S	Core test. Estimated flow one gallon a minute. Temperature 69° F.
56	--	--	--	--	Oil test. T. J. Jones lease. See log.
57	+	Feb. 2, 1942	Flows C,W	D,S	Estimated flow 2 gallons a minute. Temperature 67° F. See log.

c/ D, domestic; P, public supply; S, stock; N, not used.

Table of drillers' logs of wells in Rains County, Texas

		Thickness (feet)	Depth (feet)			Thickness (feet)	Depth (feet)
<u>Well 1</u>				<u>Well 11, partial log--Continued</u>			
Texas Pacific Coal and Oil Co. 10 miles northwest of Emory.				Sand, gravel	125	150	
Surface sand	50	50	Rock	1	151		
Gumbo, gravel	50	100	Sand, gravel	39	190		
Sticky clay	20	120	Broken lignite	8	198		
Sand	90	210	Sand, gravel	52	250		
Clay	30	240	Shale, boulders	40	290		
Hard sand	30	270	Gummy shale	360	650		
Sandy shale	65	335	Shale, boulders	430	1080		
Sand rock	5	340	Broken shells	232	1312		
Sandy shale	47	387	Sandy shale	80	1392		
Shale	323	710	Hard sand	18	1410		
Water sand	10	720	Shale, boulders	20	1430		
Shale and sandy shale	1565	2285	Sand rock	8	1438		
Chalk	1250	2410	Sandy shale, boulders	22	1460		
Broken chalk	210	2620	Shale, boulders	90	1550		
Shale	80	2700	Gumbo	50	1600		
Lime	95	2795	Hard gummy shale, boulders	100	1700		
Shale and sandy shale	305	3100	Hard sticky shale	40	1740		
Lime rock	5	3105	Hard shale	32	1772		
Shale	107	3212	Gummy shale with streaks of lime	193	1965		
Sand	3	3215	Rock	4	1969		
Shale	60	3275	Gummy shale	76	2045		
Sand and shale	10	3285	Hard shale with streaks of chalk	45	2090		
Sand	8	3293	Gummy shale	125	2215		
Sandy shale	92	3385	Hard shale	10	2225		
Sticky shale	10	3395	Rock	185	2410		
Black shale with hard streaks	10	3405	Chalk, rock, sandy shale	17	2427		
Sticky gumbo	10	3415	Sand, shale cored	16	2443		
Sticky shale and sand	14	3429	Hard shale with streaks of lime	47	2490		
Sand	3	3432	Gumbo	30	2520		
Shale and gumbo	73	3505	TOTAL DEPTH		4402		
Sandy shale	20	3525					
Gumbo	10	3535					
Hard shale, streaks of sand	5	3540					
Gumbo	17	3557					
Gravel and sand	3	3560					
Sand	10	3570					
Gumbo and shale	95	3665					
Gumbo with streaks of gypsum	10	3675					
Shale	47	3722					
Lime with soft streaks of sand and shale	10	3732					
Lime	15	3747					
Blue shale	10	3757					
Gray shale	25	3782					
Water sand	20	3802					
<u>Well 11, partial log</u>				<u>Well 15</u>			
Greer and McGlothlin. 4 $\frac{3}{4}$ miles northeast of Emory. Altitude 440 feet.				E. B. Germany. 1 $\frac{3}{4}$ miles northeast of Emory. Altitude 502 feet.			
Surface sand, clay	25	25	Sand and shells	188	188		
			Shale	532	720		
			Shale and shells	340	1060		
			Shale and sand breaks	395	1455		
			Shale and shells	145	1600		
			Shale	695	2295		
			Chalk	155	2450		
			Sandy shale	661	3111		
			Shale	509	3620		
			Chalk	360	3980		
			Sandy shale	113	4093		
			Hard shale and chalk	47	4140		
			Shale and sand breaks	12	4152		
			Shale and hard sand	55	4207		

(Continued on next page)

Table of drillers' logs of wells in Rains County--Continued

Well 15--Continued			Well 51--Continued		
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Shale, lime and shells	86	4293	Shale	40	4020
Shale and shells	107	4400	Chalk	120	4140
Sand and shale breaks	20	4420	Shale	23	4163
Sandy shale	90	4510	Sand	34	4197
<u>Well 31</u>			Shale	253	4450
Jones and Yost. 11 miles west of Emory. Altitude 460 feet.			Broken ashy sand and shale	73	4523
Clay	50	50	Shale	127	4650
Rock	1	51	Hard sand	2	4652
Shale, boulders	460	511	Water sand	6	4658
Packsand	14	525	Shale	4	4662
Shale, boulders	175	700	Water sand	5	4667
Shale	622	1322	Hard sandy lime	3	4670
Sand, cored, showed salt water	48	1370	Ashy shale	24	4694
Sandy shale	100	1470	Water sand	18	4712
Hard sand	5	1475	Red beds	10	4722
Shale	245	1720	Ashy sandy shale	8	4730
Hard sandy shale	6	1726	Red beds and shale	14	4744
Shale, boulders	264	1990	Shaley ashy sand	8	4752
Broken chalk	10	2000	<u>Well 53, partial log</u>		
Hard chalk	35	2035	H. D. Byrd et al. 9 $\frac{1}{2}$ miles southeast of Emory. Altitude reported 426 feet.		
Chalk	625	2660	Surface soil, clay	21	21
Broken lime	110	2770	Shale	59	80
Sandy shale	10	2780	Lignite	5	85
Broken lime	10	2790	Shale	25	110
Sandy shale	130	2920	Sand	3	113
Hard sand	5	2925	Shale	15	128
Shale, boulders	65	2990	Lignite	1	129
Lime	15	3005	Shale	60	189
Shale	90	3095	Lignite	7	196
Hard lime, shale, sand	2	3097	Shale	160	356
Shale	253	3550	Sand rock	1	357
Sand	50	3400	Shale	32	389
Red gumbo	20	3420	Sand rock	2	391
Sandy shale	5	3425	Shale	239	630
Sand	20	3445	Lime, shells, rock	2	632
Shale	5	3450	Lime rock	4	636
<u>Well 51</u>			Shale	80	716
Plains Production Co. 8 $\frac{1}{2}$ miles south- east of Emory.			Sandy shale	12	728
Shale	190	190	Sticky shale	10	738
Coal	8	198	Shale	12	750
Broken coal and shale	20	218	Lime rock	2	752
Sand and shale	267	485	Shale, boulders	46	798
Sandy shale	79	564	Sandy lime	4	802
Shale, shells	58	622	Sticky shale, boulders	78	880
Sandy shale	980	1602	Sticky shale	71	951
Sand	283	1885	Shale, boulders	110	1061
Sandy shale	595	2480	Sticky shale	44	1105
Chalk	1600	3980	Shale	40	1145
			Sticky shale	67	1212
			Sandy lime	3	1215

(Continued on next page)

Table of drillers' logs of wells in Rains County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 53, partial log--Continued</u>		
Shale, boulders	66	1281
Shale	61	1342
Shale, boulders	97	1439
Sandy lime rock	3	1442
Shale	132	1574
Sand	12	1586
Shale	21	1607
Sandy lime	4	1611
Soapstone	4	1615
Lime rock	2	1617
Sandy lime	3	1620
Shale, sand	27	1647
Sand rock	3	1650
Very hard shale	15	1665
Lime rock	5	1670
Sand, shells, sand rock, lime, gas	7	1677
Sticky shale, sand	1	1678
Sandy shale, show gas	2	1680
Sticky shale	20	1700
Shale	20	1720
Shale, sticky	26	1746
Shale	54	1800
Sandy lime	2	1802
Sandy shale, tough sticky	60	1862
Tough sticky shale	46	1908
Sticky shale	12	1920
Shale, streaks	74	1994
Lime	10	2004
TOTAL DEPTH		4562

Well 56

J. K. Wadley et al. 10 $\frac{1}{2}$  miles southeast of Emory.

Surface sand and shale	50	50
Lignite	10	60
Shale and boulders	350	410
Watersand	30	440
Shale and boulders	55	495
Water sand	20	515
Shale	190	705
Hard lime rock	5	710
Shale	45	755
Hard sand	5	760
Gumbo	220	980
Shale and shells	100	1080
Gumbo and boulders	125	1205
Lime	5	1210
Hard sandy shale	20	1230
Gumbo and boulders	40	1270

	Thickness (feet)	Depth (feet)
<u>Well 56--Continued</u>		
Green sandy shale	155	1425
Lime	5	1430
Sticky shale	165	1595
Lime	5	1600
Shale	43	1643
Sand	57	1700
Sandy shale	45	1745
Sand and lime streaks	20	1765
Shale	15	1780
Sandy shale	315	2095
Shale	408	2503
Hard chalk	207	2710
Shale	395	3105
Lime streaks	15	3120
Shale	490	3610
Hard sand	10	3620
Shale	205	3825
Hard chalk	207	4032
Sandy shale	33	4065
Sandy shale with lime streaks	115	4180
Sand	20	4200
Shale, streaks hard sand	84	4284
Cored fossiliferous shale with cuttings of red beds	9	4293
Shale	102	4395
Lime rock	3	4398
Shale	2	4400
Cored cross bedded sand- stone and shale	12	4412
Shale with streaks of sand	38	4450
Shale, streaks of sand (cuttings showed red beds)	180	4630
Cored hard cap rock	2	4632

Well 57

M. O. Robinson. 12 miles southeast of Emory.

Soil	5	5
Clay	10	15
Fine sand	5	20
Clay	12	32
Hard lignite	3	35
Black shale	55	90
Fine sand, some shale	52	142
Rock	1	143
White sand	10	153
Black shale	8	161
Lignite	6	167
Sand, streaks of lignite	90	257

Rains County, Texas

Analyzed at The University of Texas under the direction of W. W. Hastings, Chemist, U. S. Department of the Interior, Geological Survey, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry. Results are in parts per million. Well numbers correspond to numbers in table of well records.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
a/ 2	W. H Hurst	85	Aug. 13, 1942	1,348	58	22	391	360	537	160	-	3.0	233
3	Tom Edwards	110	do.	1,683	73	18	561	262	32	370	43	-	256
a/ 4	Fidelity Loan Co.	90	do.	2,391	134	55	787	177	1,217	610	6	-	564
5	F. S. Holman	150	do.	351	7.2	12	317	317	29	330	-	0	67
a/ 6	D. W. Alexander	16	Aug. 10, 1942	850	43	31	158	18	92	192	-	270	234
7	Posey Vanlandingham	48	Aug. 13, 1942	42	11	1.0	2.8	24	11	3.0	.1	1.0	31
a/ 8	Mrs. Camilla Gray	69	Aug. 10, 1942	350	76	1.5	57	26	26	74	-	4.0	196
9	Scottish-American Loan & Title Co.	41	do.	1,409	123	53	306	592	444	162	0	28	532
10	-	13	do.	1,558	55	49	467	287	196	650	.1	-	340
a/12	Pilgrim Rest School	21	do.	126	26	3.9	14	61	21	26	.2	5.0	82
13	Luther Hulsey	19	do.	193	19	6.3	37	13	13	64	-	45	74
a/14	Olen Gilley	24	Aug. 12, 1942	383	12	4.6	106	37	36	74	-	132	48
16	Fayette Wallace	43	Aug. 10, 1942	1,940	136	127	281	92	832	464	0	5.0	989
17	Emory Public School	21	Aug. 19, 1942	-	-	-	-	244	103	231	-	-	-
18	do.	31	do.	-	-	-	-	110	43	185	-	-	-
19	G. W. Alexander	21	do.	-	-	-	-	128	124	163	-	-	-
20	Mrs. M. J. S. Flemmons	23	Aug. 17, 1942	-	-	-	-	122	19	30	-	-	-
a/21	W. H. Love	22	Aug. 12, 1942	145	9.2	3.4	38	31	32	40	-	7.0	37
23	Waskom School	40	do.	299	20	4.6	83	98	17	81	.2	45	63
24	G. R. Kerr	171	do.	-	-	-	-	195	353	800	-	-	-
25	B. M. Karpole	81	Aug. 11, 1942	2,077	154	87	433	555	979	147	0	4.0	744
a/26	H. Spencer	190	do.	2,599	122	52	675	348	1,423	151	-	5.0	516
27	C. M. Abernathy	53	do.	2,126	150	103	433	720	1,035	49	0	2.0	792
28	D. E. McAdams	90	Aug. 13, 1942	585	57	25	150	653	14	14	-	4.0	246
29	Mrs. W. D. Armstrong	33	do.	-	-	-	-	354	1,217	243	-	117	-

a/ Analyses of water from selected wells and a spring are given in milligram equivalents per liter on page 13.

Partial analyses of water from wells and springs in Rains County--Continued  
 Results are in parts per million.

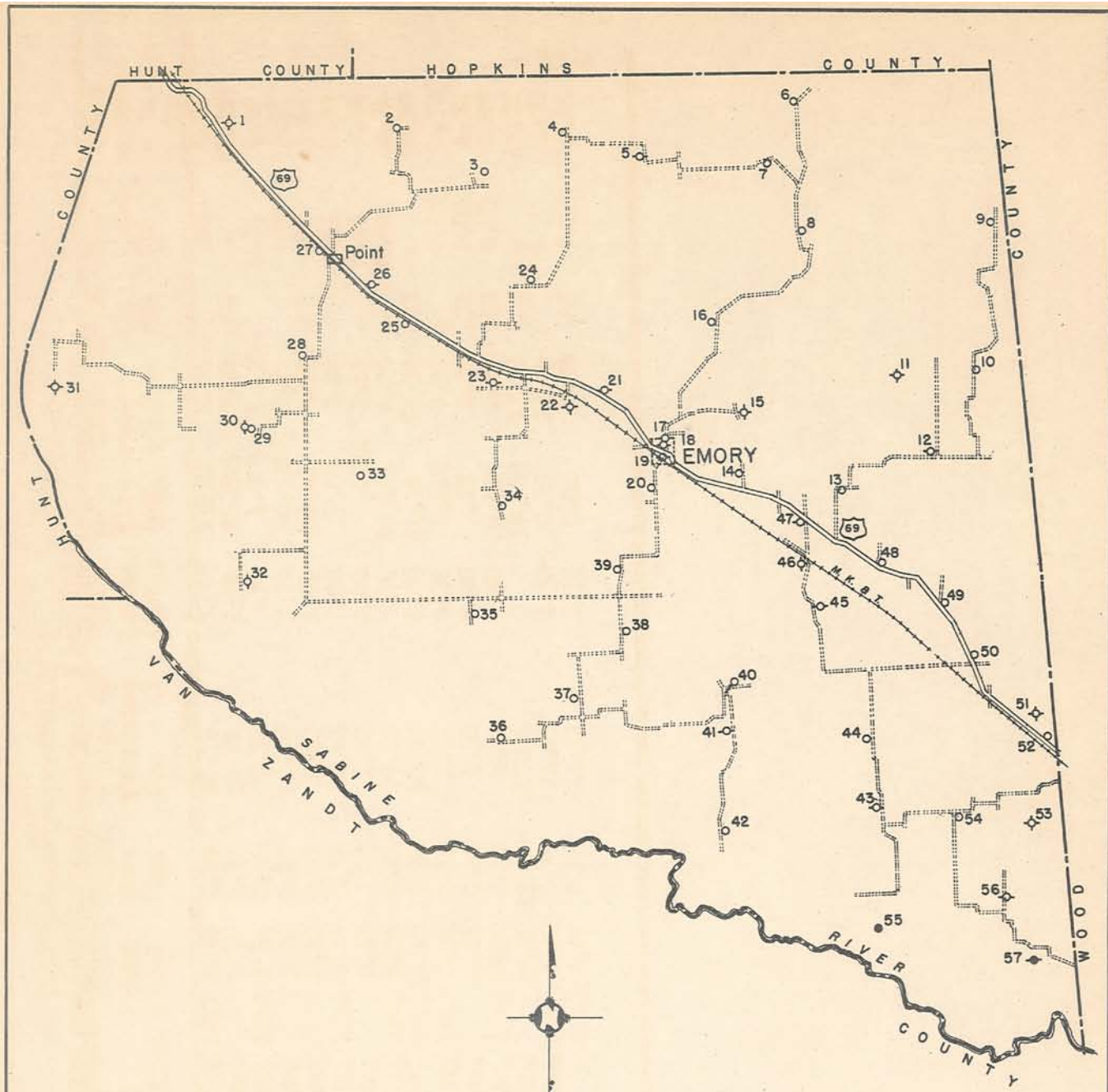
Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
a/30	Mrs. W. D. Armstrong	191	Aug. 13, 1942	4,927	308	186	1,110	415	2,148	970	.6	-	1,535
33	H. J. Daniel	131	do.	2,411	86	30	743	293	738	670	.1	-	339
34	W. M. Burchett	43	Aug. 12, 1942	241	12	4.6	69	61	72	50	.2	3.0	43
35	Vernie Lockett	27	do.	600	80	45	65	31	72	272	-	51	382
36	--	30	do.	373	11	3.4	139	329	18	37	1.0	2.0	42
37	James Dorn	43	do.	805	94	52	103	317	254	72	.2	69	447
a/38	Rocky Point School	17	do.	126	6.8	2.2	32	12	54	14	-	11	26
a/39	C. R. Northcutt	27	Aug. 12, 1942	301	85	3.4	30	317	11	13	.2	2.0	227
a/40	H. C. Armstrong	Spring	Aug. 14, 1942	187	8.0	5.3	56	24	3	100	.2	2.0	44
41	-- Green	47	do.	109	16	4.6	13	18	57	6.0	.3	3.0	58
a/42	E. B. Shivers	57	do.	3,563	566	137	300	0	1,880	630	.3	-	2,186
43	T. F. Bell	43	Aug. 17, 1942	-	-	-	-	24	280	452	-	-	-
45	J. J. Jenkins	54	do.	-	-	-	-	18	2	49	-	-	-
47	do.	27	Aug. 13, 1942	-	-	-	-	85	3	526	-	-	-
48	Godwin Estate	93	do.	-	-	-	-	256	29	12	-	-	-
49	Bert McKeown	100	do.	-	-	-	-	250	11	14	-	-	-
50	Dr. R. A. Farrington	86	do.	-	-	-	-	263	154	29	-	-	-
52	--	119	do.	-	-	-	-	354	29	12	-	-	-
54	H. H. Panter	57	Aug. 17, 1942	-	-	-	-	92	39	13	-	-	-
a/55	T. F. Bell	--	Aug. 14, 1942	1,560	28	4.6	535	275	7	300	0	-	88
a/57	M. O. Robinson	257	Feb. 2, 1942	814	.8	2.4	329	397	3	283	.2	.5	12

a/ Analyses of water from selected wells and a spring are given in milligram equivalents per liter on page 13.

Chemical Analyses--Continued

Results are in milligram equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as Ca CO <sub>3</sub> (calc.)
2	W. H. Hurst	85	Aug. 13, 1942	2.88	1.78	16.99	5.90	11.19	4.51	-	.05	4.66
4	Fidelity Loan Co.	90	do.	0.72	4.55	34.21	2.90	25.364	17.20	.03	-	11.28
6	D. V. Alexander	16	Aug. 10, 1942	2.14	2.54	7.32	.30	1.925	5.42	-	4.35	4.68
8	Mrs. Camilla Gray	69	do.	3.80	0.12	2.47	3.70	0.539	2.09	-	.06	3.92
12	Pilgrim Rest School	21	do.	1.32	0.32	0.62	1.00	0.44	0.79	.01	.08	1.64
14	Olen Gilley	24	Aug. 12, 1942	0.53	0.38	4.61	0.60	7.46	2.09	-	2.13	0.96
21	W. J. Love	22	do.	0.46	0.28	1.67	0.50	.6714	1.18	-	0.11	0.74
26	H. Spencer	190	Aug. 11, 1942	6.03	4.26	29.37	5.70	29.645	4.26	-	0.08	10.34
30	Mrs. W. D. Armstrong	191	Aug. 13, 1942	15.40	15.30	48.25	6.80	44.76	27.36	.03	-	30.70
38	Rocky Point School	17	Aug. 12, 1942	0.34	0.18	1.37	0.20	1.119	0.39	-	0.18	0.52
39	C. R. Northcutt	27	do.	4.26	0.28	1.30	5.20	0.23	0.37	.01	0.03	4.54
40	H. C. Armstrong	Spring	Aug. 14, 1942	0.40	0.48	2.44	0.40	0.06	2.32	.01	0.03	0.88
42	F. B. Shivers	57	do.	28.32	15.40	13.04	0	39.165	17.77	.02	-	43.72
55	T. F. Bell	-	do.	1.38	0.38	25.45	4.50	0.15	22.56	0	-	1.76
57	M. O. Robinson	-	Feb. 2, 1942	0.04	0.20	14.31	6.50	0.06	7.98	.01	0.01	0.24



— EXPLANATION —

- WELL WITH HAND PUMP, BUCKET OR BAILER
- ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
- FLOWING WELL
- ◇ UNUSED WELL
- ◈ WELL DRILLED TO TEST FOR OIL OR GAS
- SPRING
- 69 U. S. HIGHWAY

TEXAS BOARD OF WATER ENGINEERS  
IN COOPERATION WITH  
U. S. GEOLOGICAL SURVEY

BASE COMPILED FROM  
HIGHWAY PLANNING SURVEY COUNTY ROAD MAP  
AND FIELD NOTES

**MAP OF RAINS COUNTY, TEXAS**  
**SHOWING WATER WELLS AND SPRING**

