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PANOLA COUNTY, TEXAS

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

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WORKS PROGRESS ADMINISTRATION

GROUND-WATER SURVEY

PROJECT 2075

* * *

W. M. Lyle,
Project Superintendent

* * *

Analyses made, data assembled and
report mimeographed by
WORKS PROGRESS ADMINISTRATION
PROJECT 6507-5112

* * *

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

* * *

Austin, Texas
Apr. 26, 1938

PANOLA COUNTY, TEXAS

* * *

Introduction

by

Samuel F. Turner

Associate Hydraulic Engineer

Geological Survey

United States Department of the Interior

* * *

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 Geological Survey, United States Department of the Interior, 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. Typists employed on this project typed and assembled this release.

The field work in Panola County was started on December 11, 1936, and completed February 27, 1937. This work was done as Project 2075 of District 2 of the Works Progress Administration, Tyler, Texas. W. M. Lyle, a geologist, was project superintendent. Mr. Lyle should be given credit for his interest in the work and for the extra time he spent on the project. The Tyler office of the Works Progress Administration made this work possible by their 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. Locations of all wells 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 superintendents studied these samples and compiled the logs.

* * *

Records of wells in Panola County, Texas

(All wells are dug unless otherwise indicated in "Remarks" column.)

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

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
3	16 $\frac{1}{2}$ miles northwest	James Peel	W. W. Phillips	--	1900	41	--
4	14 miles northwest	do.	Arthur Kuykendall	Tom Foster	1927	50	36
6	13 $\frac{1}{2}$ miles northwest	Wesley Goodwin	Paul Bath	--	--	9	36
7	15 miles northwest	Ira M. Freeman	Aaron Morton	--	--	30	35
8	16 miles northwest	A. Taylor	W. B. Pelham Est.	--	--	30	30
9	17 miles northwest	Josiah Marshall	Lester S. Smith	--	1935	17	36
a/ 10	17 miles north	D. C. Moore	do.	Roy Swales	1935	1,800	--
d/ 11	16 miles north	Bailey Anderson	Ella Briggs	J. B. Welch	1936	24	16
12	13 miles northwest	Abel Bowles	J. J. Hardy	Petty Geophysical Co.	1936	85	3
13	do.	do.	do.	--	1924	44	36
15	10 $\frac{1}{2}$ miles northwest	Wm. Hamilton	Aubrey Phillips	--	--	38	30
d/ 16	do.	do.	D. L. Langley	--	1875	50	8
17	10 miles northwest	David Morris	M. L. Metcalf	M. L. Metcalf	1897	16	36
18	10 $\frac{1}{2}$ miles north	John Butler	E. L. Briggs	--	1927	42	36
21	13 miles north	Antwine Duboise, Sr.	Mrs. L. M. Yarbrough	Harrison Speed	1934	20	36
d/ 22	13 $\frac{1}{2}$ miles north	do.	Ella Briggs	--	1912	2,862	6
23	11 miles north	John Laramore	W. E. Lee	Juda Duke	1932	56	30
24	9 $\frac{1}{2}$ miles north	Antwine Duboise, Jr.	T. H. Davidson	--	--	31	36
26	do.	do.	Mrs. N. J. Majors	--	--	57	8
27	8 $\frac{1}{2}$ miles north	Antwine Duboise, Sr.	Gus & Gladys Parker	--	1921	46	36
29	9 miles north	do.	J. W. Cooke	--	--	47	60
30	do.	S. B. Hendricks	Marshall Lumber Co.	--	1933	20	2
31	10 miles north	Andrew Yeast	J. W. Cooke	-- Proctor	1936	16	1 $\frac{1}{2}$
d/ 34	14 miles north	Felix G. Timmin	Collin Sewell	--	1863	58	36
35	13 miles north	do.	Tom Beaty	--	1923	19	36

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

b/ A, air lift; B, bucket; C, cylinder; E, electric; H, hand.

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

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
3	2.4	40.1	Jan. 12, 1937	B,H	D,S	Hillside	Wood curb.
4	3.5	49.6	Jan. 18, 1937	B,H	D,S	Hilltop	Wood curb; no casing.
6	2	3.6	do.	B,H	D,S	Valley	Do.
7	2.7	29.6	Jan. 12, 1937	B,H	D,S	Hillside	Concrete curb and casing.
8	3	31.2	do.	B,H	D,S	Hilltop	Do.
9	3	18.0	do.	B,H	D,S	River valley	Wood curb and casing.
10	--	Flows	do.	None	--	Valley	Drilled well. Estimated flow, 100 gallons a minute. Located in Harrison County.
11	3	19.3	do.	B,H	D,S	River valley	Wood curb and casing. Located in Harrison County.
12	0.5	74.4	do.	None	N	Hilltop	Drilled well. Steel curb; 65 feet steel casing at top.
13	2.8	45.7	do.	B,H	D,S	do.	Brick curb and casing.
15	2.6	34.1	Apr. 16, 1937	B,H	D,S	do.	Wood curb; concrete casing.
16	2	39.8	Apr. 15, 1937	B,H	D,S	do.	Drilled well. Vitriified clay curb and casing.
17	3.3	7.2	Apr. 16, 1937	B,H	S	do.	Wood curb and casing.
18	5.5	41.5	Jan. 19, 1937	B,H	D,S	do.	Wood curb; no casing.
21	2.8	17.1	Apr. 15, 1937	B,H	D,S	Hillside	Wood curb and casing.
22	--	Flows	Jan. 12, 1937	None	--	Valley	Oil test. See log.
23	3.6	53.6	Jan. 20, 1937	B,H	D,S	Hilltop	Wood curb; concrete casing.
24	--	14.7	Jan. 19, 1937	B,H	D,S	--	Do.
26	1.8	53.5	Jan. 18, 1937	B,H	D,S	Hilltop	Wood curb and casing.
27	4	43	Jan. 20, 1937	B,H	D,S	do.	Do.
29	3.1	48.2	Jan. 19, 1937	B,H	D,S	do.	Wood curb; brick casing.
30	3.5	10	Mar. 1935 e/	C,H	D	Valley	Bored well. Steel casing.
31	1.4	10	Feb. 1935 e/	C,H	D	Hilltop	Driven well. Steel curb and casing.
34	3	32.2	Feb. 25, 1937	B,H	D,S	do.	Brick curb and casing.
35	2.6	5.4	Mar. 1, 1937	B,H	--	--	Wood curb and casing.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 36	16 miles north	Sylvester Luna	Asa Johnson	--	1839	30	36
37	do.	Edward Pease	do.	--	--	28	36
d/ 39	12 $\frac{1}{2}$ miles north	L. T. Hammer	U. S. Government	--	1937	22	36
43	11 miles north	J. H. D. Richardson	Annie Black	--	--	23	2
d/ 45	10 miles north	Jesse M. Hill	Panola County	--	--	39	3
46	11 miles northeast	J. S. White	A. J. Sutlive	--	1935	24	--
d/ 47	7 miles northeast	John F. Cheers	Waterman Lumber Co.	Burt, Humphrey, & Hunter	1927	2,458	6
48	10 $\frac{1}{2}$ miles northeast	A. T. Nichols	L. I. Ray	--	1932	22	36
51	11 miles northeast	P. Martin	W. H. Carter	--	1897	17	36
53	12 miles northeast	Winnie Mann	T. J. Wooten Est.	Southern Oil Corp.	1933	1,900	6
54	do.	do.	do.	--	--	--	--
56	do.	do.	Mrs. R. I. Hill	--	1900	75	--
57	12 $\frac{1}{2}$ miles northeast	Reubin Collins	J. C. Liston	J. C. Liston	1911	14	24
58	14 miles northeast	Daniel Tuttle	U. S. Government	U. S. Resettlement Adm.	1936	25	36
59	16 $\frac{1}{2}$ miles northeast	do.	Annie Harris Est.	--	--	20	36
60	17 $\frac{1}{2}$ miles northeast	John Findley	J. M. Furr	J. M. Furr	1892	28	36
61	19 $\frac{1}{2}$ miles northeast	J. T. Copeland	E. C. Cooke	S. A. Cooke	1835	16	36
d/ 62	18 miles northeast	Bailey Anderson	C. T. Becknell	--	1936	6,000	12
63	do.	do.	do.	C. T. Becknell	1932	35	36
65	16 miles northeast	James Smith	D. R. C. Hill	--	--	18	36
67	14 $\frac{1}{2}$ miles northeast	do.	P. D. Roguemore	--	--	47	3
d/67a	13 $\frac{1}{2}$ miles northeast	Wm. B. Culver	-- Hudson	Southern Prod. Corp.	1933	2,045	6-5/8
68	12 $\frac{1}{2}$ miles northeast	John Farmer	Lewis Willis	J. M. Willis	--	11	36
72	13 miles northeast	Wm. A. Fressley	Mrs. Lucy C. Holt	Sam Davis	1933	32	36
73	15 $\frac{1}{2}$ miles northeast	C. G. Bradberry	Robert Johnson	--	1934	17	--
d/73a	16 miles northeast	Ben Jordan	do.	Humble Oil & Ref. Co.	1921	3,006	12 $\frac{3}{8}$
d/73b	15 miles northeast	James Johnson	-- Cummings	J. H. Dickson	1927	2,058	10
74	14 miles northeast	Hancock Smith	J. Chandler	Cal Cooper	--	20	36

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
36	3.4	8.2	Mar. 1, 1937	B,H	N	Hillside	Wood curb; brick casing. Located in Harrison County.
37	3.5	27.0	do.	B,H	--	Hilltop	Brick casing. Located in Harrison County.
39	1.1	20	Feb. 25, 1937	B,H	D	do.	Wood curb and casing.
43	3.6	24.7	Jan. 19, 1937	C,H	D,S	Valley	Driven well. Steel casing.
45	0.8	11.9	Feb. 25, 1937	--	--	Hilltop	Bored well. Steel curb and casing.
46	2.8	21.2	do.	B,H	D,S	--	Wood curb and casing.
47	--	--	--	None	N	--	Oil test. See log.
48	3	11	Jan. 21, 1937	B,H	D,S	Hilltop	Wood curb; concrete casing.
51	2.8	12.6	Feb. 25, 1937	B,H	D,S	do.	Wood curb and casing.
53	3	Flows	do.	None	S	--	Steel casing. Estimated flow, 100 gallons a minute from 300 to 400 feet
54	--	Flows	--	--	--	--	Drilled well.
56	2.6	21.2	Feb. 25, 1937	B,H	--	Hilltop	Wood curb; concrete casing.
57	2	7.8	do.	B,H	D,S	do.	Vitrified clay curb and casing.
58	--	18.1	Mar. 2, 1937	None	--	--	No casing.
59	2.8	5.6	do.	B,H	D,S	Hilltop	Brick curb; no casing.
60	--	24.9	Feb. 19, 1937	B,H	D,S	do.	Wood curb; brick casing. Located in Harrison County.
61	2.8	8.7	do.	B,H	D,S	do.	Do.
62	--	--	do.	B,H	N	--	Drilled well. No casing.
63	6.6	39.3	do.	B,H	D	Hilltop	Wood curb; concrete casing.
65	2.5	10.9	do.	B,H	--	do.	Wood curb; brick casing.
67	0	Flows	Mar. 2, 1937	None	--	--	Drilled well. Steel curb and casing.
67a	--	--	--	None	N	--	Oil test. See log.
68	3	7.0	Jan. 26, 1937	B,H	D,S	Hilltop	Wood curb; no casing.
72	2	29.9	Feb. 24, 1937	--	D,S	do.	Brick curb and casing.
73	3.3	10.3	do.	B,H	D,S	do.	Wood curb.
73a	--	--	--	None	N	--	Oil test. See log.
73b	--	--	--	None	N	--	Do.
74	3	10.3	Jan. 26, 1937	B,H	D,S	Hilltop	Wood curb.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
75	15½ miles northeast	Wm. A. Pressley	J. W. Stroud	--	1894	18	--
76	do.	do.	Church of Deberry	--	--	20	36
78	18 miles northeast	J. T. Myrick	W. R. Davis	--	--	31	--
d/ 79	20 miles northeast	Thomas Alstone	J. M. Furrh	Mo-Tex Oil Co.	1937	6,175	12½
80	20 miles northeast	do.	Roland Anderson	Roland Anderson	1918	23	36
81	do.	Jane Tharpe	D. C. Griffin	--	--	13	36
82	24 miles northeast	James Shandoin	G. B. Jenning	Sandy Hawkins	--	12	36
d/ 84	20½ miles northeast	Jesse M. Birdsong	T. C. Adams	--	--	--	--
85	do.	do.	do.	--	--	110	--
d/ 86	do.	Isom Hatcher	do.	--	--	--	--
87	19½ miles northeast	James Matthews	Irma Hightower	--	--	32	36
88	19 miles northeast	A. T. McGee	A. D. Johns	--	--	14	36
89	19½ miles east	Sam B. Lacy	J. C. Pace	--	1937	23	30
90	18 miles east	M. M. Clark	Mrs. Jesse Holland	--	--	18	36
91	17 miles east	Alford Johnson	W. J. Johnson	W. J. Johnson	1911	21	36
92	19 miles east	Sec. 31, T.14N., R. 16W.	A. B. Erwin	--	1934	44	36
d/ 93	do.	--	Ligh Haven Saw Mill Co.	Ligh Haven Saw Mill Co.	1926	300	6
d/ 94	18 miles east	Hopkins Wolf	W. B. Johnson	Magnolia Pet. Co.	1922	3,000	--
95	15½ miles east	J. B. Wells	A. J. Mayfield	A. J. Mayfield	1910	32	36
98	14½ miles east	John Husband	N. T. Powell	Nelson Powell	--	42	36
99	15 miles east	Vashti Gibbs	Dewey McMillan	W. C. McMillan	1897	35	40
101	13 miles east	Adam Lagrone	H. P. Barnett	H. P. Barnett	1915	23	--
102	do.	do.	A. A. Alexander	--	--	24	36
103	12 miles east	do.	Lagrone Bros.	-- Geophysical Co.	1936	133	3
104	11½ miles east	B. M. Lewis	E. F. Watkins	--	--	28	36
109	16 miles east	Samuel Pierce	H. P. Dunahoe	--	1933	13	36
110	15 miles east	do.	B. J. Butler	--	1936	15	36

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) <u>a/</u>	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
75	3	18.7	Feb. 24, 1937	B,H	D	Hilltop	Wood curb; brick casing.
76	3	5.7	Jan. 26, 1937	B,H	D	do.	Wood curb; no casing.
78	--	29.1	do.	--	--	do.	
79	--	--	--	None	N	--	Oil test. See log.
80	--	20.3	Feb. 19, 1937	B,H	D,S	Hilltop	Wood curb and casing.
81	2.5	5.8	Jan. 26, 1937	--	--	--	Wood curb; brick casing.
82	3	2.8	do.	B,H	--	Hillside	
84	--	--	--	A,-	--	--	Drilled well.
85	--	--	--	A,-	--	--	Drilled well. Steel casing.
86	--	--	--	A,-	--	--	Drilled well.
87	4.2	19.1	Feb. 24, 1937	B,H	D,S	Hilltop	Wood curb and casing. Tenant reported fails in drought.
88	2	3.3	do.	B,H	S	Hillside	Wood curb; no casing.
89	2.8	11.5	Jan. 21, 1937	B,H	D,S	do.	Wood curb; brick casing. Tenant reported supplied 30 head of stock,
90	4	4.7	do.	B,H	D,S	do.	Wood curb; concrete casing. summer 1936.
91	2.6	15.2	Jan. 28, 1937	B,H	D,S	--	Wood curb; no casing.
92	2.7	25.8	do.	B,H	D,S	--	Wood curb; concrete casing. Located in De Soto Parish, Louisiana.
93	--	Flows	Feb. 1933 <u>e/</u>	None	N	Valley	Drilled well. Steel casing. Formerly supplied sawmill. Located in De
94	--	Flows	Jan. 1934 <u>e/</u>	None	N	--	Drilled well. Steel casing. Soto Parish, Louisiana.
95	2.9	23.7	Jan. 28, 1937	B,H	D,S	Hilltop	Concrete curb and casing.
98	4	37.4	do.	B,H	D,S	do.	Do.
99	2.9	18	Jan. 27, 1937	B,H	D,S	do.	Wood curb and casing.
101	3	17	Feb. 27, 1937	B,H	D,S	Hillside	Do.
102	4.8	25.4	Jan. 25, 1937	B,H	D,S	Hilltop	Wood curb; no casing.
103	1.5	44.5	Jan. 22, 1937	C,E	D	do.	Drilled well. Steel curb and casing. Water reported by owner in "pepper
104	2	18.8	do.	B,H	D,S	do.	and salt" sand, 123 to 133 feet. Wood curb.
109	2.8	7.2	Jan. 21, 1937	B,H	D,S	do.	Wood curb; no casing.
110	3	10.2	do.	B,H	D,S	--	Wood curb.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
111	15 miles east	Wm. English heirs	T. E. Hickey	--	1937	--	36
d/112	15 miles northeast	do.	W. E. Gulley	--	1934	14	36
115	13 miles northeast	do.	J. C. Guill	Sam Davis	--	24	36
117	11 miles east	John Pace	Jasper Thomas	Jasper Thomas	1923	32	36
118	8 miles east	S. T. R. R. Co.	E. A. Hull	-- Geophysical Co.	1936	18	3
119	7 ¹ / ₂ miles east	Nathan Davis	do.	do.	1936	42	5
120	7 miles east	do.	do.	do.	1936	16	3
126	5 ¹ / ₂ miles northeast	M. G. Gray	E. I. Williamson	C. E. Jones	1916	30	36
128	6 miles east	W. F. Sparks	E. A. Hull	W. F. Groves	1933	17	1
129	6 miles southeast	Augustus Smith	Alpha Burns	--	1935	16	36
130	6 miles southeast	Niet Anderson	H. H. Choate	Dash Jones	1904	23	36
131	5 ¹ / ₂ miles southeast	do.	G. F. Anderson	--	1931	48	36
133	4 ¹ / ₂ miles southeast	W. F. English	C. T. Moore	--	1900	19	36
135	3 ¹ / ₂ miles southeast	Willis Vaughn	L. M. Hunt	--	--	19	36
136	3 miles southeast	do.	D. T. Holmes	--	1865	22	36
137	2 ³ / ₄ miles southeast	do.	D. Purney Moore	--	1886	30	36
138	3 miles southeast	do.	Mrs. -- Cwens	--	--	23	36
d/140	3 miles south	do.	Lee Ferguson	--	1936	42	3
143	3 ¹ / ₄ miles south	David Wilkerson	S. L. Holmes	--	--	30	36
144	4 miles southwest	Lucinda Shields	Dr. I. E. Pirkle	--	1892	19	36
145	3 ¹ / ₄ miles southwest	do.	do.	--	1876	45	36
146	2 ³ / ₄ miles southwest	A. Moorman	Glenn Pippen	--	1890	21	30
147	2 miles southwest	do.	Dr. J. A. Daniels Est.	--	--	69	8
148	³ / ₂ mile west	George Goodwin	G. A. Menner	-- Thompson	1900	25	36
d/150	At Carthage	do.	City of Carthage	Boat Bros.	1926	255	8
d/151	do.	do.	do.	B. Ross	1919	255	8
152	¹ / ₂ mile east	do.	F. M. Eubanks	J. F. Benton	1901	16	36

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
111	3	14.1	Feb. 24, 1937	B,H	D	Hilltop	Wood curb; no casing.
112	4.3	9.4	do.	B,H	D	Hillside	Wood curb; brick casing.
115	3	22.7	Jan. 21, 1937	B,H	D,S	Hilltop	Wood curb; concrete casing.
117	2.4	11.7	do.	B,H	D,S	do.	Wood curb; no casing.
118	0.5	7.1	Feb. 23, 1937	None	N	Valley	Drilled well. Steel curb and casing.
119	0.5	12.5	do.	None	N	Hilltop	Do.
120	0	12.0	do.	None	N	do.	Do.
126	2	31.2	Dec. 16, 1936	B,H	D,S	Valley	Concrete curb and casing.
128	3	10	Feb. 1933 e/	C,H	D,S	Hilltop	Driven well. Steel casing.
129	2.8	16.8	Jan. 11, 1937	B,H	D,S	Hillside	Wood curb; no casing.
130	2.6	24.5	do.	B,H	D,S	--	Concrete curb and casing.
131	2	49.6	Jan. 8, 1937	B,H	D,S	Hilltop	Do.
133	6.6	17	Jan. 7, 1937	B,H	D,S	Hillside	Wood curb and casing.
135	3	4.8	do.	B,H	D,S	do.	Concrete curb and casing.
136	2.6	20.4	do.	B,H	D,S	Hilltop	Brick curb and casing.
137	3	31.6	Jan. 6, 1937	B,H	D,S	do.	Wood curb; no casing.
138	2.3	13.3	Jan. 4, 1937	B,H	D,S	do.	Do.
140	0.6	Flows	Jan. 6, 1937	None	--	Valley	Drilled well. Steel curb and casing. Estimated flow, 1 gallon a minute.
143	2.9	39.2	Dec. 15, 1936	B,H	D,S	Hilltop	Galvanized pipe curb; no casing.
144	2	18.5	do.	B,H	D,S	Fillside	Wood curb; brick casing.
145	3	44.9	do.	B,H	D,S	Hilltop	Concrete curb and casing.
146	2	19.1	do.	B,H	D,S	--	Concrete curb; brick casing.
147	3	58.7	Dec. 16, 1936	B,H	D,S	Hilltop	Bored well. Wood curb; vitrified clay casing.
148	2.7	21.7	Dec. 15, 1936	B,H	D,S	do.	Brick curb and casing.
150	4	--	Dec. 24, 1936	A,-	P	--	Drilled well. Steel curb and casing. Estimated yield, 200 gallons a minute.
151	0	35	Nov. 1919 e/	C,-	P	Hilltop	Drilled from sand, 215 to 255 feet. well. Steel casing. Estimated yield
152	2.6	12.7	Jan. 6, 1937	B,H	D,S	do.	Wood and concrete curb; tile casing. 200 gallons a minute.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
154	$\frac{1}{3}$ mile east	George Goodwin	Levi Hudson	--	--	25	36
159	$1\frac{1}{2}$ miles east	do.	J. T. Cooke	-- Oil Co.	1917	--	12
160	do.	do.	do.	--	1927	17	36
162	$2\frac{1}{2}$ miles east	August Everly	Wallace Pipkin	Wallace Pipkin	1933	21	--
163	$2\frac{1}{2}$ miles southeast	Willis Vaughn	J. C. Harrison	--	--	11	36
164	$3\frac{1}{2}$ miles east	G. W. Mallory	E. C. Hull	--	--	23	36
6/165	$3\frac{1}{2}$ miles northeast	George Brown	J. F. Woods	--	--	--	--
167	$1\frac{1}{4}$ miles northeast	Wm. Thompson	A. Hart	--	--	22	36
6/168	2 mile east	George Goodwin	F. W. Baker	Harry Hines, et al.	1928	3,220	--
170	$2\frac{1}{4}$ miles north	Wm. Scantlin	J. E. Whitaker	--	1908	11	36
171	$3\frac{1}{2}$ miles north	Samuel White	E. T. Mangham	--	--	28	36
172	$6\frac{1}{2}$ miles north	Wm. A. Lagronne	Dan Crawford	--	--	29	48
173	6 miles north	do.	Jim Jones	Jim Jones	1929	26	36
174	7 miles northwest	Wm. McFadden	William Hicks	William Hicks	1929	33	36
175	4 miles northwest	Sam Duncan	W. F. E. Pierce	W. F. E. Pierce	1912	21	36
176	$4\frac{3}{4}$ miles northwest	do.	E. C. Loden	--	1936	17	36
2/177	3 miles northwest	do.	Mrs. Irma Wall	Frank Fite	--	48	8
179	$4\frac{1}{2}$ miles southwest	Wm. Beck	J. A. McDaniel	--	--	13	36
180	$5\frac{1}{2}$ miles southwest	V. G. Longacre	Elvir P. Ross	--	1917	12	--
181	$4\frac{3}{4}$ miles southwest	do.	E. Pippin	--	--	19	36
182	$5\frac{1}{2}$ miles southwest	W. C. T. Frazier	J. N. Dennard	--	1874	33	36
184	$6\frac{1}{2}$ miles southwest	Cyrena McCreary	L. C. Chatham	L. C. Chatham	1927	22	36
189	$5\frac{1}{2}$ miles west	Wm. Liddy	Sam Dillard	--	1936	20	36
190	$4\frac{1}{2}$ miles west	Susan Snider	Harvey Fite	--	1930	16	36
191	$4\frac{1}{2}$ miles northwest	Thomas Hough	Mrs. Fannie Wilkerson	--	1936	19	36
192	$5\frac{1}{2}$ miles west	Simon House	Thos. Wooten	--	--	16	36
193	$6\frac{1}{2}$ miles west	do.	Thos. Alexander	--	1936	39	6

W. M. Lylo, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
154	2.2	24.6	Jan. 6, 1937	B,H	D	Hilltop	Wood curb; no casing.
159	0.5	Flows	--	None	S	--	Drilled well. Steel casing. Temperature 65° F.
160	2.7	17.2	Dec. 16, 1936	B,H	D,S	--	Galvanized iron curb; brick casing.
162	2.7	10.7	Feb. 23, 1937	B,H	D,S	Hilltop	Wood curb and casing.
163	2.7	8.4	Jan. 7, 1937	B,H	D,S	Hillside	Do.
164	3.5	23.1	Dec. 17, 1936	B,H	D,S	Hilltop	Concrete curb and casing.
165	2	37.0	Apr. 15, 1937	B,H	D	Hillside	Vitrified clay curb and casing.
167	2	19.9	Jan. 6, 1937	B,H	D,S	Hilltop	Wood curb; brick casing.
168	--	--	--	None	N	--	Oil test. See log.
170	2.9	7.7	Dec. 22, 1936	B,H	D	Hillside	Wood curb; brick casing.
171	3	27.4	do.	B,H	D,S	--	Wood curb; 13 feet wood casing at top.
172	2	22.4	Jan. 21, 1937	B,H	D,S	--	Wood curb and casing.
173	2.6	27.2	Apr. 15, 1937	B,H	D,S	--	Wood curb; no casing.
174	2.5	31.8	do.	B,H	D,P	--	Do.
175	2.8	18	Dec. 23, 1936	B,H	D,S	--	Do.
176	3	10.9	Dec. 22, 1936	B,H	D,S	Hillside	Wood curb and casing.
177	2.4	30.2	Dec. 21, 1936	B,H	D,S	--	Bored well. Vitrified clay curb and casing.
179	2.5	14.2	Jan. 11, 1937	B,H	D,S	Hilltop	Concrete curb and casing.
180	2.3	9.9	Dec. 16, 1936	B,H	D,S	Hillside	Bored well. Vitrified clay curb and casing.
181	2.8	13.1	Feb. 17, 1937	B,H	D,S	Hilltop	Concrete curb and casing.
182	3	27.9	Dec. 16, 1936	B,H	D,S	do.	Brick curb and casing.
184	2.9	11.5	Feb. 17, 1937	B,H	D,S	do.	Wood curb; no casing.
189	4	16.1	Jan. 29, 1937	B,H	E	do.	Wood curb; concrete casing.
190	3	16.6	Dec. 21, 1936	B,H	D,S	--	Concrete curb and casing.
191	2.7	20.7	Dec. 22, 1936	B,H	D,S	Hilltop	Wood curb; concrete casing.
192	2	17.3	Dec. 21, 1937	B,H	D,S	do.	Tile curb and casing.
193	2.5	31.8	Dec. 22, 1936	B,H	D,S	Hillside	Bored well. Wood curb and casing.

Records of wells in Parola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
194	6 miles northwest	A. Sanford	Eva Holland	Nat. Holland	1924	19	36
195	8 $\frac{1}{2}$ miles northwest	David Blankenship	D. G. Beason	--	1836	38	36
196	7 $\frac{1}{2}$ miles northwest	Jacob West	M. G. Broome	--	--	28	--
d/197	8 miles northwest	Wm. B. Towmy	R. E. Allison	Parola Oil & Gas Co.	--	2,559	--
198	9 miles northwest	Edwin Smith	Rosser Crawford	--	Old	39	36
199	10 $\frac{1}{2}$ miles northwest	Mat. J. Beck	E. Tomokins	E. Tomokins	1929	34	36
201	11 $\frac{1}{2}$ miles west	Washington Morris	R. C. Holland	R. C. Holland	1932	24	36
202	do.	Eliz. Morgan	Richmond Shaw	Donald Holland	1936	22	10
203	12 miles west	do.	R. D. Browning	--	--	21	8
205	12 $\frac{1}{2}$ miles west	Abner Herren	R. Shaw	-- Geophysical Co.	1937	86	3
207	13 miles west	J. M. Tompkins	L. B. Belew	--	1932	15	48
208	14 miles west	F. J. Johnson	J. E. Gentry	--	1886	20	42
210	16 miles west	Jesse Wilson	J. E. Wylie	J. E. Wylie	1933	17	36
211	14 miles west	G. R. Robinson	A. C. Claborn	--	--	27	36
212	16 miles west	Catherine Lindsey	Horace Guinn	--	--	17	36
214	14 $\frac{1}{2}$ miles southwest	do.	Mill Mayes	--	--	20	36
215	13 miles southwest	Adam Johnson	J. E. Beckham	--	1931	16	36
216	12 $\frac{1}{2}$ miles southwest	do.	Mrs. L. V. McDonald Est.	--	1936	80	3
217	14 miles southwest	do.	Mrs. Ada Pelham	--	1900	18	36
218	16 miles southwest	John McAdams	S. J. Brady Est.	--	Old	31	36
219	17 miles southwest	do.	Kangerga Bros.	--	1929	40	36
220	20 miles southwest	Eliz. White	Bill Johnson	--	1935	11	36
221	18 $\frac{1}{2}$ miles southwest	John Womack	P. B. Murphy	--	1907	23	36
222	17 $\frac{1}{2}$ miles southwest	Chas. Moorman	J. T. Hardy	--	1917	27	30
223	16 $\frac{1}{2}$ miles southwest	W. T. English	J. J. Lee	J. J. Lee	1932	11	36
224	do.	do.	J. T. Lake Est.	--	--	32	36
225	15 $\frac{1}{2}$ miles southwest	do.	Frank Davis Est.	George Brown	1913	23	36

W. M. Lyle, Project Superintendent

No.	Weight of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
194	3	17.5	Dec. 22, 1936	B,H	D,S	Hill-side	Wood curb; no casing.
195	3	35.1	Dec. 23, 1936	B,H	D,S	do.	Wood curb.
196	3.2	7.5	Apr. 15, 1937	B,H	D,S	--	Wood curb; no casing.
197	--	--	--	None	N	--	Oil test. See log.
198	5.1	40.7	do.	B,H	D,S	Hilltop	Wood curb; no casing.
199	5	38.8	Dec. 23, 1936	B,H	D,S	Hill-side	Wood curb; concrete casing.
201	2.3	22.7	Jan. 29, 1937	B,H	D,S	Hilltop	Wood curb and casing.
202	3.4	5.4	do.	B,H	S	do.	Bored well. Wood curb; vitrified clay casing.
203	3.2	18	do.	B,H	D,S	--	Bored well. Vitrified clay curb and casing.
205	--	Flows	do.	--	N	Valley	Drilled well. Steel curb and casing.
207	2.9	12.3	do.	B,H	D,S	--	Wood curb and casing.
208	2.8	8.7	do.	B,H	D,S	Hilltop	Wood curb; concrete casing.
210	3.3	14.6	Feb. 18, 1937	B,H	D,S	do.	Wood curb; no casing.
211	2.6	17.3	Feb. 16, 1937	B,H	--	do.	Wood curb; vitrified clay casing.
212	3.3	8.9	do.	B,H	D,S	--	Wood curb; no casing.
214	2.9	12.7	do.	B,H	D,S	Hilltop	Wood curb and casing.
215	2.6	9.9	do.	B,H	D,S	--	Wood curb.
216	--	Flows	Feb. 18, 1937	None	N	Valley	Drilled well. No casing.
217	2.5	9.8	do.	B,H	D,S	Hilltop	Wood curb; no casing.
218	3	12.7	Feb. 16, 1937	B,H	D,S	do.	Wood curb.
219	3	36.5	do.	B,H	D,S	do.	Wood curb; no casing.
220	3.4	7.7	Arr. 16, 1937	B,H	N	Hill-side	Wood curb and casing.
221	2.6	21	do.	B,H	D,S	Hilltop	Brick curb and casing.
222	3	19.1	do.	B,H	D,S	Hill-side	Brick curb; concrete casing.
223	2.6	5.9	Feb. 4, 1937	B,H	D,S	Valley	Wood curb; no casing.
224	3.8	26.7	do.	B,H	D,S	Hilltop	Concrete curb; brick casing.
225	3.8	12.6	Jan. 18, 1937	B,H	D,S	do.	Wood curb and casing.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
226	16 $\frac{1}{2}$ miles southwest	Wm. Taylor	L. F. Wedgeworth	L. F. Wedgeworth	1929	25	--
227	18 miles southwest	do.	Dan Nickerson Est.	Lewis Larry	1922	19	36
d/229	13 miles southwest	Harrison Davis	A. M. Pellum	--	1927	25	--
230	12 $\frac{1}{2}$ miles southwest	J. Hawkins	T. L. Fleming	T. L. Fleming	1912	27	36
231	11 $\frac{1}{2}$ miles southwest	Isaac Reed	J. J. Goodwin	--	--	27	--
232	10 miles southwest	Thos. Applewhite	W. P. Bryan	--	1861	19	36
d/233	do.	do.	E. A. Hull	Magnolia Pet. Co.	1836	5,260	13-3/8
234	9 miles southwest	Henry Runnels	J. B. Reeves	--	1917	28	8
235	10 $\frac{1}{2}$ miles southwest	N. K. Wornell	A. J. Reed	A. J. Reed	1929	27	36
d/236	15 miles southwest	Harrison Davis	O. M. Lawrence	Tex. La. Prod. Corp.	1930	3,016	12 $\frac{1}{2}$
237	13 miles southwest	Eliz. Lewis	A. Marshall	--	--	22	36
238	14 miles southwest	do.	L. F. Wedgeworth	Sam Tribble	1929	39	36
239	14 $\frac{1}{2}$ miles southwest	do.	Mrs. A. Prycer	--	1921	17	30
240	16 miles southwest	L. L. Wedgeworth	--	--	--	29	--
241	16 $\frac{1}{2}$ miles southwest	T. C. R. R. Co.	Mrs. W. D. Hudson	--	--	39	36
243	15 miles southwest	F. M. Hudson	Baptist Church	--	--	44	42
245	15 $\frac{1}{2}$ miles southwest	do.	May Hudson	Wilber Wooten	--	32	36
247	15 miles southwest	H. G. Strickland	R. D. Wooten	--	1927	29	36
248	13 $\frac{1}{2}$ miles south	do.	Charlie Ray	Charlie Ray	1927	21	36
249	14 $\frac{1}{2}$ miles southwest	Mary Strickland	J. C. Collins	--	--	24	36
d/250	12 $\frac{1}{2}$ miles southwest	do.	J. J. Bush & G. T. Bush	G. H. Bush	1887	26	--
d/251	do.	do.	Mrs. T. V. Pass	Tobe Johnson	1917	33	36
252	11 miles southwest	Simeon Walker	Charlie Graves	--	--	25	36
253	7 miles southwest	S. Snider	L. R. Wedgeworth	--	1932	14	36
255	6 miles southwest	Sebastian Francis	J. T. Vooley	--	1916	31	36
256	8 $\frac{1}{2}$ miles southwest	Matthew Parker	J. L. D. Morris	--	--	15	--
259	12 miles south	J. B. Bradley	H. Cozart	Robb Nutt	1907	38	36
d/260	10 $\frac{1}{2}$ miles south	do.	H. M. Dry	J. D. Ball	1921	19	36

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
226	0.6	21.5	Feb. 10, 1937	B, P	D, S	Hilltop	Concrete curb and casing.
227	2.9	12.9	Apr. 6, 1937	B, H	D, S	do.	Wood curb.
229	3.5	25	Feb. 1927 e/	--	N	--	No casing. Well is dry.
230	6.5	28.7	Feb. 18, 1937	B, H	--	--	Wood curb; concrete casing.
231	2.6	13.9	do.	B, P	D, S	Hilltop	Wood curb and casing.
232	2.7	16.4	do.	B, H	D, S	--	Concrete curb; no casing.
233	--	--	--	None	N	--	Oil test. See log.
234	3.9	19.5	Feb. 11, 1937	B, P	D, S	Hilltop	Bored well. Vitrified clay curb and casing.
235	3.5	24.9	do.	B, P	D, S	do.	Wood curb; no casing.
236	--	--	--	None	N	do.	Oil test. See log.
237	2.8	20.9	Feb. 10, 1937	B, P	N	do.	Wood curb.
238	2.8	39.6	do.	B, P	D, S	do.	Wood curb; concrete casing.
239	3	16.2	Feb. 4, 1937	B, P	D, S	do.	Brick curb and casing.
240	2	24.8	Feb. 3, 1937	B, P	S	do.	Brick curb.
241	3.8	38.1	Feb. 4, 1937	B, H	D, S	do.	Brick curb; no casing.
243	3.2	41.4	Feb. 3, 1937	B, H	D, S	do.	Wood curb; 23 feet concrete casing.
245	2.8	33.1	do.	B, P	D, S	Hillside	Wood curb; no casing.
247	3	30.2	Feb. 1, 1937	B, H	D, S	Hilltop	Wood curb; vitrified clay casing.
248	2.8	13.9	do.	B, H	D, S	do.	Wood curb; no casing.
249	3.3	10.5	do.	B, P	D, S	Hillside	Wood curb and casing.
250	3.4	26.4	Feb. 10, 1937	B, P	D, S	--	Wood curb; 7 feet concrete casing at top.
251	3.5	10.4	do.	B, H	D, S	Hilltop	Wood curb; no casing.
252	2.7	10.7	Feb. 11, 1937	B, H	D, S	do.	Wood curb; concrete casing.
253	3	6.9	do.	B, H	D, S	do.	Concrete curb and casing.
255	2.5	23.3	Feb. 15, 1937	B, P	D, S	do.	Wood curb; vitrified clay casing.
256	3	9	do.	B, P	L	do.	Wood curb.
259	2.2	12.4	Feb. 1, 1937	B, H	D, S	Hillside	Wood curb; no casing.
260	2.4	14.2	do.	B, P	D, S	Hilltop	Do.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
261	10 $\frac{1}{2}$ miles south	John Lee	Henry Smith	Henry Smith	1916	21	36
264	9 $\frac{1}{2}$ miles south	Elijah Morris	R. B. Young	--	1932	27	36
265	10 $\frac{1}{2}$ miles south	do.	Claudia Hall	--	1916	16	36
267	8 $\frac{1}{2}$ miles south	do.	Dr. Z. L. Daniels	--	1935	23	36
269	5 $\frac{1}{2}$ miles south	Isabella Hanks	Panola County	--	--	39	?
270	do.	do.	Dr. J. D. White	--	1933	19	--
271	6 miles south	Matthew Ashton	Mrs. I. R. Gary	--	1915	24	36
272	4 $\frac{1}{2}$ miles south	Lucinda Shields	H. S. Raborn	S. L. Holmes	1897	18	36
273	6 $\frac{1}{2}$ miles south	Matthew Ashton	R. B. Armstrong	--	--	35	36
275	9 miles south	George Veeden	J. B. Ingram	--	--	50	36
277	5 miles south	Matthew Payne	J. F. Ritter	--	--	13	36
279	8 $\frac{1}{2}$ miles south	R. Hester	Mattie Solomon	John Bryant	1909	22	36
284	11 $\frac{1}{2}$ miles southeast	Thos. Kelly	J. Menefee	--	--	--	12
285	9 $\frac{1}{2}$ miles southeast	do.	J. L. Benton	--	1890	20	36
286	7 miles southeast	E. J. Griswold	J. A. McDaniels	--	--	39	--
287	10 miles southeast	James Tippet	J. F. Hancock	C. A. Nard	1936	56	36
d/288	11 miles southeast	do.	J. M. Garland	-- Geophysical Co.	1936	--	3
289	do.	do.	Mrs. E. A. Davidson	--	1936	24	--
d/290	12 miles southeast	do.	Panola County	-- Geophysical Co.	--	300-400	3
291	12 $\frac{1}{2}$ miles southeast	do.	Mrs. R. H. Hancock	--	--	39	36
292	do.	Hezekiah McKilvey	Jep. Baldwin	--	1931	35	--
293	do.	J. M. Fleming	J. B. Hooker	--	1907	89	12
296	15 miles southeast	Hezekiah McKilvey	Dave Rowe	--	1905	46	36
297	14 miles southeast	Alanson Barr	J. F. Baldwin	--	1927	52	--
298	14 $\frac{1}{2}$ miles southeast	do.	K. C. Kyle	--	--	18	36
301	15 $\frac{1}{2}$ miles southeast	do.	L. H. Goolsby	J. A. J. Goolsby	1912	21	36
d/302	do.	Geo. Glass heirs	N. B. McDaniel	--	1930	37	36

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
261	2.7	15.6	Feb. 2, 1937	B, H	D, S	Hilltop	Wood curb.
264	2	9.8	do.	B, H	--	--	Do.
265	2.7	5.2	Feb. 3, 1937	B, H	D, S	Hilltop	Concrete curb and casing.
267	2.9	21.3	Feb. 11, 1937	B, H	D, S	do.	Wood curb and casing.
269	0	12.5	Feb. 17, 1937	--	D, S	Valley	Drilled well. Steel casing.
270	3.1	7.1	do.	B, H	D, S	--	Wood curb and casing.
271	2.5	16.5	Feb. 8, 1937	B, H	D, S	Hilltop	Wood curb; no casing.
272	3.9	--	do.	B, H	D, S	do.	Wood curb; brick casing.
273	3.5	14.0	do.	B, H	D, S	Hillside	Tile curb; concrete casing.
275	3	30.3	Feb. 1, 1937	B, H	D, S	Hilltop	Wood curb; concrete casing.
277	3.3	11.8	Feb. 17, 1937	B, H	D, S	Hillside	Wood curb; no casing.
279	2.6	21	Jan. 11, 1937	B, H	D, S	--	Do.
284	2	--	Mar. 3, 1937	B, H	D, S	Hilltop	Bored well, vitrified clay curb and casing.
285	3	18.1	Jan. 11, 1937	B, H	D, S	--	Wood curb; no casing.
286	2.6	39.3	do.	B, H	D, S	Hilltop	Brick curb; cement and brick casing.
287	1.5	53.0	Feb. 8, 1937	B, H	D, S	Hillside	Concrete curb.
288	--	Flows	Mar. 4, 1937	None	N	--	Drilled well. Steel casing.
289	3	23.0	Feb. 8, 1937	B, H	D, S	Hillside	Wood curb; no casing.
290	4	--	--	--	--	--	Drilled well. Steel casing.
291	--	35.5	Feb. 8, 1937	B, H	D, S	Hillside	Wood curb; no casing.
292	3	36	Feb. 5, 1937	B, H	D, S	Hilltop	Wood curb.
293	4.5	77.2	Mar. 16, 1937	B, H	D	do.	Bored well. Vitrified clay casing.
296	3	43.1	Feb. 5, 1937	B, H	D, S	Hillside	Wood curb; no casing.
297	2.9	31.6	Feb. 9, 1937	B, H	D, S	Hilltop	Wood curb; concrete casing.
298	3	15.5	Jan. 11, 1937	B, H	D, S	do.	Concrete curb and casing.
299	2.4	12	Feb. 9, 1937	B, H	D, S	do.	Concrete curb; no casing.
302	2.9	29.3	Feb. 17, 1937	B, H	D, S	do.	Concrete curb and casing.

Records of wells in Panola County--Continued

No.	Distance from Carthage	Survey or Section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
305	16 miles southeast	Abner Herrin	W. V. Butler	Everett Drilling Co.	--	--	8
304	do.	A. McFaddin	Bernard Kyle	-- Geophysical Co.	1936	45	--
305	15½ miles southeast	do.	J. V. Pou	R. H. Toomey	1907	31	36
306	do.	Jesse Loose	Bernard Kyle	--	1924	25	36
309	do.	do.	Joe Rowe	--	--	36	36
310	14½ miles southeast	do.	Joe Scape	I. Bowers	1901	35	36
311	16½ miles southeast	A. McFaddin	Mrs. W. I. Nutt	Cope Nard	1931	25	36
a/313	18 miles southeast	--	V. A. Sanford	--	--	26	36
316	20 miles southeast	Lucy Maragle	Jeff Ellington	--	--	28	36
318	13 miles east	P. F. Gibbs	Dewey Walker	Dewey Walker	1923	26	36
319	14½ miles east	A. L. Sigmun	John Bounds Est.	--	1916	20	2
320	17 miles southeast	B. D. S. Watkins	T. F. Pinkston	--	1929	24	36
321	17 miles east	Wm. McMillan	Cornelius McMillan	--	--	24	36
322	18 miles east	L. R. Booker	J. B. Baker	John Barnett	1907	17	36
323	19 miles east	D. H. Gray	J. A. Smith	Kelly Reynolds	1936	31	36
324	20 miles east	do.	J. A. Harrison	--	1935	29	36
325	19 miles southeast	A. Cornett	Marion Creech	--	1912	29	36
a/326	19½ miles southeast	--	Louis Werner	Gulf Prod. Co.	--	2,935	--
327	21 miles southeast	Chas. Q. Haley	Dr. M. A. Ramsey	Bill Faulk	--	13	36
328	do.	John R. Hailey	Mrs. F. O. Rear	--	--	17	--
a/329	do.	do.	Tom Hooper	--	1902	42	36
330	21½ miles southeast	B. B. & C. R. Co.	A. L. McGee	C. H. Britnell	1930	28	36
331	22½ miles southeast	Mannan Smith	Elzie Walker	--	--	15	36

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

b/ A, air lift; B, bucket; C, cylinder; E, electric; H, hand.

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth being measured (ft.)	Date of measurement				
303	-	Flows	Mar. 3, 1937	None	N	Valley	Drilled well. Large crater.
304	2.4	do.	Sept. 1936 e/	None	S	Hillside	Drilled well. Steel curb and casing. Estimated flow, 50 gallons a minute.
305	2	32.2	Feb. 9, 1937	B,H	D,S	do.	Concrete curb and casing. Temperature 67° F.
306	3	15.2	do.	B,H	D,S	Hilltop	Vitrified clay curb and casing.
309	3	37.2	Mar. 3, 1937	B,H	D,S	do.	Wood curb; no casing.
310	4.2	38.5	do.	B,H	D,S	do.	Concrete curb and casing.
311	3	26.2	Feb. 5, 1938	B,H	D,S	--	Wood curb; no casing.
313	3	27.8	Mar. 3, 1937	B,H	N	Hilltop	Wood curb; no casing. Located in Shelby County.
316	2.5	24.4	Feb. 5, 1937	B,H	D,S	do.	Wood curb; no casing.
318	3.5	19.0	Mar. 27, 1937	B,H	D,S	do.	Wood curb.
319	5	--	Jan. 25, 1937	C,H	D,S	do.	Bored well. Brick curb; steel casing.
320	4.5	18	do.	B,H	I	do.	Concrete curb and casing.
321	3	21	Jan. 27, 1937	B,H	D,S	Hillside	Wood curb and casing.
322	3	12.2	Jan. 25, 1937	B,H	D,S	Hilltop	Wood curb; concrete casing.
323	2.5	30.2	Jan. 27, 1937	B,H	D,S	do.	Wood curb and casing.
324	2.9	16	do.	P,H	D,S	do.	Wood curb; concrete casing.
325	2.8	26.6	Feb. 26, 1937	B,H	D,S	do.	Wood curb; vitrified clay casing.
326	--	--	--	None	N	--	Oil test. See log.
327	1.5	8.8	Feb. 5, 1937	B,H	N	Valley	Wood curb; no casing.
328	3	10.9	do.	B,H	N	do.	Wood curb.
329	3	40.8	Feb. 26, 1937	B,H	D,S	Hilltop	Wood curb and casing.
330	2.5	27.1	Feb. 5, 1937	B,H	I	do.	Do.
331	3	8.0	do.	B,H	D,S	do.	Do.

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

I/ No water sample collected for analysis.

c/ Water level reported.

Table of Drillers' Logs, Panola County, Texas

	Thickness (feet)	Depth (feet)
Driller's log of well 33		
Flanigan farm, northeast end of Antrine Duboise, Sr., survey, 13 ¹ / ₂ miles north of Carthage.		
Sand-	25	25
Shale-	5	30
Sand-	30	110
Rock-	4	114
Shale-	21	135
Lignite-	15	150
Rock-	1	151
Sandrock-	33	184
Sand-	39	213
Rock-	1	214
Hard rock-	2	216
Sand-	74	290
Gumbo-	28	318
Hard rock-	1	319
Shale-	31	350
Rock-	11	361
Gumbo-	49	410
Rock-	1	411
Shale-	20	431
Gumbo-	20	451
Shale-	43	494
Gumbo-	76	570
Rock-	2	572
Gumbo-	30	602
Hard rock-	3	605
Shale-	15	620
Gumbo-	30	752
Hard rock-	2	754
Gumbo-	111	865
Shale-	21	926
Shale and gumbo-	74	1000
Shale-	80	1080
TOTAL DEPTH-		2862

Driller's log of well 47		
Waterman Lumber Co. tract, John F. Chears survey, 7 miles northeast of Carthage.		
Sand-	100	100
Shale	20	120
Sand-	45	165
Shale-	163	328
Sandrock-	2	330
Sticky shale-	145	475
Shale-	260	735
Gumbo-	20	755
Sticky shale-	20	775
Shale and shells-	98	873
Sticky shale and boulders-	360	1233
Sticky shale-	17	1250
Sandy shale-	75	1325
Chalk-	10	1335

	Thickness (feet)	Depth (feet)
Driller's log of well 47--Continued		
Sticky shale-	160	1495
Sandy shale-	58	1553
Chalk-	52	1605
Limy chalk-	72	1677
Chalk-	35	1712
Hard chalk-	20	1732
Chalk-	95	1827
Sandy shale-	23	1850
Sticky shale-	80	1930
Lime shell-	1	1931
TOTAL DEPTH-		2458

Driller's log of well 67 A.		
Hudson farm, W. B. Culver survey, 13 ¹ / ₂ miles northeast of Carthage.		
Sand-	12	12
Gravel-	31	43
Hard sand-	4	47
Soapstone-	17	64
Shale-	26	90
Soapstone-	20	110
Shale-	10	120
Hard sand-	31	151
Sandy gumbo-	6	157
Hard rock-	5	162
Gumbo-	2	164
Rock-	8	172
Gumbo-	1	173
Hard rock-	11	184
Gravel-	4	188
Hard shale-	4	192
Hard rock-	17	209
Gumbo-	1	210
Rock-	18	228
Hard shale-	1	229
Gumbo-	64	293
Shale-	5	298
Hard gumbo-	2	300
Hard shale-	3	303
Rock-	44	347
Shale	6	353
Gumbo-	7	360
Rock-	14	374
Shale-	1	375
Gumbo-	20	395
Shale-	10	405
Gumbo-	25	430
Hard shale-	14	444
Gumbo-	104	548
Shale-	25	573
Rock-	41	614
Gumbo-	1	615
Shale-	4	619

(Continued on next page)

Table of Drillers' Logs, Panola County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 67 A--Continued		
Shale and boulders-	46	665
Tough gumbo-	48	713
Shale-	20	733
Shale and boulders-	55	788
Shale-	64	852
Gumbo-	10	862
Shale-	5	867
Gumbo-	20	887
Shale-	7	894
Gumbo-	21	915
Shale-	20	935
Gumbo-	63	998
Chalky shale-	15	1013
Gumbo-	52	1065
Chalk rock-	6	1071
TOTAL DEPTH-		2045

	Thickness (feet)	Depth (feet)
Driller's log of well 73 A		
Robert Johnson farm, Ben Jordan survey, 16 miles northeast of Carthage.		
Red clay-	25	25
Sand-	15	40
Rock-	10	50
Hard shale-	50	100
Gumbo and shale-	10	110
Sandrock-	15	125
Green gumbo-	5	130
Rock-	5	135
Green gumbo-	15	150
Hard shale-	10	160
Sand rock-	5	165
Green gumbo-	10	175
Hard shale and boulders-	10	185
Green gumbo-	30	215
Rock-	5	220
Hard rock-	2	222
Shale-	8	230
Hard shale-	70	300
Hard rock-	2	302
Rock-	3	305
Hard shale-	25	330
Gumbo-	25	355
Shale-	33	388
Gumbo-	10	398
Shale-	25	423
Hard shale-	20	443
Hard gumbo-	30	473
Gumbo-	10	483
Shale-	20	503
Hard gumbo-	30	533
Gumbo-	90	623
Shale-	20	643
Gumbo-	10	653
Hard gumbo-	15	668

	Thickness (feet)	Depth (feet)
Driller's log of well 73 A--Continued		
Gumbo-	25	690
Shale-	10	700
Gumbo-	14	714
Hard shale-	21	735
Gumbo-	15	750
Hard shale-	15	765
Gumbo-	15	780
Hard shale-	20	800
Gumbo-	10	810
Soft shale-	5	815
Gumbo-	10	825
Hard gummy shale-	42	867
Hard shale-	8	875
Tough gumbo-	25	900
Gumbo-	7	907
Chalk rock-	53	960
Hard shale-	57	1017
Hard shale and packed sand-	40	1057
Packed sand-	74	1131
Hard shale-	14	1145
TOTAL DEPTH-		3006

	Thickness (feet)	Depth (feet)
Driller's log of well 73 B		
Cummings farm, James Johnson survey, 15 miles northeast of Carthage.		
Clay-	75	75
Water sand-	30	105
Shale-	120	225
Shale and boulders-	275	500
Shale-	250	750
Gummy shale-	100	850
Gumbo-	14	864
Gummy shale-	36	900
Gumbo-	45	945
Sand and shale-	44	989
Gas sand-	1	990
Sandy shale-	25	1015
Gumbo-	55	1070
Shale and boulders-	74	1144
Shale-	126	1270
Chalk-	35	1305
Shale-	90	1395
Chalk and shale-	73	1468
Gumbo-	10	1478
Chalk rock-	272	1750
Gumbo-	30	1780
Shale-	10	1790
Gumbo-	10	1800
Shale-	80	1880
Gumbo-	15	1895
Shale-	20	1915
Sticky shale-	43	1958

(Continued on next page)

Table of Drillers' Logs, Panola County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 73 B--Continued		
Sand, shale and oil- - - - -	40	1998
Sandy shale- - - - -	12	2010
Oil sand- - - - -	8	2018
Sandy shale- - - - -	14	2032
Rock and sand- - - - -	26	2058
TOTAL DEPTH- - - - -		2058

	Thickness (feet)	Depth (feet)
Driller's log of well 79		
Mo-Tex Oil Co., J. M. Furrh farm, Thomas M. Alstone survey, 20 miles northeast of Carthage.		
Sand, shale, and boulders- -	255	255
Broken lime- - - - -	70	325
Shale and boulders - - - - -	1080	1405
Chalk- - - - -	50	1455
Shale and boulders- - - - -	100	1555
Chalk- - - - -	285	1840
Broken chalk - - - - -	40	1880
Sand- - - - -	50	1930
Broken sand and shale- - - -	50	1980
Sand and shale- - - - -	227	2207
Shale- - - - -	118	2325
Shale and shells- - - - -	133	2458
Broken lime- - - - -	4	2462
Lime- - - - -	243	2705
Lime and shale- - - - -	200	2905
Shale and shells- - - - -	665	3570
Shale and lime- - - - -	240	3810
Hard lime- - - - -	82	3892
Sand and lime- - - - -	49	3941
Lime, shale, and anhydrite-	119	4060
Sand, shale, anhydrite, and lime- - - - -	30	4090
TOTAL DEPTH - - - - -		6175

	Thickness (feet)	Depth (feet)
Driller's log of well 168		
P. V. Baker farm, George Goodwin survey, 1/2 mile east of Carthage.		
Sand- - - - -	11	11
Gravel- - - - -	40	51
Rock- - - - -	1	52
Sticky shale- - - - -	10	62
Sandy shale- - - - -	47	109
Shale- - - - -	96	205
Water sand - - - - -	20	225
Sand and shale - - - - -	9	234
Rock- - - - -	2	236
Sand- - - - -	14	250
Shale- - - - -	17	267
Rock- - - - -	15	282
Shale- - - - -	33	305
Rock- - - - -	3	308
Gummy shale- - - - -	17	325
Shale- - - - -	25	350

	Thickness (feet)	Depth (feet)
Driller's log of well 168--Continued		
Rock- - - - -	1	351
Gummy shale- - - - -	58	409
Rock- - - - -	1	410
Shale- - - - -	24	434
Rock- - - - -	1	435
Shale- - - - -	50	485
Rock- - - - -	1	486
Gummy shale- - - - -	61	547
Rock- - - - -	1	548
Shale- - - - -	42	590
Gummy shale- - - - -	8	598
Rock- - - - -	1	599
Gummy shale- - - - -	121	720
Sticky shale - - - - -	10	730
Rock- - - - -	3	733
Shale and boulders - - - -	33	766
Rock- - - - -	1	767
Shale and boulders - - - -	271	1038
Gummy shale- - - - -	283	1321
Hard chalk and streaks shale- - - - -	10	1331
TOTAL DEPTH- - - - -		3210

	Thickness (feet)	Depth (feet)
Driller's log of well 197		
R. E. Allison farm, Wm. B. Towmy survey, 8 miles northwest of Carthage.		
Clay- - - - -	10	10
Water sand- - - - -	135	145
Gumbo- - - - -	91	236
Gas sand - - - - -	6	292
Gumbo- - - - -	48	340
Shale- - - - -	49	389
Rock- - - - -	1	390
Sand- - - - -	48	438
Gumbo- - - - -	19	457
Sand rock- - - - -	8	465
Packed sand - - - - -	44	509
Gumbo- - - - -	26	535
Shale- - - - -	25	560
Rock- - - - -	2	562
Shale- - - - -	78	640
Rock- - - - -	1	641
Gumbo- - - - -	47	688
Hard shale - - - - -	10	698
Gumbo- - - - -	33	731
Shale- - - - -	10	741
Gumbo- - - - -	18	759
Rock- - - - -	1	760
Shale- - - - -	20	780
Gumbo- - - - -	20	800
Rock- - - - -	1	801
Gumbo- - - - -	13	814
Shale- - - - -	18	832

(Continued on next page)

Table of Drillers' logs, Panola County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 197--Continued		
Rock- - - - -	1	833
Shale - - - - -	13	846
Gumbo- - - - -	24	870
Shale- - - - -	32	902
Gumbo- - - - -	26	928
Rock- - - - -	1	929
Gumbo- - - - -	4	933
Rock- - - - -	1	934
Shale- - - - -	39	973
Gumbo- - - - -	41	1014
TOTAL DEPTH- - - - -		2559

	Thickness (feet)	Depth (feet)
Driller's log of well 233		
E. A. Hull farm, Thomas Applewhite survey, 10 miles southwest of Carthage.		
Clay- - - - -	22	22
Shale and sand- - - - -	46	68
Shale- - - - -	50	118
Sand- - - - -	17	135
Shale- - - - -	25	160
Sand rock- - - - -	8	168
Shale, sand, and shells- - - - -	33	261
Hard sand and shale- - - - -	39	350
Shale and shell- - - - -	25	375
Sand- - - - -	11	386
Sticky shale- - - - -	43	429
Sand- - - - -	6	435
Sticky shale and shells - - - - -	38	473
Rock- - - - -	1	474
Sticky shale- - - - -	33	507
Hard sand- - - - -	1	508
Shale and shells- - - - -	116	624
Hard sand and shale- - - - -	32	656
Shale- - - - -	44	700
Hard sand- - - - -	13	713
Sticky shale- - - - -	132	845
Shale and shell- - - - -	27	872
Shale- - - - -	213	1085
Shale and chalk- - - - -	5	1090
Hard shale- - - - -	112	1202
Sticky shale- - - - -	20	1222
Hard shale and gray sand- - - - -	54	1276
Lime and streaks of shale- - - - -	61	1340
Lime and hard shale- - - - -	5	1345
Lime- - - - -	17	1360
Shale and shell- - - - -	195	1555
Chalk and streaks of shale- - - - -	51	1606
TOTAL DEPTH- - - - -		5596

	Thickness (feet)	Depth (feet)
Driller's log of well 236		
O. M. Lawrence farm, Harrison Davis survey, 15 miles southwest of Carthage.		
Clay- - - - -	20	20
Hard sand - - - - -	35	45

	Thickness (feet)	Depth (feet)
Driller's log of well 236--Continued		
Hard sand and gravel- - - - -	25	70
Rock- - - - -	2	72
Sand- - - - -	13	85
Hard sand - - - - -	19	104
Shale and sand- - - - -	31	135
Rock- - - - -	2	137
Sand- - - - -	22	159
Sandy shale - - - - -	52	211
Rock- - - - -	2	213
Shale and boulders- - - - -	41	254
Sand and gravel- - - - -	95	349
Sandy shale with lignite- - - - -	22	371
Sand and gravel- - - - -	29	400
Gray shale- - - - -	27	427
Packed sand and gravel - - - - -	29	456
Sand and gravel with streaks of shale- - - - -	32	488
Rock- - - - -	1	489
Sand rock - - - - -	3	492
Sandy shale- - - - -	68	560
Rock- - - - -	2	562
Sandy shale - - - - -	19	581
Black shale- - - - -	5	586
Rock- - - - -	18	604
Shale- - - - -	3	607
Shale and boulders - - - - -	118	725
Gummy shale- - - - -	22	747
Shale and boulders - - - - -	143	890
Shale- - - - -	96	986
Shale and boulders - - - - -	87	1073
Shale- - - - -	17	1090
Gray shale - - - - -	18	1108
Gummy shale- - - - -	17	1125
Gray shale- - - - -	45	1170
Streaked shale- - - - -	32	1202
Shale and lime- - - - -	133	1335
Gummy shale with streaks of lime- - - - -	115	1450
Hard dark-colored shale- - - - -	38	1488
Shale with streaks of sandy lime- - - - -	36	1524
Hard, black, and gummy shale- - - - -	16	1540
TOTAL DEPTH- - - - -		3016

	Thickness (feet)	Depth (feet)
Driller's log of well 326		
Louis Werner tract, Chas. Q. Haley survey, 19 1/2 miles southeast of Carthage.		
Clay- - - - -	2	2
Sand rock - - - - -	12	14
Sand and boulders - - - - -	24	38
Rock- - - - -	2	40
Sand and boulders - - - - -	100	140

(Continued on next page)

Table of Drillers' Logs, Panola County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 326--Continued		
Sand- - - - -	10	150
Rock- - - - -	3	152
Hard sand rock- - - - -	20	172
Sand and boulders - - - - -	39	211
Rock- - - - -	2	213
Sand and rock - - - - -	9	222
Rock- - - - -	1	223
Sand and boulders - - - - -	51	274
Rock- - - - -	14	288
Sand rock- - - - -	13	307
Sand- - - - -	40	347
Rock- - - - -	1	348
Sand and boulders - - - - -	30	378
Rock- - - - -	1	379
Shale- - - - -	75	454
Gumbo- - - - -	23	477
Shale and boulders- - - - -	57	534

	Thickness (feet)	Depth (feet)
Driller's log of well 326--Continued		
Rock- - - - -	1	535
Shale - - - - -	22	557
Gumbo- - - - -	15	572
Shale and gumbo- - - - -	151	723
Rock- - - - -	1	724
Gumbo, shale, and bould- ers- - - - -	376	1100
Shale- - - - -	24	1124
Gumbo- - - - -	20	1144
Shale - - - - -	60	1204
Sandy shale- - - - -	37	1241
Sand rock- - - - -	28	1269
Sandy shale- - - - -	31	1300
Sandy gumbo- - - - -	20	1320
Sandy shale- - - - -	20	1340
Gumbo and gypsum- - - - -	20	1360
Shale rock- - - - -	548	1908
TOTAL DEPTH - - - - -		2935

Logs of test wells drilled by W. P. A. labor in Panola County, Texas
 Samples examined and classified by W. M. Lyle,
 Project Superintendent.

	Thickness (feet)	Depth (feet)
<u>Well 1</u>		
Northwest corner N. Ward Estate 198 acre tract, J. M. Lawless survey, 17 miles northwest of Carthage.		
Yellow shale-	2	2
Red shale-	10	12
Red and gray shale - - - -	1	13
Red sand-	1	14
Yellow and gray sand- - - -	1	15
Yellow and white sand - - -	2	17
Gray sand- - - - - - - -	1	18
Pink sand- - - - - - - -	1	19
Gray sand- - - - - - - -	1	20
Pink sand- - - - - - - -	3	23
Red sand- - - - - - - -	2	25
Yellow sand- - - - - - - -	1	26
Gray and white sand - - - -	2	28
Gray sand- - - - - - - -	2	30
Yellow sand - - - - - - - -	1	31
Gray sand- - - - - - - -	2	33
Pink sand- - - - - - - -	2	35
Gray sand- - - - - - - -	1	36
Brown sand- - - - - - - -	1	37
White sand- - - - - - - -	7	44
Struck water at 36 feet.		
Water level, 36.4 feet below top of ground, 10 hours after hole completed. January 8, 1937.		

<u>Well 2</u>		
Top of hill, 1,000 feet west of road north from Tatum, N. Ward Estate tract, J. M. Lawless survey, 16 miles northwest of Carthage.		
Sand-	2	2
White sand-	10	12
Red sand-	3	15
Buff-colored sand - - - - -	1	16
Pink sand- - - - - - - -	6	22
White sand - - - - - - - -	2	24
Red sand- - - - - - - -	5	29
Red shale - - - - - - - -	5	34
Gray sand - - - - - - - -	6	40
Struck water at 34 feet.		
Water level, 36.3 feet below top of ground, 48 hours after hole completed. January 13, 1937.		

<u>Well 5</u>		
Top of hill, 2,000 feet south of north line and 300 feet west of east line Fannie Hemby tract, Wesley Goodwin survey, 14½ miles northwest of Carthage.		
Buff-colored sand- - - - -	4	4

	Thickness (feet)	Depth (feet)
<u>Well 5 continued</u>		
Red clay- - - - - - - -	2	6
Gray shale- - - - - - - -	3	9
Brownish gray shale - - - -	2	11
Brown shale- - - - - - - -	1	12
Lignite- - - - - - - - -	1	13
Brown shale- - - - - - - -	2	15
Blue shale- - - - - - - -	4	19
Gray water sand - - - - -	2	21
Water level, 12.2 feet below top of ground, 4 hours after hole completed. January 18, 1937.		

<u>Well 14</u>		
Top of hill, 400 feet north of south line and 200 feet east of north-south road crossing W. H. Hardy tract, Wm. Hamilton survey, 12½ miles northwest of Carthage.		
Sand- - - - - - - - - -	1	1
Red clay- - - - - - - - -	4	5
Red and white clay- - - - -	2	7
Gray sand- - - - - - - - -	5	12
Red and gray sand- - - - -	1	13
Yellow sand- - - - - - - -	4	17
Pink sand- - - - - - - - -	4	21
Yellow sand- - - - - - - -	1	22
Yellow clay- - - - - - - -	6	28
Red clay- - - - - - - - -	4	32
Red and white sand- - - - -	2	34
Yellow water sand- - - - -	4	38
January 18, 1937.		

<u>Well 19</u>		
Ella Briggs tract, E. Morris survey, 11 miles north of Carthage.		
White sand- - - - - - - -	1	1
Red clay- - - - - - - - -	5	6
Yellow clay- - - - - - - -	1	7
Gray shale- - - - - - - -	1	8
Yellow sand - - - - - - - -	1	9
White shale- - - - - - - -	1	10
Yellow sand- - - - - - - -	2	12
Blue shale- - - - - - - -	2	14
Yellow sand- - - - - - - -	5	19
Water level, 4. feet below top of ground, ½ hour after hole completed. January 20, 1937.		

<u>Well 20</u>		
Top of hill, northeast corner J. T. Thompson 136 acre tract, E. Morris survey, 11½ miles north of Carthage.		
Soil- - - - - - - - - -	2	2

(continued on next page.)

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

	Thickness (feet)	Depth (feet)
<u>Well 20 continued</u>		
White sand-	4	6
Red clay-	3	9
Yellow clay-	4	13
Red sand-	4	17
White sand-	5	22
Water level, 18 feet below top of ground, 1 hour after hole completed. January 20, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 25</u>		
Northwest corner J. G. Hightower tract, Antwine Duboise Jr. survey, 8½ miles north of Carthage.		
Soil-	1	1
Yellow sand-	1	2
White and yellow sand-	2	4
White sand-	1	5
Yellow clay and white sand-	1	6
Red clay and white sand-	1	7
White clay-	5	12
Blue shale-	2	14
Yellow clay and white sand-	2	16
Red and yellow clay-	3	19
White and red clay-	2	21
Yellow clay-	2	23
White sand-	1	24
Yellow sand-	1	25
Struck water at 23 feet. January 10, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 28</u>		
Top of hill, 1,000 feet south of east- west road, 500 feet west of northeast- southwest road, Gus Parker tract, Antwine Duboise Sr. survey, 8½ miles north of Carthage.		
White sand-	3	3
Red clay-	9	12
Red sand-	4	16
January 19, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 32</u>		
U. S. Government tract, approximate center of John H. Kirby survey, 11 miles north of Carthage.		
Soil-	1	1
Yellow clay-	3	4
Yellow and white sand-	4	8
White sand-	4	12
Brown shale and white sand-	5	17
Sand-	1	18
Struck water at 16 feet. Water level, 16.3 feet below top of ground, 3 hours after hole completed. March 2, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 33</u>		
U. S. Government tract, T. T. Williamson survey, 13 miles north of Carthage.		
Surface materials-	4	4
Yellow sand-	7	11
Clay-	4	15
White sand-	6	21
Red sand-	8	29
Yellow shale-	2	31
White sand-	4	35
Water level, 30.5 feet below top of ground, 2 hours after hole completed. March 1, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 38</u>		
1,000 feet east of Highway 8, U. S. Go- vernment tract, L. T. Hammer survey, 14 miles north of Carthage.		
Sand-	2	2
Red clay-	7	9
Yellow sand-	5	14
Black lignite-	3	17
White sand-	9	26
Yellow sand-	5	31
Water level, 27 feet below top of ground, ½ hour after hole completed. April 1, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 40</u>		
Top of hill at Headquarters Place, U. S. Government tract, L. T. Hammer survey, 12½ miles north of Carthage.		
Surface materials-	2	2
Clay and sand-	7	9
White shale-	4	13
Sand-	7	20
Water level, 15 feet below top of ground, 1½ hours after hole completed. March 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 41</u>		
Side of hill, U. S. Government tract, L. T. Hammer survey, 12½ miles north of Carthage.		
Surface materials-	4	4
White sand and yellow clay-	5	9
Gray sand-	4	13
Yellow clay-	5	18
Gray shale-	4	22
Gray sand-	5	27
Struck water at 22 feet. Water level, 22.1 feet below top of ground, ½ hour after hole completed. March 1, 1937.		

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

	Thickness (feet)	Depth (feet)
<u>Well 44</u>		
Top of hill, U. S. Government tract, Joseph Palmer survey, 10 $\frac{1}{2}$ miles north of Carthage.		
Surface materials- - - - -	4	4
Red clay- - - - -	6	10
Hard gray sand and shale -	4	14
Gray sand- - - - -	12	26
Water level, 14 feet below top of ground, 4 hours after hole completed. March 2, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 49</u>		
Top of hill, L. L. Ray tract, A. T. Nichols survey, 10 $\frac{1}{2}$ miles northeast of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	3	5
Red sand- - - - -	4	9
Yellow sand and shale- - - -	3	17
White sand- - - - -	7	24
December 23, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 50</u>		
Side of hill, Pauline Gale tract, J. M. Hill survey, 11 miles northeast of Carthage.		
White sand- - - - -	3	3
Yellow sand - - - - -	3	6
Red clay and sand- - - - -	3	9
Yellow clay and sand- - - -	4	13
White sand- - - - -	8	21
Lignite- - - - -	4	25
Water level, 16.5 feet below top of ground, 24 hours after hole completed. February 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 52</u>		
Top of hill, Frank Jernigan tract, E. Decker survey, 10 $\frac{1}{2}$ miles northeast of Carthage.		
White sand- - - - -	1	1
Red clay- - - - -	2	3
Yellow clay - - - - -	1	4
White sand- - - - -	2	6
White sand- - - - -	1	7
Red sand- - - - -	3	10
Red and white sand- - - - -	1	11
Red sand- - - - -	3	14
Red and white sand- - - - -	4	18
White sand- - - - -	3	21
January 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 55</u>		
Side of hill, 1,000 feet west of crest line, Mrs. R. T. Hill 560 acre tract,		

	Thickness (feet)	Depth (feet)
<u>Well 55 continued</u>		
Winnny Mann survey, 11 $\frac{1}{2}$ miles northeast of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	5	7
Yellow clay- - - - -	4	11
White sand- - - - -	4	15
Yellow sand- - - - -	4	19
Red shale- - - - -	3	22
White sand- - - - -	6	28
Water level, 25 feet below top of ground, 4 hours after hole completed. February 26, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 64</u>		
Top of hill, Mrs. Eddie Neal tract, Daniel Tuttle survey, 17 miles northeast of Carthage.		
Surface materials- - - - -	1	1
Dark sand- - - - -	2	3
Red clay- - - - -	4	7
Gray shale- - - - -	2	9
Red clay- - - - -	3	12
Red and gray shale - - - -	4	16
Yellow shale- - - - -	3	19
Yellow shale and sand- - -	5	24
Gray sand- - - - -	6	30
Water level, 26 feet below top of ground 30 hours after hole completed. February 19, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 69</u>		
Alzee Williams tract, John Parmer survey, 12 miles northeast of Carthage.		
Surface materials- - - - -	2	2
White sand- - - - -	6	8
White shale - - - - -	4	12
Red clay- - - - -	2	14
Red sand- - - - -	4	18
White sand- - - - -	3	21
Water level, 18 feet below top of ground, 3 hours after hole completed. February 18, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 70</u>		
Top of hill, center of south line, C. S. Ivey 55 acre tract, John Parmer survey, 11 miles northeast of Carthage.		
Surface materials- - - - -	2	2
White sand- - - - -	5	7
Red clay- - - - -	3	10
Yellow sand - - - - -	6	16
Red shale- - - - -	4	20
Yellow sand- - - - -	5	25
White sand- - - - -	3	28
December 23, 1936.		

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

	Thickness (feet)	Depth (feet)
<u>Well 71</u>		
County road, opposite northeast corner Lewis Werner Saw Mill Co. 791 acre tract, John Parmer survey, 12 miles northeast of Carthage.		
Sand- - - - -	1	1
Red clay- - - - -	4	5
White sand- - - - -	5	10
Struck water at 8 feet.		
Water level, 4 feet below top of ground, $\frac{1}{2}$ hour after hole completed.		
January 21, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 77</u>		
Top of hill, Jim Roquemore tract, Ben C. Jordan survey, 17 miles northeast of Carthage.		
Surface materials- - - - -	3	3
Red clay- - - - -	3	6
Sand rock - - - - -	2	8
Sand and clay - - - - -	4	12
Yellow sand- - - - -	3	15
White sand- - - - -	4	19
Water level, 15 feet below top of ground, $1\frac{1}{2}$ hours after hole completed.		
February 24, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 96</u>		
Side of hill, Werner Saw Mill Co. tract, John Husband survey, 15 miles east of Carthage.		
Red clay- - - - -	5	5
Yellow sand- - - - -	3	8
Pink sand- - - - -	5	13
Yellow sand- - - - -	2	15
February 28, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 97</u>		
Top of hill, 3,000 feet east of railway, N.T. Powell tract, John Husband survey, $14\frac{1}{2}$ miles east of Carthage.		
Surface materials- - - - -	3	3
Red clay- - - - -	4	7
Yellow sand - - - - -	14	21
White sand- - - - -	8	29
Yellow sand - - - - -	2	31
Water level, 29 feet below top of ground 2 hours after hole completed.		
January 27, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 100</u>		
Fill and Cottle tract, Vashti Gibbs survey, $14\frac{1}{2}$ miles east of Carthage.		
White sand- - - - -	2	2
Red clay- - - - -	3	5
Yellow sand- - - - -	5	10

	Thickness (feet)	Depth (feet)
<u>Well 100 continued</u>		
Red clay- - - - -	7	17
Soapstone - - - - -	4	21
Water level, 17 feet below top of ground, 2 hours after hole completed.		
January 28, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 105</u>		
A. E. Elliott tract, B. M. Lewin survey, 11 miles east of Carthage.		
Red clay and sand- - - - -	3	3
Yellow clay and sand - - - -	3	6
White clay- - - - -	2	8
Yellow clay and sand- - - -	7	15
Brown shale- - - - -	3	18
Yellow sand- - - - -	6	24
January 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 106</u>		
Side of hill, N. E. Vaughn tract, Wm. G. Anderson survey, 14 miles east of Carthage.		
Soil- - - - -	1	1
Clay- - - - -	3	4
Clay and sand - - - - -	7	11
Pink sand- - - - -	7	18
White sand - - - - -	3	21
Yellow sand- - - - -	7	28
February 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 107</u>		
Holiness Church, Wm. G. Anderson survey, $12\frac{1}{2}$ miles east of Carthage.		
White sand- - - - -	1	1
Yellow sand - - - - -	3	4
Red clay- - - - -	1	5
Red and white sand- - - - -	2	7
Yellow and white clay- - - -	2	9
Yellow and white sand- - - -	3	12
White clay- - - - -	2	14
White sand- - - - -	1	15
Yellow and white clay - - - -	6	21
January 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 113</u>		
Top of hill, 1.4 miles east of Carter's Store, Mrs. Kelley Holt tract, Wm. English Heirs survey, $13\frac{1}{2}$ miles northeast of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	3	5
Red sand- - - - -	4	9
Red shale- - - - -	3	12
Red clay- - - - -	4	16
Red and white sand- - - - -	4	20
White sand- - - - -	5	25
February 24, 1937.		

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

	Thickness (feet)	Depth (feet)
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Well 116

300 feet south, opposite northeast center of north line, Junius Furrh tract, Madison E. Alford survey, 12 miles east of Carthage.

Sand- - - - -	2	2
Red clay- - - - -	3	5
White shale- - - - -	5	10
White sand- - - - -	12	22
Red shale- - - - -	10	32
Red clay- - - - -	16	48

January 22, 1937.

Well 122

On logging railway, J. W. Bird tract, B. H. Brewer survey.

White sand- - - - -	3	3
Yellow sand - - - - -	7	10
Red sand- - - - -	7	17
Red and white sand- - - - -	4	21
White sand- - - - -	2	23
Yellow sand - - - - -	6	29
Yellowish-white sand - - - - -	3	32
White sand- - - - -	5	37

January 11, 1937.

Well 123

Side of hill, county road, Micajah Ivy survey, 9½ miles northeast of Carthage.

Red shale- - - - -	1	1
White shale- - - - -	2	3
Red rock and sand- - - - -	3	6
White sand- - - - -	2	8
Blue and white shale - - - - -	2	10
Yellow sand- - - - -	1	11
Red sand- - - - -	2	13
White sand- - - - -	3	16
Yellow and white sand- - - - -	3	19
White sand- - - - -	1	20

Struck water at 20 feet.

Water level, 18 feet below top of ground, 1 hour after hole completed.

January 21, 1937.

Well 124

C. S. Ivy tract, A. T. Nichols survey, 9½ miles northeast of Carthage.

Surface materials- - - - -	2	2
White sand- - - - -	4	6
Red clay- - - - -	4	10
Red shale- - - - -	3	13
Red sand- - - - -	4	17
White sand - - - - -	5	22

December 22, 1936.

	Thickness (feet)	Depth (feet)
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Well 125

Side of hill, C. M. Solman tract, Moses Shook survey, 9 miles northeast of Carthage.

Surface materials- - - - -	3	3
Yellow clay- - - - -	1	4
Black clay - - - - -	2	6
Blue clay and sand - - - - -	1	7
Red clay- - - - -	1	8
White sand- - - - -	2	10
Red shale - - - - -	1	11
Yellow sand - - - - -	1	12
White sand- - - - -	8	20

January 21, 1937.

Well 127

Top of hill, county road, F. J. Wise survey, 4¾ miles east of Carthage.

Surface materials- - - - -	2	2
Red clay- - - - -	4	6
Yellow sand - - - - -	2	8
White sand - - - - -	10	18
Yellow sand- - - - -	3	21

Water level, 19 feet below top of ground, 2 hours after hole completed.

February 23, 1937.

Well 132

Mrs. C. S. Ivy tract, 1,000 feet south and opposite northeast center of the north line of Wiet Anderson survey, 4¾ miles southeast of Carthage.

Light brown shale- - - - -	1	1
Yellow shale- - - - -	1	2
Red shale- - - - -	1	3
Red and gray shale- - - - -	1	4
Gray shale- - - - -	1	5
White shale- - - - -	4	9
Rock- - - - -		9

January 6, 1937.

Well 134

Henry Hall tract, Wm. English survey, 4 miles southeast of Carthage.

Yellow sand- - - - -	5	5
Buff-colored sand and shale- - - - -	3	8
Gray water sand- - - - -	10	18
White quicksands- - - - -	3	21

Water level, 16 feet below top of ground, ½ hour after hole completed.

January 11, 1937.

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

	Thickness (feet)	Depth (feet)
<u>Well 139</u>		
300 feet north and opposite northeast center of the more southerly south line of John S. Neal 170 acre tract, Willis Vaughn survey, $3\frac{1}{4}$ miles southeast of Carthage.		
Surface materials-	1	1
Red clay-	2	3
Yellow clay-	3	6
Red clay-	4	10
Red and white sand-	2	12
Yellow clay and white sand-	4	16
Yellow sand-	4	20
January 10, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 141</u>		
Top of hill, southeast corner N. Baker tract, Willis Vaughn survey, $2\frac{3}{4}$ miles south of Carthage.		
White sand-	1	1
Red shale-	5	6
Yellow shale-	1	7
Red shale and sand-	3	10
Red sand-	2	12
Yellow sand-	1	13
Red sand-	8	21
Gray sand-	6	27
White sand-	2	29
Yellow sand-	1	30
White sand-	5	35
January 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 142</u>		
Side of hill, 1,280 feet north of south line and 200 feet west of east line J. W. Cooke tract, Cornelius Crenshaw survey, $3\frac{1}{4}$ miles south of Carthage.		
Red shale and sand-	4	4
White sand and shale-	2	6
White sand-	3	9
Buff-colored shale-	1	10
Blue shale-	2	12
Brown shale-	1	13
Blue shale-	1	14
January 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 149</u>		
M. Isaac tract, George Goodwin survey, $\frac{3}{4}$ mile southwest of Carthage.		
Red clay-	3	3
Gray shale-	5	8
White sand-	3	11
Yellow sand-	9	20
Black shale-	4	24

	Thickness (feet)	Depth (feet)
<u>Well 149 continued</u>		
Blue shale-	4	28
Water level, 20 feet below top of ground, 10 hours after hole completed. December 19, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 153</u>		
Side of hill, 1,000 feet west of east line and 400 south of north line, J. S. Neal 20-acre tract, George Goodwin survey, $\frac{1}{3}$ mile northeast of Carthage.		
Surface materials-	1	1
Red and white shale-	1	2
White shale-	1	3
Brown sand-	1	4
Gray sand-	1	5
White sand-	2	7
Brown gravel and sand-	1	8
Brown sand-	4	12
Yellow sand-	1	13
Gray shale-	1	14
January 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 155</u>		
County road, George Goodwin survey, 1 mile southeast of Carthage.		
White sand-	2	2
Yellow clay and sand-	1	3
Red clay and yellow sand-	2	5
Red clay and white sand-	3	8
Yellow sand-	1	9
White sand-	1	10
Yellow sand-	1	11
Sandstone-		11
January 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 156</u>		
Top of hill, 800 feet north of south line, 300 feet west of east line, Dr. S. L. Bowen and Essie Bowen 20-acre tract, George Goodwin survey, $1\frac{1}{4}$ miles south of Carthage.		
Clay-	1	1
Red and white sand-	2	3
Red shale-	10	13
Orange-colored shale-	4	17
Red shale-	5	22
Blue shale-	3	25
Buff-colored shale-	6	31
Yellow sand-	3	34
Red shale-	5	39
White water sand-	6	45
January 7, 1937.		

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

	Thickness (feet)	Depth (feet)
<u>Well 157</u>		
Valley, Kendall tract, George Goodwin survey, 2 miles south of Carthage.		
Gray sand- - - - -	8	8
White sand- - - - -	2	10
White quicksand- - - - -	2	12
January 5, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 158</u>		
Top of hill, 900 feet east of west line and 900 feet north of south line, C. H. Pryor tract, George Goodwin survey, 1 1/2 miles southeast of Carthage.		
Sand- - - - -	2	2
Yellow sand - - - - -	3	5
Red clay and white sand - - -	3	8
Struck water at 7 feet.		
January 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 161</u>		
J. W. Cooke tract, George Goodwin survey, 1 3/4 miles northeast of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	3	5
Red sand- - - - -	7	12
Yellow sand- - - - -	8	20
Water level, 9 feet below top of ground, 3 hours after hole completed.		
December 15, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 169</u>		
J. I. Metcalf tract, Wm. Thompson survey, 1 3/4 miles north of Carthage.		
Surface materials- - - - -	1	1
Yellow sandy clay- - - - -	1	2
Red clay and yellow clay -	1	3
Red and white shale - - -	2	5
Yellow clay and white shale- - - - -	3	8
White shale- - - - -	3	11
Brown shale- - - - -	2	13
February 19, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 178</u>		
Top of hill, in woods 400 feet west of State Highway 149, E. E. Brassell tract, James Hughes survey, 1 3/4 miles northwest of Carthage.		
White sand- - - - -	1	1
Yellow sand - - - - -	1	2
Yellow clay - - - - -	2	4
Red clay- - - - -	3	7
Red clay and white sand- -	2	9
Yellow and white sand- - -	5	14
White sand and red shale--	15	29
White watersand- - - - -	3	32
January 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 183</u>		
Top of hill, E. P. Ross tract, Cyrena McCreary survey, 6 miles southwest of Carthage.		
Surface materials- - - - -	1	1
Dark sand- - - - -	1	2
Yellow sand- - - - -	2	4
Red sand and clay- - - - -	2	6
Yellow shale- - - - -	2	8
Gray sand- - - - -	6	14
Red sand- - - - -	8	22
Gray sand- - - - -	2	24
Yellow sand- - - - -	2	26
White sand- - - - -	4	30
Gray sand- - - - -	5	35
Struck water at 33 feet.		
Water level, 33 feet below top of ground, 13 hours after hole completed.		
February 17, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 185</u>		
Top of hill, 600 feet south of north line and 300 feet east of west line, Hermann Brown tract, Cyrena McCreary survey, 7 1/2 miles southwest of Carthage.		
Surface materials- - - - -	1	1
Red and yellow clay- - - - -	4	5
Red clay and white sand- -	3	8
Yellow clay and white sand-	1	9
Yellow sand- - - - -	6	15
Brown shale- - - - -	5	20
Yellow sand- - - - -	3	23
Struck water at 14 feet.		
February 15, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 186</u>		
Top of hill, G. H. Soape tract, approximate center east 1/2 John N. Williams survey, 5 miles southwest of Carthage.		
Surface materials- - - - -	1	1
Yellow sand- - - - -	2	3
Red clay- - - - -	3	6
Yellow sand and clay - - -	4	10
White sand- - - - -	5	15
Yellow clay and sand- - -	4	19
Gray sand- - - - -	3	22
Yellow sand- - - - -	2	24
Dark shale- - - - -	3	27
Yellow shale- - - - -	2	29
White sand- - - - -	6	35
Water level, 30 feet below top of ground, 1/2 hour after hole completed.		
February 15, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 187</u>		
Top of hill, A. C. Soape tract, north-		
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 187 continued</u>		
east corner of John N. Williams survey, 5 miles southwest of Carthage.		
Surface materials- - - - -	1	1
Dark sand- - - - -	2	3
Red clay- - - - -	1	4
Gray shale- - - - -	1	5
Red shale and gravel - - -	5	10
Gray and red shale- - - -	6	16
Yellow sand and clay- - -	4	20
Yellow sand- - - - -	4	24
Water level, 20 feet below top of ground, $\frac{1}{2}$ hour after hole completed. February 18, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 188</u>		
Sam Dillard tract, Wm. Liddy survey, $5\frac{1}{2}$ miles west of Carthage.		
Surface materials- - - - -	1	1
Yellow sand- - - - -	1	2
Yellow sand and clay - - -	3	5
Red clay and white sand- - -	4	9
Red and yellow sand- - - -	5	14
Yellow sand- - - - -	6	20
Struck water at 16 feet. Water level, 16.1 feet below top of ground, $\frac{1}{2}$ hour after hole completed. January 29, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 200</u>		
Top of hill, S. A. Ellis tract, Catherine Lindsey survey, 7 miles west of Carthage.		
Surface materials- - - - -	1	1
Yellow clay- - - - -	1	2
Red clay and white sand- - -	1	3
Yellow clay and white sand- -	3	6
Yellow and white sand- - -	4	10
Yellow sand- - - - -	5	15
Yellow clay- - - - -	3	18
White sand- - - - -	2	20
Yellow sand- - - - -	1	21
Struck water at 15 feet. Water level, 15.2 feet below top of ground, 3 hours after hole completed. January 29, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 204</u>		
Top of hill, 600 feet south of State Highway 64, 100 feet east of west line of J. R. Harris tract, J. W. Williams survey.		
Yellow shale- - - - -	2	2
Red shale- - - - -	2	4
Gray shale- - - - -	1	5
Red shale- - - - -	1	6
Gray shale- - - - -	1	7

	Thickness (feet)	Depth (feet)
<u>Well 204 continued</u>		
Buff-colored shale- - - -	4	11
Lignite and shale- - - -	1	12
Yellow shale- - - - -	4	16
Struck water at 13 feet. Water level, 4 feet below top of ground, 4 hours after hole completed. January 29, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 206</u>		
Richardson Shaw tract, Abner Herren Sr. survey, $12\frac{1}{2}$ miles west of Carthage.		
Surface materials- - - - -	1	1
Red clay- - - - -	6	7
Yellow sand- - - - -	-	7
January 29, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 209</u>		
On State Highway 64, John Warden survey, 15 miles west of Carthage.		
White sand- - - - -	3	3
Red shale- - - - -	2	5
Yellow sand- - - - -	8	13
Gray chalk- - - - -	2	15
Buff-colored sand- - - -	1	16
White sand and shale- - -	2	18
Yellow sand- - - - -	1	19
White sand, water- - - -	17	36
December 3, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 213</u>		
Fred Giles tract, Catherine Lindsey survey, $15\frac{1}{2}$ miles west of Carthage.		
Surface materials- - - -	2	2
Red clay and white sand- - -	5	7
Yellow sand- - - - -	6	13
Yellow and white sand- - -	2	15
Yellow sand- - - - -	6	21
White sand- - - - -	5	26
Quicksand- - - - -	3	29
Struck water at 21 feet. Water level, 19.2 feet below top of ground, 10 hours after hole completed. February 16, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 228</u>		
Top of hill, Liza Ballard tract, William Taylor survey, 18 miles southwest of Carthage.		
Surface materials- - - - -	1	1
Brown sand- - - - -	2	3
Red clay- - - - -	3	6
Yellow and gray clay- - -	5	11
Yellow sand- - - - -	4	15
Black shale- - - - -	1	16
Yellow sand- - - - -	1	17

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

	Thickness (feet)	Depth (feet)
<u>Well 228 continued</u>		
Gray shale- - - - -	1	18
Red clay- - - - -	1	19
Hard dark-gray shale- - - -	4	23
February 16, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 242</u>		
Top of hill, A. Prycer tract, F. A. Hudson survey, 15 $\frac{1}{2}$ miles southwest of Carthage.		
White sand- - - - -	6	6
Light-red sand- - - - -	17	23
Gray sand- - - - -	2	25
Water level, 20 feet below top of ground, 30 hours after hole completed.		
February 4, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 244</u>		
County road, opposite F. O. Johnson tract, Noah Snider survey, 15 $\frac{1}{2}$ miles southwest of Carthage.		
White sand- - - - -	3	3
Red sand- - - - -	2	5
Buff-colored sand - - - - -	8	13
Yellow sand- - - - -	5	18
White sand- - - - -	3	21
Struck water at 18 feet.		
Water level, 7.2 feet below top of ground, 1 hour after hole completed.		
February 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 246</u>		
Joe Collins tract, Henry G. Strickland survey, 15 $\frac{1}{2}$ miles southwest of Carthage.		
Surface soil- - - - -	1	1
Red clay- - - - -	3	4
Yellow clay - - - - -	5	9
Yellow sand- - - - -	3	12
Hard lignite- - - - -	3	15
White sand- - - - -	3	18
February 9, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 254</u>		
G. D. Marshall tract, Sebastian Francis survey, 6 $\frac{1}{2}$ miles southwest of Carthage.		
Yellow sand- - - - -	2	2
Red clay and yellow sand - -	3	5
Blue shale- - - - -	2	7
White shale - - - - -	3	10
Yellow clay- - - - -	4	14
Gray shale- - - - -	1	15
Yellow shale- - - - -	2	17
February 17, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 257</u>		
Top of hill, Jim Langford tract, Wm. Fisher survey, 10 miles southwest of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	6	8
Yellow clay and sand - - -	12	20
Blue clay and soapstone- -	5	25
Yellow sand- - - - -	4	29
Water level, 26 feet below top of ground, 2/3 hour after hole completed.		
February 11, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 258</u>		
Miles Dudley tract, Johnathan Lindley survey, 13 miles south of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	3	5
White sandy clay- - - - -	4	9
Yellow sandy clay- - - - -	5	14
White sand- - - - -	6	20
Water level, 17 feet below top of ground, 1 hour after hole completed.		
February 10, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 262</u>		
Top of hill, Z. L. Daniels tract, Edward Smith survey, 9 $\frac{1}{2}$ miles south of Carthage.		
Surface materials- - - - -	1	1
Red clay- - - - -	2	3
Red sand- - - - -	4	7
White sand- - - - -	3	10
Light sand- - - - -	1	11
Dark sand- - - - -	2	13
Light sand- - - - -	1	14
Dark sand- - - - -	1	15
Yellow sand- - - - -	3	18
Dark sand- - - - -	7	25
White sand - - - - -	1	26
Water level, 20 feet below top of ground, 10 hours after hole completed.		
February 2, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 263</u>		
Top of hill, Z. L. Daniels tract, Edward Smith survey, 9 $\frac{1}{2}$ miles south of Carthage.		
Surface materials- - - - -	2	2
Red clay- - - - -	4	6
Yellow clay - - - - -	4	10
February 11, 1937.		

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

	Thickness (feet)	Depth (feet)
<u>Well 266</u>		
J. A. Pate tract, Elijah Morris survey, 9 miles south of Carthage.		
Surface materials- - - - -	1	1
Red clay- - - - -	3	4
Yellow clay - - - - -	3	7
Yellow sand- - - - -	2	9
White sand- - - - -	4	13
Red sand- - - - -	7	20
February 11, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 268</u>		
Top of hill, L. D. Moore tract, lot 37, Isabella Hanks survey, 7 miles south of Carthage.		
Gray sand- - - - -	4	4
Black sand- - - - -	5	9
White sand- - - - -	7	16
Yellow sand- - - - -	9	25
Brown sand- - - - -	7	32
White quicksand - - - - -		32
February 17, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 274</u>		
Top of hill, Z. L. Daniels tract, Jesse Davis survey, 7 $\frac{1}{2}$ miles south of Carthage.		
Surface materials- - - - -	1	1
Yellow clay- - - - -	1	2
Red and gray clay- - - - -	2	4
Red clay- - - - -	2	6
Yellow clay- - - - -	2	8
Yellow clay and gray sand -	1	9
Red and gray clay- - - - -	2	11
Yellow sand- - - - -	1	12
White sand- - - - -	1	13
Yellow sand- - - - -	1	14
Yellow and gray clay - - - -	2	16
February 1, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 276</u>		
Top of hill, Paul Rogers tract, George Weeden survey, 8 miles south of Carthage.		
Red clay- - - - -	2	2
Yellow clay- - - - -	3	5
White sand and yellow clay-	2	7
Brown shale- - - - -	5	12
White and yellow sand- - -	1	13
White sand- - - - -	1	14
Yellow sand- - - - -	3	17
White sand- - - - -	3	20
Quicksand- - - - -	1	21
Struck water at 20 feet.		
February 2, 1937.		

Well 278
3,000 feet east of State Highway 8,

	Thickness (feet)	Depth (feet)
<u>Well 278 continued</u>		
N. A. Harris tract, Ralph Hester survey, 8 miles south of Carthage.		
Surface materials- - - - -	1	1
Yellow sand- - - - -	4	5
Red and white sand - - - -	3	8
Orange-colored and gray sand- - - - -	4	12
White sand- - - - -	1	13
Yellow sand - - - - -	3	16
Orange-colored and white sand- - - - -	1	17
White sand- - - - -	10	27
Yellow sand - - - - -	10	37
Water level, 10 feet below top of ground, 8 hours after hole completed. February 2, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 280</u>		
Jeff Ellison tract, George Humphries survey, 9 $\frac{1}{2}$ miles south of Carthage.		
Surface materials- - - - -	1	1
Dark sand- - - - -	4	5
Red and white clay - - - -	5	10
Yellow sand- - - - -	4	14
White sand- - - - -	3	17
Gray sand- - - - -	7	24
February 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 281</u>		
1/3 mile west of U. S. Highway 59, M. P. Foots tract, Hampton West survey, 11 miles south of Carthage.		
Surface materials- - - - -	2	2
Yellow clay- - - - -	2	4
Red and yellow clay - - -	4	8
Yellow sand- - - - -	4	12
White sand- - - - -	2	14
Pink and white sand- - - -	1	15
Yellow and white sand- - -	2	17
Pink sand- - - - -	3	20
White sand- - - - -	1	21
White and pink sand- - - -	1	22
White and yellow sand- - -	3	25
Pink sand- - - - -	2	27
January 12, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 282</u>		
Top of hill, Dr. Deberry tract, Thomas Kelly survey, 11 miles southeast of Carthage.		
Surface materials- - - - -	1	1
Red clay- - - - -	2	3
Yellow sand- - - - -	1	4
Red and light-colored sand-	1	5
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 282 continued</u>		
Yellow shale - - - - -	3	8
February 3, 1937.		

<u>Well 283</u>		
Ed. Deberry tract, Thomas Kelly survey, 12 miles southeast of Carthage.		
Red clay and white sand - -	3	3
Yellow clay and white sand -	2	5
Yellow sand - - - - -	5	10
White sand - - - - -	5	15
Yellow clay - - - - -	2	17
Blue shale - - - - -	4	21
Struck water at 20 feet.		
February 1, 1937.		

<u>Well 294</u>		
1,000 feet west of Woodson School, J. B. Hooker tract, Susanah Horton survey, 12 $\frac{1}{2}$ miles southeast of Carthage.		
Surface sand - - - - -	2	2
Yellow sand - - - - -	7	9
Red and gray sand - - - - -	4	13
Yellow sand - - - - -	8	21
White sand - - - - -	6	27
Red sand - - - - -	4	31
Quicksand - - - - -	10	41
Water level, 32 feet below top of ground, 1 hour after hole completed.		
March 19, 1937.		

<u>Well 295</u>		
Ben Hooker tract, Hezekiah McKilvey sur- vey, 13 $\frac{1}{2}$ miles southeast of Carthage.		
Surface materials - - - - -	1	1
Red clay - - - - -	5	6
Yellow sand - - - - -	6	12
Yellow clay - - - - -	5	17
Yellow sand - - - - -	5	22
Brown clayey sand - - - - -	3	25
Yellow sand - - - - -	5	30
Clay and sand - - - - -	6	36
Blue clay - - - - -	4	40
Yellow sand - - - - -	2	42
Blue sand - - - - -	3	45
Yellow sand - - - - -	2	47
Blue sand - - - - -	3	50
Water level, 47.5 feet below top of ground, 2 hours after hole completed.		
February 5, 1937.		

<u>Well 299</u>		
Top of hill, Julia Baldwin tract, Alanson Barr survey, 15 $\frac{1}{2}$ miles southeast of Car- thage.		
Surface materials - - - - -	1	1

	Thickness (feet)	Depth (feet)
<u>Well 299 continued</u>		
Red clay - - - - -	2	3
Yellow clay - - - - -	3	6
White clay - - - - -	5	11
Black clay - - - - -	6	17
March 3, 1937.		

<u>Well 300</u>		
Side of hill, L. H. Goolsby tract, Alanson Barr survey, 15 $\frac{1}{2}$ miles south- east of Carthage.		
Red sand - - - - -	9	9
Yellow sand - - - - -	2	11
White sand - - - - -	2	13
Gray sand - - - - -	3	16
Yellow sand - - - - -	2	18
Quicksand - - - - -	4	22
Water level, 18.8 feet below top of ground, $\frac{1}{2}$ hour after hole completed.		
March 3, 1937.		

<u>Well 307</u>		
Joe Alford tract, Jesse Loose survey, 15 miles southeast of Carthage.		
Surface materials - - - - -	2	2
Red clay - - - - -	4	6
Yellow clay - - - - -	4	10
Red clay - - - - -	1	11
White clayey sand - - - - -	2	13
Yellow sand and clay - - -	3	16
Brown shale - - - - -	2	18
White sand - - - - -	3	21
February 9, 1937.		

<u>Well 308</u>		
Side of hill, Joe Rowe tract, Jesse Loose survey, 15 $\frac{1}{2}$ miles southeast of Carthage.		
Surface materials - - - - -	1	1
Red clay - - - - -	5	6
Yellow clay - - - - -	6	12
Black shale - - - - -	6	18
Hard yellow shale - - - -	1	19
March 3, 1937.		

<u>Well 312</u>		
Side of hill, 2,000 feet east of county road, J. D. Mimms tract, Andrew McFaddin survey, 17 $\frac{1}{2}$ miles southeast of Carthage.		
Surface materials - - - - -	1	1
Red clay - - - - -	2	3
Yellow sand - - - - -	3	6
White sand - - - - -	2	8
Yellow and white sand - -	7	15
Yellow and red sand - - -	6	21
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 312 continued</u>		
Brown shale- - - - -	5	26
Yellow sand and clay - - -	3	29
Struck water at 27 feet.		
Water level, 27.2 feet below top of ground, 2 hours after hole completed.		
March 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 314</u>		
Top of hill, Jim Owens tract, Wm. G. Parish survey, 17 miles southeast of Carthage.		
Red sand- - - - -	13	13
White sand- - - - -	2	15
Water level, 5.1 feet below top of ground, 2 hours after hole completed.		
February 5, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 315</u>		
Top of hill, 1,000 feet west of east line, 200 feet north of south line, E. W. Cockerell 100 acre tract, Lucy Maragle survey, 18 miles southeast of Carthage.		
White sand- - - - -	1	1
Red sand- - - - -	5	6
White sand- - - - -	1	7
Red sand- - - - -	1	8
White sand- - - - -	2	10
Red sand- - - - -	1	11
White sand- - - - -	2	13
Red sand- - - - -	1	14
White sand- - - - -	1	15
Water level, 9 feet below top of ground, 2 hours after hole completed.		
February 5, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 317</u>		
Top of hill, J. C. Reeves tract, E. W. Gibbs survey, 14 miles southeast of Carthage.		
Surface materials- - - -	2	2
Red clay- - - - -	4	6
Yellow clay and sand - -	5	11
Yellow sand- - - - -	6	17
White sand- - - - -	4	21
Water level, 17 feet below top of ground, 2 hours after hole completed.		
March 27, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 332</u>		
Valley of Sabine River. 50 feet south of river bed, Mrs. Dempsey Spradley tract, B. B. & C. R. R. Co. survey, 21 miles southeast of Carthage.		
Surface materials- - - -	2	2
Clay- - - - -	3	5
Sand- - - - -	9	14
Struck water at 13 feet.		
February 25, 1937.		

Partial analyses of water from wells in Panola 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. Stulken, D. F. Riddell, H. T. Davidson, Floyd H. Ward, and F. G. Steer, Chemists; and J. A. Harmaza, Martin Wieland, and Jack Ramsey, Assistant Chemists. Nitrate determined by E. W. Lohr, U. S. Geological Survey. Results are in parts per million. Well numbers correspond to numbers in table of well records.)

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
1	W. P. A. test	44	Jan. 8, 1937	46	-	-	-	24	7	10	b/	-
2	do.	40	Jan. 13, 1937	-	-	-	-	-	6	5	49	-
3	W. W. Phillips	41	Jan. 12, 1937	23	-	-	-	18	a/	5	b/	-
4	Arthur Kuykendall	50	Jan. 18, 1937	464	34	15	87	12	a/	112	210	148
6	Paul Bath	9	do.	93	-	-	-	49	20	16	b/	-
7	Aaron Morton	30	Jan. 12, 1937	54	-	-	-	24	a/	8	b/	-
8	W. B. Pelham Est.	30	do.	31	-	-	-	24	a/	7	b/	-
9	Lester S. Smith	17	do.	47	-	-	-	24	11	7	b/	-
12	J. J. Hardy	85	do.	72	-	-	-	37	14	14	b/	-
13	do.	44	do.	45	-	-	-	18	a/	12	b/	-
15	Aubrey Phillips	38	Apr. 16, 1937	221	48	5	18	85	a/	30	75	138
17	M. L. Metcalf	16	do.	577	51	28	108	61	24	216	120	242
18	E. L. Briggs	42	Jan. 19, 1937	135	12	-	37	37	a/	42	26	30
19	W. P. A. test	19	Jan. 20, 1937	65	-	-	-	24	25	6	b/	-
20	do.	22	do.	112	22	4	-	-	a/	20	60	72
21	Mrs. I. M. Yarbrough	20	Apr. 15, 1937	612	26	13	172	43	30	236	114	118
23	W. F. Lee	56	Jan. 20, 1937	375	50	24	43	171	46	47	81	226
24	T. H. Davidson	31	Jan. 19, 1937	350	31	12	66	12	77	90	68	128
26	Mrs. N. J. Majors	57	Jan. 18, 1937	706	58	39	134	6	22	340	110	304
27	Gus & Gladys Parker	46	Jan. 20, 1937	33	-	-	-	24	a/	5	b/	-
29	J. W. Cooke	47	Jan. 19, 1937	146	21	2	23	24	a/	35	49	62
30	Marshall Lumber Co.	20	Jan. 20, 1937	59	-	-	-	37	a/	8	b/	-
31	J. W. Cooke	16	Feb. 25, 1937	37	-	-	-	24	a/	6	b/	-
32	W. P. A. test	18	Mar. 2, 1937	414	-	-	-	49	25	214	b/	-
33	do.	35	Mar. 1, 1937	90	-	-	-	12	11	7	40	-
35	Tom Beaty	19	do.	823	96	33	136	146	38	246	202	375
37	Asa Johnson	28	do.	164	-	-	-	122	10	18	b/	-
38	W. P. A. test	31	Apr. 1, 1937	93	-	-	-	73	a/	13	b/	-
40	do.	20	Mar. 3, 1937	139	24	2	25	61	22	36	b/	70
43	Annie Black	27	Jan. 19, 1937	103	-	-	-	18	a/	56	b/	-

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
44	W. P. A. test	26	Mar. 2, 1937	97	8	-	22	12	10	10	41	20
46	A. J. Sutlive	24	Feb. 25, 1937	162	-	-	-	24	22	48	27	-
48	L. L. Ray	22	Jan. 21, 1937	279	36	-	63	73	a/	82	57	90
49	W. P. A. test	24	Dec. 23, 1936	112	8	1	30	37	11	24	20	26
50	do.	25	Feb. 6, 1937	583	-	-	-	12	274	118	b/	-
51	W. H. Carter	17	Feb. 25, 1937	214	-	-	-	85	32	42	24	-
52	W. P. A. test	21	Jan. 25, 1937	1,249	-	-	-	24	558	280	b/	-
53	T. J. Wooten Est.	1,900	Feb. 25, 1937	28,151	527	126	10,320	646	10	16,850	b/	1,838
54	do.	--	do.	494	26	19	126	24	15	230	66	142
55	W. P. A. test	28	do.	29	-	-	-	12	a/	4	b/	-
56	Mrs. R. T. Hill	75	do.	595	138	26	53	305	12	216	b/	451
57	J. C. Liston	14	do.	382	-	-	-	24	142	76	32	-
58	U. S. Government	25	Mar. 2, 1937	73	-	-	-	24	a/	4	26	-
59	Annie Harris Est.	20	do.	354	-	-	-	122	35	92	46	-
60	J. M. Furr	28	Feb. 19, 1937	127	-	-	-	37	a/	40	26	-
61	E. C. Cooke	16	do.	178	-	-	-	85	10	52	b/	-
63	C. T. Becknell	35	do.	164	-	-	-	134	a/	18	b/	-
64	W. P. A. test	30	do.	72	-	-	-	12	14	27	b/	-
65	D. R. C. Hill	18	do.	977	102	21	213	122	28	384	169	344
66	W. P. A. test	21	do.	-	-	-	-	-	62	42	b/	-
67	P. D. Roguemore	47	Mar. 2, 1937	246	33	3	47	85	31	40	50	97
68	Lewis Willis	11	Jan. 26, 1937	316	-	-	-	220	15	50	28	-
69	W. P. A. test	21	Feb. 19, 1937	91	-	-	-	24	15	14	21	-
70	do.	28	Dec. 23, 1936	405	-	-	-	24	62	144	b/	-
72	Mrs. Lucy C. Holt	32	Feb. 24, 1937	129	-	-	-	98	a/	21	b/	-
73	Robert Johnson	17	do.	-	-	-	-	-	28	137	69	-
74	J. Chandler	20	Jan. 26, 1937	38	12	-	3	24	a/	11	b/	30
75	J. W. Stroud	18	Feb. 24, 1937	145	18	5	22	18	a/	36	55	63
76	Church of Deberry	20	Jan. 26, 1937	61	-	-	-	24	a/	22	b/	-
77	W. P. A. test	19	Feb. 24, 1937	42	9	2	-	-	a/	25	b/	32
78	W. R. Davis	31	Jan. 26, 1937	154	-	-	-	37	10	58	b/	-
80	Roland Anderson	23	Feb. 19, 1937	1,246	-	-	-	171	69	615	35	-
81	D. C. Griffin	13	Jan. 26, 1937	165	17	2	36	37	20	34	38	52
82	G. B. Jenning	12	do.	133	-	-	-	37	15	52	b/	-

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
85	T. C. Adams	110	--	440	37	13	114	250	27	104	22	148
87	Irma Hightower	32	Feb. 24, 1937	134	19	9	8	12	a/	30	62	86
88	A. D. Johns	14	do.	96	-	-	-	37	a/	34	b/	-
89	J. O. Pace	23	Jan. 21, 1937	39	-	-	-	24	a/	12	b/	-
90	Mrs. Jesse Holland	18	do.	-	-	-	-	-	38	84	68	-
91	W. J. Johnson	21	Jan. 28, 1937	45	-	-	-	24	a/	16	b/	-
92	A. B. Erwin	44	do.	-	-	-	-	-	27	56	62	-
95	A. J. Mavfield	32	do.	196	22	10	23	6	a/	50	88	96
97	W. P. A. test	31	Jan. 27, 1937	38	-	-	-	12	a/	10	b/	-
98	E. T. Powell	42	Jan. 28, 1937	240	-	-	-	110	a/	96	b/	-
99	Dewey McMillan	35	Jan. 27, 1937	233	17	7	53	24	a/	84	55	72
100	W. P. A. test	21	Jan. 28, 1937	58	-	-	-	24	a/	19	b/	-
101	H. P. Barnett	23	Feb. 27, 1937	82	-	-	-	18	a/	13	35	-
102	A. A. Alexander	24	Jan. 25, 1937	65	4	1	14	6	a/	11	32	16
103	Lagrove Bros.	133	Jan. 22, 1937	59	-	-	-	49	a/	7	b/	-
104	E. F. Watkins	28	do.	81	-	-	-	37	11	11	b/	-
109	E. P. Dunfee	13	Jan. 21, 1937	634	22	16	167	6	58	200	168	120
110	B. J. Burler	15	do.	120	18	7	6	24	a/	9	62	75
111	E. P. Hickey	-	Feb. 24, 1937	138	-	-	-	37	12	58	b/	-
115	J. C. Gill	24	Jan. 21, 1937	68	-	-	-	73	a/	5	b/	-
117	Jasper Thomas	32	do.	250	20	9	49	24	13	65	82	85
118	E. A. Hull	18	Feb. 25, 1937	44	-	-	-	24	10	6	b/	-
119	do.	42	do.	155	50	10	-	122	28	7	b/	166
120	do.	16	do.	8,644	850	1,262	-	171	6,437	10	b/	7,315
123	W. P. A. test	20	Jan. 21, 1937	146	-	-	-	48	31	40	b/	-
124	do.	22	Dec. 22, 1936	176	-	-	-	171	20	5	b/	-
126	R. L. Williamson	30	Dec. 16, 1936	272	-	-	-	195	14	55	b/	-
127	W. P. A. test	21	Feb. 23, 1937	-	-	-	-	-	20	8	b/	-
128	E. A. Hull	17	do.	34	-	-	-	18	a/	12	b/	-
129	Alpha Burns	16	Jan. 11, 1937	23	-	-	-	12	a/	8	b/	-
130	H. H. Choate	23	do.	230	34	7	32	67	a/	50	74	115
131	G. F. Anderson	48	Jan. 8, 1937	168	38	10	2	79	a/	21	58	136
133	C. E. Moore	19	Jan. 7, 1937	55	-	-	-	24	a/	8	b/	-
135	L. M. Hunt	19	do.	186	16	-	55	98	28	32	b/	40

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
136	D. T. Holmes	22	Jan. 7, 1937	55	-	-	-	24	a/	19	b/	-
137	D. Burney Moore	30	Jan. 6, 1937	245	29	19	20	61	a/	46	101	152
138	Mrs. --Owens	23	Jan. 4, 1937	301	-	-	-	37	50	106	26	-
143	S. L. Holmes	30	Dec. 15, 1936	72	-	-	-	31	15	13	b/	-
144	Dr. L. H. Pirkle	19	do.	566	59	12	110	134	35	100	184	198
145	do.	45	do.	245	-	-	-	195	a/	42	b/	-
146	Glenn Pippen	21	do.	106	7	2	24	6	a/	28	38	27
147	Dr. J. A. Daniels Est.	69	Dec. 16, 1936	2,182	-	-	-	110	150	1,200	b/	-
148	G. A. Menner	25	Dec. 15, 1936	195	-	-	-	18	a/	88	26	-
149	W. P. A. test	28	Dec. 19, 1936	73	-	-	-	49	16	7	b/	-
152	F. M. Eubanks	16	Jan. 6, 1937	889	45	27	202	12	a/	262	338	-
153	W. P. A. test	14	do.	96	-	-	-	24	46	7	b/	-
154	Levi Hudson	25	do.	886	45	13	238	134	77	225	222	168
157	W. P. A. test	12	Jan. 5, 1937	298	-	-	-	24	108	80	b/	-
159	J. W. Cooke	--	--	325	-	-	-	305	a/	38	b/	-
160	do.	17	Dec. 16, 1936	567	-	-	-	110	204	116	b/	-
161	W. P. A. test	20	Dec. 15, 1936	70	-	-	-	24	23	11	b/	-
162	Welleco Pipkin	21	Feb. 23, 1937	464	52	14	96	85	15	190	55	189
163	J. N. Harrison	11	Jan. 7, 1937	109	-	-	-	18	a/	52	b/	-
164	E. A. Hull	23	Dec. 17, 1936	217	44	6	32	159	20	37	b/	134
167	A. Hart	22	Jan. 6, 1937	1,214	-	-	-	24	276	510	b/	-
170	J. E. Whitaker	11	Dec. 22, 1936	130	-	-	-	61	a/	44	b/	-
171	E. T. Mangham	28	do.	491	-	-	-	195	25	172	20	-
172	Dan Crawford	29	Jan. 20, 1937	-	-	-	-	-	-	16	b/	-
173	Jim Jones	26	Apr. 15, 1937	116	-	-	-	24	a/	40	b/	-
174	William Hicks	33	do.	72	-	-	-	49	a/	16	b/	-
175	W. H. E. Pierce	21	Dec. 23, 1936	50	-	-	-	37	a/	8	b/	-
176	E. O. Loden	17	Dec. 22, 1936	105	-	-	-	-	22	50	b/	-
178	W. P. A. test	32	Jan. 7, 1937	89	12	-	21	37	a/	8	33	30
179	J. A. McDaniel	13	Jan. 11, 1937	317	-	-	-	12	16	182	b/	-
180	Elvin P. Ross	12	Dec. 16, 1936	88	-	-	-	37	a/	30	b/	-
181	E. Pippen	19	Feb. 17, 1937	366	47	9	67	92	11	70	117	156
182	J. N. Dennard	33	Dec. 16, 1936	414	38	24	88	171	20	160	b/	195

a/ Sulphate less than 10 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
183	W. P. A. test	35	Feb. 17, 1937	105	-	-	-	12	13	49	b/	-
184	L. C. Chatham	22	do.	119	-	-	-	12	12	40	22	-
185	W. P. A. test	23	Feb. 15, 1937	131	-	-	-	12	26	54	b/	-
186	do.	35	do.	2,568	328	160	388	12	116	1,530	40	1,480
188	do.	20	Jan. 29, 1937	-	-	-	-	-	16	8	-	-
189	Sam Dillard	20	do.	111	-	-	-	122	a/	4	b/	-
190	Harvey Fite	16	Dec. 21, 1936	205	-	-	-	61	a/	94	b/	-
191	Mrs. Fannie Wilkerson	19	Dec. 22, 1936	276	-	-	-	110	65	60	b/	-
192	Thos. Wooten	16	Dec. 21, 1936	359	-	-	-	61	85	116	b/	-
193	Thos. Alexander	39	Dec. 22, 1936	59	-	-	-	37	a/	11	b/	-
194	Eva Holland	19	do.	108	-	-	-	61	31	9	b/	-
195	D. G. Beason	38	Dec. 23, 1936	140	-	-	-	49	a/	40	22	-
196	M. G. Broome	28	Apr. 15, 1937	69	-	-	-	31	a/	28	b/	-
198	Rosser Crawford	39	do.	138	-	-	-	12	10	64	b/	-
199	E. Tompkins	34	Dec. 23, 1936	858	-	-	-	171	24	435	b/	-
200	W. P. A. test	21	Jan. 29, 1937	170	-	-	-	98	58	5	b/	-
201	R. C. Holland	24	do.	33	-	-	-	12	12	4	b/	-
202	Richmond Shaw	22	do.	897	72	24	177	-	96	228	300	280
203	R. D. Browning	21	do.	234	-	-	-	146	14	40	24	-
205	R. Shaw	86	do.	141	-	-	-	110	a/	28	b/	-
207	L. B. Belew	15	do.	53	-	-	-	24	a/	15	b/	-
208	J. E. Gentry	20	do.	447	41	19	73	43	18	110	165	182
209	W. P. A. test	36	Dec. 3, 1936	50	4	-	15	12	a/	17	b/	10
210	J. E. Wylie	17	Feb. 18, 1937	104	-	-	-	6	a/	48	b/	-
211	A. C. Claborn	27	Feb. 16, 1937	163	-	-	-	61	15	40	22	-
212	Horace Guinn	17	do.	984	92	52	122	6	64	180	471	442
213	W. P. A. test	29	do.	45	4	1	10	12	14	10	b/	16
214	Will Mayes	20	do.	131	-	-	-	49	a/	54	b/	-
215	J. E. Beckham	16	do.	105	-	-	-	24	a/	50	b/	-
216	Mrs. L. V. McDonald	80	Feb. 18, 1937	97	-	-	-	31	11	36	b/	-
	Est.											
217	Mrs. Ada Pelham	18	do.	176	-	-	-	24	a/	100	b/	-
218	S. J. Brady Est.	31	Feb. 16, 1937	445	32	8	106	61	15	125	129	115
219	Kangerga Bros.	40	do.	62	-	-	-	24	a/	13	b/	-

a/ Sulphate less than 10 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
220	Bill Johnson	11	Apr. 16, 1937	177	-	-	-	61	30	54	b/	-
221	P. B. Murphy	23	do.	205	-	-	-	67	30	56	b/	-
222	W. T. Hardy	27	do.	621	-	-	-	18	384	34	b/	-
223	J. W. Lee	11	Feb. 4, 1937	39	-	-	-	12	a/	14	b/	-
224	W. T. Lake Est.	32	do.	-	-	-	-	-	15	565	112	-
225	Frank Davis Est.	23	Jan. 18, 1937	160	15	12	16	6	a/	43	71	88
226	L. F. Wedgeworth	25	Feb. 10, 1937	95	-	-	-	49	a/	12	22	-
227	Dan Nickerson Est.	19	Apr. 6, 1937	120	-	-	-	12	10	52	b/	-
230	T. L. Fleming	27	Feb. 18, 1937	81	-	-	-	37	a/	20	b/	-
231	J. J. Goodwin	27	do.	61	-	-	-	31	11	13	b/	-
232	W. P. Bryan	19	do.	219	-	-	-	37	a/	100	25	-
234	J. B. Reeves	28	Feb. 11, 1937	120	-	-	-	98	a/	18	b/	-
235	A. J. Reed	27	do.	1,019	62	17	252	177	43	220	338	225
237	A. Marshall	22	Feb. 10, 1937	168	23	12	13	24	a/	46	62	107
238	L. F. Wedgeworth	39	do.	2,187	-	-	-	134	846	560	b/	-
239	Mrs. A. Prycer	17	Feb. 4, 1937	43	-	-	-	37	a/	8	b/	-
240	--	29	Feb. 3, 1937	42	-	-	-	37	a/	3	b/	-
241	Mrs. W. D. Hudson	39	Feb. 4, 1937	83	-	-	-	12	10	25	b/	-
243	Baptist Church	44	Feb. 3, 1937	31	-	-	-	24	a/	7	b/	-
244	W. P. A. test	21	do.	66	17	2	-	12	a/	5	36	52
245	May Hudson	32	do.	223	-	-	-	37	20	68	44	-
247	R. D. Wooten	29	Feb. 1, 1937	143	-	-	-	110	a/	17	20	-
248	Charlie Ray	21	do.	323	-	-	-	12	114	80	b/	-
249	J. C. Collins	24	do.	79	-	-	-	24	a/	38	b/	-
252	Charlie Graves	25	Feb. 11, 1937	335	-	-	-	73	47	104	35	-
253	W. R. Wedgeworth	14	do.	388	83	9	50	317	10	34	46	246
255	W. T. Wooley	31	Feb. 15, 1937	1,135	83	81	144	6	10	300	514	540
256	J. L. D. Morris	15	do.	239	30	17	22	37	a/	64	84	145
257	W. P. A. test	29	Feb. 11, 1937	5,766	-	-	-	134	316	3,330	-	-
258	do.	20	Feb. 10, 1937	140	-	-	-	24	35	45	b/	-
259	H. Cozart	38	Feb. 1, 1937	1,373	61	27	400	49	189	585	87	261
261	Henry Smith	21	Feb. 2, 1937	723	-	-	-	6	27	435	b/	-
262	W. P. A. test	26	do.	797	49	34	163	-	381	170	b/	262
264	R. B. Young	27	do.	246	-	-	-	-	a/	152	b/	-

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
265	Claudia Hall	16	Feb. 3, 1937	241	33	2	46	79	13	40	68	91
266	W. P. A. test	20	Feb. 11, 1937	302	-	-	-	12	134	65	b/	-
267	Dr. Z. L. Daniels	23	do.	414	41	19	70	6	10	166	105	182
269	Panola County	39	Feb. 17, 1937	167	26	6	32	134	10	27	b/	89
270	Dr. J. D. White	19	do.	608	-	-	-	24	95	290	b/	-
271	Mrs. W. R. Gary	24	Feb. 8, 1937	432	52	20	66	24	a/	178	100	213
272	H. S. Raborn	18	do.	710	31	19	190	98	35	234	153	157
273	R. B. Armstrong	35	do.	200	-	-	-	49	64	48	b/	-
275	J. B. Ingram	30	Feb. 1, 1937	370	39	11	65	61	a/	82	138	142
276	W. P. A. test	21	Feb. 2, 1937	38	-	-	-	12	a/	10	b/	-
277	J. F. Ritter	13	Feb. 17, 1937	587	-	-	-	12	51	284	46	-
278	W. P. A. test	37	Feb. 2, 1937	95	-	-	-	24	46	6	b/	-
279	Mattie Solomon	22	Jan. 11, 1937	47	-	-	-	18	a/	16	b/	-
284	J. Menefee	-	Mar. 3, 1937	309	35	2	69	92	35	60	63	96
285	J. L. Benton	20	Jan. 11, 1937	315	13	4	94	37	22	112	52	47
286	J. A. McDaniels	39	do.	158	15	5	29	31	a/	34	60	58
287	J. F. Hancock	56	Feb. 8, 1937	129	-	-	-	49	10	48	b/	-
289	Mrs. E. A. Davidson	24	do.	147	-	-	-	73	20	38	b/	-
291	Mrs. R. H. Hancock	39	do.	133	25	3	7	-	a/	18	74	77
292	Jep. Baldwin	33	Feb. 5, 1937	266	38	8	37	85	a/	44	92	130
293	J. B. Hooker	89	Mar. 16, 1937	77	-	-	-	55	a/	16	b/	-
295	W. P. A. test	50	Feb. 5, 1937	-	-	-	-	-	250	760	-	-
296	Dave Rowe	46	do.	47	-	-	-	24	a/	12	b/	-
297	J. F. Baldwin	32	Feb. 9, 1937	142	-	-	-	116	a/	22	b/	-
298	K. C. Kyle	18	Jan. 11, 1937	86	-	-	-	49	a/	16	b/	-
300	W. P. A. test	22	Mar. 3, 1937	303	-	-	-	207	10	19	67	-
301	L. H. Goolsby	21	Feb. 9, 1937	384	18	24	80	12	a/	168	88	145
303	W. W. Butler	--	Mar. 3, 1937	337	34	4	95	262	31	44	b/	102
304	Bernard Kyle	45	Feb. 9, 1937	90	-	-	-	49	a/	32	b/	-
305	J. V. Pou	31	do.	93	-	-	-	24	a/	30	b/	-
306	Bernard Kyle	25	do.	232	18	8	50	6	a/	98	55	80
309	Joe Rowe	36	Mar. 3, 1937	78	-	-	-	49	a/	7	b/	-
310	Joe Scape	35	do.	255	-	-	-	37	20	114	b/	-
311	Mrs. W. I. Nutt	25	Feb. 5, 1937	204	-	-	-	49	11	82	b/	-

a/ Sulphate less than 10 parts per million.

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

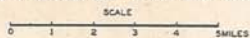
Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	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)	Nitrate (NO ₃)	Total hardness as CaCO ₃ (calculated)
312	W. P. A. test	29	Mar. 3, 1937	-	-	-	-	24	24	6	b/	-
314	do.	15	Feb. 5, 1937	32	-	-	-	12	12	3	b/	-
315	do.	15	do.	75	-	-	-	12	26	18	b/	-
316	Jeff Ellington	28	do.	106	-	-	-	49	11	32	b/	-
317	W. P. A. test	21	Mar. 27, 1937	49	-	-	-	12	12	14	b/	-
318	Dewey Walker	26	do.	35	-	-	-	6	a/	19	b/	-
319	John Bounds Est.	20	Jan. 25, 1937	807	22	7	266	195	77	245	94	84
320	T. F. Pinkston	24	do.	225	29	2	43	61	a/	46	75	82
321	Cornelius McMillan	24	Jan. 27, 1937	-	-	-	-	-	a/	74	50	-
322	J. B. Baker	17	Jan. 25, 1937	269	-	-	-	73	11	50	87	-
323	J. A. Smith	31	Jan. 27, 1937	238	31	12	26	31	a/	60	94	128
324	J. A. Harrison	29	do.	171	37	3	20	110	a/	21	31	107
325	Marion Creech	29	Feb. 26, 1937	406	-	-	-	24	20	192	43	-
327	Dr. W. A. Ramsey	13	Feb. 5, 1937	71	13	2	11	37	a/	22	b/	42
328	Mrs. F. O. Rear	17	do.	68	-	-	-	61	a/	7	b/	-
330	A. L. McGee	28	do.	923	-	-	-	24	292	290	27	-
331	Elzie Walker	15	do.	171	-	-	-	12	13	76	b/	-

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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



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

- EXPLANATION-
- WELL WITH HAND PUMP BUCKET OR BAILER
 - ⊙ WELL WITH PUMPING PLANT-5 HORSE POWER OR LARGER
 - ◆ WELL DRILLED TO TEST FOR OIL OR GAS
 - ⊕ FLOWING WELL
 - ◇ UNUSED WELL
 - TEST WELL DRILLED BY WPA LABOR
 - IMPROVED ROAD
 - - - UNIMPROVED ROAD

FIELD WORK BY
W. M. LYLE
PROJECT SUPERINTENDENT
W. P. A. PROJECT 6005-5682

BASE COMPILED FROM
LAND OWNERSHIP MAP
AND FIELD NOTES

