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STATE BOARD OF WATER ENGINEERS

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ANDREWS COUNTY. TEXAS

Records of wells, test wells, drillers' logs,  
chemical analyses of water and map showing  
locations of wells.

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Work Projects Administration Project 6999  
Joe W. Lang, Superintendent  
1937

Supplementary data by  
Lloyd G. Davis, Superintendent  
Project 13460  
1939

\* \* \*

Analyses made and report mimeographed by  
WORK PROJECTS ADMINISTRATION  
Project 10443

\* \* \*

Sponsored by the State Board of Water Engineers with the United States Department of the Interior, Geological Survey, and the Bureau of Industrial Chemistry of The University of Texas cooperating.

\* \* \*

Austin, Texas  
May 25, 1940

ANDREWS COUNTY, TEXAS

\* \* \*

Introduction

by

William O. George

Assistant Geologist

United States Geological Survey

This publication contains records of wells, drillers' logs of wells, and logs of test wells in Andrews County, Texas. The records were obtained in an inventory made by the Work Projects Administration. The work was started in July, 1936 as Project 6999 in the Lubbock District, with Joe W. Lang, a geologist, as project superintendent. Because of a lack of funds, the work was interrupted in October 1936. By this time, considerable information had been obtained in the southern half of the county and this data was compiled and released on December 2, 1937. The investigation was resumed on July 11, 1939 as Project 13460 in the San Angelo District and with Lloyd G. Davis as project superintendent and completed on September 25, 1939. This release contains the combined data of both projects, which includes 246 well records, 29 drillers' logs, logs of 137 test wells, and 169 chemical analyses.

The analyses were made by chemists employed on Work Projects Administration Project 10443 under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry of The University of Texas, and E. W. Lohr, Chemist of the Quality of Water Division of the Geological Survey; the Bureau of Industrial Chemistry furnished laboratory space and equipment. This release was typed by typists employed on that project.

The records serve as a guide to land owners, well drillers and others who need information regarding springs and wells, the depth to ground water in different parts of the county, and the quantity and chemical character of water yielded by both springs and wells. They afford a basis for the more intensive investigation that is now being carried on by the State Board of Water Engineers in cooperation with the Geological Survey. The purpose of this investigation is to determine the distribution and extent of the available ground-water supplies and the safe yield of the underground reservoirs.

These projects are a part of a State-wide investigation of the underground water resources of Texas, and are sponsored by the Texas State Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey.

Records of wells in Andrews County, Texas  
 (All wells are drilled.)

(See "Logs of W. P. A. test wells" for records of all test wells.)

No.	Distance from Andrews	Section	Block and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
1	11 $\frac{1}{2}$ miles north	4, NE $\frac{1}{4}$ NW $\frac{1}{4}$	4	University of Texas	1935	76	--	0
3	11 $\frac{1}{2}$ miles northeast	3, NW $\frac{1}{4}$ SW $\frac{1}{4}$	4	do.	--	90	--	0
4	10 miles northeast	9, SW $\frac{1}{4}$ SW $\frac{1}{4}$	4	do.	--	58	6	0
7	15 $\frac{1}{2}$ miles east	13, NE $\frac{1}{4}$ SW $\frac{1}{4}$	8	do.	Old	74	6	2
12	19 miles east	33, NE $\frac{1}{4}$ NE $\frac{1}{4}$	7	do.	1933	85	6	0
14	18 miles east	32, NE $\frac{1}{4}$ SE $\frac{1}{4}$	39, T. 3 N.	J. E. Mabee	1934	71	6	0.5
15	do.	25, NW $\frac{1}{4}$ SE $\frac{1}{4}$	39, T. 2 N.	do.	1933	70	6	0.5
17	16 miles east	16, NE $\frac{1}{4}$ NE $\frac{1}{4}$	40, T. 3 N.	do.	Old	83	6	2
18	14 $\frac{1}{2}$ miles east	18, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Midland Farms Co.	Old	77	6	1
19	15 $\frac{1}{2}$ miles east	3, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	Old	67	--	1
21	13 $\frac{1}{2}$ miles east	20, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1930	78	--	1
23	12 miles east	34, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	55	6	1.5
24	10 $\frac{1}{2}$ miles east	4, NE $\frac{1}{4}$ NE $\frac{1}{4}$	41, T. 3 N.	do.	1923	91	--	0
26	9 miles east	13, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1923	98	--	1
31	6 $\frac{1}{2}$ miles east	23, SE $\frac{1}{4}$ NE $\frac{1}{4}$	3, P. S. L.	M. Q. McCarley	1924	98	--	1
32	5 $\frac{1}{2}$ miles east	24, NE $\frac{1}{4}$ SE $\frac{1}{4}$	3, T. 3 N.	Carl Gibson	1926	98	6	1
35	4 $\frac{1}{2}$ miles east	24, NE $\frac{1}{4}$ NW $\frac{1}{4}$	3, P. S. L.	W. D. McCarley	--	98	6	1
36	2 miles east	2, NW $\frac{1}{4}$ NW $\frac{1}{4}$	A44, P. S. L.	W. J. Lay	--	89	--	1
37	In Andrews	24, SW $\frac{1}{4}$ NW $\frac{1}{4}$	A45, P. S. L.	J. D. Mathews	--	100	6	0
38	1 $\frac{1}{4}$ miles southeast	9, NE $\frac{1}{4}$ NW $\frac{1}{4}$	A44, P. S. L.	Leona Mitchell	Old	105	--	1
40	2 $\frac{1}{4}$ miles south	8, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	C. L. Louis	1924	96	--	1
43	3 $\frac{1}{2}$ miles southeast	14, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. W. Dearen	Old	102	--	0.5
44	6 miles southeast	5, N $\frac{1}{2}$ S $\frac{1}{2}$	A19, P. S. L.	W. D. McCarley	1925	84	--	1
46	7 miles southeast	32, NW $\frac{1}{4}$ NW $\frac{1}{4}$	3, P. S. L.	do.	--	83	--	0.5
d/ 46a	6 $\frac{1}{2}$ miles east	29, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1934	5,001	20	--

a/ Measuring point was usually top of casing, top of pump base, or top of well curb.

b/ C, cylinder; W, windmill; A, air lift; number indicates horsepower.

Records obtained by Joe W. Lang, Project Superintendent  
(Chemical analyses of water from these wells are in the table of analyses.)

No.	Water Level		Pump and power b/	Use of water c/	Topo- graphic situ- ation	Remarks
	Depth below measur- ing point (feet)	Date of measur- ment				
1	54.6	Oct. 27, 1936	--	N	Flat	Reported geophysical test drilled into "Red Beds."
3	66.3	do.	C,W	S	do.	Concrete curb. Strong supply reported in sand.
4	37.1	do.	C,W	S	Edge of draw	12 feet iron casing at top.
7	53.7	Oct. 13, 1936	C,W	S	Sink bottom	Strong supply reported in sand.
12	68.2	Oct. 14, 1936	C,W	S	Rolling	Concrete curb. Reported weak supply.
14	32.4	Oct. 15, 1936	C,W	S	Edge of sink	Concrete curb; 10 feet galvanized casing at top.
15	40.8	do.	C,W	S	do.	Do.
17	41.4	do.	C,W	S	Sink bottom	Do.
18	43.6	Oct. 14, 1936	C,W	S	Rolling	Strong supply reported in sand.
19	44.5	do.	C,W	S	Edge of sink	Do.
21	46.9	Sept. 16, 1936	C,W	S	do.	Do.
23	45.9	Oct. 14, 1936	C,W	S	Sink bottom	Wood curb; 6 feet casing at top.
24	66.1	Sept. 10, 1936	--	N	Flat	Water reported in sand.
26	75.9	July 28, 1936	--	N	do.	Concrete curb. Well with strong supply reported 1,000 feet south.
31	73.1	Aug. 7, 1936	C,W	D,S	Flat	Concrete curb. Strong supply reported in sand at 77-98 feet.
32	33.5	Aug. 10, 1936	C,W	D,S	Rolling	Concrete curb. Reported irrigates 1-acre garden in summer.
33	78.3	do.	C,W	S	Flat	Concrete curb; 6 feet galvanized casing at top.
36	66.2	Aug. 11, 1936	C,W	D,S	do.	Concrete curb. Irrigates small garden.
37	89.6	Aug. 18, 1936	C,W	D,S	do.	Wood curb. Reported irrigates small garden. Drilled by D. Nix.
38	81.2	Aug. 17, 1936	C,W	D,S	Rolling	Strong supply reported in sand.
40	93	do.	C,W	D,S	Flat	Concrete curb. Strong supply reported in sand. Drilled by G. L. Lonis.
43	62.8	Aug. 11, 1936	C,W	D,S	do.	Wood curb. Reported irrigates small garden.
44	63.2	do.	C,W	D,S	do.	Concrete curb. Reported irrigates small garden.
46	54.5	Aug. 10, 1936	C,W	S	Gentle slope	Concrete curb. Strong supply reported in sand.
46a	--	--	None	N	--	Oil test. See log. Drilled by Roland S. Bond, et al.

c/ S, Stock; D, Domestic; Of, oil field; N, not used.

d/ No water sample collected for analysis.

e/ Water level reported.

## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
47	6 $\frac{1}{2}$ miles east	29, NE $\frac{1}{4}$ NW $\frac{1}{4}$	3, P. S. L.	W. D. McCarley	--	96	6	1
49	8 miles east	27, SE $\frac{1}{2}$ SE $\frac{1}{4}$	do.	Mary Quinn	--	69	--	0.5
50	9 miles east	15, NW $\frac{1}{4}$ SW $\frac{1}{4}$	41, T. 3 N.	Midland Farms Co.	--	75	6	1
52	10 $\frac{1}{2}$ miles east	1, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1924	58	6	0
53	14 miles east	8, NW $\frac{1}{4}$ SW $\frac{1}{4}$	40, T. 2 N.	do.	--	33	6	2
55	15 miles east	3, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. E. Mabee	--	74	6	1
56	17 miles east	11, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	63	6	0
57	16 $\frac{1}{2}$ miles east	13, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	42	6	1
58	do.	20, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	1930	37	6	1
59	18 miles east	34, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	51	6	1.5
60	18 miles southeast	43, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	1934	68	6	1
61	20 miles southeast	47, SW $\frac{1}{4}$ NW $\frac{1}{4}$	40, T. 1 N.	do.	--	54	6	1
62	20 $\frac{1}{2}$ miles southeast	10, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Midland Farms Co.	--	103	6	0.5
63	21 $\frac{1}{2}$ miles southeast	23, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	57	6	0.5
64	22 miles southeast	25, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	192-	42	--	0
66	19 $\frac{1}{2}$ miles southeast	5, NW $\frac{1}{4}$ SW $\frac{1}{4}$	41, T. 1 N.	do.	--	37	--	0.5
69	17 miles southeast	10, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	78	--	1
73	14 $\frac{1}{2}$ miles southeast	15, NE $\frac{1}{4}$ NE $\frac{1}{4}$	41, T. 2 N.	do.	--	52	--	0.5
74	15 miles southeast	3, SW $\frac{1}{2}$ SE $\frac{1}{4}$	do.	do.	--	35	6	1.5
75	13 $\frac{1}{2}$ miles southeast	24, SE $\frac{1}{2}$ SW $\frac{1}{4}$	40, T. 2 N.	do.	--	40	6	1
79	12 miles southeast	11, NW $\frac{1}{4}$ SE $\frac{1}{4}$	41, T. 2 N.	do.	--	82	6	0
82	11 miles southeast	7, SE $\frac{1}{4}$ SE $\frac{1}{4}$	2, University Lands	University of Texas	1936	89	--	0
83	9 $\frac{1}{2}$ miles southeast	9, SE $\frac{1}{2}$ SE $\frac{1}{4}$	do.	do.	Old	90	--	2.5
85	11 miles southeast	3, NE $\frac{1}{4}$ NW $\frac{1}{4}$	42, T. 2 N.	Midland Farms Co.	--	100	6	0.5
86	13 $\frac{1}{2}$ miles southeast	30, SW $\frac{1}{4}$ SE $\frac{1}{4}$	41, T. 2 N.	do.	--	85	6	0
87	14 $\frac{1}{2}$ miles southeast	33, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	--	81	6	2
88	15 $\frac{1}{2}$ miles southeast	25, NW $\frac{1}{4}$ SW $\frac{1}{4}$	41, T. 1 N.	do.	--	65	6	0.5

## Joe W. Lang, Project Superintendent

No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
47	64.6	Aug. 10, 1936	C,W	D,S	Flat	Concrete curb; galvanized casing.
49	52.5	Aug. 7, 1936	C,W	S	Gentle slope	Concrete curb. Strong supply reported in sand.
50	49.1	Oct. 15, 1936	C,W	S	Flat	Strong supply reported in sand.
52	54.4	do.	None	N	do.	10 feet galvanized casing at top.
53	22.5	Oct. 20, 1936	C,W	N	Edge of sink	Strong supply reported in sand.
55	50.4	Oct. 15, 1936	C,W	S	do.	Concrete curb; 10 feet galvanized casing at top.
56	35.4	Oct. 19, 1936	C,W	S	do.	Concrete curb. Strong supply reported in sand.
57	25.6	do.	C,W	S	do.	Do.
58	21.8	do.	C,W	S	Flat	Do.
59	30.2	do.	C,W	S	do.	Do.
60	26.6	do.	C,W	S	do.	Do.
61	43.8	Oct. 16, 1936	C,W	S	Flat	Concrete curb. Strong supply reported in sand.
62	35.9	do.	C,W	S	Gentle slope	Do.
63	38.8	do.	C,W	S	Flat	Do.
64	31	July 28, 1936	C,W	D,S	do.	Concrete curb. Strong supply reported in sand.
66	30.8	do.	C,W	S	Edge of sink	Do.
69	31.2	do.	C,W	S	Flat	Do.
73	16.7	Oct. 16, 1936	C,W	S	do.	Do.
74	6.9	Oct. 19, 1936	C,W	S	Bottom of draw	Concrete curb. Reported seep springs 150 feet from well.
75	12.5	do.	C,W	S	do.	Concrete curb. Strong supply.
79	30.6	Oct. 16, 1936	C,W	S	Lake-side	Concrete curb. Strong supply reported in sand.
82	49.6	Oct. 10, 1936	--	N	Flat	Oil test.
83	39.2	Aug. 24, 1936	C,W	S	Edge of sink	Wood curb. Strong supply reported in sand.
85	35.9	Oct. 21, 1936	C,W	S	Gentle slope	Concrete curb. Strong supply reported in sand.
86	31.4	do.	C,W	S	do.	Do.
87	53	do.	--	--	Flat	Do.
88	36.1	do.	C,W	S	Edge of sink	Do.

## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
89	17 miles southeast	27, SE $\frac{1}{2}$ NW $\frac{1}{4}$	41, T. 1 N.	Midland Farms Co.	--	91	6	2
90	19 miles southeast	28, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	do.	--	25	6	0
91	17 $\frac{1}{2}$ miles southeast	5, SE $\frac{1}{2}$ NE $\frac{1}{2}$	42, T. 1. N.	do.	--	70	6	2.5
95	14 $\frac{1}{2}$ miles south	40, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	do.	--	87	6	1
97	13 $\frac{1}{2}$ miles southeast	38, SE $\frac{1}{2}$ SE $\frac{1}{2}$	1, University Lands	University of Texas	1934	90	--	0
98	12 $\frac{1}{2}$ miles southeast	2, NE $\frac{1}{2}$ SW $\frac{1}{4}$	42, T. 2 N.	Midland Farms Co.	--	92	6	0
99	11 $\frac{1}{2}$ miles southeast	30, SE $\frac{1}{2}$ SE $\frac{1}{2}$	1, University Lands	University of Texas	1935	85	--	0
100	12 $\frac{1}{2}$ miles south	31, SW $\frac{1}{2}$ SW $\frac{1}{4}$	do.	do.	Old	70	6	1
102	do.	32, SW $\frac{1}{2}$ SW $\frac{1}{4}$	do.	do.	1934	110	6	0.5
105	10 miles south	25, SW $\frac{1}{2}$ NE $\frac{1}{4}$	do.	do.	--	106	--	0.5
107	8 $\frac{1}{2}$ miles southeast	15, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	do.	1935	92	--	0
111	6 $\frac{1}{2}$ miles south	4, SE $\frac{1}{2}$ SW $\frac{1}{4}$	do.	do.	Old	70	--	2
112	6 $\frac{1}{2}$ miles southeast	3, SE $\frac{1}{2}$ SW $\frac{1}{4}$	do.	do.	1935	100	--	0
114	7 $\frac{1}{2}$ miles southeast	1, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	do.	--	64	--	2
115	5 miles southeast	26, NW $\frac{1}{2}$ SW $\frac{1}{4}$	A44, P. S. L.	H. C. Barnes	--	103	--	1
119	2 $\frac{3}{4}$ miles southwest	7, SW $\frac{1}{2}$ SW $\frac{1}{4}$	do.	Honolulu Oil Co.	1934	120	8	0
d/119a	2 $\frac{1}{2}$ miles southwest	do.	do.	J. E. Parker	1934	4,733	15 $\frac{1}{2}$	--
122	2 miles west	18, SE $\frac{1}{2}$ SE $\frac{1}{2}$	A46, P. S. L.	do.	--	127	6	1.5
d/123	3 miles west	15, NE $\frac{1}{2}$ NW $\frac{1}{4}$	do.	do.	1934	112	6	1
124	4 $\frac{1}{2}$ miles west	14, NW $\frac{1}{2}$ NW $\frac{1}{4}$	do.	W. J. Harris	--	102	6	0
d/126	3 miles southwest	1, SW $\frac{1}{2}$ SW $\frac{1}{4}$	A45, P. S. L.	J. E. Parker	--	103	6	1.5
128	4 $\frac{1}{2}$ miles west	3, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	J. R. McCloutt	Old	144	--	2
130	5 $\frac{1}{2}$ miles west	21, NE $\frac{1}{2}$ SW $\frac{1}{4}$	A46, P. S. L.	Hayden Miles	--	29	6	0.5
131	6 $\frac{1}{2}$ miles west	22, NW $\frac{1}{2}$ NE $\frac{1}{4}$	do.	do.	Old	44	--	1
135	8 $\frac{1}{2}$ miles west	9, NW $\frac{1}{2}$ NE $\frac{1}{2}$	do.	Dr. R. H. Lendley	192-	83	--	1
136	do.	8, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	do.	Old	83	6	1
d/138	7 miles west	6, SE $\frac{1}{2}$ SW $\frac{1}{4}$	do.	C. E. Ogden	1929	4,428	20	--

## Joe W. Lang, Project Superintendent

No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
89	30.4	Oct. 21, 1936	C,W	S	Edge of sink	Concrete curb. Strong supply reported in sand.
90	18.8	do.	C,W	S	do.	Do.
91	49.5	do.	C,W	D,S	Flat	Do.
95	42.6	Sept. 7, 1936	C,W	S	Bottom of draw	Concrete curb; iron casing, top to bottom. Strong supply.
97	67.7	Oct. 26, 1936	None	N	Rolling	Oil test. Reported drilled into "Red Bed".
98	33.8	do.	C,W	S	Edge of sink	Iron casing. Strong supply reported in sand.
99	78.1	do.	None	N	Rolling	Oil test.
100	52.2	Aug. 21, 1936	C,W	S	Gentle slope	10 feet iron casing at top.
102	63.4	Aug. 20, 1936	C,W	S	Rolling	Iron casing. Strong supply reported in sand.
105	98.8	Aug. 21, 1936	C,W	S	do.	Strong supply reported in sand.
107	79.1	Oct. 10, 1936	None	N	do.	Oil test.
111	61.6	Aug. 24, 1936	C,W	S	do.	Concrete curb. Strong supply reported in sand.
112	75.2	do.	None	N	do.	Oil test.
114	51.9	do.	C,W	S	do.	Concrete curb. Strong supply reported in sand. Reported adjacent to second well.
115	75.1	Aug. 11, 1936	C,W	S	do.	Concrete curb.
119	82.9	Aug. 17, 1936	C,W	Of	Sand dunes	8 feet iron casing at top. Drilled by D. Nix.
119a	--	--	None	N	do.	Oil test. See log. Drilled by Honolulu Oil Co.
122	111.4	Sept. 8, 1936	None	N	Ridge-top	Concrete curb; galvanized casing. Drilled by Honolulu Oil Co.
123	98.2	do.	C,W	S	Rolling	Concrete curb; 10 feet galvanized casing at top. Drilled by D. Nix.
124	80.9	do.	None	N	do.	Concrete curb; 20 feet galvanized casing at top.
126	31.8	do.	C,W	S	do.	20 feet iron casing at top. Strong supply reported in sand.
128	134.7	Sept. 1, 1936	None	N	do.	
130	17	do.	None	N	Sink bottom	Iron casing.
131	39.7	do.	C,W	D,S	Edge of sink	Concrete curb.
135	75	do.	C,W	S	Rolling	Concrete curb. Strong supply reported in sand.
136	71.7	do.	None	N	do.	Iron casing.
138	--	--	--	--	--	Oil test. See log. Drilled by Deep Rock Oil Co.



## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) $\frac{m}{f}$
d/139	5 miles west	4, SE $\frac{1}{4}$ SW $\frac{1}{4}$	A46, P. S. L.	W. J. Mathis	1930	5,088	20	--
d/140	4 $\frac{1}{2}$ miles west	20, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	D. J. Hostetter	1929	4,604	20	--
d/141	5 $\frac{1}{2}$ miles west	12, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	W. J. Harris	1928	4,688	15 $\frac{1}{2}$	--
d/142	6 $\frac{1}{2}$ miles west	22, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	B. L. King	1930	4,765	20	--
d/143	do.	11, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	A. R. King	1931	4,457	20	--
145	10 miles west	18, SE $\frac{1}{4}$ NE $\frac{1}{4}$	A47, P. S. L.	Munger and Nix	--	110	---	0
d/147	12 miles west	20, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	135	6	1.5
149	13 miles west	2, SE $\frac{1}{4}$ NE $\frac{1}{4}$	A41, P. S. L.	do.	--	158	--	0
d/151	15 miles southwest	8, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Aver Meddor, et al.	1930	4,501	20	--
153	17 miles west	24, SE $\frac{1}{4}$ SE $\frac{1}{4}$	12, University Lands	University of Texas	1936	102	--	0
155	19 $\frac{1}{2}$ miles west	15, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	--	53	6	1
156	do.	do.	do.	do.	--	50	6	--
d/157	20 miles southwest	3, SW $\frac{1}{4}$ NW $\frac{1}{4}$	A54, P. S. L.	J. E. Parker	1933	504	6	1
158	18 miles southwest	21, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	Old	92	--	1
159	16 $\frac{1}{2}$ miles southwest	2, NW $\frac{1}{4}$ NW $\frac{1}{4}$	11, University Lands	University of Texas	1935	86	--	0
161	12 $\frac{1}{2}$ miles southwest	4, NW $\frac{1}{4}$ NW $\frac{1}{4}$	10, University Lands	do.	1935	120	--	--
162	13 $\frac{1}{2}$ miles southwest	16, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	104	--	2
d/163	11 $\frac{1}{2}$ miles southwest	3, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1936	121	--	0
164	do.	17, SE $\frac{1}{4}$ SW $\frac{1}{4}$	A42, P. S. L.	A. J. Edwards	--	113	--	0
d/165	do.	15, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	-- Taylor	--	4,206	12 $\frac{1}{2}$	--
167	9 miles southwest	12, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	W. A. Ashton	--	109	--	0.8
168	10 miles southwest	18, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	M. A. Thornberry	--	122	--	1
169	do.	23, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	--	115	6	1
171	9 miles southwest	5, SW $\frac{1}{4}$ SW $\frac{1}{4}$	9, University Lands	University of Texas	Old	100	--	1
173	7 miles southwest	16, SE $\frac{1}{4}$ NE $\frac{1}{4}$	A43, P. S. L.	W. T. Ford	--	90	--	0.5
177	7 miles south	11, NE $\frac{1}{4}$ NE $\frac{1}{4}$	9, University Lands	University of Texas	Old	110	--	1.5
178	10 $\frac{1}{2}$ miles south	25, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	Old	71	--	1

Joe W. Lang, Project Superintendent

No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
139	--	--	--	--	--	Oil Test. See log. Drilled by Deep Rock Oil Co.
140	--	--	--	--	--	Do.
141	--	--	--	--	--	Do.
142	--	--	--	--	--	Do.
143	--	--	--	--	--	Do.
145	106.3	Sept. 2, 1936	C,W	S	Rolling	Concrete curb. Reported weak supply.
147	100.3	do.	None	N	do.	Concrete curb; 20 feet galvanized casing at top. Reported weak supply.
149	147.1	do.	None	N	Hill-top	Concrete curb. Reported weak supply.
151	--	--	--	--	--	Oil test. See log. Drilled by Maer & Staniforth.
153	97.2	Sept. 30, 1936	None	N	Rolling	Oil test. Reported drilled into red clay. Drilled by Seismograph Service Co.
155	49.7	Sept. 22, 1936	C,W	S	Sand dunes	Concrete curb; 10 feet iron casing at top. Reported weak supply.
156	200	<u>e/</u>	C,W	S	Rolling	Concrete curb; iron casing, top to bottom. Reported weak supply.
157	223	Sept. 22, 1936	C,W	S	do.	Do.
158	67.1	Sept. 23, 1936	C,W	S	do.	Concrete curb. Reported weak supply.
159	71.1	Sept. 4, 1936	None	N	Sand dunes	Oil test. Reported drilled into red shale.
161	98.7	do.	None	N	do.	Do.
162	31.9	Sept. 23, 1936	C,W	S	do.	Concrete curb. Strong supply reported in sand.
163	96.2	Sept. 4, 1936	None	N	Rolling	Oil test. Reported drilled into "Red-Beds".
164	94.1	Sept. 3, 1936	C,W	S	Sink bottom	Wood curb. Strong supply reported in sand.
165	--	--	--	--	--	Oil test. See log. Drilled by Maer & Staniforth.
167	100.4	Sept. 3, 1936	C,W	S	Rolling	Wood curb. Reported drilled to "Red-Beds".
168	99.6	do.	C,W	D,S	do.	Concrete curb. Reported 1.3 feet draw-down after pumping 6 gallons a minute for 2
169	89.7	do.	C,W	S	do.	Concrete curb; 18- hours. Drilled by D. Nix. inch iron casing, 0-6 feet; 6-inch galvanized casing, 18-121 feet. Drilled by --
171	39.6	Sept. 24, 1936	C,W	S	do.	Concrete curb. Strong supply reported in sand. <u>Howell.</u>
173	73.4	Sept. 2, 1936	C,W	S	Sink bottom	Strong supply reported in sand.
177	100.8	Aug. 21, 1936	C,W	S	Sand dunes	Concrete curb.
178	65.6	do.	C,W	S	Rolling	Strong supply reported in sand.

## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
179	13 $\frac{1}{2}$ miles south	35, SW $\frac{1}{4}$ SW $\frac{1}{4}$	1, University Lands	University of Texas	Old	98	--	2.4
181	14 miles south	45, NW $\frac{1}{4}$ SE $\frac{1}{4}$	9, University Lands	do.	Old	110	--	0
182	12 $\frac{1}{2}$ miles south	32, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	Old	90	--	--
183	14 miles south	31, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	1935	90	--	0
185	15 miles south	43, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	1935	59	--	0
187	15 $\frac{1}{2}$ miles south	43, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	1935	57	--	0
d/188	16 miles south	11, SE $\frac{1}{4}$ NE $\frac{1}{4}$	44, T. & P.R.R.	W. F. Cowden	--	50	6	0.5
189	15 miles southwest	35, SW $\frac{1}{4}$ SW $\frac{1}{4}$	10, University Lands	University of Texas	1936	56	--	0
d/190	14 $\frac{1}{2}$ miles southwest	34, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	46	5	1
192	16 $\frac{1}{2}$ miles southwest	32, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	1936	84	--	0
194	do.	32, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	Old	61	--	1
196	17 $\frac{1}{2}$ miles southwest	31, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	1935	68	--	0
197	18 miles southwest	36, NW $\frac{1}{4}$ SW $\frac{1}{4}$	11, University Lands	do.	--	65	--	1.5
199	18 $\frac{1}{2}$ miles southwest	35, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	Old	53	6	1
d/201	20 $\frac{1}{2}$ miles southwest	4, SE $\frac{1}{4}$ NE $\frac{1}{4}$	45, T. & P.R.R.	J. E. Parker	--	85	--	0.5
203	21 miles southwest	32, SE $\frac{1}{4}$ SE $\frac{1}{4}$	11, University Lands	University of Texas	1935	76	--	0
204	do.	32, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	57	--	1.5
206	23 miles southwest	37, NW $\frac{1}{4}$ NE $\frac{1}{4}$	73, P. S. L.	Ratliff & Bedford	--	58	--	1.5
208	21 $\frac{1}{2}$ miles southwest	19, NW $\frac{1}{4}$ SW $\frac{1}{4}$	11, University Lands	University of Texas	--	45	6	1
209	24 miles southwest	16, SW $\frac{1}{4}$ NE $\frac{1}{4}$	73, P. S. L.	Ratliff & Bedford	Old	90	--	1
d/210	25 miles southwest	8, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	1927	4,116	20	--
d/210a	29 miles west	18, SE $\frac{1}{4}$ NE $\frac{1}{4}$	A52, P. S. L.	Jax M. Cowden	1928	5,002	20	--
d/211	24 $\frac{1}{2}$ miles west	2, SE $\frac{1}{4}$ SE $\frac{1}{4}$	A38, P. S. L.	J. S. Kelly	1935	1,770	15 $\frac{1}{2}$	--
d/212	18 $\frac{1}{2}$ miles northwest	20, NW $\frac{1}{4}$ SE $\frac{1}{4}$	A37, P. S. L.	H. M. Wilson	1930	4,775	20	--
d/213	15 miles northwest	8, NW $\frac{1}{4}$ NW $\frac{1}{4}$	A33, P. S. L.	Cox Est.	1935	4,811	15 $\frac{1}{2}$	--
d/214	15 $\frac{1}{2}$ miles northwest	25, SE $\frac{1}{4}$ SE $\frac{1}{4}$	A22, P. S. L.	Cora J. George	1935	5,110	15	--
d/215	8 $\frac{1}{2}$ miles northwest	5, SW $\frac{1}{4}$ SW $\frac{1}{4}$	A36, P. S. L.	M. M. Fisher	1929	4,674	20	--

## W. Lang, Project Superintendent

No.	Water Level		Pump and power	Use of water	Topographic situation	Remarks
	Depth below measurement point (feet)	Date of measurement				
179	31.4	Aug. 18, 1936	C,W	D,S	Rolling	Wood curb. Reported 3.8 feet drainage after pumping 5 gallons a minute for 4 hours.
181	52.7	Aug. 20, 1936	C,W	S	Edge of sink	Concrete curb. Strong supply reported in sand.
182	50	e/	C,W	S	Rolling	Do.
183	48.1	Sept. 7, 1936	None	N	Flat	Oil test.
185	43.8	do.	None	N	do.	Do.
187	38.7	do.	None	N	do.	Oil test. Reported drilled to "Red Beds".
188	40.1	do.	C,W	S	Edge of sink	Concrete curb. Strong supply reported in sand.
189	48.6	do.	None	N	Ridge-top	Oil test. Reported drilled to "Red Beds".
190	37	do.	C,W	S	Gentle slope	6 feet iron casing at top.
192	40	Sept. 16, 1936	None	N	Flat	Oil test. Reported drilled to "Red Beds". Reported altitude, 3,200 feet.
194	41.7	Sept. 21, 1936	C,W	D,S	Sand dunes	Strong supply reported in sand.
196	53.8	do.	None	N	Flat	Oil test. Reported drilled into red shale. Reported altitude, 3,228 feet.
197	45.2	do.	C,W	S	Sand dunes	Concrete curb. Strong supply reported in sand.
199	46	Sept. 28, 1936	C,W	S	Flat	Concrete curb; 10 feet galvanized casing at top.
201	71.1	do.	C,W	S	do.	Concrete curb.
203	66.9	do.	None	N	Gentle slope	Oil test.
204	51.3	do.	C,W	S	Sink bottom	Concrete curb. Strong supply reported in sand.
206	55.4	do.	C,W	S	Rolling	Concrete curb. Reported weak supply.
208	41.8	Sept. 29, 1936	C,W	S	Sand dunes	40 feet iron casing at top.
209	75.8	do.	C,W	S	do.	Concrete curb. One of two adjacent wells.
210	--	--	--	--	--	Oil test. See log. Drilled by J. S. Cosden, Inc.
210a	--	--	--	--	--	Oil test. See log. Drilled by Carter & Zweifel.
211	--	--	--	--	--	Oil test. See log. Drilled by Gulf Production Co.
212	--	--	--	--	--	Oil test. See log. Drilled by Penn Oil Co.
213	--	--	--	--	--	Oil test. See log. Drilled by Wahlenstein-York & Harper, Inc.
214	--	--	--	--	--	Oil test. See log. Drilled by L. G. Stagner, et al.
215	--	--	--	--	--	Oil test. See log. Drilled by Mid-Continent Petroleum Corp.

Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section or Labor	Block or League and Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <sup>a/</sup>
d/216	3 $\frac{1}{2}$ miles north	6, SE $\frac{1}{4}$ NE $\frac{1}{4}$	A45, P. S. L.	T. W. Craddock	Old	106	8	0.3
d/216a	5 $\frac{1}{2}$ miles north	22, SE $\frac{1}{4}$ SE $\frac{1}{4}$	A35, P. S. L.	J. S. Means	--	4,535	16	--
d/217	7 $\frac{1}{2}$ miles north	12, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	3,376	--	--
d/218	8 $\frac{1}{2}$ miles north	11, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1934	4,558	15 $\frac{1}{8}$	--
d/219	10 $\frac{1}{2}$ miles north	4, SE $\frac{1}{4}$ SW $\frac{1}{4}$	C45, P. S. L.	R. M. Means	1935	4,520	13- 3/8	--
d/220	11 $\frac{1}{2}$ miles north	20, SW $\frac{1}{4}$ NW $\frac{1}{4}$	A34, P. S. L.	Mrs. Lela McQuatters	Old	111	12	1.2
d/221	14 $\frac{1}{2}$ miles north	Gen. Labor 12	Lge. 315, Partner. C. S. L.	Hereford Stock Farms	1935	5,005	16	--
d/222	do.	1, SW $\frac{1}{4}$ NE $\frac{1}{4}$	A34, P. S. L.	Mrs. J. T. & R. Crews	Old	70	6	1

a/ Measuring point was usually top of casing, top of pump base, or top of well curb.

b/ C, cylinder; W, windmill; A, air lift; number indicates horsepower.

Joe W. Lang, Project Superintendent

No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
216	75.4	June 26, 1937	A, 2	S	Sand dunes	Iron casing. Strong supply reported in sand.
216a	--	--	--	--	--	Oil test. See log. Drilled by Humble Oil & Refining Co.
217	--	--	--	--	--	Oil test. See log. Drilled by -- Neff, et al.
218	--	--	--	--	--	Oil test. See log. Drilled by Humble Oil & Refining Co.
219	--	--	--	--	--	Do.
220	30.9	June 26, 1937	A, 3	S	Sand dunes	Iron casing. Strong supply.
221	--	--	--	--	--	Oil test. See log. Drilled by York, Harper & Adams Corp.
222	56.3	June 26, 1937	A, 3 $\frac{1}{2}$	D, S	Sand dunes	Iron casing. Strong supply.

c/ S, stock; D, domestic; Of, oil field; N, not used.d/ No water sample collected for analysis.e/ Water level reported.

Records of wells in Andrews County, Texas

(All wells are drilled unless otherwise noted in "Remarks" column)

(See "Logs of W. P. A. test wells" for all records of test wells)

No.	Distance from Andrews	Section	Block and survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
301	19½ miles east	11, SE¼NE¼	blk. 7 University Lands	University of Texas	--	45	8	1
302	do.	4, SE¼NE¼	do.	do.	1936	53	5- 5/8	1.5
303	19 miles northeast	46, SW¼SW¼	blk. 6 University Lands	do.	1939	90	5- 5/8	1.8
304	21 miles northeast	31, SW¼NE¼	do.	do.	--	63	--	1.2
305	19 miles northeast	33, SE¼NW¼	do.	do.	--	59	6	2.6
306	18½ miles northeast	20, SE¼NW¼	do.	do.	--	87	4½	3
1/307	do.	16, SE¼SW¼	blk. A-19	C. A. Clayton	--	--	3	3.3
308	19 miles northeast	16, NW¼NW¼	do.	do.	--	25	--	2.0
309	do.	27, NW¼SW¼	do.	W. H. Badgett	1938	22	--	2.5
310	17½ miles northeast	14, NE¼SE¼	do.	J. M. Jameson	--	57	--	2.0
311	17 miles northeast	2, NW¼NW¼	blk. 5 University Lands	University of Texas	--	67	--	1
312	16½ miles northeast	14, SE¼NE¼	do.	do.	1920?	--	5- 5/8	3.1
313	do.	do.	do.	do.	--	12	5- 5/8	0
317	15 miles northeast	22, SE¼SE¼	do.	do.	--	51	--	0.5
318	do.	4, SW¼SE¼	do.	do.	--	90	5- 5/8	1.0
319	13 miles northeast	18, SE¼NE¼	do.	do.	--	42	5- 5/8	1.0
320	13½ miles northeast	6, SW¼SW¼	do.	do.	--	116	6	3.0
321	16 miles northeast	31, SE¼NE¼	blk. A-19	M. D. Long	--	71	--	--
322	15 miles northeast	32, NE¼NE¼	do.	Kiah Howell	1909	112	--	1.7
325	13½ miles northeast	10, SE¼NW¼	do.	W. H. Howell	--	85	5	0.7
326	11½ miles northeast	14, NE¼NE¼	blk. 4 University Lands	University of Texas	--	52	--	0.5
327	7½ miles northeast	19, SW¼SE¼	do.	do.	--	64	6	0.7
328	8½ miles northeast	33, NE¼NE¼	do.	do.	1937	78	4	1

✓ Measuring point was usually top of casing, pipe clamp or well curb; it was above ground level unless below ground indicated by minus (-) sign.

Ⓜ B, bucket; C, cylinder; W, windmill; H, hand; G, gasoline; E, electric; number indicates horsepower.

Records obtained by Lloyd G. Davis, Project Superintendent

No.	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (ft.)	Date of measurement				
301	31.2	Aug. 10, 1939	C,W	S	Sink bottom	Reported weak supply.
302	40.2	do.	C,W	S	Rolling	Reported weak supply. Struck water at 45 feet. Drilled by -- Crews.
303	47.9	do.	C,W	S	In draw	Large earthen tank by well. Drilled by Bill Skeen.
304	41.1	Aug. 28, 1939	C,W	S	do.	
305	32.9	do.	C,W	S	Flat	Steel casing.
306	71.0	do.	C,W	S	Gentle slope	Galvanized iron casing.
307	14.2	Aug. 15, 1939	C,W	N	do.	Do.
308	22.3	do.	C,W	S	Edge of sink	
309	17.2	do.	C,H	S	Gentle slope	Reported weak supply. Dug well.
310	42.4	do.	C,W	S	do.	
311	39.1	do.	C,W	S	Flat	Steel casing.
312	5.6	do.	C,W	S	do.	Poor water unfit for domestic use. Reported weak supply.
313	5.9	do.	C,W	D, Ind	do.	Steel casing.
317	42.5	do.	C,W	S	In draw	
318	59.4	Sept. 7, 1939	C,W	S	Flat	Steel casing.
319	27.3	do.	C,W	S	In draw	Salty water. Steel casing.
320	87.1	Sept. 24, 1939	C,W	D	Gentle slope	Reported strong supply.
321	60	e/	C,W	S	Sand hill	
322	84.6	Aug. 8, 1939	C,W	D,S	--	Reported strong supply. No casing. Water from sand and gravel.
325	70.6	Aug. 21, 1939	C,W	D,S	Ridge-top	Reported weak supply from iron casing.
326	29.0	Aug. 9, 1939	C,W	S	Edge of draw	Salty water.
327	49.9	Aug. 23, 1939	C,W	S	Near sink	Wooden casing. Salty water.
328	65.9	Aug. 9, 1939	C,W	S	Rolling	Galvanized iron casing.

c/ D, domestic; S, stock; I, irrigation; Ind, industrial; P, public; RR, railroad; N, not used.

d/ No water sample collected for analysis.

e/ Water level reported.



## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
330	9 miles east	11, NE $\frac{1}{4}$ SE $\frac{1}{4}$	blk. 3 University Lands	University of Texas	--	55	11	1.3
331	11 miles east	37, SW $\frac{1}{4}$ SW $\frac{1}{4}$	blk. 40	Midland Farm Co.	--	83	--	0.3
332	10 miles east	44, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	--	84	6	0.4
335	7 miles east	16, SE $\frac{1}{4}$ SE $\frac{1}{4}$	Public School Lands	R. M. Means	--	73	--	0
336	5 miles east	19, NW $\frac{1}{4}$ SE $\frac{1}{4}$	blk. 3	R. S. Means	--	80	6	1.0
338	6 miles northeast	8, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	University of Texas	1937	100	6	0.4
341	4 $\frac{1}{4}$ miles northeast	4, NE $\frac{1}{4}$ NE $\frac{1}{4}$	blk. A-19	J. S. Means	1924	105	10	0
344	2 miles northeast	18, SE $\frac{1}{4}$ SE $\frac{1}{4}$	blk. A-45	W. H. Howell	1902	90	8	1
345	2 $\frac{1}{2}$ miles northeast	19, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	J. S. Means	--	80	5	2.0
346	1-3/4 miles north	14, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	G. E. Moxley	--	120	6	0.7
351	2-3/4 miles northeast	6, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	W. D. Craddock	1919	89	--	--
352	3 miles north	7, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Mrs. G. E. Sutphen	1909	110	6	1.2
353	3 miles northwest	25, SE $\frac{1}{4}$ SE $\frac{1}{4}$	blk. A-36	Mrs. A. C. Means	--	98	--	0.4
357	3 $\frac{1}{2}$ miles north	6, SE $\frac{1}{4}$ SE $\frac{1}{4}$	blk. A-45	Mrs. J. S. Means	1932	77	8	0.6
360	5-3/4 miles northwest	25, NW $\frac{1}{4}$ NW $\frac{1}{4}$	blk. A-35	L. E. Gardner	--	151	8	0.5
364	8 miles northwest	5, SW $\frac{1}{4}$ SW $\frac{1}{4}$	blk. A-36	M. M. Fisher	--	73	8	2.6
365	9 miles northwest	5, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	--	93	--	--
369	7 $\frac{1}{2}$ miles north	15, NW $\frac{1}{4}$ NW $\frac{1}{4}$	blk. A-35	do.	--	97	6	--
379	4 $\frac{1}{2}$ miles north	9, NW $\frac{1}{4}$ NE $\frac{1}{4}$	blk. A-45	J. S. Means	1924	83	6	1
386	9 $\frac{1}{2}$ miles north	5, SW $\frac{1}{4}$ NW $\frac{1}{4}$	blk. A-35	L. E. Gardner	--	103	--	2.0
387	do.	4, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	O. C. Mitchell	1938	105	6	1.0
388	do.	21, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	H. L. Park	--	--	6	1.3
389	10 $\frac{1}{2}$ miles north	22, NE $\frac{1}{4}$ NE $\frac{1}{4}$	blk. A-34	W. W. McQuatters	--	131	8	1.5
391	do.	22, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1903	107	--	1.0
392	10 $\frac{1}{2}$ miles northwest	24, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	M. M. Fisher	1909	104	--	1.8

## Lloyd G. Davis, Project Superintendent

No.	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (ft.)	Date of measurement				
330	37.9	Aug. 22, 1939	C,W	D,S	Gentle slope	Wooden casing.
331	61.7	Aug. 10, 1939	C,W	S	In sink	
332	60.9	Aug. 24, 1939	C,W	S	Gentle slope	Steel casing.
335	64.1	Aug. 22, 1939	C,W	S	Slope to sink	Reported good water.
336	74.2	Sept. 7, 1939	C,W	D,S	Rolling	Steel Casing.
338	83.1	Aug. 22, 1939	C,W	S	do.	Steel casing. Drilled by Dennis Nix.
341	92.2	do.	C,W	S	Edge of draw	Steel casing. Drilled by Perry Looney.
344	79.0	Aug. 2, 1939	C,W	D,S	Gentle slope	Steel casing. Drilled by W. H. Howell.
345	72.0	do.	C,W	S	do.	Steel casing.
346	90.2	do.	C,W	S	Rolling	Drilled by Dennis Nix.
351	78	e/	C,W	D,S	Gentle slope	Reported strong supply from gravel. Drilled by -- Yarbrough.
352	89.2	July 27, 1939	C,W	D,S	Rolling	Reported pumped 10 gallons a minute for 24 hours. Concrete casing to 6 feet. Irrigates small garden. Reports injury to soil after two years. Drilled by Lewis Beyr.
353	77.1	do.	C,W	S	do.	
357	75.8	July 19, 1939	C,W	D,S	Near draw	Reported weak supply. Drilled by Lone Star Construction Company.
360	30.5	Aug. 16, 1939	C,W	S	Rolling	Salty water through steel casing.
364	66.6	Aug. 3, 1939	C,W	S	do.	Steel casing.
365	68	e/	C,W	D,S	Flat	Reported good water.
369	72	e/	C,W	S	Rolling	Steel casing.
379	69.5	Aug. 3, 1939	C,W	S	do.	Do.
386	81.4	Aug. 16, 1939	C,W	S	Sand dunes	Reported good water.
387	76.6	July 31, 1939	C,W	D,S	Gentle slope	Steel casing to 6 feet.
388	73.9	do.	C,W	S	Flat	Do.
389	82.1	July 19, 1939	C,W	D,S	Rolling	Steel casing. Drilled by the State Highway Department.
391	97.6	Aug. 3, 1939	C,W	D,S	do.	Reported water from sand under hard rock at 100 feet. Drilled by Kiah Howell.
392	77.7	do.	C,W	D,S	Flat	Drilled by Kiah Howell.

## Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
393	11 miles northwest	16, SE $\frac{1}{2}$ SE $\frac{1}{2}$	blk. A-34	W. J. Underwood	1900	87	12	--
394	11 $\frac{1}{2}$ miles northwest	17, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	do.	--	83	--	0.4
<u>a/</u> 396	11 $\frac{1}{2}$ miles north	20, NW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	Mrs. Lela McQuatters	--	94	10	0.4
397	10 miles north	15, SW $\frac{1}{2}$ NW $\frac{1}{2}$	blk. A-20	R. M. Means	1903	100	--	1.7
398	9 miles north	3, NE $\frac{1}{2}$ SW $\frac{1}{2}$	blk. A-35	Humble Oil & Refining Co.	1934	161	12 $\frac{1}{2}$	--
399	do.	do.	do.	do.	1936	202	8- 5/8	--
<u>a/</u> 400	do.	do.	do.	do.	1936	185	13- 5/8	--
<u>a/</u> 401	do.	do.	do.	do.	1937	172	8	--
404	10 miles north	1, SW $\frac{1}{2}$ NE $\frac{1}{2}$	do.	J. S. Means	--	77	8	2.0
405	10 $\frac{1}{2}$ miles north	6, NE $\frac{1}{2}$ SW $\frac{1}{2}$	blk. A-19	do.	--	114	--	0.4
406	12 miles north	8, NW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	H. G. Barnes	--	102	5	1.4
407	do.	8, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	Kansas Trust Co.	1907	103	--	1.0
414	13 miles north	16, SW $\frac{1}{2}$ SW $\frac{1}{2}$	Parmer County School Land	Florey Public School	1925	93	4	1.8
415	12 $\frac{1}{2}$ miles north	8, SE $\frac{1}{2}$ NE $\frac{1}{2}$	Gaines County School Land	Mrs. S. E. Noley	--	63	--	0.4
416	13 miles north	5, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	S. E. Noley	1925	60	--	0.6
418	14 miles north	1, SW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	Oscar O. Lykes	1923	62	--	1.1
420	13 miles north	10, NE $\frac{1}{2}$ SE $\frac{1}{2}$	blk. A-34	E. R. Crews	--	64	5- 5/8	0.4
421	do.	9, NW $\frac{1}{2}$ SW $\frac{1}{2}$	do.	Mrs. M. Mathew	--	89	5- 5/8	1.2
422	14 $\frac{1}{2}$ miles northwest	4, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	J. A. McWilliams	--	85	6	1.4
423	16 $\frac{1}{2}$ miles northwest	19, NW $\frac{1}{2}$ SE $\frac{1}{2}$	blk. A-23	Virginia Sherrod	--	81	5	1.4
424	15 $\frac{1}{2}$ miles northwest	4, SW $\frac{1}{2}$ NE $\frac{1}{2}$	blk. A-33	J. F. Getter & O. G. Bittle	--	93	6	1.3
425	14 $\frac{1}{2}$ miles northwest	2, SE $\frac{1}{2}$ SW $\frac{1}{2}$	do.	J. E. Parker	--	85	6	1.4
426	13 miles northwest	11, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	J. L. Underwood	1907	83	--	1.3

## Lloyd G. Davis, Project Superintendent

No.	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (ft.)	Date of measurement				
393	65	e/	C,W	D,S,I	Edge of draw	Steel casing.
394	67.4	Sept. 6, 1939	C,W	S	Gentle slope	No casing.
396	78.8	July 19, 1939	C,W	S	Ridge-top	Iron casing.
397	76.6	July 31, 1939	C,W	S	do.	Drilled by Kiah Howell.
398	75	e/	T,E	D	Flat	Gravel-wall well; 61 yards of gravel. Pump capacity reported 87.3 gallons a minute. See log. Drilled by Dolan and Murray.
399	90	e/	T,E	S,I	Ridge-top	Gravel-wall well; 50 yards of washed gravel. Well capacity reported 100 barrels an hour.
400	90	e/	C,G	S,I	do.	Gravel-wall well; 45 yards of washed gravel. Water from sands and sandy clay between 110 feet and 170 feet. Reported tested capacity 75 barrels an hour. See log. Drilled by S & S Drilling Company.
401	90	e/	C,G	D,S,I	Ridge-top	Gravel-wall well; 10 yards washed gravel. Reported tested capacity 58 barrels an hour from sands between 88 feet and 170 feet. See log.
404	45.6	Aug. 23, 1939	None	N	Gentle slope	Wooden casing. Drilled by S & S Drilling Company.
405	73.0	do.	C,W	S	do.	Reported good water.
406	66.1	Sept. 9, 1939	C,W	S	Rolling	Steel casing.
407	87.1	do.	C,W	D,S	do.	Reported strong supply.
414	74.1	Sept. 7, 1939	C,W	D,I	Gentle slope	83 feet of steel casing 10 feet perforated at bottom. Water reported from sand at 83 feet.
415	50.5	Aug. 17, 1939	C,W	D,S,I	Near draw	Irrigates small garden.
416	47.4	July 21, 1939	C,W	D,S	Rolling	
418	58.3	do.	C,W	S	do.	
420	54.6	Aug. 11, 1939	C,W	S	do.	Steel casing.
421	52.5	do.	C,W	S	Sand dunes	Filled with debris.
422	55.0	Sept. 16, 1939	C,W	S	---	
423	61.3	Sept. 9, 1939	C,W	S	Rolling	Reported weak supply.
424	72.6	do.	C,W	S	Near draw	Iron casing.
425	55.0	Sept. 6, 1939	C,W	S	Sand dunes	Steel casing to 8 feet.
426	57.7	do.	C,W	S	Flat	Drilled by Kiah Howell.

Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
429	13 $\frac{1}{2}$ miles northwest	SW $\frac{1}{2}$ NW $\frac{1}{4}$	blk. A-33	Bettie Cox	--	81	8	0.7
430	12 miles northwest	19, SW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	B. F. Daugherty	1906	125	--	--
431	13 miles northwest	1, SE $\frac{1}{2}$ NE $\frac{1}{4}$	blk. 13	University of Texas	1900	85	10	0.4
433	11 miles northwest	15, NW $\frac{1}{2}$ NW $\frac{1}{2}$	blk. 14	do.	1919	148	6	1.7
434	9 $\frac{1}{2}$ miles northwest	11, NW $\frac{1}{2}$ NW $\frac{1}{2}$	Shafter Lake sur.	Thomas H. Peary	1908	61	7	1.4
435	11 $\frac{1}{2}$ miles northwest	do.	do.	do.	1938	82	5	0.7
440	4 $\frac{1}{2}$ miles northwest	27, SE $\frac{1}{2}$ SE $\frac{1}{2}$	blk. A-36	Lera Battles	--	100	8	1.0
443	3 $\frac{1}{2}$ miles northwest	26, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	J. M. Speed	--	109	--	1.6
444	3 $\frac{1}{4}$ miles northwest	2, NE $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-46	J. S. Means	--	110	--	2.0
447	2 $\frac{1}{2}$ miles west	18, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. E. Parker	--	120	6	2.40
448	3/4 miles west	25, SW $\frac{1}{2}$ SW $\frac{1}{2}$	blk. 12	Homer L. Rentz	1939	116	6	0.4
449	7 miles south	8, NW $\frac{1}{4}$ SE $\frac{1}{4}$	blk. 1	University of Texas	--	113	6	0.8
d/450	3 miles west	2, NE $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-43	M. A. Thornberry	1938	120	8 $\frac{1}{4}$	--
e/452	5 $\frac{1}{4}$ miles west	5, SE $\frac{1}{2}$ SE $\frac{1}{4}$	blk. A-46	J. H. Harris	1939	86	6 $\frac{1}{2}$	1.0
f/453	5 $\frac{1}{2}$ miles west	do.	do.	do.	1939	101	6	1.5
455	6 miles west	11, NW $\frac{1}{2}$ NE $\frac{1}{4}$	do.	J. W. Triplehorn	1937	110	15 $\frac{1}{2}$	--
460	15 $\frac{1}{2}$ miles west	18, NE $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-48	The Lotus Oil Co.	--	750	12	--
463	18 $\frac{1}{2}$ miles west	16, SW $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-49	B. B. Ralph	--	711	8	--
y/464	21 miles west	25, NW $\frac{1}{2}$ SW $\frac{1}{2}$	blk. A-37	A. C. Pancoast	1939	728	6	--
z/465	22 miles west	12, SW $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-49	John T. Carlton	1915	590	6	1
466	24 miles west	13, SE $\frac{1}{2}$ NE $\frac{1}{4}$	blk. A-50	B. B. Ralph	1909	450	5	1.3
1/467	28 $\frac{1}{2}$ miles west	4, NE $\frac{1}{2}$ SE $\frac{1}{2}$	blk. A-39	Hugh Simms	1939	82	--	0
468	do.	do.	do.	do.	1939	81	--	0
472	29 $\frac{1}{2}$ miles west	17, NE $\frac{1}{2}$ SW $\frac{1}{4}$	blk. A-29	do.	--	82	--	0.5

## Lloyd G. Davis, Project Superintendent

No.	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (ft.)	Date of measurement				
429	69.7	July 26, 1939	C,W	S	Rolling	Concrete casing to 3 feet.
430	70	e/	C,W	D,S	Rolling	Drilled by Kiah Howell.
431	74.2	July 31, 1939	C,W	D,S	do.	Reported strong supply. Drilled by Bill Gates.
433	122.2	do.	C,W	S	Ridge-top	Steel casing to 80 feet.
434	60.0	do.	C,W	D,S	do.	Reported weak supply. Wooden casing.
435	58.9	do.	N	--	do.	Drilled to 110 feet; filled with gravel to 85 feet. Steel casing to 85 feet; bottom joint
440	89.4	Aug. 1, 1939	C,W	S	do.	Wooden casing perforated. Drilled by Dennis Nix.
443	99.8	do.	C,W	S	Gentle slope	Concrete curb.
444	98.6	do.	C,W	S	Sand dunes	
447	101.8	Aug. 29, 1939	C,W	S	Near draw	Steel casing.
448	95.5	Aug. 31, 1939	C,W	S	Rolling	Reported strong supply. Concrete curb at top.
449	73.3	Aug. 14, 1939	C,W	S	Gentle slope	Steel casing.
450	85	e/	C,G	Ind	--	Used for drilling oil well. Water sands from 65 feet to 68 feet and from 94 to 98 feet. Reported capacity 75 barrels a day. See log.
452	70.9	Aug. 29, 1939	None	N	Gentle slope	Steel casing. Drilled by the Flack Water Well Co. Drilled by Dennis Nix.
453	89.8	do.	None	N	Near draw	Iron casing. Drilled by Dennis Nix.
455	92	e/	C,W	D	Rolling	Reported capacity 15 barrels a day. Steel casing. Drilled by the Flack Water Well Co.
460	215	e/	C,W	S	Ridge-top	Reported weak supply. Steel casing.
463	220	e/	C,W	S	Near draw	Steel casing. Drilled by Ed Burk.
464	190	e/	C,W	S	Rolling	Drawdown reported 125 feet after pumping 45 minutes at 30 gallons a minute. Steel casing to bottom; 28 feet perforated at bottom. Water sand at 700 feet. Water has taste of soda.
465	300	Sept. 22, 1939	C,W	S	Sand dunes	Reported strong supply. Steel casing.
466	195.5	do.	C,W	S	In sink	Steel casing to bottom with 40 feet perforated at bottom.
467	66.5	July 28, 1939	None	N	Ridge-top	Water from sand and gravel at 80 feet. See log. Drilled by Dennis Nix.
468	66.4	do.	None	N	do.	Drilled by Dennis Nix.
472	79.9	do.	C,W	S	Sand dunes	

Records of wells in Andrews County--Continued

No.	Distance from Andrews	Section	Block and survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/473	29½ miles northwest	3, SW¼SE¼	blk. A-29	J. W. Richards	1908	105	6	--
474	25 miles west	3, NW¼SE¼	blk. A-30	J. S. Kelley	1879	36	--	0.5
d/475	25½ miles northwest	13, NE¼NE¼	blk. A-30	Ralph McWhorter	1935	85	6	--
d/476	25 miles northwest	6, NW¼SE¼	blk. A-31	do.	--	115	6	--
d/477	23 miles northwest	9, NE¼SW¼	do.	J. D. Biles	1935	143	6	--
d/478	18½ miles northwest	5, SE¼SE¼	blk. A-32	C. W. Logsdon	1937	835	6	--
d/479	do.	4, SW¼NE¼	do.	do.	1915	126	--	--
d/480	20 miles northwest	25, NE¼NE¼	blk. A-26	W. F. Scarbrough	1906	110	6	--
481	18 miles northwest	10, NE¼NW¼	blk. A-36	Harry Adams	--	Lake	--	--
482	13 miles northeast	14, NE¼NE¼	blk. 5	University of Texas	--	Lake	--	--

a/ Measuring point was usually top of casing, pipe clamp or well curb; it was above ground level unless below ground indicated by minus (-) sign.

b/ B, bucket; C, cylinder; W, windmill; H, hand; G, gasoline; E, electric; number indicates horsepower.

## Lloyd G. Davis, Project Superintendent

No.	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (ft.)	Date of measurement				
473	93	e/	C,W	S	Sand dunes	Steel casing to 15 feet.
474	31.1	Sept. 22, 1939	C,W	S	In draw	Reported capacity 25 gallons a minute.
475	65	e/	C,G	--	Gentle slope	Reported capacity 25 gallons a minute. Drilled by Ed Burk.
476	95	e/	C,W	S	Flat	Steel casing to 15 feet. Reported capacity 6 gallons a minute.
477	100	e/	C,W	S	Sand dunes	Steel casing to bottom with 30 feet perforated at bottom. Drilled by Ed Burk.
478	240	e/	C,W	S	Rolling	Reported capacity 15 gallons a minute. Drilled by E. L. Farmer.
479	100	e/	C,W	S	Gentle slope	Reported capacity 3 gallons a minute; 20 gallons a minute when drilled.
480	100	e/	C,W	S	Rolling	Reported capacity 6 gallons a minute. Steel casing to 15 feet.
481	--	--	--	--	Lake	Shafter Lake, a large lake
482	--	--	--	--	Lake	Small lake. Reported never goes dry and water kills cattle.

c/ D, domestic; S, stock; I, irrigation; Ind, industrial; F, public; RR, railroad; N, not used.

d/ No water sample collected for analysis.

e/ Water level reported.



Table of Drillers' Logs, Andrews County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 46A</u>		
Roland S. Bond et al., No. 1 McCarley, 6½ miles east of Andrews.		
Caliche- - - - -	40	40
Lime- - - - -	20	60
Caliche- - - - -	20	80
Water sand - - - - -	30	110
Red rock - - - - -	258	368
Red sand - - - - -	22	390
Red rock - - - - -	550	940
Shale and red rock - - - - -	40	980
Red rock - - - - -	255	1235
Lime- - - - -	25	1260
Sandy red rock - - - - -	215	1475
Sand - - - - -	55	1530
Sand and gravel- - - - -	35	1565
Sandy shale- - - - -	5	1570
Sandy red rock - - - - -	100	1670
Red sand - - - - -	35	1705
Red rock - - - - -	40	1745
Red shale- - - - -	30	1775
Red rock - - - - -	60	1835
Sand- - - - -	5	1840
Red rock - - - - -	20	1860
Sandy shale- - - - -	255	2115
Anhydrite- - - - -	25	2140
TOTAL DEPTH- - - - -		5001

<u>Driller's log of well 119A</u>		
Honolulu Oil Corp., J. E. Parker No. 1, 2½ miles southwest of Andrews.		
Caliche- - - - -	40	40
Yellow sand- - - - -	72	112
Red shale- - - - -	418	530
Fine-grained red sand- - - - -	20	550
Red shale- - - - -	705	1255
Red shale and sand - - - - -	475	1730
Red shale- - - - -	200	1930
Anhydrite and salt - - - - -	1224	3154
TOTAL DEPTH- - - - -		4733

<u>Driller's log of well 138</u>		
Deep Rock Oil Co., C. E. Oggen No. 1, 7 miles west of Andrews.		
Caliche- - - - -	75	75
Sand- - - - -	15	90
Red mud- - - - -	5	95
Sand - - - - -	5	100
Red rock - - - - -	40	140
Red mud- - - - -	10	150
Red rock - - - - -	20	170
Gray shale - - - - -	55	225
Red rock - - - - -	45	270
Red mud- - - - -	30	300
Red beds - - - - -	55	355

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 136--Continued</u>		
Red mud- - - - -	35	390
Red rock - - - - -	145	535
Red mud- - - - -	45	580
Red rock - - - - -	20	600
Red mud- - - - -	10	610
Red shale- - - - -	33	643
Shell- - - - -	7	650
Red mud- - - - -	25	675
Red shale- - - - -	20	695
Brown shale- - - - -	25	720
Sand - - - - -	25	745
Red rock - - - - -	105	850
Brown mud- - - - -	15	865
Pink mud - - - - -	10	875
Gray mud - - - - -	25	900
Brown mud- - - - -	25	925
Red cave - - - - -	10	935
Red beds - - - - -	7	942
Red shale- - - - -	28	970
Red mud- - - - -	10	980
Lime shell - - - - -	3	983
Red mud- - - - -	37	1020
Gypsum and red shale - - - - -	5	1025
Red mud- - - - -	38	1063
Lime- - - - -	12	1075
TOTAL DEPTH- - - - -		4423

<u>Driller's log of well 139</u>		
Deep Rock Oil Co., W. J. Mathis No. 1, 5 miles west of Andrews.		
Soil and sand- - - - -	4	4
Caliche- - - - -	17	21
Hard lime- - - - -	39	60
Gritty sand- - - - -	30	90
Water sand - - - - -	5	95
Red rock - - - - -	10	105
Lime shell - - - - -	10	115
Sandy red shale- - - - -	40	155
Brown sand - - - - -	10	165
Sandy red shale- - - - -	15	180
Caving red mud - - - - -	362	542
Red rock - - - - -	75	617
Red mud- - - - -	131	748
Mixed red and brown mud- - - - -	42	790
Water sand - - - - -	30	820
Blue and red streaked shale	6	826
Red mud- - - - -	149	975
Red rock - - - - -	18	993
Red mud- - - - -	54	1047
Red rock - - - - -	62	1109
Gypsum and shells- - - - -	5	1114
Red rock - - - - -	46	1160
Sand- - - - -	6	1166

(Continued on next page)

Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 139--Continued</u>		
Gypsum - - - - -	2	1168
Red mud- - - - -	22	1190
Green shale- - - - -	2	1192
Red rock - - - - -	8	1200
Gypsum - - - - -	10	1210
Shale and red sand - - - - -	9	1219
Red rock - - - - -	76	1295
Sandy shale- - - - -	15	1310
Gypsum and red rock- - - - -	10	1320
Water sand - - - - -	10	1330
Gypsum and yellow mud- - - - -	8	1338
Shale- - - - -	22	1360
TOTAL DEPTH- - - - -		5088

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 140</u>		
Deep Rock Oil Co., D. J. Hostetter tract, 4 $\frac{1}{2}$ miles west of Andrews.		
Soil - - - - -	40	40
Lime - - - - -	10	50
Yellow mud - - - - -	5	55
Lime - - - - -	15	70
Yellow mud - - - - -	23	93
Lime - - - - -	5	98
Yellow mud - - - - -	22	120
Water sand - - - - -	20	140
Red mud- - - - -	100	240
Light-colored sandy shale- - - - -	23	263
Red mud- - - - -	32	295
Brown mud- - - - -	15	310
Red mud- - - - -	535	845
Brown shale- - - - -	35	880
Red mud- - - - -	115	995
Red beds - - - - -	30	1025
Shale- - - - -	15	1040
Red mud- - - - -	10	1050
Red beds - - - - -	35	1085
Red mud- - - - -	53	1140
Red beds - - - - -	25	1165
Red mud- - - - -	13	1178
Dry sand - - - - -	12	1190
Red mud- - - - -	27	1217
Red sand - - - - -	13	1235
Sandy shale- - - - -	60	1295
Red mud- - - - -	70	1365
Red beds - - - - -	3	1338
Water sand - - - - -	37	1425
Red mud and sand - - - - -	25	1450
Red sand - - - - -	15	1465
Gray water sand- - - - -	12	1477
Red sand - - - - -	8	1485
Red mud- - - - -	40	1525
Sandy shale- - - - -	35	1560
Red mud- - - - -	10	1570
Sandy shale- - - - -	20	1590

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 140--Continued</u>		
Red sand - - - - -	215	1805
Red beds - - - - -	25	1830
Red mud- - - - -	16	1846
Gypsum - - - - -	3	1849
Red beds - - - - -	10	1859
Anhydrite- - - - -	31	1890
TOTAL DEPTH- - - - -		4604

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 141</u>		
Deep Rock Oil Co., W. J. Harris No. 1, 5 $\frac{1}{2}$ miles west of Andrews.		
Lime - - - - -	65	65
Red mud- - - - -	46	120
Quicksand- - - - -	15	135
Red mud- - - - -	45	180
Red rock - - - - -	40	220
Red mud- - - - -	140	360
Red rock - - - - -	25	385
Soft and sandy red rock- - - - -	15	400
Red rock - - - - -	325	725
Sand- - - - -	30	755
Red rock - - - - -	330	1085
Red mud - - - - -	35	1120
Sand - - - - -	20	1140
Sandy red shale- - - - -	10	1150
Red shale- - - - -	140	1290
Sandy red shale- - - - -	20	1310
Red sand - - - - -	5	1315
Sandy red shale- - - - -	15	1330
Red sand - - - - -	10	1340
Red beds - - - - -	10	1350
Sandy red shale- - - - -	50	1400
Red sand - - - - -	15	1415
Red shale- - - - -	10	1425
Red sand - - - - -	20	1445
Sandy shale- - - - -	25	1470
Broken shale - - - - -	10	1480
Red shale- - - - -	10	1490
Broken shale - - - - -	10	1500
Red shale- - - - -	165	1665
Anhydrite- - - - -	40	1705
TOTAL DEPTH- - - - -		4638

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 142</u>		
Deep Rock Oil Co., B. L. King No. 1, 6 $\frac{1}{2}$ miles west of Andrews.		
Soil - - - - -	6	6
Caliche- - - - -	16	22
Lime shell - - - - -	6	28
Sand and gravel- - - - -	30	58
Red rock - - - - -	90	148
Caving red beds- - - - -	22	170
Red rock - - - - -	102	272

(Continued on next page)

Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 142--Continued</u>		
Gritty red rock - - - - -	118	390
Red shale - - - - -	210	600
Blue shale - - - - -	50	650
Gray shale - - - - -	15	665
Red rock and red shale - -	35	700
Water sand - - - - -	40	740
Red shale - - - - -	25	765
Blue shale - - - - -	20	785
Greenish-gray shale - - -	10	795
Red rock and red shale - -	115	910
Red shale - - - - -	165	1075
Caving red shale - - - - -	110	1185
Sharp-grained red sand - -	55	1240
Sharp-grained gray sand - -	25	1265
Gray water sand - - - - -	55	1320
Gray sandy shale - - - - -	25	1345
Water sand - - - - -	13	1358
Sandy red shale - - - - -	117	1475
Caving red mud - - - - -	110	1585
Sandy red shale - - - - -	70	1655
Anhydrite - - - - -	45	1700
Salt - - - - -	75	1775
Salt and anhydrite - - - -	40	1815
TOTAL DEPTH - - - - -		4765

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 143</u>		
Deep Rock Oil Co., A. R. King No. 1, 6 $\frac{1}{2}$ miles west of Andrews.		
Yellow sand - - - - -	85	85
Red rock - - - - -	75	160
Broken lime - - - - -	25	185
Red rock - - - - -	405	590
Red rock cave - - - - -	35	625
Red rock - - - - -	55	680
Blue shale - - - - -	25	705
Water sand, hole full of water - - - - -	35	740
Blue shale - - - - -	10	750
Red rock - - - - -	110	860
Blue shale - - - - -	10	870
Red rock - - - - -	15	885
Red beds - - - - -	95	980
Red rock and gypsum - - -	25	1005
Red rock - - - - -	15	1020
Red rock and gypsum shells -	20	1040
Hard limestone - - - - -	10	1050
Red mud - - - - -	10	1060
Red mud and shells - - - -	20	1080
Sandy red shale - - - - -	5	1085
Sandy red shale and shells -	20	1105
Sandy red shale - - - - -	20	1125
Red rock and shells - - - -	5	1130
Red rock - - - - -	30	1160
Red rock and shells - - - -	20	1180

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 143--Continued</u>		
Red rock - - - - -	35	1215
Gray sand - - - - -	100	1315
Red rock - - - - -	5	1320
Sandy red shale - - - - -	95	1415
Red mud - - - - -	120	1535
Sandy red shale - - - - -	105	1640
Anhydrite - - - - -	58	1698
Salt - - - - -	7	1705
TOTAL DEPTH - - - - -		4457

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 151</u>		
Maier and Staniforth, Aver Modder, et al. No. 2, 15 miles southwest of Andrews.		
Caliche - - - - -	40	40
Sandy caliche - - - - -	45	85
Sand and gravel - - - - -	30	115
Red rock - - - - -	460	575
Gray shale - - - - -	23	598
Sandy shale - - - - -	12	610
Water sand - - - - -	45	655
Blue shale - - - - -	10	665
Red rock - - - - -	460	1125
Sandy red shale - - - - -	75	1200
Sandy shale - - - - -	3	1203
Water sand - - - - -	17	1220
Red rock - - - - -	5	1225
Sandy shale - - - - -	30	1255
Sand and shale - - - - -	15	1270
Hard sand - - - - -	15	1285
Sand and shale - - - - -	15	1300
Gray sand - - - - -	10	1310
Sandy shale - - - - -	100	1410
Shale - - - - -	25	1435
Red rock - - - - -	10	1445
Gypsum - - - - -	10	1455
Red shale - - - - -	65	1520
Sandy shale - - - - -	45	1565
Red shale and gypsum - - -	80	1645
Sandy red shale - - - - -	15	1660
Anhydrite - - - - -	10	1670
TOTAL DEPTH - - - - -		4501

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 165</u>		
Maier and Staniforth, Taylor No. 1, 11 $\frac{1}{2}$ miles southwest of Andrews.		
Sand - - - - -	45	45
White mud - - - - -	20	65
White sand - - - - -	10	75
Red sand - - - - -	15	90
Blue sand - - - - -	45	135
Red sand - - - - -	465	600
Gray sand - - - - -	60	660
Brown sand - - - - -	20	680

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Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
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Driller's log of well 165--Continued

Red rock - - - - -	270	950
Red shale- - - - -	45	995
Red sand - - - - -	5	1000
TOTAL DEPTH- - - - -		4206

Driller's log of well 210

J. S. Cosden Inc., Ratliff and Bedford  
No. 1, 25 miles southwest of Andrews.

Sand - - - - -	105	105
Red rock - - - - -	210	315
White shale- - - - -	50	365
Red rock - - - - -	440	805
Sandy lime - - - - -	8	813
Red rock - - - - -	57	870
White shale- - - - -	35	905
Red shale- - - - -	115	1020
Sand- - - - -	30	1050
Shale - - - - -	3	1053
Sand- - - - -	7	1060
Red rock- - - - -	10	1070
Sand- - - - -	70	1140
Red rock - - - - -	10	1150
Water sand - - - - -	75	1225
Sandy lime - - - - -	5	1230
Red rock- - - - -	45	1275
Water sand - - - - -	10	1285
Red rock- - - - -	10	1295
Water sand - - - - -	25	1320
Red rock - - - - -	250	1570
Anhydrite - - - - -	15	1585
Salt- - - - -	15	1600
TOTAL DEPTH- - - - -		4116

Driller's log of well 210a

Carter and Zweifel, Jax M. Cosden et al.  
No. 1, 29 miles west of Andrews.

Sand and gypsum- - - - -	16	16
Gypsum- - - - -	34	50
Quicksand- - - - -	5	55
Red sand- - - - -	11	66
Sand- - - - -	4	70
Red sand and mud - - - - -	30	100
Red mud - - - - -	75	175
Caving red mud - - - - -	25	200
Blue shale - - - - -	10	210
Red mud- - - - -	165	375
Red rock - - - - -	110	485
Red beds - - - - -	25	510
Red rock - - - - -	15	525
Muddy red rock - - - - -	35	560
Red beds - - - - -	5	565
Red mud- - - - -	55	620
Red beds - - - - -	55	675
Red bed and water sand - - - - -	100	775

	Thickness (feet)	Depth (feet)
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Driller's log of well 210a--Continued

Red mud- - - - -	55	810
Rcd beds - - - - -	50	860
Water sand - - - - -	5	865
Hard gray sand - - - - -	75	940
Sand- - - - -	50	990
Sand, shells and red rock- - - - -	10	1000
Gritty red beds - - - - -	85	1085
Red beds - - - - -	145	1230
Red rock - - - - -	35	1265
Red rock and water - - - - -	40	1305
Anhydrite- - - - -	70	1375
Soft salt- - - - -	10	1385
TOTAL DEPTH- - - - -		5002

Driller's log of well 211

Gulf Production Co., J. S. Kelley "A"  
No. 1, 24½ miles west of Andrews.

Caliche- - - - -	25	25
Sand - - - - -	15	40
Caliche- - - - -	15	55
Gravel - - - - -	5	60
Sand- - - - -	10	70
Red rock - - - - -	25	95
Red shale- - - - -	55	150
Red beds - - - - -	90	240
Water sand - - - - -	15	255
Red beds - - - - -	195	450
Sandy shale- - - - -	50	500
Red beds - - - - -	10	510
Red sand - - - - -	60	570
Sandy shale- - - - -	20	590
Red beds and shale - - - - -	110	700
Red beds - - - - -	59	759
Water sand - - - - -	16	775
Sand - - - - -	30	805
Shale- - - - -	45	850
Sand - - - - -	50	900
Sand and gypsum- - - - -	10	910
Sandy shale- - - - -	12	922
Red beds - - - - -	4	926
Red shale- - - - -	139	1065
Water sand - - - - -	30	1095
Sandy shale- - - - -	20	1115
Shale- - - - -	20	1135
Red beds - - - - -	30	1165
Sandy shale- - - - -	46	1211
Red rock - - - - -	76	1287
Sandy shale- - - - -	28	1315
Shells and gypsum- - - - -	10	1325
Sand- - - - -	75	1400
Shale - - - - -	16	1416
Sticky shale - - - - -	40	1456
Sandy shale- - - - -	10	1466
Hard red sand- - - - -	96	1562

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Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 211--Continued</u>		
Red beds - - - - -	10	1572
Sandy red rock - - - - -	10	1582
Red beds - - - - -	12	1594
Sandy shale- - - - -	9	1603
Red shale- - - - -	8	1611
Sandy shale- - - - -	24	1635
Shale and gypsum - - - - -	12	1647
Red shale- - - - -	12	1659
Sandy shale and gypsum - -	12	1671
Hard sandy shale - - - - -	36	1707
Anhydrite- - - - -	63	1770
TOTAL DEPTH- - - - -		1770

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 212</u>		
Penn Oil Co., H. M. Wilson No. 1, 18 $\frac{1}{2}$ miles northwest of Andrews.		
Sand and gravel- - - - -	70	70
Red beds - - - - -	30	100
Sand- - - - -	95	195
Red beds - - - - -	45	240
Sand - - - - -	35	275
Red beds - - - - -	450	725
Dark gray sand - - - - -	40	765
Dark-colored sand- - - - -	25	790
Blue slate - - - - -	30	820
Brown shale- - - - -	35	855
Red beds- - - - -	295	1150
Slate- - - - -	10	1160
Red rock - - - - -	15	1175
White slate- - - - -	10	1185
Gray sand- - - - -	10	1195
Red shale- - - - -	45	1240
Dark gray sand - - - - -	5	1245
Red shale- - - - -	50	1295
Gray sand- - - - -	20	1315
Red shale- - - - -	5	1320
Gray sand- - - - -	15	1335
Red sand - - - - -	25	1360
Red rock and blue shale- -	10	1370
TOTAL DEPTH- - - - -		4775

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 213</u>		
Wahlenmaier-York and Harper Inc., Cox Estate No. 1, 15 miles northwest of Andrews.		
Sand and clay- - - - -	10	10
Water sand- - - - -	70	80
Hard lime- - - - -	15	95
Water sand - - - - -	45	140
Sandy shale- - - - -	10	150
Shale and sand - - - - -	9	159
Sand- - - - -	171	330
Sand and shale - - - - -	34	364
Shale - - - - -	17	381

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 213--Continued</u>		
Sand and shale - - - - -	92	473
Red rock- - - - -	125	598
Sand and shale - - - - -	113	711
Red rock- - - - -	44	755
Sand and shale-- - - - -	18	773
Shale- - - - -	5	778
Lime and shale - - - - -	10	788
Shale- - - - -	12	800
Gumbo- - - - -	9	809
Sand and shale - - - - -	8	817
Shale and shells - - - - -	3	820
Sandy shale- - - - -	20	840
Shale- - - - -	31	871
Sand and shale - - - - -	9	880
Shale- - - - -	13	893
Red rock - - - - -	47	940
Shale- - - - -	59	999
Lime - - - - -	2	1001
Sand - - - - -	9	1010
Sandy shale- - - - -	15	1025
Lime - - - - -	2	1027
Lime and sand- - - - -	8	1035
Gray lime- - - - -	8	1043
Red shale- - - - -	3	1046
Gray lime- - - - -	6	1052
Lime- - - - -	8	1060
Hard lime -- - - - -	57	1117
Shale and shells - - - - -	4	1121
Shale - - - - -	15	1136
Red rock - - - - -	4	1140
Red rock and shale - - - -	24	1164
Shale and lime shell - - - -	12	1176
Lime- - - - -	2	1178
Shale- - - - -	7	1185
Lime - - - - -	5	1190
Shale and shells - - - - -	10	1200
Shale- - - - -	44	1244
Red rock - - - - -	9	1253
Shale- - - - -	52	1305
Sandy shale- - - - -	12	1317
Shale- - - - -	10	1327
Shale and sand - - - - -	31	1358
Shale and shells -- - - - -	22	1380
Sand - - - - -	4	1384
Shale- - - - -	2	1386
Lime - - - - -	7	1393
Shale and lime shells- - - -	24	1417
Lime and sand- - - - -	2	1419
Lime and shale - - - - -	4	1423
Shale and sand - - - - -	7	1430
Lime and sand- - - - -	2	1432
Shale and sand - - - - -	20	1452
Shale- - - - -	28	1480
Shale and shell- - - - -	6	1486

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Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 213--Continued</u>		
Lime shell-	2	1488
Shale-	7	1495
Sand -	5	1500
Shale-	17	1517
Lime-	3	1520
Lime and sand -	10	1530
Shale and lime shells-	10	1540
Sand-	3	1543
Sandy lime-	26	1569
Shale -	3	1572
Lime-	2	1574
Sandy shale-	17	1591
Shale-	20	1611
Sandy shale-	10	1621
Shale and shells -	33	1654
Sandy shale-	10	1664
Shale and shells -	4	1668
Brown sand-	4	1672
Sand-	7	1679
Lime-	10	1689
Shale and shells -	10	1699
Lime-	1	1700
Red rock-	1	1701
Shale-	5	1706
Sandy shale-	83	1789
Shale and shells -	4	1793
Shale -	4	1797
Lime-	53	1850
Red rock -	25	1875
Anhydrite-	25	1900
TOTAL DEPTH-		4811

<u>Driller's log of well 214</u>		
L. G. Stagner et al. Cora C. George No.1, 15 $\frac{1}{2}$ miles northwest of Andrews.		
Caliche-	25	25
Sand-	10	35
Caliche -	45	80
Lime-	10	90
Caliche-	10	100
Gravel-	30	130
Quicksand-	10	140
Sand and gravel-	8	148
Red rock -	96	244
Blue sand-	36	280
Brown sand -	10	290
Red rock-	710	1000
Red rock and shells-	160	1160
Water sand -	295	1455
Sand and red rock-	106	1561
Red rock and shells-	29	1590
Red shale-	60	1650
Sand-	16	1666
Lime shells-	2	1668

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 214--Continued</u>		
Red rock -	182	1850
Anhydrite-	20	1870
TOTAL DEPTH-		5110

<u>Driller's log of well 215</u>		
Mid Continent Pet. Corp., M. M. Fisher No. 1, 8 $\frac{1}{2}$ miles northwest of Andrews.		
Soft lime-	40	40
Quicksand-	5	45
Hard lime and shells -	15	60
Water sand -	20	80
Red shale-	25	105
Red rock -	55	160
Red and yellow sand-	20	180
Light-colored shale-	20	200
Red rock-	60	260
Light gray sand-	10	270
Red rock-	30	300
Light-colored sand-	12	312
Red rock -	38	350
Hard lime-	15	365
Red rock -	435	800
Red beds -	25	825
Brown shale-	25	850
Water sand -	5	855
Blue mud-	35	890
Soft water sand-	85	975
Red shale-	30	1005
Red rock -	30	1035
Red beds -	200	1235
Red rock -	90	1325
Red sand -	5	1330
White sand -	20	1350
Water sand -	15	1365
Red rock-	10	1375
White water sand -	30	1405
Hard lime-	10	1415
Water sand -	35	1450
Sandy red rock -	70	1520
Red sand -	10	1530
Sandy red shale-	35	1565
Red mud-	130	1695
Red rock and anhydrite -	5	1695
TOTAL DEPTH-		4674

<u>Driller's log of well 216</u>		
Humble Oil and Refining Co., J. S. Means No. 9, 5 $\frac{1}{2}$ miles north of Andrews.		
Red rock and sand-	134	134
Red rock and red beds-	95	229
Red beds and shell -	171	400
Red rock and red beds-	1298	1698
Red rock-	146	1844

(Continued on next page)

Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
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Driller's log of well 216--Continued

Red rock and red beds- - -	107	1951
Anhydrite- - - - -	59	2010
TOTAL DEPTH- - - - -		4535

Driller's log of well 217

Neff, et al., Means No. 1, 7 $\frac{1}{2}$  miles north of Andrews.

White sand- - - - -	60	60
Shells- - - - -	5	65
Brown sand- - - - -	20	85
Gravel - - - - -	10	95
White sand- - - - -	10	105
Red shale- - - - -	95	200
Limestone- - - - -	5	205
Red shale- - - - -	170	375
Limestone and shell- - - - -	10	385
Red shale- - - - -	45	430
Hard limestone - - - - -	15	445
Red shale- - - - -	10	455
Limestone- - - - -	5	460
Red shale - - - - -	35	495
Limestone- - - - -	10	505
Red rock- - - - -	400	905
Sand- - - - -	29	934
Blue shale and mud- - - - -	11	945
Sand- - - - -	35	980
Red mud - - - - -	10	990
Blue mud - - - - -	20	1010
TOTAL DEPTH- - - - -		3376

Driller's log of well 218

Humble Oil and Refining Co., J. S. Means No. 2, 8 $\frac{1}{2}$  miles north of Andrews.

Red beds and shells- - - -	39	39
Red beds, sand and clay- -	52	91
Red beds, sand and rock- -	114	205
Red beds and red rock- - -	109	314
Red beds and sand- - - - -	81	395
Red beds- - - - -	105	500
Red beds and sand- - - - -	425	925
Red beds and red rock- - -	83	1008
Sand and rock - - - - -	38	1046
Red beds and red rock- - -	132	1178
Red beds and streaks of limo- - - - -	42	1220
Red beds and shells- - - -	111	1331
Red beds, limo, and shells	50	1381
Red beds and red rock- - -	87	1468
Red beds and shells- - - -	106	1574
Red beds and red rock- - -	286	1860
Red beds and shells- - - -	75	1935
Red beds and gray shale- -	27	1962
Anhydrite and red beds - -	112	2074
TOTAL DEPTH- - - - -		4558

	Thickness (feet)	Depth (feet)
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Driller's log of well 219

Humble Oil and Refining Co., R. M. Means No. 4, 10 $\frac{1}{2}$  miles north of Andrews.

Sand- - - - -	51	51
Gravel- - - - -	10	61
Sand, gravel and lime - - -	38	99
Sand and red beds - - - -	65	164
Sand- - - - -	26	190
Red beds- - - - -	690	880
Red beds and red rock - - -	149	1029
Red beds- - - - -	390	1419
Red beds and shale- - - - -	343	1762
Red beds and red rock - - -	66	1828
Red beds- - - - -	42	1870
Anhydrite and red beds- - -	56	1926
TOTAL DEPTH- - - - -		4520

Driller's log of well 220

York and Harper and Harry Adams Corp., Hereford Stock Farms No. 1, 14 $\frac{1}{2}$  miles north of Andrews.

Caliche - - - - -	30	30
Sand rock - - - - -	35	65
Water sand- - - - -	15	80
Red rock and red beds - - -	105	185
Sand- - - - -	40	225
Red beds- - - - -	20	245
Sand- - - - -	10	255
Red beds- - - - -	5	260
Blue shale- - - - -	25	285
Shell- - - - -	4	289
Blue shale- - - - -	6	295
Red beds- - - - -	540	835
Red rock- - - - -	35	870
Red beds- - - - -	90	960
Blue shale- - - - -	25	985
Blue and gray shale - - - -	15	1000
Red beds- - - - -	115	1115
Water sand- - - - -	20	1135
Blue shale- - - - -	5	1140
Water sand- - - - -	15	1155
Red beds- - - - -	5	1160
Red beds, sandy - - - - -	275	1435
Red beds- - - - -	90	1525
Water sand- - - - -	15	1540
Sand- - - - -	75	1615
Red beds- - - - -	10	1625
Sand- - - - -	15	1640
Red beds and sand - - - - -	125	1765
Sandy red shale - - - - -	30	1795
Water sand- - - - -	15	1810
Red beds- - - - -	20	1830
Sand - - - - -	10	1840
Sandy red shale - - - - -	345	2185
Red shale - - - - -	95	2280
Anhydrite- - - - -	5	2285
TOTAL DEPTH- - - - -		5005

Table of drillers' logs, Andrews County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 398</u>		
Humble Oil and Refining Company, 9 miles north of Andrews.		
Red clay - - - - -	10	10
Red sand - - - - -	15	25
Sand - - - - -	35	60
Lime - - - - -	15	75
Water sand - - - - -	65	140
Red rock - - - - -	3	143
Water sand - - - - -	15	158
Red beds - - - - -	3	161
TOTAL DEPTH - - - - -		161
CASING RECORD: 97 feet of 12 $\frac{1}{2}$ -inch steel casing at top, cemented in place; 101 feet of 8-5/8-inch casing at top; 60 feet of 8-5/8-inch screen at bottom.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 399</u>		
Humble Oil and Refining Company, 9 miles north of Andrews.		
Sand - - - - -	30	30
Caliche - - - - -	30	60
Sand - - - - -	20	80
Lime - - - - -	15	95
Sand - - - - -	20	115
Sand and gravel - - - - -	10	125
Sand - - - - -	46	171
Red beds - - - - -	31	202
TOTAL DEPTH - - - - -		202
CASING RECORD: 8-5/8-inch casing to bottom; perforated from 115 feet to 171 feet.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 400</u>		
Humble Oil and Refining Company, 9 miles north of Andrews.		
Sand - - - - -	30	30
Caliche - - - - -	30	60
Sand - - - - -	20	80
Lime - - - - -	15	95
Sand - - - - -	20	115
Sand and gravel - - - - -	25	140
Sand - - - - -	10	150
Red beds - - - - -	5	155
Sand - - - - -	15	170
Red beds - - - - -	15	185
TOTAL DEPTH - - - - -		185
CASING RECORD: 13-3/8-inch surface casing; 6-inch casing to bottom; slotted from 110 feet to 170 feet.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 401</u>		
Humble Oil and Refining Company, 9 miles north of Andrews.		
Red beds, sand - - - - -	40	40
Caliche - - - - -	30	70
Gray sand - - - - -	18	88
Water sand - - - - -	12	100
Hard shells - - - - -	4	104
Gray sand - - - - -	6	110
Sand and gravel - - - - -	10	120
Sand - - - - -	50	170
Red beds - - - - -	2	172
TOTAL DEPTH - - - - -		172
CASING RECORD: 165 feet of 8-inch casing at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 450</u>		
M. A. Thornberry, 3 miles west of Andrews.		
Sand - - - - -	20	20
Clay - - - - -	15	35
Sandy lime - - - - -	15	50
Sand - - - - -	15	65
Water sand and gravel - - - - -	20	85
Red rock - - - - -	8	93
Red beds - - - - -	3	96
Water sand - - - - -	3	99
Red beds - - - - -	26	125
Red rock - - - - -	1	126
TOTAL DEPTH - - - - -		126
CASING RECORD: 118 feet of 12 $\frac{1}{2}$ -inch casing cemented with 35 sacks of cement; 8 $\frac{1}{4}$ -inch casing at top; open end.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 468</u>		
Hugh Sirms, 28 $\frac{1}{2}$ miles west of Andrews.		
Caliche and rock - - - - -	28	28
Sand - - - - -	52	80
Red beds - - - - -	5	85
TOTAL DEPTH - - - - -		85
CASING RECORD: No casing used.		



Logs of test wells drilled by W. P. A. Labor in Andrews County, Texas  
 Samples examined and classified by Joe W. Lang,  
 Project Superintendent.

	Thickness (feet)	Depth (feet)
<u>Well 2</u>		
Flat, University of Texas, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, blk. 4, University Lands, 12 miles north of Andrews.		
Chocolate-colored		
calcareous clay- - - - -	3	2
Limy white marl and sand -	3	10
Rust-colored calcareous marl and sand- - - - -	2	12
Gray calcareous marl and sand- - - - -	13	25
<u>Well 5</u>		
Bottom of draw, University of Texas, NW $\frac{1}{4}$ sec. 15, blk. 4, University Lands, 10 $\frac{1}{2}$ miles northeast of Andrews.		
Sandy black clay- - - - -	5	5
Red clay and sand- - - - -	1	6
Fine-grained limy white sand- - - - -	5	11
White limy sand and gravel-	1	12
Rock- - - - -		12
<u>Well 6</u>		
Flat, University of Texas, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, blk. 4, University Lands, 6 $\frac{1}{2}$ miles northeast of Andrews.		
Red sand- - - - -	5	5
Yellow clay and sand - - -	4	9
Brown sand- - - - -	1	10
Yellow limy clay and sand-	12	22
<u>Well 8</u>		
Rolling, Midland Farms Co. tract, NE $\frac{1}{4}$ sec. 5, blk. 40, T. 3N, 16 miles east of Andrews.		
Red clay and sand- - - - -	4	4
Sandy, yellow, limy clay- -	2	6
Red sand with limy white clay- - - - -	4	10
Sandy, light yellow, limy clay- - - - -	12	22
Sandy light yellow clay and caliche- - - - -	2	24
Rock- - - - -		24
<u>Well 9</u>		
Rolling, University of Texas, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, blk. 7, University Lands, 18 $\frac{1}{2}$ miles east of Andrews.		
Red sand- - - - -	1	1
Red clay and sand - - - - -	6	7
Sandy yellow limy clay - -	15	22

	Thickness (feet)	Depth (feet)
<u>Well 9--Continued</u>		
Caliche pebbles- - - - -	1	23
Caliche rock- - - - -		23
<u>Well 10</u>		
Rolling, University of Texas, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19, blk. 7, University Lands, 19 $\frac{1}{2}$ miles east of Andrews.		
Red clay and sand- - - - -	3	3
Sandy white limy clay- - -	2	5
Yellow clay and sand - - -	3	8
Caliche pebbles- - - - -	1	9
Caliche rock - - - - -		9
<u>Well 11</u>		
Flat, University of Texas, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, blk. 7, University Lands, 20 miles east of Andrews.		
Sandy chocolate-colored clay- - - - -		
	3	3
Sandy light brown clay - -	2	5
Sandy yellow limy clay - -	3	8
Soft caliche rock- - - - -	1	9
Sandy yellow limy clay - -	4	13
Light red clay and sand- -	1	14
Sandy yellow limy clay - -	2	16
<u>Well 13</u>		
Bottom of sink, J. E. Mabee tract, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, blk. 39, T. 3N, 18 $\frac{1}{2}$ miles east of Andrews.		
Sandy black clay- - - - -	4	4
Yellow limy clay and sand- - - - -	3	7
Gray limy clay and sand -	2	9
Rock- - - - -		9
<u>Well 16</u>		
Flat, J. E. Mabee tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, blk. 40, T. 3N, 16 miles east of Andrews.		
Light red clay and sand -	2	2
Caliche rock - - - - -		2
<u>Well 20</u>		
Flat, Midland Farms Co. tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, blk. 40, T. 3N, 14 $\frac{1}{2}$ miles east of Andrews.		
Light red clay and sand -	2	2
Soft caliche rock- - - - -	1	3
Caliche rock- - - - -		3

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (foot)	Depth (feet)
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Well 22

Flat, Midland Farms Co. tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 36, blk. 40, T. 3N, 12 $\frac{1}{2}$  miles east of Andrews.

Light red clay and sand- -	2	2
White caliche and sand - -	2	4
Caliche rock- - - - -		4

Well 25

Flat, Midland Farms Co. tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5, blk. 41, T. 3N, 10 $\frac{1}{2}$  miles east of Andrews.

Red clay and sand- - - - -	2	2
Caliche rock - - - - -		2

Well 28

Flat, Midland Farms Co. tract, SE $\frac{1}{2}$ SE $\frac{1}{4}$  sec. 21, blk. 41, T. 3N, 8 $\frac{1}{2}$  miles east of Andrews.

Red sand- - - - -	3	3
Caliche- - - - -	2	5
Rock- - - - -		5

Well 29

Flat, Midland Farms Co. tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 21, blk. 41, T. 3N, 8 $\frac{1}{2}$  miles east of Andrews.

Red sand- - - - -	2	2
Caliche- - - - -	3	5
Rock- - - - -		5

Well 30

Lake bottom, side county road, NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, blk. 3, P. S. L., 7 miles east of Andrews.

Sandy dark brown clay- - -	4	4
Yellow limy clay and fine sand- - - - -	5	9
Yellow limy clay - - - - -	5	14
Rock - - - - -		14

Well 34

Flat, side county road, SW $\frac{1}{2}$ SW $\frac{1}{4}$  sec. 19, blk. 3, P. S. L., 4 $\frac{1}{2}$  miles east of Andrews.

Light brown sandy topsoil-	1	1
Caliche rock- - - - -	5	6
Rock- - - - -		6

Well 35

Flat, side county road, NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 11, blk. A44, P. S. L., 2 $\frac{1}{4}$  miles east of Andrews.

Sandy red loam- - - - -	8	8
Sandy red clay - - - - -	4	12
Caliche rock - - - - -		12

	Thickness (foot)	Depth (feet)
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Well 39

Rolling, side State Highway 51, NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, blk. A44, P. S. L., 1 $\frac{3}{4}$  miles south of Andrews.

Sandy red clay and red sand-	6	6
Yellow limy, sandy clay- - -	4	10
Sandy clay and lime - - - -	7	17
Solid lime rock- - - - -		17

Well 41

Flat, G. N. McKenney tract, SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, blk. A44, P. S. L., 2 $\frac{3}{4}$  miles south-east of Andrews.

Red sand and sandy red clay-	5	5
Caliche rock- - - - -		5

Well 42

Rolling, side county road, NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, blk. A44, P. S. L., 3 $\frac{3}{4}$  miles south-east of Andrews.

Red sand- - - - -	4	4
Sandy red clay- - - - -	2	6
Yellow limy clay and sand -	8	14
Caliche rock- - - - -		14

Well 45

Rolling, W. D. McCarley tract, NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 30, blk. 3, P. S. L., 5 $\frac{1}{2}$  miles southeast of Andrews.

Red sandy topsoil- - - - -	2	2
Caliche rock- - - - -		2

Well 48

Bottom of sink, Mary Quinn tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, blk. 3, P. S. L., 7 miles east of Andrews.

Black clay and sand- - - - -	4	4
Brown clay- - - - -	1	5
Gray and yellow limy clay and sand- - - - -	5	10
Sandy brown clay- - - - -	1	11
Gray sand and iron-colored clay- - - - -	1	12
Greenish-gray clay and sand-	1	13
Sandy gray clay- - - - -	4	17
Limestone boulders and gravel- - - - -		17

Well 51

Flat, Midland Farms Co. tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, blk. 41, T. 3N, 9 miles east

(Continued on next page)

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 51--Continued</u>		
of Andrews.		
Sandy red topsoil- - - - -	3	2
Solid lime rock- - - - -		2
<u>Well 54</u>		
Flat, J. E. Mabee and Pyle tract, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 17, blk. 40, T. 3N, 14 $\frac{1}{2}$ miles east of Andrews.		
Light red clay and sand- -	2	2
Solid caliche rock - - - -		2
<u>Well 65</u>		
Top of ridge, Midland Farms Co. tract, NE $\frac{1}{2}$ NW $\frac{1}{2}$ sec. 3, blk. 41, T. 1N, 21 miles southeast of Andrews.		
Red sand - - - - -	3	3
Sandy red clay - - - - -	6	9
Caliche rock and limy gravel - - - - -	3	12
Brown calcareous sandstone-	4	16
<u>Well 67</u>		
Flat, Midland Farms Co. tract, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 6, blk. 41, T. 1N, 19 miles southeast of Andrews.		
Sandy gray limy clay - - -	3	3
White limy clay and caliche-	9	12
Caliche rock - - - - -		12
<u>Well 68</u>		
Top of ridge, Midland Farms Co. tract, SE $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 10, blk. 41, T. 1N, 17 $\frac{1}{2}$ miles southeast of Andrews.		
Red sand - - - - -	8	8
White and yellow limy clay and sand - - - - -	2	10
Brown clay and sand- - - -	6	16
Gray limy clay and sand- -	10	26
Grayish-green clay with black spots- - - - -	1	27
Caliche- - - - -		27
<u>Well 70</u>		
Flat, Midland Farms Co. tract, NW $\frac{1}{2}$ NW $\frac{1}{2}$ sec. 9, blk. 41, T. 1N, 16 miles southeast of Andrews.		
Light brown sandy topsoil -	2	2
Limestone boulders and solid rock - - - - -		2

	Thickness (feet)	Depth (feet)
<u>Well 71</u>		
Rolling, Midland Farms Co. tract, NE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 17, blk. 41, T. 2N, 15 miles southeast of Andrews.		
Sandy light brown limy topsoil- - - - -	2	2
Solid lime rock- - - - -		2
<u>Well 72</u>		
Draw, Midland Farms Co. tract, SE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 18, blk. 41, T. 2N, 14 $\frac{1}{2}$ miles southeast of Andrews.		
Sandy dark brown topsoil - - - - -	3	3
Sandy brown clay - - - - -	2	5
Yellow limy clay and sand-	2	7
Caliche- - - - -		7
<u>Well 76</u>		
Draw, Midland Farms Co. tract, SE $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 19, blk. 41, T. 2N, 14 miles southeast of Andrews.		
Sandy dark brown topsoil -	2	2
White clay and sand- - - -	3	5
Sandy red clay- - - - -	3	8
Sandy white clay - - - - -	2	10
Caliche- - - - -		10
<u>Well 77</u>		
Lake bottom, Midland Farms Co. tract, NE $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 20, blk. 41, T. 2N, 12 $\frac{1}{2}$ miles southeast of Andrews.		
Black gumbo clay and sand-	2	2
Light brown sand - - - - -	3	5
Brown clay and sand with iron-colored streaks	1	6
Solid rock - - - - -		6
<u>Well 78</u>		
Rolling, Midland Farms Co. tract, SE $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 22, blk. 41, T. 2N, 11 $\frac{1}{2}$ miles southeast of Andrews.		
Sandy light brown, limy clay topsoil- - - - -	1	1
Solid rock- - - - -		1
<u>Well 80</u>		
Rolling, Midland Farms Co. tract, NE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 23, blk. 41, T. 2N, 10 $\frac{1}{2}$ miles southeast of Andrews.		
Loose reddish-brown sand- - - - -	3	3

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Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
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Well 80--Continued

Red clay and sand - - - - -	6	9
Sandy yellow clay- - - - -	2	11
Caliche- - - - -		11

Well 81

Sand dune, Midland Farms Co. tract, NE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 24, blk. 41, T. 2N, 10 miles southeast of Andrews.

Loose red sand- - - - -	3	3
Red clay and sand- - - - -	7	10
Sandy yellow clay- - - - -	2	12
Caliche- - - - -	4	16
Hard rock- - - - -		16

Well 84

Flat, University of Texas, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 9, blk. 2, University Lands, 9 $\frac{1}{2}$  miles southeast of Andrews.

Sandy brown, limy clay topsoil- - - - -	2	2
Caliche rock - - - - -		2

Well 92

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 22, blk. 42, T. 1N, 16 $\frac{1}{2}$  miles south of Andrews.

Sandy red loam - - - - -	3	3
Sandy red limy clay- - - - -	4	7
Sandy, white, limy clay- - - - -	8	15
Lime rock- - - - -		15

Well 93

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 23, blk. 42, T. 1N, 15 $\frac{1}{2}$  miles south of Andrews.

Sandy red loam- - - - -	3	3
White limy marl - - - - -	2	5
White and yellow limy sand- - - - -	20	25
Caliche rock- - - - -		25

Well 94

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, blk. 42, T. 1N, 14 $\frac{1}{2}$  miles south of Andrews.

Sandy red topsoil- - - - -	3	3
Light red limy clay and sand- - - - -	5	8
White limy clay and sand - - - - -	8	16
Caliche rock- - - - -		16

	Thickness (feet)	Depth (feet)
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Well 96

Rolling, side of State Highway 51, SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 37, blk. 1, University Lands, 13 $\frac{1}{2}$  miles south of Andrews.

Sandy red loam- - - - -	3	3
White limy clay and sand- stone- - - - -	15	18

Well 101

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 32, blk. 1, University Lands, 12 $\frac{1}{2}$  miles south of Andrews.

Sandy red loam- - - - -	5	3
Yellow limy clay and sand- - - - -	3	6
Red sand and clay - - - - -	6	12
White sand- - - - -	5	17
Caliche- - - - -		17

Well 103

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, blk. 1, University Lands, 11 $\frac{1}{2}$  miles south of Andrews.

Sandy red topsoil- - - - -	3	3
Caliche rock- - - - -		3

Well 104

Rolling, side of State Highway 51, SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 24, blk. 1, University Lands, 10 $\frac{1}{2}$  miles south of Andrews.

Sandy red topsoil- - - - -	4	4
Limy, sandy clay - - - - -	2	6
Red clay and sandy, limy material- - - - -	6	12
Lime rock- - - - -		12

Well 106

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 21, blk. 1, 9 $\frac{1}{2}$  miles south of Andrews.

Red sand and sandy red clay- - - - -	5	5
White limy clay - - - - -	2	7
Caliche rock - - - - -		7

Well 108

Rolling, side of State Highway 51, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 16, blk. 1, University Lands, 8 $\frac{1}{2}$  miles south of Andrews.

Sandy red topsoil- - - - -	5	5
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Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
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Well 108--Continued

Brown limy sand- - - - -	1	0
Sandy yellow clay- - - - -	1	7
Caliche- - - - -		7

Well 109

Rolling, side of State Highway 51, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 8, blk. 1, University Lands, 7 $\frac{1}{2}$  miles south of Andrews.

Red sand and sandy red clay-	5	5
Sandy, yellow, limy clay- -	5	10
Rock- - - - -		10

Well 110

Rolling, side of State Highway 51, SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 5, blk. 1, University Lands, 6 $\frac{1}{2}$  miles south of Andrews.

Red sand- - - - -	4	4
Sandy red clay - - - - -	6	10
Yellow limy sand - - - - -	4	14
Lime rock - - - - -		14

Well 113

Rolling, University of Texas, SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 1, blk. 1, University Lands, 7 $\frac{1}{2}$  miles southeast of Andrews.

Sandy red clay- - - - -	3	3
Sandy, white, limy clay- -	3	6
Light brown limy sand- - -	1	7
Caliche- - - - -		7

Well 116

Rolling, side of State Highway 51, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 29, blk. A44, P. S. L., 5 miles south of Andrews.

Red sand and sandy red clay- - - - -	7	7
Brown clay and sand - - - -	2	9
Yellow limy clay- - - - -	4	13
Solid caliche rock- - - - -		13

Well 117

Rolling, side of State Highway 51, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 20, blk. A44, P. S. L., 4 miles south of Andrews.

Sandy red topsoil- - - - -	5	5
Sandy yellow clay- - - - -	5	10
Caliche rock- - - - -		10

Well 118

Rolling, J. E. Parker tract, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 17, blk. A44, P.S.L., 3 $\frac{1}{2}$  miles south of Andrews.

Red sand - - - - -	5	5
Sandy red clay - - - - -	6	11

	Thickness (feet)	Depth (feet)
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Well 118--Continued

Yellow, limy clay and sand - - - - -	3	14
Red sandstone- - - - -	2	16
Lime rock- - - - -		16

Well 120

Gentle slope, side of county road, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 17, blk. A46, P. S. L., 1 mile west of Andrews.

Red sand - - - - -	1	1
Clay and red sand- - - - -	3	4
Sandy white clay and lime-	6	10

Well 121

Rolling, side of county road, SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 17, blk. A46, P. S. L., 2 miles west of Andrews.

Red sand - - - - -	2	2
Clay and red sand- - - - -	16	18
Sandy red clay and caliche- - - - -	2	20
Hard caliche- - - - -		20

Well 125

Rolling, side of county road, SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 18, blk. A46, P. S. L., 3 miles west of Andrews.

Red sand - - - - -	5	5
Brittle caliche rock - - -	1	6
Light red limy sand and clay- - - - -	6	12

Well 127

Rolling, side of county road, SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 19, blk. A46, P. S. L., 4 miles west of Andrews.

Red sand and sandy red clay- - - - -	4	4
Sandy, yellow, limy clay -	4	8
Caliche rock- - - - -		8

Well 129

Gentle slope, side of county road, SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 21, blk. A46, P. S. L., 5 miles west of Andrews.

Red sand and sandy red clay- - - - -	6	6
Sandy yellow clay and white lime- - - - -	15	21
Rock- - - - -		21

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 132</u>		
Edge of sink, side of county road, SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 21, blk. A46, P. S. L., 6 miles west of Andrews.		
Sandy white lime and clay-	4	4
Light green sandy clay and white lime, potash, and gypsum - - - - -	10	14
Hard rock- - - - -		14
<u>Well 135</u>		
Gentle slope, Hayden Miles tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, blk. A46, P. S. L., 7 miles west of Andrews.		
White sand - - - - -	1	1
Sandy white clay - - - - -	4	5
Sandy white lime - - - - -	4	9
Lime rock- - - - -		9
<u>Well 134</u>		
Rolling, J. W. Kuykendall, SE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 24, blk. A46, P. S. L., 8 miles west of Andrews.		
Red sand- - - - -	2	2
Sandy red clay- - - - -	3	5
White lime and chalky sand- - - - -	3	8
Red sand and clay - - - - -	6	14
White limy sand - - - - -	12	26
Rock- - - - -		26
<u>Well 144</u>		
Rolling, side of county road, SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 24, blk. A46, P. S. L., 9 miles west of Andrews.		
Red sand- - - - -	2	2
Sandy red clay- - - - -	3	5
Sandy white lime- - - - -	7	12
Brown limy sand - - - - -	6	18
White lime and sand - - - - -	7	25
Limy sandstone- - - - -		25
<u>Well 146</u>		
Rolling, side of county road, SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 17, blk. A47, P. S. L., 10 miles west of Andrews.		
Red sand- - - - -	1	1
Sandy red clay- - - - -	11	12
Sandy red clay and white lime- - - - -	7	19
Caliche rock- - - - -		19
<u>Well 148</u>		
Flat, Munger and Nix tract, NE $\frac{1}{2}$ E $\frac{1}{2}$ sec. 1, blk. A41, P. S. L., 12 miles west of Andrews.		

	Thickness (feet)	Depth (feet)
<u>Well 148--Continued</u>		
Red sand - - - - -	1	1
Sandy red clay - - - - -	4	5
Sandy brown lime - - - - -	5	10
White lime and sand- - - - -	5	15
<u>Well 150</u>		
Rolling, Munger and Nix tract, SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 21, blk. A47, P. S. L., 14 miles west of Andrews.		
Red sand- - - - -	1	1
Red clay and sand- - - - -	3	4
White limy sand- - - - -	3	7
<u>Well 152</u>		
Rolling, A. J. Edwards tract, NE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 5, blk. A41, P. S. L., 16 $\frac{1}{2}$ miles west of Andrews.		
Red sand - - - - -	1	1
Red clay and sand- - - - -	2	3
White limy sand- - - - -	5	8
Caliche rock - - - - -		8
<u>Well 154</u>		
Sand dunes, University of Texas, SE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 13, blk. 12, University Lands, 17 miles west of Andrews.		
Red sand - - - - -	1	1
Red clay and sand- - - - -	5	6
Light red limy sand- - - - -	10	16
Caliche rock - - - - -		16
<u>Well 160</u>		
Sand dunes, University of Texas, NE $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 5, blk. 10, University Lands, 13 miles southwest of Andrews.		
Light red sand - - - - -	4	4
Yellow sand- - - - -	1	5
Red clay and sand- - - - -	8	13
Sandy yellow limy clay-- - - - -	5	18
Soft caliche rock- - - - -		18
<u>Well 166</u>		
Rolling, H. A. Thornberry tract, SW $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 13, blk. A42, 9 $\frac{1}{2}$ miles southwest of Andrews.		
Red sand- - - - -	1	1
Sandy red clay- - - - -	4	5
Sandy red clay and lime- - - - -	11	16
Sandy white lime- - - - -	4	20

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness Depth	
	(feet)	(feet)
<u>Well 170</u>		
University of Texas, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, blk. 9, University Lands, 9 $\frac{1}{2}$ miles southwest of Andrews.		
Red sand - - - - -	1	1
Red clay and sand- - - - -	3	3
Limy brown sand- - - - -	1	4
Sandy red clay - - - - -	4	8
Sandy white lime - - - - -	17	25

	Thickness Depth	
	(feet)	(feet)
<u>Well 172</u>		
Rolling, University of Texas, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, blk. 9, University Lands, 8 miles southwest of Andrews.		
Red sand- - - - -	4	4
Sandy red clay - - - - -	3	7
White limy sand- - - - -	9	16
Brown limy sand- - - - -	4	20
Sandy white lime - - - - -	5	25

	Thickness Depth	
	(feet)	(feet)
<u>Well 174</u>		
Rolling, G. W. Owens tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, blk. A43, P. S. L., 5 $\frac{1}{2}$ miles southwest of Andrews.		
Red sand - - - - -	5	3
Sandy red clay - - - - -	7	10
Sandy, white, limy clay- -	2	12

	Thickness Depth	
	(feet)	(feet)
<u>Well 175</u>		
Rolling, University of Texas, E $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 2, blk. 9, University Lands, 6 miles south of Andrews.		
Red sand - - - - -	2	2
Sandy red clay - - - - -	12	14
White limy clay and sand -	1	15
Light red limy sand- - - -	11	26

	Thickness Depth	
	(feet)	(feet)
<u>Well 176</u>		
Rolling, University of Texas, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, blk. 9, University Lands, 6 miles south of Andrews.		
Red sand - - - - -	2	2
Sandy red clay - - - - -	5	7
Sandy brown lime and white clay - - - - -	18	25
Caliche- - - - -		25

	Thickness Depth	
	(feet)	(feet)
<u>Well 180</u>		
Rolling, University of Texas, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 47, blk. 9, University Lands, 13 $\frac{1}{2}$ miles south of Andrews.		
Red sand - - - - -	1	1
Clay and red sand- - - - -	6	7
Brown clay and sand- - - -	7	14
White lime and sand- - - -	6	20

	Thickness Depth	
	(feet)	(feet)
<u>Well 184</u>		
Flat, University of Texas, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 42, blk. 9, University Lands, 14 miles south of Andrews.		
Gray, sandy, limy, clay topsoil- - - - -	2	2
Gray limy clay and sand- -	1	3
Caliche rock - - - - -		5

	Thickness Depth	
	(feet)	(feet)
<u>Well 186</u>		
Flat, University of Texas, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 43, blk. 9, University Lands, 15 $\frac{1}{2}$ miles south of Andrews.		
Gray lime and sandy clay-	2	2
Gray limy clay-- - - - -	7	9
Caliche rock- - - - -		9

	Thickness Depth	
	(feet)	(feet)
<u>Well 191</u>		
Flat, University of Texas, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, blk. 10, University Lands, 15 $\frac{1}{2}$ miles southwest of Andrews.		
Sandy gray clay- - - - -	2	2
Sandy white lime - - - - -	3	5
Soft lime rock - - - - -		5

	Thickness Depth	
	(feet)	(feet)
<u>Well 193</u>		
Flat, University of Texas, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, blk. 10, University Lands, 17 miles southwest of Andrews.		
Sandy gray clay topsoil- -	2	2
Sandy white lime - - - - -	1	3
Caliche rock- - - - -		3

	Thickness Depth	
	(feet)	(feet)
<u>Well 195</u>		
Sand dunes, University of Texas, NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, blk. 10, University Lands, 15 $\frac{1}{2}$ miles southwest of Andrews.		
White sand- - - - -	7	7
Rust-colored sand- - - - -	2	9
Red clay and sand- - - - -	5	14
Sandy white lime and red sand- - - - -	6	20
Quicksand - - - - -		20

	Thickness Depth	
	(feet)	(feet)
<u>Well 198</u>		
Flat, University of Texas, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, blk. 11, University Lands, 18 miles southwest of Andrews.		
Gray clay and sand - - - -	1	1
Sandy white lime- - - - -	2	3
Caliche rock- - - - -		3

	Thickness Depth	
	(feet)	(feet)
<u>Well 200</u>		
Flat, University of Texas, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, blk. 11, University Lands, 20 miles southwest of Andrews.		

(Continued on next page)

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
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Well 200--Continued

Red clay and sand- - - - -	3	3
Caliche rock- - - - -		5

Well 202

Rolling, University of Texas, SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 33, blk. 11, University Lands, 21 miles southwest of Andrews.

Red clay and sand- - - - -	3	3
Sandy red clay- - - - -	1	4
Caliche rock- - - - -	1	5

Well 205

Flat, J. M. Cowden and Sons tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 6, blk. 45, T. & P. R. Co. survey, 22 $\frac{1}{2}$  miles southwest of Andrews.

	Thickness (feet)	Depth (feet)
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Well 205--Continued

Sandy red topsoil- - - - -	3	3
Sandy white lime - - - - -	4	7
White sand- - - - -	13	20

Well 207

Sand dunes, University of Texas, NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 19, blk. 11, University Lands, 21 $\frac{1}{2}$  miles southwest of Andrews.

Light red sand - - - - -	10	10
Brown sand and lime- - - - -	3	13
White sand- - - - -	3	16
Gray sand - - - - -	2	18
Rust-colored clay and sand and sandy lime - - - - -	8	26
Red sand and gray lime - -	8	34



Logs of test wells drilled by T. P. A. labor in Andrews County, Texas  
 Samples examined and classified by Lloyd G. Davis  
 Project Superintendent

	Thickness (feet)	Depth (feet)
<u>Well 315</u>		
Gentle slope to sink, University of Texas tract, SE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 14, blk. 5, 16 $\frac{1}{2}$ miles northeast of Andrews.		
Sandy clay - - - -	8	8
White sand - - - -	7	15
Struck water at 5 <sup>1</sup> feet. Water level, 5.4 feet below ground level, 6 hours after hole completed. August 15, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 316</u>		
Valley flat, University of Texas tract, SE $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 14, blk. 5, 16 $\frac{1}{2}$ miles northeast of Andrews.		
Sandy surface soil - -	4	4
Sandy clay - - - -	7	11
Sand - - - - -	1	12
Sandy clay - - - -	2	14
Struck water at 12 feet. August 15, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 324</u>		
Gentle slope in sink, Mary Bivens tract, SE $\frac{1}{2}$ SE $\frac{1}{2}$ labor 21, league 316, Parmer County School Land, 15 $\frac{1}{2}$ miles northeast of Andrews.		
Sandy clay - - - -	2	2
Limey clay - - - -	5	8
Sandy clay and rock -	1	9
Sand rock - - - - -	3	12
September 20, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 329</u>		
Gentle slope, University of Texas tract, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, blk. 3, 8 miles northeast of Andrews.		
Sandy top soil - - -	4	4
Sandy clay and caliche	6	10
Sandy soil - - - -	4	14
Rock - - - - -		14
August 22, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 333</u>		
Bottom of sink, B. M. Means tract, SE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 16, blk. 3, Public School, 7 miles east of Andrews.		
Dark sandy clay - - -	5	5
Light-gray sandy clay -	7	12
Rock - - - - -		12
August 28, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 337</u>		
Bottom of sink, R. I. Means tract, NE $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 19, blk. 3, Public School, 4-3/4 miles east of Andrews.		
Sandy clay - - - -	5	5
White sand - - - -	3	8
Sandy white clay - -	5	13
Rock - - - - -		13
July 14, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 340</u>		
Bottom of sink, University of Texas tract, NW $\frac{1}{2}$ NW $\frac{1}{2}$ sec. 8, blk. 3, 5 $\frac{1}{2}$ miles northeast of Andrews.		
Sandy top soil - - -	5	5
Sand - - - - -	5	10
Limey clay - - - -	2	12
Rock - - - - -		12
August 31, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 343</u>		
Slope to draw, J. S. Means tract, north end sec. 4, blk. A-19, 4 $\frac{1}{4}$ miles northeast of Andrews.		
Sand - - - - -	11	11
Sand rock - - - - -	8	19
September 18, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 350</u>		
Bottom of sink, G. W. Weibusch tract, NE $\frac{1}{2}$ NW $\frac{1}{2}$ sec. 16, blk. A-45, 1 $\frac{1}{2}$ miles northwest of Andrews.		
Sandy clay - - - -	3	3
Sandy clay and rock -	2	5
Limey clay - - - -	7	12
Rock - - - - -		12
September 1, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 354</u>		
Bottom of draw, Mrs. A. C. Means tract, NE $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 1, blk. A-46, 2-3/4 miles northwest of Andrews.		
Sandy red clay - - -	6	6
Caliche - - - - -	4	10
Sandy clay - - - -	2	12
Rock - - - - -		12
July 26, 1939.		

Logs of 7. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 355</u>		
Ridgetop, Mrs. A. C. Means tract, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, blk. A-36, 3 miles northwest of Andrews.		
Sandy clay soil - - -	4	4
Sandy clay and caliche	9	13
Rock - - - - -		13
July 26, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 356</u>		
Bottom of draw, Mrs. A. C. Means tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, blk. A-36, 3 $\frac{1}{2}$ miles northwest of Andrews.		
Sandy red clay - - -	4	4
Clay and caliche - - -	7	11
Rock - - - - -		11
July 26, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 358</u>		
Gentle slope, C. E. Sutphen tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, blk. A-45, 4 miles north of Andrews.		
Sandy clay - - - - -	6	6
Caliche - - - - -	6	12
Rock - - - - -		12
July 19, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 363</u>		
Bottom of sink, M. M. Fisher tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, blk. A-36, 7 $\frac{1}{2}$ miles northwest of Andrews.		
Clay - - - - -	11	11
Clay and caliche - - -	6	17
Sandy clay - - - - -	5	22
July 31, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 366</u>		
Flat, M. M. Fisher tract, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, blk. A-36, 8 miles northwest of Andrews.		
Sandy top soil - - -	4	4
Sandy caliche and clay	1	5
Sand - - - - -	4	9
Sandy clay and caliche	1	10
Sandy clay - - - - -	5	15
Caliche - - - - -	5	20
Rock - - - - -		20
July 20, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 367</u>		
Flat, M. M. Fisher tract, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, blk. A-36, 8 miles northwest of Andrews.		
Sandy red clay - - -	3	3
Caliche - - - - -	2	5
Sand - - - - -	3	8
Caliche - - - - -	4	12
July 20, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 368</u>		
Flat, M. M. Fisher tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, blk. A-36, 8 miles northwest of Andrews.		
Sandy red clay - - -	6	6
Caliche - - - - -	7	13
Sandy red caliche - - -	1	14
Hard caliche - - - - -		14
July 20, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 371</u>		
Gentle slope, L. E. Gardner tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, blk. A-35, 5-3/4 miles north of Andrews.		
Sand - - - - -	21	21
Sandy clay - - - - -	2	23
August 2, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 373</u>		
Gentle slope of sand dune, E. E. Chesley tract, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, blk. A-35, 5 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay - - - - -	4	4
Sand - - - - -	3	7
Sandy clay - - - - -	3	10
Rock - - - - -		10
August 2, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 375</u>		
Flat, J. S. Means tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, blk. A-45, 3 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay top soil - - -	3	3
Sandy caliche - - - - -	16	19
Rock - - - - -		19
August 4, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 376</u>		
Flat, J. S. Means tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, blk. A-45, 3 $\frac{1}{2}$ miles north of Andrews.		
Sandy top soil - - -	2	2
Sandy caliche - - - - -	13	15
Rock - - - - -		15
August 4, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 377</u>		
Gentle slope, J. S. Means tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, blk. A-45, 3 $\frac{1}{2}$ miles north of Andrews.		
Sandy top soil - - -	3	3
Sandy caliche - - - - -	11	14
Rock - - - - -		14
August 4, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 378</u>		
Gentle slope, J. S. Means tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, blk. A-45, 3-3/4 miles north of Andrews.		
(Continued on next page)		

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 378--Continued</u>		
Andrews.		
Sandy clay - - - -	4	4
Sandy clay and caliche	8	12
Sandy clay - - - -	4	16
August 4, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 380</u>		
Flat, J. S. Means tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, blk. A-35, 5 $\frac{1}{2}$ miles north of Andrews.		
Sandy top soil - - -	5	5
Sandy clay and caliche	12	17
Rock - - - - -		17
August 14, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 381</u>		
Gentle slope to sink, J. S. Means tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, blk. A-35, 7 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay - - - -	2	2
Clay - - - - -	2	4
Sandy clay and caliche	14	18
Caliche - - - - -		18
July 21, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 383</u>		
Bottom of sink, L. E. Gardner tract, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, blk. A-35, 8 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay - - - -	19	19
Sandy soil and caliche	3	22
August 16, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 385</u>		
Gentle slope to sink, L. E. Gardner tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, blk. A-35, 8 $\frac{1}{2}$ miles north of Andrews.		
Sandy top soil - - -	3	3
Sandy clay - - - -	9	12
Sandy clay and caliche	2	14
August 16, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 390</u>		
Gentle slope, Park Estate tract, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, blk. A-34, 10 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay - - - -	3	3
Sandy caliche and rock	5	8
White sand - - - -	3	11
Rock - - - - -		11
August 11, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 395</u>		
Bottom of sink, side of State Highway, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, blk. A-34, 11 $\frac{1}{2}$ miles north of Andrews.		

	Thickness (feet)	Depth (feet)
<u>Well 395--Continued</u>		
Sandy top soil - - -	4	4
Sandy caliche - - -	3	7
Sandy clay - - - -	7	14
Rock - - - - -		14
August 11, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 402</u>		
Gentle slope, J. S. Means tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, blk. A-35, 9 miles north of Andrews.		
Sandy top soil - - -	1	1
Sandy clay - - - -	3	4
Sand - - - - -	5	9
Sandy caliche - - -	2	11
Rock - - - - -	1	12
September 13, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 403</u>		
Slope to draw, J. S. Means tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, blk. A-35, 9 miles north of Andrews.		
Sandy red clay - - -	4	4
Clay and caliche - -	3	7
Sand - - - - -	6	13
Sandy clay - - - -	6	19
Rock - - - - -		19
September 13, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 408</u>		
Bottom of sink, Kansas Trust Co., tract, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, blk. A-19, 12 miles north of Andrews.		
Top soil - - - - -	2	2
Sandy clay - - - -	17	19
Rock - - - - -		19
August 21, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 409</u>		
Gentle slope of sink, Kansas Trust Co., tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, blk. A-19, 12 $\frac{1}{2}$ miles north of Andrews.		
Sandy clay - - - -	19	19
Clay - - - - -	4	23
Struck water at 15-3/4 feet. Water level, 15.8 feet below ground level, 1 hour after hole completed. Aug. 21, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 410</u>		
Gentle slope of sink, Mrs. S. E. Noley tract, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, Gaines County School Land, 12 miles north of Andrews.		
Clay - - - - -	5	5
Sandy clay - - - -	15	20
August 17, 1939.		

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 411</u>		
Bottom of sink, side of county road, SW $\frac{1}{4}$ sec. 7, Gaines County School Land, 12 miles north of Andrews.		
Sandy clay - - - -	14	14
Sand - - - - -	6	20
Sandy clay - - - -	2	22
Rock - - - - -		22
August 17, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 413</u>		
Bottom of sink, Mrs. S. E. Noley tract, SW $\frac{1}{4}$ sec. 7, Gaines County School Land, 12 miles north of Andrews.		
Sandy limey clay - -	21	21
Sand - - - - -	4	25
Sandy clay - - - -	2	27
September 4, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 417</u>		
Bottom of sink, Oscar O. Lykes tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, Gaines County School Land, 14 miles north of Andrews.		
Sandy clay - - - -	6	6
Sandy clay and caliche	4	10
Rock - - - - -		10
September 15, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 419</u>		
Gentle slope, F. L. Britton tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, Gaines County School Land, 14 miles north of Andrews.		
Sandy clay - - - -	6	6
Sandy caliche - - -	6	12
Rock - - - - -		12
September 15, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 427</u>		
Gentle slope to sink, J. L. Underwood tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, blk. A-33, 13 miles northwest of Andrews.		
Sandy top soil - - -	3	3
Limey clay and caliche	8	11
Sandy caliche - - -	5	16
Rock - - - - -		16
September 6, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 428</u>		
Bottom of sink, J. L. Underwood tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, blk. A-33, 13 miles northwest of Andrews.		
Sandy top soil - - -	3	3
Limey clay - - - -	8	11
Sandy caliche - - -	6	17
September 6, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 432</u>		
Gentle slope, University of Texas tract, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, blk. 13, 11 $\frac{1}{2}$ miles north-west of Andrews.		
Sandy top soil - - -	2	2
Caliche - - - - -	2	4
Sandy caliche - - -	13	17
Rock - - - - -		17
September 12, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 436</u>		
Bottom of sink, E. R. Crews tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, blk. A-36, 8 miles north-west of Andrews.		
Sandy white clay - -	4	4
Red clay - - - - -	12	16
Hard clay - - - - -		16
July 18, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 439</u>		
Gentle slope to sink, University of Texas tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, blk. 14, 6 $\frac{1}{2}$ miles northwest of Andrews.		
Sandy soil - - - - -	14	14
Sandy clay and caliche	1	15
Hard-packed sand - -	3	18
Rock - - - - -		18
August 30, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 441</u>		
Slope, J. S. Means tract, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, blk. A-46, 4 miles northwest of Andrews.		
Sandy clay - - - - -	12	12
Sandy clay and caliche	7	19
July 27, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 442</u>		
Gentle slope, J. H. Speed tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, blk. A-36, 4 miles northwest of Andrews.		
Sandy top soil - - -	7	7
Sandy caliche - - -	14	21
Rock - - - - -		21
July 27, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 445</u>		
Gentle slope, J. E. Parker tract, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, blk. A-46, 3 miles west of Andrews.		
Sandy red soil - - -	11	11
Sandy caliche - - -	4	15
Rock - - - - -		15
September 5, 1939.		

Logs of W. P. A. test wells in Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 446</u>		
Gentle slope, J. E. Parker tract, NW $\frac{1}{4}$ -NE $\frac{1}{4}$ sec. 18, blk. A-46, 2 $\frac{1}{2}$ miles west of Andrews.		
Red sand - - - - -	12	12
Sandy clay - - - - -	2	14
Rock - - - - -		14
July 17, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 451</u>		
Gentle slope to sink, W. J. Mathis tract, SW $\frac{1}{4}$ -SW $\frac{1}{4}$ sec. 4, blk. A-46, 5 $\frac{1}{2}$ miles west of Andrews.		
Sandy top soil - - -	2	2
Sandy caliche - - -	11	13
Rock - - - - -		13
August 29, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 454</u>		
Gentle slope, J. E. Fitzpatrick tract, NE $\frac{1}{4}$ -NW $\frac{1}{4}$ sec. 5, blk. A-46, 6 miles west of Andrews.		
Sandy red top soil - -	6	6
Caliche - - - - -	12	18
Rock - - - - -		18
July 24, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 456</u>		
Gentle slope, side of county road, NW $\frac{1}{2}$ -SE $\frac{1}{2}$ sec. 37, blk. 13, 9 miles west of Andrews.		
Sandy top soil - - -	6	6
Sandy caliche - - -	6	12
Rock - - - - -		12
September 11, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 458</u>		
Gentle slope to sink, University of Texas tract, NW $\frac{1}{4}$ -SE $\frac{1}{4}$ sec. 34, blk. 13, 11 miles west of Andrews.		
Sand - - - - -	2	2
Sandy clay - - - - -	5	7
Sandy clay and caliche	3	10
Rock - - - - -		10
September 11, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 459</u>		
Bottom of draw, University of Texas tract, SE $\frac{1}{4}$ -SW $\frac{1}{4}$ sec. 28, blk. 13, 12 $\frac{1}{2}$ miles west of Andrews.		
Sandy clay - - - - -	8	8
Sand - - - - -	1	9
Rock - - - - -		9
September 19, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 461</u>		
Gentle slope to sink, Bryan-Link Co., tract, NE $\frac{1}{4}$ -SW $\frac{1}{4}$ sec. 7, blk. A-48, 17 miles west of Andrews.		
Sandy clay - - - - -	4	4
Sandy caliche - - - -	8	12
Rock - - - - -		12
September 19, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 462</u>		
Gentle slope to sink, side of county road, NE $\frac{1}{4}$ -SW $\frac{1}{4}$ sec. 7, blk. A-48, 17 miles west of Andrews.		
Sand - - - - -	2	2
Sandy caliche - - - -	10	12
Rock - - - - -		12
September 19, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 470</u>		
Slope of sand dune, Hugh Sirms tract, NE $\frac{1}{4}$ -SW $\frac{1}{4}$ sec. 17, blk. A-29, 29 $\frac{1}{2}$ miles west of Andrews.		
Sand - - - - -	7	7
Sandy clay and caliche	7	14
July 28, 1939.		

Partial analyses of water from wells in Andrews County, Texas

(Analyzed at The University of Texas under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, by J. E. Stullken, D. F. Riddell, H. T. Davidson, and Floyd H. Ward, Chemists, and J. A. Harmaza, Martin Wieland and Jack Ramsey, Assistant Chemists. Results are in parts per million. Well numbers correspond to numbers in table of records.)

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Total hardness as CaCO <sub>3</sub> (calculated)
1	University of Texas	76	Oct. 27, 1936	730	-	-	-	250	244	115	-
3	do.	90	do.	726	-	-	-	171	248	150	-
4	do.	58	do.	787	-	-	-	336	196	150	-
7	do.	74	Oct. 13, 1936	643	-	-	-	323	97	154	-
12	do.	85	Oct. 14, 1936	783	-	-	-	275	195	180	-
14	J.E. Mabee	71	Oct. 15, 1936	418	-	-	-	305	37	74	-
15	do.	70	do.	421	-	-	-	268	60	74	-
17	do.	83	do.	459	-	-	-	207	94	100	-
18	Midland Farms Co.	77	Oct. 14, 1936	573	-	-	-	366	71	110	-
19	do.	67	do.	549	89	17	20	256	37	60	290
21	do.	78	Sept. 16, 1936	517	-	-	-	73	168	140	-
23	do.	55	Oct. 14, 1936	584	-	-	-	329	94	116	-
24	do.	91	Sept. 10, 1936	390	-	-	-	256	72	50	-
26	do.	98	July 28, 1936	645	52	28	150	281	131	146	247
31	M.Q. McCarley	98	Aug. 7, 1936	686	91	34	111	262	170	148	366
32	Carl Gibson	98	Aug. 10, 1936	709	-	-	-	293	172	144	-
33	W.D. McCarley	98	do.	634	-	-	-	238	153	126	-
36	W.J. Lay	89	Aug. 11, 1936	948	-	-	-	256	300	200	-
37	J.D. Mathews	100	Aug. 18, 1936	834	-	-	-	256	225	195	-
38	Leona Mitchell	105	Aug. 17, 1936	847	-	-	-	256	240	190	-
40	C.L. Lonis	96	do.	814	-	-	-	281	225	170	-
43	J.W. Dearen	102	Aug. 11, 1936	1,039	-	-	-	281	306	240	-
44	W.D. McCarley	84	do.	628	-	-	-	232	168	128	-
46	do.	83	Aug. 10, 1936	827	-	-	-	159	255	215	-
47	do.	96	do.	571	-	-	-	232	139	118	-
49	Mary Quim	69	Aug. 7, 1936	630	-	-	-	305	127	128	-
50	Midland Farms Co.	75	Oct. 15, 1936	812	-	-	-	317	180	190	-
52	do.	58	do.	260	-	-	-	232	a/	45	-
53	do.	33	Oct. 20, 1936	249	-	-	-	85	60	60	-
55	J.E. Mabee	74	Oct. 15, 1936	-	-	-	-	-	90	98	-
56	do.	63	Oct. 19, 1936	447	-	-	-	317	68	58	-

a/ Sulphate less than 10 parts per million.

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Partial analyses of water from wells in Andrews County--Continued

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Total hardness as CaCO <sub>3</sub> (calculated)
57	J.E. Mabee	42	Oct.19,1936	-	-	-	-	-	80	72	-
58	do.	37	do.	-	-	-	-	-	411	340	-
59	do.	51	do.	-	-	-	-	-	180	184	-
60	do.	68	do.	-	-	-	-	-	280	235	-
61	do.	54	Oct.16,1936	-	-	-	-	-	112	80	-
62	Midland Farms Co.	103	do.	-	-	-	-	-	216	170	-
63	do.	57	do.	-	-	-	-	-	88	80	-
64	do.	42	July 28,1936	1,373	160	53	241	244	509	290	617
66	do.	37	do.	803	-	-	-	317	262	110	-
69	do.	78	do.	1,694	226	73	258	305	592	395	865
73	do.	52	Oct.16,1936	520	-	-	-	104	208	90	-
74	do.	35	Oct.19,1936	2,990	-	-	-	98	1,040	920	-
75	do.	40	do.	-	-	-	-	-	974	830	-
79	do.	82	Oct.16,1936	-	-	-	-	-	208	150	-
82	University of Texas	89	Oct.10,1936	1,255	-	-	-	104	511	285	-
83	do.	90	Aug.24,1936	636	-	-	-	140	202	150	-
85	Midland Farms Co.	100	Oct.21,1936	-	-	-	-	-	364	205	-
86	do.	85	do.	622	-	-	-	85	224	150	-
87	do.	81	do.	554	-	-	-	122	188	120	-
88	do.	65	do.	-	-	-	-	-	332	160	-
89	do.	91	do.	882	-	-	-	85	347	205	-
90	do.	25	do.	1,535	-	-	-	85	703	300	-
91	do.	70	do.	439	-	-	-	122	155	76	-
95	do.	82	Sept. 7,1936	-	-	-	-	-	220	166	-
97	University of Texas	90	Oct.26,1936	505	-	-	-	122	180	96	-
98	Midland Farms Co.	92	do.	2,551	-	-	-	305	1,006	560	-
99	University of Texas	85	do.	3,103	-	-	-	61	1,382	700	-
100	do.	70	Aug.21,1936	476	-	-	-	183	131	90	-
102	do.	110	Aug.20,1936	468	-	-	-	159	124	104	-
105	do.	106	Aug.21,1936	2,806	-	-	-	189	1,198	610	-
107	do.	92	Oct.10,1936	431	-	-	-	183	132	60	-
111	do.	70	Aug.24,1936	1,524	158	69	289	365	449	380	629
112	do.	100	do.	1,326	-	-	-	659	345	190	-
114	do.	64	do.	1,149	-	-	-	317	329	270	-

Partial analyses of water from wells in Andrews County--Continued

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Total hardness as CaCO <sub>3</sub> (calculated)
115	H.C. Barnes	105	Aug.11,1936	1,076	113	48	198	207	345	270	479
119	Honolulu Oil Co.	120	Aug.17,1936	318	32	27	56	281	23	42	192
122	J.E. Parker	127	Sept. 8,1936	1,035	-	-	-	98	387	260	-
124	W.J. Harris	102	do.	-	-	-	-	-	2,027	1,010	-
128	J.R. McClouff	144	Sept. 1,1936	1,020	-	-	-	329	292	215	-
130	Hayden Miles	29	do.	4,362	-	-	-	116	2,820	174	-
131	do.	44	do.	1,306	-	-	-	336	446	255	-
135	Dr. R.H. Lendley	83	do.	3,217	218	168	659	260	1,174	870	1,234
136	do.	83	do.	2,879	-	-	-	85	1,078	820	-
145	Munger & Nix	110	Sept. 2,1936	1,256	52	53	317	171	312	260	347
149	do.	158	do.	1,405	-	-	-	397	591	155	-
153	University of Texas	102	Sept.30,1936	1,432	-	53	-	98	805	135	-
155	do.	53	Sept.22,1936	1,523	-	-	-	104	805	190	-
156	do.	500	do.	2,535	10	6	895	500	973	405	49
158	J.E. Parker	92	Sept.23,1936	1,431	-	-	-	183	457	405	-
159	University of Texas	86	Sept. 4,1936	1,526	-	-	-	1,458	24	190	-
161	do.	120	do.	529	73	15	96	165	148	116	245
162	do.	104	Sept.23,1936	1,015	-	-	-	153	352	250	-
164	A.J. Edwards	113	Sept. 3,1936	992	-	-	-	165	296	280	-
167	W.A. Ashton	109	do.	1,726	-	-	-	262	520	495	-
168	M.A. Thornberry	122	do.	652	-	-	-	262	132	160	-
169	do.	115	do.	429	-	-	-	177	88	102	-
171	University of Texas	100	Aug.24,1936	335	-	-	-	165	64	70	-
173	W.T. Ford	90	Sept. 2,1936	4,208	-	-	-	116	2,197	640	-
177	University of Texas	110	Aug.21,1936	6,465	-	-	-	98	2,939	1,420	-
178	do.	71	do.	643	81	35	114	368	94	132	346
179	do.	98	Aug.19,1936	-	-	-	-	-	131	140	-
181	do.	110	Aug.20,1936	-	-	-	-	-	60	56	-
182	do.	90	do.	323	42	24	42	146	67	76	205
183	do.	90	Sept. 7,1936	978	-	-	-	110	340	260	-
185	do.	59	do.	286	-	-	-	159	68	38	-
187	do.	57	do.	249	-	-	-	122	52	48	-



Partial analyses of water from wells in Andrews County--Continued

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Total hardness as CaCO <sub>3</sub> (calculated)
189	University of Texas	56	Sept. 7, 1936	316	-	-	-	140	60	74	-
192	do.	84	Sept. 16, 1936	465	-	-	-	281	71	86	-
194	do.	61	Sept. 21, 1936	830	-	-	-	43	329	210	-
196	do.	68	do.	350	-	-	-	268	41	46	-
197	do.	65	do.	339	-	-	-	214	67	44	-
199	do.	53	Sept. 28, 1936	329	-	-	-	195	49	64	-
203	do.	76	do.	588	15	-	214	342	127	64	37
204	do.	57	do.	314	-	-	-	220	37	52	-
206	Ratliff & Bedford	57	do.	874	-	-	-	226	255	210	-
208	University of Texas	45	Sept. 29, 1936	784	-	-	-	281	307	76	-
209	Ratliff & Bedford	90	do.	1,693	-	-	-	140	562	500	-

Partial analyses of water from wells in Andrews County, Texas

(Analyzed at The University of Texas under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, and E. W. Lohr, Chemist, U. S. Department of the Interior, Geological Survey; by D. F. Riddell, and H. T. Davidson, Chemists; and Martin Wieland, Jack Ramsey and J. H. Raby, Assistant Chemists. Nitrate and fluoride determined by E. W. Lohr. 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 (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Total hardness as CaCO <sub>3</sub> (calc.)
301	University of Texas	45	Aug. 10, 1939	926	108	57	146	378	249	180	b/	-	505
c/302	do.	53	do.	529	124	13	44	250	116	73	36	0.3	363
303	do.	90	do.	491	82	30	54	232	92	104	b/	-	328
304	do.	63	Aug. 28, 1939	575	83	51	55	293	112	110	b/	4.1	417
305	do.	59	do.	920	149	77	86	610	112	165	31	-	687
c/306	do.	87	do.	512	129	29	22	470	36	26	39	0.4	443
308	C. A. Clayton	25	Aug. 15, 1939	6,726	658	517	821	244	3,110	1,500	-	-	3,770
309	W. H. Badgett	22	do.	6,160	642	414	733	275	3,331	830	105	-	3,305
310	J. M. Jameson	57	do.	2,324	172	194	356	244	787	690	b/	4.5	1,230
311	University of Texas	67	do.	1,602	157	131	196	256	682	310	b/	-	932
312	do.	-	do.	2,757	236	189	421	500	1,244	390	31	-	1,365
313	do.	12	do.	2,447	213	180	351	403	1,083	375	42	5.2	1,272
c/315	W. P. A. Test	15	do.	13,550	848	803	2,565	647	6,120	2,890	-	6.4	5,420
317	University of Texas	51	do.	2,005	166	124	353	427	762	390	b/	-	926
318	do.	90	Sept. 7, 1939	829	93	68	109	354	225	160	b/	-	512
319	do.	42	do.	2,784	154	146	693	573	289	1,220	b/	-	985
320	do.	116	Aug. 24, 1939	481	56	46	61	342	84	66	b/	-	329
321	M. D. Long	71	do.	1,528	180	153	131	329	465	425	b/	-	1,080
c/322	Kiah Howell	112	Aug. 8, 1939	835	89	62	120	317	281	122	b/	4.9	478
325	W. H. Howell	85	Aug. 21, 1939	3,109	285	148	527	238	1,565	440	27	-	1,322
326	University of Texas	52	Aug. 9, 1939	5,279	171	146	1,520	451	1,573	1,630	-	6.1	1,028
327	do.	64	Aug. 23, 1939	4,070	299	370	637	384	795	1,780	-	-	2,268
328	do.	78	Aug. 9, 1939	2,123	182	136	377	256	570	720	b/	3.1	1,014
c/330	do.	55	July 14, 1939	1,330	165	60	221	366	367	290	42	4.9	657

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 54.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Total hardness as CaCO <sub>3</sub> (calc.)
331	Midland Farms Company	83	Aug. 10, 1939	498	107	17	55	293	88	86	b/	0.7	335
332	do.	84	July 14, 1939	370	58	13	61	201	81	58	b/	-	198
335	R. M. Means	73	Aug. 22, 1939	733	99	36	109	238	169	166	37	-	398
c/336	R. S. Means	80	July 14, 1939	652	85	25	119	275	145	132	b/	1.9	315
338	University of Texas	100	Aug. 22, 1939	649	56	33	130	189	201	134	b/	2.0	275
341	J. S. Means	105	do.	565	63	35	93	232	144	116	b/	-	302
344	do.	90	Aug. 2, 1939	726	100	41	100	244	205	160	b/	-	421
c/345	do.	80	do.	454	70	27	50	226	60	59	76	1.4	287
346	G. E. Moxley	120	July 14, 1939	498	50	15	115	250	121	72	b/	2.3	189
351	W. D. Craddock	89	do.	1,528	126	71	299	214	617	310	b/	-	604
352	Mrs. G. E. Sutphen	110	July 27, 1939	1,291	157	68	199	268	415	320	b/	-	672
353	Mrs. A. C. Means	98	July 26, 1939	1,521	151	90	269	348	460	380	b/	-	745
357	Mrs. J. S. Means	77	July 19, 1939	952	66	34	222	207	343	185	b/	-	306
c/360	L. E. Garden	151	Aug. 16, 1939	6,954	921	225	1,203	98	1,806	2,750	-	1.2	3,228
c/364	M. M. Fisher	73	July 20, 1939	3,486	275	232	624	293	952	1,240	b/	2.8	1,643
365	do.	93	July 26, 1939	1,489	90	111	282	378	460	360	b/	-	684
369	do.	97	do.	813	52	58	168	390	185	158	b/	-	371
c/379	J. S. Means	83	Aug. 3, 1939	973	79	45	199	232	321	195	20	-	383
386	L. E. Gardner	103	Aug. 16, 1939	841	55	75	150	397	181	185	b/	-	447
c/387	O. C. Mitchell	105	July 19, 1939	1,638	103	99	331	329	597	340	b/	5.8	666
388	H. L. Park	-	July 31, 1939	382	61	38	29	281	60	56	b/	-	308
389	W. W. McQuatters	131	July 19, 1939	784	65	68	118	299	246	140	b/	-	442
391	do.	107	July 20, 1939	594	74	50	76	317	109	129	b/	-	391
c/392	M. M. Fisher	104	July 26, 1939	534	64	46	72	311	101	92	b/	5.5	349
393	W. J. Underwood	87	do.	887	94	64	142	378	181	220	b/	-	500
394	do.	83	Sept. 6, 1939	618	71	54	84	275	84	190	b/	-	398

a/ Sulphate less than 10 parts per million.  
b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 54.

Partial analyses of water from wells in Andrews County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Total hardness as CaCO <sub>3</sub> (calc.)
397	R. M. Means	100	July 31, 1939	789	89	69	102	403	181	150	b/	-	508
c/398	Humble Oil & Refining Co.	161	Aug. 4, 1939	581	72	58	57	281	128	128	b/	-	421
399	do.	202	do.	569	60	55	69	250	136	126	b/	-	374
404	J. S. Means	77	Aug. 23, 1939	1,203	110	114	155	397	349	280	b/	-	746
c/405	do.	114	do.	472	56	50	52	293	76	89	b/	4.9	346
406	H. G. Barnes	102	Aug. 9, 1939	1,144	124	92	126	232	542	146	b/	-	687
407	Kansas Trust Company	103	do.	1,272	80	87	247	378	457	210	b/	5.2	559
c/409	W.P.A. Test	23	Aug. 21, 1939	331	48	55	10	378	13	6	b/	13.0	344
414	Floreay Public School	93	July 21, 1939	868	96	55	129	268	335	116	b/	4.7	464
415	Mrs. S.E. Noley	63	Aug. 17, 1939	636	48	64	96	378	156	86	b/	-	385
416	S. E. Noley	60	July 21, 1939	691	75	52	95	275	238	96	b/	-	402
c/418	Oscar O. Lykes	62	do.	1,467	141	90	237	293	589	260	b/	6.0	720
420	E. R. Crews	64	Aug. 11, 1939	702	68	63	100	390	181	98	b/	-	429
c/421	Mrs. M. Mathew	89	do.	560	62	58	67	378	100	82	b/	5.3	396
422	J. A. McWilliams	85	Sept. 16, 1939	807	86	73	103	342	197	180	b/	-	515
c/423	Virginia Sherrod	81	Sept. 9, 1939	1,891	170	139	294	451	616	428	b/	5.4	996
424	J. F. Gettie & O. G. Ritle	93	do.	480	51	19	100	250	112	70	b/	-	207
425	J. E. Parker	85	Sept. 6, 1939	557	70	50	61	268	136	108	b/	-	381
c/426	J. L. Underwood	83	July 26, 1939	850	131	78	66	262	153	290	b/	3.1	648
429	Bettie Cox	81	do.	903	91	61	147	317	258	190	b/	-	478
430	B. F. Daugherty	125	do.	574	65	44	88	329	105	110	b/	-	342
c/431	University of Texas	85	July 31, 1939	1,066	56	56	250	403	278	180	48	-	370
433	do.	148	July 18, 1939	641	44	39	142	323	137	120	b/	-	269
434	Thos. H. Peary	61	do.	815	41	29	223	366	202	140	b/	-	223
c/440	Lera Battles	100	Aug. 1, 1939	1,053	85	44	229	275	347	210	b/	3.3	392
443	J. M. Speed	109	July 26, 1939	1,612	134	96	283	128	601	435	b/	-	729
444	J. S. Means	110	Aug. 1, 1939	1,413	147	77	243	256	425	395	b/	-	682
c/447	J. E. Parker	120	July 17, 1939	1,041	84	41	228	226	343	230	b/	3.9	381

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 54.

Partial analyses of water from wells in Andrews County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc. )	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Nitrate (NO <sub>3</sub> )	Fluoride (F)	Total hardness as CaCO <sub>3</sub> (calc.)
448	Homer L. Rentz	116	July 14, 1939	863	93	35	162	207	286	185	b/	-	377
c/449	University of Texas	113	Aug. 14, 1939	1,377	112	63	277	238	530	275	b/	2.8	540
455	S.W. Triplehorn	110	Sept. 8, 1939	1,115	112	56	193	183	429	235	b/	-	510
c/460	The Lotus Oil Company	750	do.	3,902	28	12	1,371	702	1,364	780	b/	1.5	120
463	B. B. Ralph	711	Sept. 22, 1939	4,380	27	6	1,562	839	1,485	885	b/	2.7	92
c/466	do.	450	do.	1,991	39	12	648	342	843	280	b/	1.3	148
c/468	Hugh Simms	81	July 28, 1939	209	54	13	10	220	12	11	b/	0.8	188
472	do.	82	do.	1,012	240	27	75	232	210	310	36	-	712
474	J. S. Kelley	36	Sept. 22, 1939	2,778	287	126	505	329	698	880	120	-	1,238
c/481	Harry Adams	Lake	July 31, 1939	137,318	2,640	2,980	44,160	268	23,406	64,000	-	-	18,850
c/482	University of Texas	Lake	Aug. 15, 1939	415,328	1,200	16,051	117,872	976	116,725	163,000	-	-	96,000

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 54.

Chemical Analyses--Continued  
Results are in milligrams equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Total hardness as CaCO <sub>3</sub> (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulphate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total dissolved solids (calc.)
302	University of Texas	53	Aug. 10, 1939	7.26	6.20	1.06	1.90	4.10	2.42	2.06	0.015	0.58	18.32
306	do.	87	Aug. 28, 1939	8.86	6.46	2.40	0.97	7.70	0.75	0.73	0.02	0.63	19.66
315	W. P. A. Test	15	Aug. 15, 1939	108.40	42.40	66.00	111.54	10.60	127.49	81.51	0.34	-	439.88
322	Kiah Howell	112	Aug. 8, 1939	9.56	4.46	5.10	5.20	5.20	5.85	3.45	0.26	-	29.52
330	University of Texas	55	July 14, 1939	13.14	8.24	4.90	9.62	6.00	7.64	8.18	0.26	0.64	45.52
336	R. S. Means	80	do.	6.30	4.24	2.06	5.19	4.50	3.02	3.72	0.10	0.15	22.98
345	J. S. Means	80	Aug. 2, 1939	5.74	3.48	2.26	2.17	3.70	1.25	1.66	0.07	1.23	15.82
360	L. E. Garden	151	Aug. 16, 1939	64.55	46.05	18.50	52.29	1.60	37.62	77.56	0.06	-	233.68
364	M. M. Fisher	73	July 20, 1939	32.86	13.76	19.10	27.14	4.80	19.82	34.97	0.15	0.26	120.00
379	J. S. Means	83	Aug. 3, 1939	7.66	3.96	3.70	8.65	3.80	6.68	5.50	-	0.32	32.62
387	O. C. Mitchell	105	July 19, 1939	13.32	5.16	8.16	14.41	5.40	12.43	9.59	0.31	-	55.46
392	M. M. Fisher	104	July 26, 1939	6.98	3.18	3.80	3.11	5.10	2.10	2.60	0.29	-	20.18
398	Humble Oil & Refining Co.	161	Aug. 4, 1939	8.42	3.62	4.80	2.47	4.60	2.67	3.61	-	-	21.78
405	J. S. Means	114	Aug. 23, 1939	6.92	2.82	4.10	2.24	4.80	1.58	2.51	0.26	-	18.32
409	W. P. A. Test	23	Aug. 21, 1939	6.88	2.38	4.50	0.44	6.20	0.27	0.17	0.68	-	14.82
418	Oscar O. Lykes	62	July 21, 1939	14.40	7.04	7.36	10.31	4.80	12.26	7.33	0.32	-	49.42
421	Mrs. M. Mathew	89	Aug. 11, 1939	7.92	3.12	4.80	2.96	6.20	2.09	2.31	0.28	-	21.76
423	Virginia Sherrod	81	Sept. 9, 1939	19.92	8.52	11.40	12.80	7.40	12.70	12.07	0.28	0.26	65.44
426	J. L. Underwood	83	July 26, 1939	12.96	6.56	6.40	2.87	4.30	3.19	8.18	0.16	-	31.66
431	University of Texas	85	July 31, 1939	7.40	2.80	4.60	10.85	6.60	5.79	5.08	-	0.77	36.50
440	Lera Battles	100	Aug. 1, 1939	7.84	4.24	3.60	9.97	4.50	7.22	5.92	0.17	-	35.62
447	J. E. Parker	120	July 17, 1939	7.62	4.22	3.40	9.92	3.70	7.14	6.49	0.21	-	35.08
449	University of Texas	113	Aug. 14, 1939	10.80	5.60	5.20	12.05	3.90	11.03	7.76	0.15	-	45.70
460	The Lotus Oil Company	750	Sept. 8, 1939	2.40	1.40	1.00	59.60	11.50	28.42	22.00	0.08	-	124.00
466	B. B. Ralph	450	Sept. 22, 1939	2.96	1.96	1.00	28.17	5.60	17.55	7.90	0.07	-	62.26
468	Hugh Simms	81	July 28, 1939	3.76	2.70	1.06	0.44	3.60	0.25	0.31	0.04	-	8.40
481	Harry Adams	Lake	July 31, 1939	377.00	132.00	245.00	1,920.02	4.40	487.62	1,805.00	-	-	4,594.04
482	University of Texas	Lake	Aug. 15, 1939	1,920.00	600.00	1,320.00	5,124.89	16.00	2,431.76	4,597.12	-	-	14,089.78

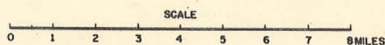
BASE COMPILED FROM  
LAND OWNERSHIP MAP  
AND FIELD NOTES

TEXAS BOARD OF  
WATER ENGINEERS  
ASSISTED BY  
U. S. GEOLOGICAL SURVEY



FIELD WORK BY  
JOE W. LANG LLOYD G. DAVIS  
PROJECT SUPERINTENDENTS  
W.P.A. PROJECTS 2071 & 13470

# MAP OF ANDREWS COUNTY, TEXAS SHOWING LOCATIONS OF WATER WELLS LISTED



— EXPLANATION —

- WELL WITH HANDPUMP, BUCKET, OR BAILER
- ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
- ⊙ WELL WITH PUMPING PLANT — 5 HORSE POWER OR LARGER
- ⋄ WELL DRILLED TO TEST FOR OIL OR GAS
- ◇ UNUSED WELL
- ⊠ TEST WELL DRILLED BY W.P.A. LABOR
- ◉ EARTHEN TANK OR RESERVOIR
- ⊖ SINK HOLE

