

ANDREWS COUNTY, TEXAS
(South Half)

* * *

Introduction

by

Samuel F. Turner

Associate Hydraulic Engineer

U. S. Geological Survey

The purpose of this survey was to obtain information concerning existing wells and the quantity and quality of water they yield, and to put down test holes where additional information was needed.

This project was part of a statewide Works Progress Administration project known as a "Statewide Inventory of Water Wells," sponsored by the State Board of Water Engineers. The Division of Ground Water of the U. S. Geological Survey cooperated in the technical direction of the project and the Bureau of Industrial Chemistry of The University of Texas furnished laboratory space and equipment and supervised the chemical analyses.

The analyses were made by chemists employed on Works Progress Administration Project 6507-5112 at Austin, Texas, sponsored by the State Board of Water Engineers. This release was typed and assembled by typists and draftsmen employed on this project.

The field work in Andrews County was started in July, 1936, and the south half was completed October 31, 1936. Work was discontinued on that date due to lack of funds before the north half of the county could be completed. This work was done as Project 6999 of District 18 of the Works Progress Administration, Big Spring, Texas. Joe W. Lang, a geologist, was project superintendent. Mr. Lang should be given credit for his interest in the work and for the many extra hours he spent on the project. The office of the Works Progress Administration in the Big Spring district made this work possible by constant help and cooperation.

This release contains the well records and well logs obtained by the project superintendent, logs of the test holes drilled by the W. P. A. labor, and the chemical analyses of water from privately owned wells and test holes. Locations of all wells and test holes listed are shown on the map in the back of the release.

The test wells were drilled by W. P. A. labor using a soil auger, drop auger, churn drill, and a sand bucket. Samples were collected at one-foot intervals by the well driller in charge of the party. The project superintendent studied these samples and compiled the logs.

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	11½ miles north	4, NE¼NW¼	4	University of Texas	1935	76	--	0
3	11½ miles northeast	3, NW¼SW¼	4	do.	--	90	--	0
4	10 miles northeast	9, SW¼SW¼	4	do.	--	58	6	0
7	15½ miles east	13, NE¼SW¼	8	do.	Old	74	6	2
12	19 miles east	33, NE¼NE¼	7	do.	1933	85	6	0
14	18 miles east	32, NE¼SE¼	39, T. 3 N.	J. E. Mabee	1934	71	6	0.5
15	do.	25, NW¼SE¼	39, T. 2 N.	do.	1933	70	6	0.5
17	16 miles east	16, NE¼NE¼	40, T. 3 N.	do.	Old	83	6	2
18	14½ miles east	18, SE¼SW¼	do.	Midland Farms Co.	Old	77	6	1
19	15½ miles east	3, NW¼NW¼	do.	do.	Old	67	--	1
21	13½ miles east	20, NW¼NW¼	do.	do.	1930	78	--	1
23	12 miles east	34, NE¼NW¼	do.	do.	--	55	6	1.5
24	10½ miles east	4, NE¼NE¼	41, T. 3 N.	do.	1923	91	--	0
26	9 miles east	13, NE¼NW¼	do.	do.	1923	98	--	1
31	6½ miles east	23, SE¼NE¼	3, P. S. L.	M. Q. McCarley	1924	98	--	1
32	5½ miles east	24, NE¼SE¼	3, T. 3 N.	Carl Gibson	1926	98	6	1
33	4½ miles east	24, NE¼NW¼	3, P. S. L.	W. D. McCarley	--	98	6	1
36	2 miles east	2, NW¼NW¼	A44, P. S. L.	W. J. Lay	--	89	--	1
37	In Andrews	24, SW¼NW¼	A45, P. S. L.	J. D. Mathews	--	100	6	0
38	1¼ miles southeast	9, NE¼NW¼	A44, P. S. L.	Leona Mitchell	Old	105	--	1
40	2¼ miles south	8, SW¼SE¼	do.	C. L. Ionis	1924	96	--	1
43	3½ miles southeast	14, NW¼SW¼	do.	J. W. Dearen	Old	102	--	0.5
44	6 miles southeast	5, N¾S¾	A19, P. S. L.	W. D. McCarley	1925	84	--	1
46	7 miles southeast	32, NW¼NW¼	3, P. S. L.	do.	--	83	--	0.5
<u>d/</u> 46a	6½ miles east	29, SE¼NW¼	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 <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
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	83.5	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 C. 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	6½ miles east	29, NE¼NW¼	3, P. S. L.	W. D. McCarley	--	96	6	1
49	8 miles east	27, SE¼SE¼	do.	Mary Quinn	--	69	--	0.5
50	9 miles east	15, NW¼SW¼	41, T. 3 N.	Midland Farms Co.	--	75	6	1
52	10½ miles east	1, NW¼NW¼	do.	do.	1924	58	6	0
53	14 miles east	8, NW¼SW¼	40, T. 2 N.	do.	--	33	6	2
55	15 miles east	3, NW¼NE¼	do.	J. E. Mabee	--	74	6	1
56	17 miles east	11, NE¼NW¼	do.	do.	--	63	6	0
57	16½ miles east	13, SE¼NW¼	do.	do.	--	42	6	1
58	do.	20, SW¼SW¼	do.	do.	1930	37	6	1
59	18 miles east	34, SW¼NW¼	do.	do.	--	51	6	1.5
60	18 miles southeast	43, NW¼NE¼	do.	do.	1934	68	6	1
61	20 miles southeast	47, SW¼NW¼	40, T. 1 N.	do.	--	54	6	1
62	20½ miles southeast	10, SW¼SW¼	do.	Midland Farms Co.	--	103	6	0.5
63	21½ miles southeast	23, NE¼NW¼	do.	do.	--	57	6	0.5
64	22 miles southeast	25, SW¼SW¼	do.	do.	192-	42	--	0
66	19½ miles southeast	5, NW¼SW¼	41, T. 1 N.	do.	--	37	--	0.5
69	17 miles southeast	10, NE¼NW¼	do.	do.	--	78	--	1
73	14½ miles southeast	15, NE¼NE¼	41, T. 2 N.	do.	--	52	--	0.5
74	15 miles southeast	3, SW¼SE¼	do.	do.	--	35	6	1.5
75	15½ miles southeast	24, SE¼SW¼	40, T. 2 N.	do.	--	40	6	1
79	12 miles southeast	11, NW¼SE¼	41, T. 2 N.	do.	--	82	6	0
82	11 miles southeast	7, SE¼SE¼	2, University Lands	University of Texas	1936	89	--	0
83	9½ miles southeast	9, SE¼SE¼	do.	do.	Old	90	--	2.5
85	11 miles southeast	3, NE¼NW¼	42, T. 2 N.	Midland Farms Co.	--	100	6	0.5
86	13½ miles southeast	30, SW¼SE¼	41, T. 2 N.	do.	--	85	6	0
87	14½ miles southeast	33, SE¼NE¼	do.	do.	--	81	6	2
88	15½ miles southeast	25, NW¼SW¼	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	85.9	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	85.9	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 $\frac{1}{4}$ NW $\frac{1}{4}$	41, T. 1 N.	Midland Farms Co.	--	91	6	2
90	19 miles southeast	28, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	25	6	0
91	17 $\frac{1}{2}$ miles southeast	5, SE $\frac{1}{4}$ NE $\frac{1}{4}$	42, T. 1. N.	do.	--	70	6	2.5
95	14 $\frac{1}{2}$ miles south	40, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	82	6	1
97	13 $\frac{1}{2}$ miles southeast	38, SE $\frac{1}{4}$ SE $\frac{1}{4}$	1, University Lands	University of Texas	1934	90	--	0
98	12 $\frac{1}{2}$ miles southeast	2, NE $\frac{1}{4}$ SW $\frac{1}{4}$	42, T. 2 N.	Midland Farms Co.	--	92	6	0
99	11 $\frac{1}{2}$ miles southeast	30, SE $\frac{1}{4}$ SE $\frac{1}{4}$	1, University Lands	University of Texas	1935	85	--	0
100	12 $\frac{1}{2}$ miles south	31, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	Old	70	6	1
102	do.	32, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	1934	110	6	0.5
105	10 miles south	25, SW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	--	106	--	0.5
107	8 $\frac{1}{2}$ miles southeast	15, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	1935	92	--	0
111	6 $\frac{1}{2}$ miles south	4, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	Old	70	--	2
112	6 $\frac{1}{2}$ miles southeast	3, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	1935	100	--	0
114	7 $\frac{1}{2}$ miles southeast	1, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	64	--	2
115	5 miles southeast	26, NW $\frac{1}{4}$ SW $\frac{1}{4}$	A44, P. S. L.	H. C. Barnes	--	105	--	1
119	2 $\frac{3}{4}$ miles southwest	7, SW $\frac{1}{4}$ 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 $\frac{1}{4}$ SE $\frac{1}{4}$	A46, P. S. L.	do.	--	127	6	1.5
d/123	3 miles west	15, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	do.	1934	112	6	1
124	4 $\frac{1}{4}$ miles west	14, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	W. J. Harris	--	102	6	0
d/126	3 miles southwest	1, SW $\frac{1}{4}$ SW $\frac{1}{4}$	A43, P. S. L.	J. E. Parker	--	103	6	1.5
128	4 $\frac{1}{4}$ miles west	3, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. R. McClouff	Old	144	--	2
130	5 $\frac{1}{2}$ miles west	21, NE $\frac{1}{4}$ SW $\frac{1}{4}$	A46, P. S. L.	Hayden Miles	--	29	6	0.5
131	6 $\frac{1}{2}$ miles west	22, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	Old	44	--	1
135	8 $\frac{1}{2}$ miles west	9, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Dr. R. H. Lendley	192-	83	--	1
136	do.	8, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	Old	83	6	1
d/138	7 miles west	6, SE $\frac{1}{4}$ 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 Beds".
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	81.8	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.) \pm /
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.	--	500	6	--
d/157	20 miles southwest	3, SW $\frac{1}{4}$ NW $\frac{1}{4}$	A54, P. S. L.	J. E. Parker	1923	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 b/	Use of water c/	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	e/	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	36.2	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	89.6	Sept. 24, 1936	C,W	S	do.	Concrete curb. Strong supply reported in sand. Howell.
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.) $\frac{a}{b}$
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 C. 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	--

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				
179	31.4	Aug. 18, 1936	C, W	D, S	Rolling	Wood curb. Reported 3.8 feet drawdown 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	45.8	do.	None	N	do.	Do.
187	33.7	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 Wahlenmaier-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.) <u>a/</u>
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, Parmer 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. P. E. 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.

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, 6 $\frac{1}{2}$ 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

	Thickness	Depth
<u>Driller's log of well 119a</u>		
Honolulu Oil Corp., J. E. Parker No. 1, 2 $\frac{1}{2}$ 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

	Thickness	Depth
<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- - - - -		4428

	Thickness	Depth
<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, 4½ 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- - - - -	55	1140
Red beds - - - - -	25	1165
Red mud- - - - -	13	1178
Dry sand - - - - -	12	1190
Red mud- - - - -	27	1217
Red sand - - - - -	18	1235
Sandy shale- - - - -	60	1295
Red mud- - - - -	70	1365
Red beds - - - - -	3	1368
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, 5½ 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- - - - -		4688

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 142</u>		
Deep Rock Oil Co., B. L. King No. 1, 6½ 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 Medder, 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

(Continued on next page)

Table of Drillers' Logs, Andrews County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 165--Continued</u>		
Red rock - - - - -	270	950
Red shale- - - - -	45	995
Red sand - - - - -	5	1000
TOTAL DEPTH- - - - -		4206

<u>Driller's log of well 210</u>		
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

<u>Driller's log of well 210a</u>		
Carter and Zweifel, Jax M. Cowden 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)
<u>Driller's log of well 210a--Continued</u>		
Red mud- - - - -	55	810
Red 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

<u>Driller's log of well 211</u>		
Gulf Production Co., J. S. Kelley "A" No. 1, 24 $\frac{1}{2}$ 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

(Continued on next page)

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

Driller's log of well 212
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

Driller's log of well 213

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

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 214</u>		
L. G. Stagner et al. Cora C. George No.1, 15½ 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

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 215</u>		
Mid Continent Pet. Corp., M. M. Fisher No. 1, 8½ 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

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 216-2162</u>		
Humble Oil and Refining Co., J. S. Means No. 9, (5½) 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)
--	---------------------	-----------------

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)
--	---------------------	-----------------

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

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- - - - -	2	2
Limy white marl and sand -	8	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 $\frac{1}{4}$ 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 (feet)	Depth (feet)
<u>Well 22</u>		
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

<u>Well 25</u>		
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

<u>Well 28</u>		
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 - - - - -	3	3
Caliche - - - - -	2	5
Rock - - - - -		5

<u>Well 29</u>		
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

<u>Well 30</u>		
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

<u>Well 34</u>		
Flat, side county road, SW $\frac{1}{4}$ 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

<u>Well 35</u>		
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 (feet)	Depth (feet)
<u>Well 39</u>		
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

<u>Well 41</u>		
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

<u>Well 42</u>		
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

<u>Well 45</u>		
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

<u>Well 48</u>		
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

<u>Well 51</u>		
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- - - - -	2	2
Solid lime rock- - - - -		2
<u>Well 54</u>		
Flat, J. E. Mabee and Pyle tract, SW $\frac{1}{2}$ SW $\frac{1}{4}$ 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 $\frac{1}{4}$ NW $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ SE $\frac{1}{4}$ 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 $\frac{1}{4}$ NW $\frac{1}{4}$ 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 $\frac{1}{4}$ NE $\frac{1}{4}$ 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 $\frac{1}{4}$ NE $\frac{1}{4}$ 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 $\frac{1}{4}$ SE $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ SE $\frac{1}{4}$ 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 $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, blk. 41, T. 2N, 10 $\frac{1}{2}$ miles southeast of Andrews.		
Loose reddish-brown sand- - - - -	3	3

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 80--Continued</u>		
Red clay and sand - - - - -	6	9
Sandy yellow clay- - - - -	2	11
Caliche- - - - -		11
<u>Well 81</u>		
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
<u>Well 84</u>		
Flat, University of Texas, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 9, blk. 2, University Lands, 9 $\frac{1}{2}$ miles southeast of Andrews.		
Sandy brown, limy clay topsoil- - - - -	2	2
Caliche rock - - - - -		2
<u>Well 92</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SW $\frac{1}{2}$ 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
<u>Well 93</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SW $\frac{1}{2}$ 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
<u>Well 94</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SW $\frac{1}{2}$ 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)
<u>Well 96</u>		
Rolling, side of State Highway 51, SE $\frac{1}{2}$ SE $\frac{1}{2}$ 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
<u>Well 101</u>		
Rolling, side of State Highway 51, S $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 32, blk. 1, University Lands, 12 $\frac{1}{2}$ miles south of Andrews.		
Sandy red loam- - - - -	3	3
Yellow limy clay and sand- - - - -	3	6
Red sand and clay - - - - -	6	12
White sand- - - - -	5	17
Caliche- - - - -		17
<u>Well 103</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 29, blk. 1, University Lands, 11 $\frac{1}{2}$ miles south of Andrews.		
Sandy red topsoil- - - - -	3	3
Caliche rock- - - - -		3
<u>Well 104</u>		
Rolling, side of State Highway 51, SE $\frac{1}{2}$ SW $\frac{1}{2}$ 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
<u>Well 106</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SW $\frac{1}{2}$ 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
<u>Well 108</u>		
Rolling, side of State Highway 51, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 16, blk. 1, University Lands, 8 $\frac{1}{2}$ miles south of Andrews.		
Sandy red topsoil- - - - -	5	5

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
--	---------------------	-----------------

Well 108--Continued

Brown limy sand- - - - -	1	6
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)
--	---------------------	-----------------

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 $\frac{1}{4}$ 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 133</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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ NE $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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 $\frac{1}{4}$ 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, M. A. Thornberry tract, SW $\frac{1}{4}$ 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 (feet)	Depth (feet)
--	---------------------	-----------------

Well 170

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- - - - -	2	3
Limy brown sand- - - - -	1	4
Sandy red clay - - - - -	4	8
Sandy white lime - - - - -	17	25

Well 172

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

Well 174

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 - - - - -	3	3
Sandy red clay - - - - -	7	10
Sandy, white, limy clay- -	2	12

Well 175

Rolling, University of Texas, NE $\frac{1}{4}$ 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

Well 176

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

Well 180

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 (feet)	Depth (feet)
--	---------------------	-----------------

Well 184

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 - - - - -		3

Well 186

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

Well 191

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

Well 193

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

Well 195

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

Well 198

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

Well 200

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)
--	---------------------	-----------------

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. R. Co. survey, 22 $\frac{1}{2}$ miles southwest of Andrews.

	Thickness (feet)	Depth (feet)
--	---------------------	-----------------

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

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 ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (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.	349	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	268	170	148	366
32	Carl Gibson	98	Aug. 10, 1936	709	-	-	-	293	172	144	-
33	W.D. McCarley	98	do.	634	-	-	-	268	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 Quinn	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.

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 ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (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 ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (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. McClouitt	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	138	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.

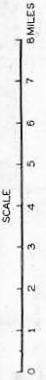
Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
189	University of Texas	56	Sept. 7, 1936	316	-	-	-	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	-

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

TEXAS BOARD OF
WA 3 ENGINEERS
U.S. G. 10000 SURVEY

FIELD WORK BY
JOE W. LANG
PROJECT SUPERINTENDENT
W.P.A. PROJECT 2071

BASE COMPILED FROM
LAND OWNERSHIP MAP
AND FIELD NOTES



- EXPLANATION -
- WELL WITH HANDPUMP BUCKET OR BAIER
 - ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ◇ WELL DRILLED TO TEST FOR OIL OR GAS
 - TEST WELL DRILLED BY W.P.A. LABOR
 - ◊ UNLINED WELL
 - IMPROVED ROAD
 - - - UNIMPROVED ROAD

