Please do not destroy or throw away this publication. If you have no further use for it, write to the State Board of Water Engineers, Austin, requesting return postage.

* * *

TEXAS

* * *

STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman
A. H. Dunlap, Member
J. W. Pritchett, Member

* * *

SHELBY COUNTY, TEXAS

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

* * *

WORKS PROGRESS ADMINISTRATION

GROUND-WATER SURVEY

PROJECT 5682

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 United States Department of the Interior, Geological Survey, cooperating.

* * *

Austin, Texas
Mar. 10, 1938

SHELBY COUNTY, TEXAS

* * *

Introduction

by
Samuel F. Turner
Associate Hydraulic Engineer
United States Department of the Interior
Geological Survey

The purpose of this survey was to obtain information concerning existing wells and springs and the quantity and quality of water they yield, and to put down test holes were 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 above mentioned cooperating parties. Typists employed on this project typed and assembled this release.

The field work in Shelby County was started on February 28, 1937, and completed May 28, 1937. This work was done as Project 5682 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 the extra hours he spent on the project and for his interest in the work. The Tyler office of the Works Progress Administration made this work possible by their constant help and cooperation.

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

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

Records of wells and springs in Shelby County, Texas
(All wells are dug unless otherwise indicated in "Remarks" column.)
(See "Logs of W. P. A. test wells" for all records of test wells.)

No.	Distance from Center	Survey	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
1	19⅕ miles northwest	E. Stacey	J. D. Oliver	--	Hilltop	1927	22	36
2	20 miles northwest	--	Mrs. -- Sanford	--	do.	1937	24	36
d/ 3	18⅗ miles northwest	W. A. Corder	Adam Yarbrough	Chester Yarbrough	Hillside	1917	24	--
d/ 4	17⅘ miles northwest	J. Clay	-- Hughes	Jack Schultz	--	1931	4,808	--
5	18⅘ miles northwest	M. Sweasey	Sally McLeroy	--	Hilltop	--	28	36
6	do.	A. Cameron	J. H. Wedgeworth Est.	H. Wedgeworth	do.	1876	30	36
d/ 7	17⅕ miles northwest	--	J. C. Collins	--	do.	1936	28	36
9	16⅕ miles northwest	A. Cameron	Mrs. Shroud Kelley	Bill Archey	do.	1931	22	--
11	15 miles northwest	John Bradley, et ux.	Mrs. Ida Keeling	--	do.	--	25	36
12	14 miles northwest	H. S. Corder	W. R. Tyre	W. R. Tyre	do.	1936	22	--
14	12⅘ miles west	Henry Hilton	J. C. Bogard Estate	--	Hillside	1907	17	36
15	do.	L. D. Scoggins	Travis Billingslea	Travis Billingslea	Hilltop	1927	21	36
16	12 miles west	H. Garrett	J. A. Billingslea	Robert Billingslea	--	1932	13	--
18	9 miles northwest	R. Yarborough	Willie Honeycutt	--	Hilltop	--	25	36
20	11⅘ miles northwest	John Richards	Eula Powers	--	Hillside	1907	25	36
d/ 25	10⅕ miles northwest	James Burns	R. B. Ramsey	--	--	--	25	--
26	13⅕ miles northwest	W. S. Richards	Ed. Bogard	Ed. Bogard	--	1901	22	--
28	11⅕ miles northwest	Wm. Nail	Phillip Whittaker	--	Hilltop	--	23	36
d/ 34	11 miles north	A. W. Canfield	Mrs. Rosa Boulard, et al.	Arkansas Fuel Oil Co.	--	1927	3,732	--
35	11⅖ miles north	Sarah Hughes	J. W. Butler	--	--	1917	16	36
36	10⅗ miles north	J. B. Freeland	H. E. Finklea	Chester King	--	1933	32	36
39	4⅕ miles north	Hez. McKelvey	Guy Stacy	--	Hilltop	1880	62	30
41	8 miles north	Henry Hilton	W. T. Cobb	--	Hillside	1901	27	36
42	9 miles north	do.	Ralph Jopling	--	Hilltop	Old	26	36
46	11 miles north	T. H. Day	H. L. Jackson	T. W. Gunter	--	1910	23	36

a/ Measuring point was usually top of well curb, top of casing, or top of pump base.
b/ A, air lift; B, bucket; C, cylinder; E, electric; G, gasoline engine; H, hand; T, turbine; number indicates horsepower.

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

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (ft.)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
1	3.7	22.5	Apr. 16, 1937	B,H	D,S	Concrete curb.
2	1.1	23.6	Mar. 25, 1937	B,H	D,S	Wood curb; no casing. Located in Rusk County.
3	3	21.4	do.	B,H	D,S	Wood curb; no casing. Reported water level lower in summer.
4	--	--	--	None	N	Oil test. See log.
5	2.7	8.0	Mar. 25, 1937	B,H	D,S	Concrete curb and casing. Tenant reported water level low in summer.
6	2.1	26.1	do.	B,H	D,S	Concrete curb and casing.
7	3.3	19.6	do.	B,H	--	Wood curb. Located in Panola County.
9	--	18.0	Mar. 4, 1937	--	--	Wood curb.
11	3	22.0	Mar. 26, 1937	B,H	D	Do.
12	2.5	7.0	Apr. 23, 1937	B,H	D,S	Do.
14	3	4.0	do.	B,H	D,S	Do.
15	2.6	12.7	Apr. 30, 1937	B,H	D,S	Concrete curb and casing. Owner reported strong supply.
16	2	7.6	do.	B,H	--	Concrete curb. Strong supply reported.
18	3	14.8	do.	--	--	Wood curb; vitrified clay and brick casing.
20	2	9.0	Apr. 23, 1937	--	--	
25	2.5	21.4	do.	B,H	--	Wood curb.
26	3.2	18.0	Mar. 24, 1937	B,H	--	Wood curb; no casing. Owner reported strong supply.
28	2	16.7	do.	B,H	D,S	Brick curb and casing.
34	--	--	--	None	N	Oil test. See log.
35	3	13.6	Mar. 16, 1937	B,H	D,S	5 feet wood casing at top.
36	5	--	do.	B,H	D,S	Wood curb; wood and concrete casing. Water reported in coarse gray sand.
39	3	53.9	Apr. 20, 1937	--	--	Brick curb and casing.
41	2.7	10.8	Apr. 9, 1937	B,H	D,S	Wood curb; no casing.
42	2.5	19	do.	B,H	D,S	Wood curb; no casing. Owner reported strong supply.
46	2.4	4.6	Apr. 8, 1937	B,H	D,S	Wood curb; no casing.

c/ D, domestic; Ind. Industrial; P, public supply; S, stock; N, not used.
d/ No water sample collected for analysis.
e/ Water level reported.

Records of wells and springs in Shelby County--Continued

No.	Distance from Center	Survey	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
48	10 miles north	Hez. Thomas	G. V. May	G. W. May	Hilltop	1905	23	36
49	8⅕ miles northeast	do.	J. W. Haight	--	do.	--	27	36
50	6⅕ miles northeast	D. W. Morris	W. D. Carroll	--	--	--	14	--
51	8 miles northeast	G. W. Mitchell	J. J. Ashberry	Sandie Oil Co.	Valley	1921	465	[illegible]
d/ 52	do.	do.	do.	I. M. Bradley	--	1931	3,277	--
54	3⅕ miles northeast	John Forsyth	A. D. Colley	Patterson & Sowell	Hilltop	1925	43	--
55	4½ miles northeast	Kneel Black	A. G. Cross	--	Hillside	--	20	40
58	8½ miles east	H. Ashabraner	John Potts	J. H. Ross	Hilltop	1920	105	2
60	9⅕ miles northeast	John English	J. R. Lawson	--	Hillside	--	14	36
62	9 miles northeast	Joel White	S. A. McDaniel	--	Hilltop	1907	33	36
63	9⅕ miles northeast	do.	W. E. Oates	--	do.	1933	18	--
d/ 64	10 miles northeast	John Smith	Mrs. J. M. Taylor	J. M. Taylor	do.	1900	24	--
67	14 miles northeast	Mannan Smith	E. B. Childress	--	do.	1927	20	46
68	do.	J. R. Sojourner	Joaquin School Dist.	--	do.	1922	160	2
d/ 69	do.	S. O. Pennington	A. G. Rushing	--	do.	1912	100	--
70	do.	do.	Mrs. M. M. Carroll	E. B. Ross	Hillside	1917	250	6
d/ 72	do.	W. Snider	-- Hunt	The Texas Co.	--	1920	3,415	--
73	15 miles northeast	H. L. Brooks	D. E. Siler Lt. & Power Co.	--	Hilltop	1917	600	6
74	16 miles northeast	--	J. C. Stubblefield	--	do.	1927	107	4
75	15 miles northeast	K. Petit	City of Logansport & Frank Hays	-- Forsong	--	--	205	20
76	14 miles northeast	Wm. Snider	Joe Childress	--	Valley	1897	16	--
77	do.	Sam Snider	J. W. Dickerson, Sr.	--	Hilltop	1916	19	30
79	12 miles northeast	J. D. Hardin	J. C. Gordon	--	Hillside	--	14	48
80	14 miles northeast	A. M. Gray	M. A. Shaver	--	Hilltop	--	29	48
85	12 miles northeast	D. Odom	S. P. Leggett	--	do.	1935	32	36
d/ 86	15 miles northeast	C. H. Patterson	Mrs. E. A. Caraway, et al.	Gulf Prod. Co.	--	1929	6,580	--
87	13⅕ miles northeast	P. W. Harvey	R. Sholar	Buck H. Watson	Hilltop	1935	35	--

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (ft.)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
48	3.4	22	Apr. 7, 1937	B,H	D,S	Wood curb and casing.
49	2	24.8	Apr. 8, 1937	B,H	D,S	Wood curb.
50	2.9	9	Apr. 20, 1937	B,H	--	Brick curb and casing.
51	0	Flows	Apr. 22, 1937	None	--	Drilled well. Steel casing. Water reported in sand, 435 to 465 feet.
52	--	--	--	None	N	Oil test. See log.
54	3	40.4	Apr. 20, 1937	B,H	--	Wood curb; 10 feet wood casing at top. Tenant reported strong supply.
55	2.9	13.9	do.	--	--	12 feet wood casing at top.
58	0	60	Apr. 1920 e/	C,G, $1\frac{1}{2}$	D,S	Drilled well. Steel casing.
60	3	11	Apr. 5, 1937	B,H	D,S	Wood curb and casing.
62	6	22.5	Apr. 22, 1937	B,H	D,S	Wood curb; vitrified clay casing.
63	3.3	12.3	do.	B,H	D,S	Wood curb; no casing.
64	3.2	21.1	do.	B,H	D,S	Do.
67	3.4	7.3	Mar. 29, 1937	--	--	Wood curb and casing.
68	1.2	40	Mar. 1933 e/	C,E, 1/3	D	Drilled well. Wood curb; galvanized casing. Supplies school.
69	--	--	--	--	--	Drilled well.
70	1.3	--	--	C,E, $2\frac{1}{2}$	P	Drilled well. Concrete curb; steel casing.
72	--	--	--	None	N	Oil test. See log.
73	4	60-70	Mar. 1931 e/	A,-	D,Ind	Drilled well. Steel curb and casing.
74	0.5	--	Mar. 30, 1936	C,E,-	D,S	Drilled well. Steel curb and casing. Located in De Soto Parish, Louisiana.
75	4.3	19.1	Apr. 14, 1937	T,-,-	P	Drilled well. Steel curb and casing.
76	2.6	6.5	Apr. 5, 1937	B,H	D,S	Concrete curb and casing.
77	2.6	12.3	Mar. 30, 1937	B,H	--	Vitrified clay curb.
79	2.4	10.6	Apr. 5, 1937	B,H	--	Wood curb and casing.
80	2.6	26.5	Mar. 30, 1937	B,H	D,S	Wood curb; no casing. Tenant reported weak supply in summer.
85	3	32.9	Apr. 6, 1937	B,H	N	Wood curb and casing.
86	--	--	--	None	N	Oil test. See log.
87	3	11.7	Apr. 6, 1937	B,H	D,S	Wood curb; 12 feet wood casing at top. Weak supply reported in summer.

Records of wells and springs in Shelby County--Continued

No.	Distance from Center	Survey	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
[illegible]	13½ miles east	J. Dameron	A. B. Wilson	F. J. Fermenter	Hillside	--	27	36
d/ 90	14 miles east	E. Hamner	C. A. Dew	--	do.	1932	180	8
91	16 miles east	S. C. Jewell	Hugh Jones	Hugh Jones	Valley	1936	20	8
94	do.	E. Ritter	E. W. Alford	E. W. Alford	Hilltop	1929	17	36
95	13 miles east	do.	Jim Bailey	Marlin Cartwright	do.	1934	22	36
96	17 miles east	J. Hanks	G. L. Golden Est.	--	do.	1900	37	36
97	15 miles east	S. Holmes	Mrs. T. B. Buckley	--	do.	1923	23	36
98	14½ miles east	V. T. Withers	J. E. Tamplin	--	do.	--	20	8
99	12 miles east	Wm. J. Cane	Sam Houston Nat'l. Forest	--	Hillside	--	Spring	--
d/100	11¼ miles east	do.	- Pickering	Producers Oil Co.	--	1917	2,666	--
101	do.	T. J. Thomas	Chas. Crawford	--	--	--	55	36
103	9½ miles east	J. M. Hall	J. F. Smith	J. F. Smith	--	1907	29	--
104	7½ miles east	L. Watkins	H. E. Holt	H. E. Holt	Hilltop	1927	33	--
d/105	6 miles east	J. M. Hughes	J. S. K. Fowler	Sebastian & Smith	--	1926	3,634	--
106	do.	S. N. Hall	J. I. Fowler	--	Hilltop	1925	17	36
108	do.	S. English	Shelbyville Post Office	--	do.	1890	34	36
110	7½ miles east	E. B. Dysart	F. I. Bickham	--	Valley	1927	17	36
111	6 miles southeast	S. English	H. M. Davis	H. M. Davis	Hilltop	1933	16	36
112	8 miles southeast	Allen Hailey	J. P. Sample	--	Hillside	--	11	36
113	6½ miles southeast	D. Biggar	Jim T. Cannon	--	do.	--	21	--
115	5½ miles south	M. M. Vann	D. L. Carmack	D. D. Carmack	--	1907	22	60
116	4 miles southeast	Z. C. Walker	Quincy Green	Aaron Pitts	--	1934	14	--
117	4¼ miles east	Wm. Leach	Mrs. J. G. Rushing	--	Hilltop	1930	13	24
119	4¾ miles east	Milton Cook	Dudley Cook	--	Hillside	--	17	36
122	3 miles northeast	W. P. Hopkins	Otis Pleasant	--	do.	--	36	36
123	1⅛ miles southeast	John Green	S. Cook	--	Hilltop	1880	34	--
125	2⅛ miles southeast	Z. C. Walker	T. C. Davis	B. R. Emmon	do.	--	31	36

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (ft.)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
89	3	7.8	Apr. 23, 1937	B,H	D,S	Wood curb; brick casing. Weak supply reported in drought.
90	--	--	--	J,H	D,S	Drilled well. Steel casing.
92	3	--	--	C,H	D,S	Driven well. Steel casing.
94	2.4	5.8	Apr. 23, 1937	B,H	D,S	Wood curb.
95	2.6	22.2	do.	B,H	--	Do.
96	3	36	do.	--	--	15 feet wood casing at top.
97	2.1	10.3	Apr. 22, 1937	B,H	D,S	Wood curb and casing.
98	2.8	18.7	do.	B,H	D,S	Wood curb; 8 feet wood casing at top. Tenant reported weak supply in drought.
99	--	Flows	do.	None	D	Measured flow, 5 gallons a minute from 1 opening in soft sandstone.
100	--	--	--	None	N	Oil Test. See log.
101	3	49.9	Apr. 23, 1937	B,H	N	Wood curb; 12 feet wood casing at top.
103	2.8	28.5	do.	B,H	--	Concrete curb and casing.
104	3.9	11.2	Apr. 14, 1937	B,H	D,S	Wood curb; 12 feet wood casing at top.
105	--	--	--	None	N	Oil test. See log.
106	3	11.0	Apr. 14, 1937	B,H	D,S	Wood curb; vitrified clay casing.
108	2.6	35.7	do.	B,H	N	7½ feet brick casing at top.
110	5.1	10.7	do.	B,H	D,S	Wood curb; brick casing.
111	3.5	11.4	May 4, 1937	B,H	D,S	Vitrified clay curb and casing.
112	2	7.9	do.	B,H	D,S	Concrete curb; 6 feet concrete casing at top. Owner reported weak supply in summer.
114	2.4	19	do.	B,H	D,S	Wood curb; 8 feet wood casing at top.
115	3.6	19.1	May 4, 1937	B,H	D,S	Brick curb and casing.
116	2.4	13.7	Apr. 14, 1937	B,H	D,S	Brick curb; no casing. Owner reported weak supply in summer.
117	1.7	6.4	do.	B,H	D,S	Brick curb; vitrified clay casing.
119	2.4	9.7	Apr. 20, 1937	B,H	D,S	Wood curb; no casing.
122	2.9	18.7	do.	B,H	--	Wood curb; brick casing.
123	3	19.4	Apr. 1, 1937	None	N	Wood curb.
125	6.6	32.4	do.	B,H	D,S	Wood curb; 10 feet wood casing at top.

Records of wells and springs in Shelby County--Continued

No.	Distance from Center	Survey	Owner	Driller	Topo-Graphic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
128	2¾ miles south	M. M. Vann	J. K. Sanford Est.	--	Hill-side	1934	11	36
d/129	4 miles south	do.	T. B. Sanford & Sloane Prospecting Co.	Shelby Oil Co.	--	1931	3,795	--
130	do.	T. H. McBroom	Mrs. Pearl Hayes	M. Hayes	Hilltop	1912	48	48
131	6 miles southwest	J. Covington	Mrs. G. A. Williams	--	do.	--	16	36
132	1¼ miles southwest	Jesse Mason	W. S. Mahan	W. S. Mahan	do.	1936	20	36
133	1¼ miles southeast	do.	Cecil Osby	--	do.	--	35	48
d/134	¾ miles east	do.	T.C.& S.F.R.R.	--	--	--	623	--
135	⅓ mile southwest	do.	J. K. Sanford Est.	J. K. Sanford	Hill-side	1933	18	30
136	½ mile south	do.	Laurie Daugherty	--	Hilltop	1928	11	42
137	¼ mile west	do.	Mrs. T. Wood Smith	--	do.	--	18	36
138	1 mile northwest	N. Smith	J. F. Willis	B. Campbell	Hill-side	1935	17	30
140	3 miles northwest	Thos. Haley	R. C. Adams	--	Hilltop	--	31	30
141	3½ miles west	do.	-- Sanford heirs	--	do.	1900	21	40
142	2¾ miles west	do.	O. F. Polley	--	do.	1907	60	36
143	4½ miles west	A. Lindsey	J. B. Bush, Sr.	--	do.	1927	21	24
144	4¾ miles southwest	B. Estes	C. C. Locke	--	Hill-side	--	33	36
145	9⅓ miles southwest	R. Wheeler	J. T. Oliver	J. T. Oliver	do.	1919	16	36
146	6 miles west	A. K. Landrum	Bart Cann	--	--	1924	35	30
147	5 miles west	C. Lindsey	W. A. Crocker	--	Valley	1900	10	36
148	5⅓ miles northwest	Ben. White	A. R. Rasberry	A. R. Rasberry	Hill-side	1927	19	48
149	7⅓ miles west	do.	J. E. Holloway	--	Hilltop	1907	34	36
150	10 miles west	L. J. Sparks	J. P. Prince	--	do.	--	34	48
151	9⅓ miles west	Hampton West	T. A. Cook	--	Hill-side	1887	41	36
152	9 miles west	A. Wheeler	A. S. Johnson	--	do.	--	22	--
153	do.	Tom Alvice	J. M. Burgay Est.	--	do.	--	21	36
154	11 miles west	E. D. Swan	H. S. Stephenson	H. S. Stephenson	--	1929	25	36
155	13 miles west	W. Blackburn	Mathis Stockman	--	Hilltop	--	20	48

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (ft.)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
128	2.7	9.4	May 6, 1937	B,H	D	Wood curb; no casing.
129	--	--	--	None	N	Oil test. See log.
130	4.5	24.1	May 7, 1937	B,H	D,S	Wood curb and casing. Tenant reported w ak supply in summer.
131	3.1	13.8	May 12, 1937	B,H	D,S	Concrete and brick curb; brick casing.
132	2	15.7	May 18, 1937	B,H	D,S	Brick curb; no casing. Owner reported weak supply in summer.
133	2	14	Apr. 1, 1937	B,H	D,S	Brick curb and casing. Owner reported weak supply in summer.
134	--	--	--	--	--	Drilled well. See log. Chemical analysis o water published in U.S.G.S Water Supply Pap 190. p. 6.
135	3	17.4	May 14, 1937	B,H	D	Brick curb and casing.
136	2.5	8.5	do.	B,H	D,S	Vitrified clay casing. Owner reported weak supply in summer.
137	2	10.8	May 19, 1937	B,H	--	Concrete and brick curb.
138	3.1	6.2	Apr. 20, 1937	B,H	D	Concrete curb;brick casing. Tenant reported strong supply.
140	3.4	30.1	do.	B,H	D,S	Wood curb; 12 feet wood casing at top.
141	2.3	12.3	May 21, 1937	B,H	D,S	Wood curb; no casing. Tenant reported supply too weak for use in summer.
142	2.8	61	May 20, 1937	B,H	D,S	Concrete and brick curb; no casing.
143	5	20.8	do.	B,H	D,S	Vitrified clay curb and casing. Owner reported weak supply in summer.
144	2.8	11.3	May 12, 1937	B,H	D,S	Concrete curb and casing.
145	2.9	12.4	May 3, 1937	B,H	--	Wood curb; no casing. Owner reported weak supply in summer.
146	2	28	May 20, 1937	B,H	D,S	Concrete curb and casing. Tenant reported strong supply.
147	3.1	7.3	May 21, 1937	B,H	D,S	Wood curb; no casing.
148	2.4	11.1	Apr. 20, 1937	B,H	D,S	Wood curb; 10 feet wood casing at top.
149	4.3	19.7	do.	B,H	D,S	Brick curb.
150	3.3	34.8	May 3, 1937	B,H	D,S	Wood curb and casing.
151	2.5	28.8	do.	B,H	--	Wood curb; no casing.
152	6	23.5	do.	B,H	D,S	Concrete curb; 6 feet concrete casing at top.
153	2.5	14	do.	B,H	--	Concrete curb.
154	2.2	21.4	do.	B,H	D,S	Do.
155	3	17.9	Apr. 30, 1937	B,H	D,S	Brick curb; concrete casing. Strong supply reported.

Records of Wells and Springs in Shelby County--Continued

No.	Distance from Center	Survey	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/156	13 miles west	M. Carr	J. [illegible] Haywood	--	Hilltop	1936	--	36
d/157	12 miles southwest	M. Moore	-- Holt	Catch Cart Texas Oil Co.	--	--	3,000	--
158	3 miles southwest	L. V. McConley	A. P. McSwain	J. B. Spells	Hillside	1937	73	36
159	8⅓ miles south	Neely Kimbro	N. F. Kimbro	--	do.	1936	13	36
160	6⅓ miles south	W. A. Slack	A. Hughes	--	do.	--	Spring	--
161	7 miles south	do.	A. J. Hughes	--	Hilltop	--	15	36
165	10⅓ miles southeast	T. C. Lester	N. B. Evans	Woodrow Evans	Hillside	1936	37	40
166	12 miles southeast	Nathan Davis	E. D. Collins	E. D. Collins	Hilltop	1929	27	36
d/167	14½ miles southeast	--	Jack Greer	--	do.	--	81	36
168	9⅓ miles southeast	F. Adams	D. B. Nix	--	Hillside	--	39	36
169	10⅔ miles southeast	T. E. Choate	Dr. T. L. Hurst	E. L. Higgins	--	1937	14	--
170	12 miles southeast	George Neil	Frank Goodwin	--	--	1926	19	--
171	14⅓ miles southeast	Jonas Harrison	T. M. Alms	--	Hilltop	1919	12	36
d/172	16⅓ miles southeast	James Rowe	U.S. C.C.C. Camp	--	--	1935	1,000	6
173	17⅓ miles southeast	do.	H. L. Bussy	H. L. Bussy	Hilltop	1931	18	36
174	18 miles southeast	do.	John O. Clark	--	--	--	16	--
175	19 miles southeast	T. R. Goodwin	Mrs. M. C. Goodwin	--	--	1933	29	--
176	14⅔ miles southeast	J. B. Tucker	H. S. Sims	--	--	1931	20	--
178	13½ miles southeast	Wm. M. Britain	Mrs. I. T. Wilburn	--	--	--	35	--
179	19⅔ miles southeast	T. F. Brittain	[illegible]. T. Lee	W. T. Lee	--	1917	17	--
180	21 miles southeast	R. S. Forbes	Dudley Cook	--	--	--	21	36
181	21⅓ miles southeast	Richard Hailey	W. B. Palmer	--	--	1937	38	--
182	22⅓ miles southeast	do.	G. C. Risinger	--	--	--	17	--
d/183	23⅓ miles southeast	Domingo Gonzales	Wiley Swan	-- Geophysical Co.	Hilltop	1936	133	2
d/184	21⅓ miles southeast	do.	O. H. Polley	R. Franklin Smith	--	1936	3,553	--

a/ Measuring point was usually top of well curb, top of casing, or top of pump base.
b/ A, air lift; B, bucket; C, cylinder; E, electric; G, gasoline engine; H, hand; T, turbine; number indicates horsepower.

W. M. Lyle, Project Superintendent

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (ft.)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
156	3.6	36	Aug. 1936 e/	B,H	N	Wood curb; no casing.
157	--	--	--	None	N	Oil test. See log.
158	3	71.3	May 10, 1937	B,H	D,S	Wood curb; 12 feet wood casing at top.
159	3	11.8	May 8, 1937	B,H	D,S	Wood curb.
160	--	Flows	May 7, 1937	None	D	Estimated flow, 5 gallons a minute from 1 opening in soft sandstone.
161	5.1	14.9	May 8, 1937	B,H	D,S	Wood curb and casing.
165	3	31	May 4, 1937	B,H	D	Brick curb and casing.
166	2.6	18.7	do.	B,H	D,S	Do.
167	2.6	69.6	do.	B,H	D,S	Wood curb; no casing. Located in San Augustine County.
168	2.5	25.9	do.	B,H	D,S	Wood curb; brick casing. Weak supply reported in drought.
169	2.6	7.6	May 24, 1937	--	--	Wood curb.
170	2.5	12	do.	B,H	--	Wood curb; no casing.
171	3.8	13.3	May 27, 1937	--	D,S	Wood curb.
172	--	--	do.	A,-,-	--	Drilled well. Steel casing.
173	3	16.8	May 27, 1937	B,H	D,S	Wood curb.
174	3	12.9	May 26, 1937	B,H	D	Wood curb. Reported weak supply in summer.
175	2.2	29.4	do.	B,H	D,S	Wood curb. Strong supply reported.
176	1.8	15.1	May 24, 1937	--	--	Wood curb.
178	2.7	36.3	May 25, 1937	--	--	Wood curb; concrete casing.
179	2.9	10.3	do.	B,H	--	Wood curb.
180	4	15	do.	B,H	--	Wood curb; no casing. Tenant reported weak supply in summer.
181	3.3	--	May 26, 1937	B,H	D,S	Wood curb.
182	2.9	14.5	May 24, 1937	B,H	D,S	Do.
183	0.7	96	Dec. 30, 1936 e/	None	--	Drilled well. 110 feet steel casing at top.
184	--	--	--	None	N	Oil test. See log.

a/ D, domestic; Ind, industrial; P, public supply; S, stock; N, not used.
d/ No water sample collected for analysis.
e/ Water level reported.

Table of Drillers' Logs, Shelby County, Texas

	Thickness (feet)	Depth (feet)
Driller's log of well 4		
Jack Schultz, Hughes No. 1. 17½ miles northwest of Center.		
Sand and clay	8	8
Clay	42	50
Sand	15	65
Shale	70	135
Rock	1	136
Shale	34	170
Hard rock	4	174
Sand and shale	134	308
Sand and hard shells	105	413
Sand rock	12	425
Shale and boulders	31	456
Rock	2	458
Shale and shells	567	1025
Hard lime rock	30	1055
Lime	2	1057
Shale and shells	26	1083
Hard lime	2	1085
Shale	10	1095
Lime	3	1098
Shale	42	1140
Shale and hard shells	12	1152
Hard lime rock	4	1156
Hard shale	17	1173
Lime rock	1	1174
Hard shale	76	1250
Shale	87	1337
Lime rock	1	1338
Shale, hard lime, and shell	166	1504
Shale, lime and shells	97	1601
Hard lime	4	1605
Hard lime and shale	22	1627
Sticky shale, lime and shells	40	1667
Shale and lime	401	2068
Shale	107	2175
Hard chalk	62	2237
Hard shale	10	2247
Shale and chalk	179	2426
Hard chalk	111	2537
Broken chalk	51	2588
Chalk	50	2638
Hard chalk	24	2662
Chalk	20	2682
Hard chalk	18	2700
Chalk	38	2738
Broken chalk	12	2750
Chalk	30	2780
Shale, streaks of chalk	30	2810
TOTAL DEPTH		4808

	Thickness (feet)	Depth (feet)
Driller's log of well 34		
Arkansas Fuel Oil Co., Mrs. Rosa Bouland, et al. 11 miles north of Center.		
Surface materials	5	5
Clay	15	20
Sand and boulders	25	45
Rock	1	46
Sand and boulders	24	70
Rock	1	71
Sand and boulders	27	98
Rock	3	101
Sand and boulders	49	150
Rock	1	151
Sand and boulders	47	198
Gummy shale	76	274
Rock	1	275
Shale	3	278
Gummy shale	115	393
Sandy shale	27	420
Gray sand	3	423
Sand and gravel	22	445
Sandy shale	44	489
Rock	1	490
Sandy shale	103	593
Rock	1	594
Sandy shale	66	660
Rock	1	661
Sandy shale	35	696
Rock	1	697
Sandy shale	33	730
Rock	1	731
Sandy shale	65	796
Sandy shale and boulders	79	875
Rock	2	877
Gummy shale	85	962
Rock	1	963
Gummy shale	77	1040
Shale and chalk	30	1070
Gummy shale	70	1140
Shale and chalk	20	1160
Rock	1	1161
Shale	162	1323
Gummy shale	76	1399
Shale	47	1446
Gummy shale	224	1670
Chalk	34	1704
Chalk	27	1731
Shale	21	1752
Chalk and shale	198	1950
Chalk	20	1970
Broken chalk	31	2001
Chalk	211	2212
Gumbo	5	2217

(continued on next page)

Table of Driller's Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 34 continued		
Gummy shale	129	2346
Sandy shale	32	2378
Shale	19	2397
Gummy shale	224	2621
Rock	2	2623
Shale	12	2635
Rock	2	2637
Shale	2	2639
Sandy lime	59	2698
Gummy shale	10	2708
Sandy shale	67	2775
Sandy lime	8	2783
Gummy lime	34	2817
Sandy lime	21	2838
Gummy shale	7	2845
TOTAL DEPTH		3732
Driller's log of well 52		
I. M. Bradley, J. J. Ashberry No. 1. 8 miles northeast of Center.		
Clay	25	25
Sticky clay	25	50
Soft sand rock	1	51
Sticky shale	14	65
Red sand rock	1	66
Sticky shale	34	100
Red sand rock	2	102
Soft chalk	26	128
Sandy lime	2	130
Black shale, boulders, streaks of sand	115	245
Sandy lime	2	247
Gumbo and boulders	33	280
Broken sand and boulders	20	300
Gumbo	41	341
Brown sand	9	350
Packed sand	2	352
Broken sand	8	360
Sticky shale	53	413
Sand	26	439
Hard sand rock and breaks of packed sand	59	498
Hard sand rock	77	575
Sticky formation	115	690
Sticky formation and packed sand	10	700
Lignite	3	703
Sticky formation	25	728
Packed sand	1	729
Sticky formation	46	775
Sticky mud	36	811
Sandy lime	29	840
Sticky mud	5	845
Sand	11	856
Lime rock	2	858

	Thickness (feet)	Depth (feet)
Driller's log of well 52 continued		
Hard sand	4	862
Sticky formation	35	897
Sand rock	1	898
Broken sand	35	933
Gumbo and boulders	10	943
Sticky formation	114	1057
Hard packed sand	1	1058
Shale and shells	581	1639
Broken sand, shale, and shells	15	1654
Sandy shale and pyrite	106	1760
Gypsum	6	1766
Hard sand and pyrite	17	1783
Chalk	31	1814
Chalk with soft breaks	29	1843
Chalk	33	1876
Soft chalk	94	1970
Sandy shale	73	2043
Hard chalk	249	2292
Shale	38	2330
Sticky shale	39	2369
Sticky shale with sand breaks	39	2408
Sticky shale and sand, show of oil	27	2435
Sticky shale with soft sand breaks	30	2465
Broken sand and sticky shale	17	2482
Gumbo	22	2504
Shale and shells	123	2627
TOTAL DEPTH		3277
Driller's log of well 72		
The Texas Co., Hunt No. 1. 14 miles northeast of Center.		
Clay	20	20
Sand	25	45
Rock	3	48
Packed sand	8	56
Rock	2	58
Packed sand	20	78
Rock	2	80
Packed sand	10	90
Sand	20	110
Rock	1	111
Sand	10	121
Rock	1	122
Gumbo	15	137
Shale	8	145
Rock	2	147
Shale and boulders	23	170
Rock	1	171
Shale	39	210

(Continued on next page)

Table of Drillers' Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 72 continued		
Gumbo	15	225
Shale	5	230
Rock	1	231
Shale	25	256
Gumbo	9	265
Rock	1	266
Packed sand	4	270
Gumbo	7	277
Shale	47	324
Gumbo	21	345
Packed sand	35	380
Gumbo	20	400
Sand	14	414
Rock	2	416
Packed sand	6	422
Shale	40	462
Gumbo	18	480
Shale	20	500
Gumbo	15	515
Shale	14	529
Rock	1	530
Packed sand	3	533
Rock	1	534
Gumbo	6	540
Shale	41	581
Gumbo	9	590
Rock	2	592
Shale	10	602
Gumbo	5	607
Shale	6	613
Gumbo	25	638
Shale	45	683
Gumbo	22	705
Shale and boulders	27	732
Shale	6	738
Gumbo	10	748
Shale and boulders	15	763
Gumbo	9	772
Shale and boulders	117	889
Gumbo	6	895
Shale and boulders	5	900
Packed sand	20	920
Shale and boulders	15	935
Shale	15	950
Shale and boulders	149	1099
Shale	40	1139
Gumbo	15	1154
Shale	10	1164
Rock, show of gas	35	1199
Shale and boulders	20	1219
Gumbo	61	1280
Packed sand	7	1287
Hard shale	25	1312
Shale and boulders	10	1322
Gumbo	15	1337
Chalk rock	540	1877
Sand rock	1	1878
Packed sand	4	1882
Shale	24	1906
Gumbo	12	1918
Packed sand	3	1921
Shale	16	1937
Packed sand	45	1982
Sand rock	5	1987
Packed sand	4	1991
Gumbo	10	2001
Shale	10	2011
Packed sand	3	2014
Shale	49	2063
Packed sand	4	2067
Shale and boulders	20	2087
Packed sand	10	3097
Shale	10	3107
Gumbo	8	3115
Shale	36	3151
Gumbo	5	3156
Shale	82	2238
Gumbo	12	2250
Shale	66	2316
Lime rock	18	2334
Shale	56	2390
Packed sand	1	2391
Hard shale	42	2433
Shale	50	2483
Lime rock	4	2487
Shale	20	2507
Shale and pyrite	4	2511
Shale	20	2531
TOTAL DEPTH		3415

Driller's log of well 86

Gulf Prod. Co., Caraway, et al. No. 1. 15 miles northeast of Center.

Clay and sand	10	10
Sand	20	30
Sand and boulders	74	104
Sand and gravel	6	110
Blue gummy shale	32	142
Rock	1	143
Blue shale and streaks of sand	26	169
Rock	2	171
Blue shale	3	174
Rock	1	175
Blue shale	2	177
Rock	1	178
Hard sand	21	199
Rock	1	200
Blue shale	10	210

(Continued on next page)

Table of Drillers' Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 86 continued		
Rock- - - - - - - - - - - -	1	211
Sand- - - - - - - - - - - -	44	255
Hard sand - - - - - - - - -	20	275
Rock- - - - - - - - - - - -	1	276
Sand- - - - - - - - - - - -	23	299
Rock- - - - - - - - - - - -	2	301
Sand- - - - - - - - - - - -	39	340
Blue shale - - - - - - - - -	35	375
Blue gummy shale - - - - -	20	395
Rock- - - - - - - - - - - -	2	397
Blue shale and streaks of sand- - - - - - - - - - -	58	455
Blue shale- - - - - - - - -	6	461
Rock- - - - - - - - - - - -	4	465
Gummy blue shale- - - - -	12	477
Rock- - - - - - - - - - - -	1	478
Blue shale- - - - - - - - -	38	516
Rock- - - - - - - - - - - -	1	517
Blue shale- - - - - - - - -	23	540
Rock- - - - - - - - - - - -	2	542
Blue gumbo- - - - - - - - -	30	572
Rock- - - - - - - - - - - -	1	573
Blue shale- - - - - - - - -	15	588
Rock- - - - - - - - - - - -	1	589
Blue shale- - - - - - - - -	8	597
Rock- - - - - - - - - - - -	4	601
Gumbo - - - - - - - - - - -	13	614
Rock- - - - - - - - - - - -	1	615
Gumbo - - - - - - - - - - -	26	641
Rock- - - - - - - - - - - -	2	643
Gummy blue shale- - - - -	142	785
Rock- - - - - - - - - - - -	1	786
Gumbo - - - - - - - - - - -	23	809
Gumbo and boulders- - - -	71	880
Gumbo - - - - - - - - - - -	55	935
Rock- - - - - - - - - - - -	1	936
Blue shale and boulders -	294	1230
Gumbo - - - - - - - - - - -	95	1325
Blue shale and boulders -	15	1340
Gumbo - - - - - - - - - - -	28	1368
Sandy shale and boulders-	13	1381
Sandy shale- - - - - - - -	5	1386
Gumbo- - - - - - - - - - -	20	1406
Blue gummy shale and sticky sandy shale- - -	19	1425
Gray sand and streaks of gray sandy shale- - - -	18	1443
Gray sandy shale- - - - -	5	1448
Chalk rock- - - - - - - -	46	1494
Blue shale- - - - - - - -	27	1521
Hard blue shale- - - - -	83	1604
Gumbo- - - - - - - - - - -	8	1612
Blue shale - - - - - - - -	83	1695
Gumbo- - - - - - - - - - -	20	1715
Hard chalk rock - - - - -	257	1972

	Thickness (feet)	Depth (feet)
Driller's log of well 86 continued		
Blue shale and streaks of chalk- - - - - - - -	23	1995
Blue shale - - - - - - -	15	2010
Gray sandy shale - - -	6	2016
Gray sandy shale and shells- - - - - - - -	17	2033
Gray sand - - - - - - -	7	2040
Sandy gumbo - - - - - -	4	2044
Gray sand and streaks of sandy gumbo- - - -	36	2080
Gray sandy shale and streaks of gumbo- - -	25	2105
Hard gray sand and streaks of gumbo- - -	44	2149
Hard gray sand and streaks gummy shale -	36	2185
Hard gray sand and gumbo- - - - - - - - -	55	2240
Blue sandy shale and streaks of gray sand -	25	2265
Hard blue sandy shale and streaks of broken lime rock- - - - - - -	37	2302
Blue shale and boulders-	94	2396
Hard blue shale and streaks of hard sandy shale and boulders- - - - - - -	77	2473
Broken lime and blue shale- - - - - - - -	15	248
TOTAL DEPTH- - - - - -		6530

CASING RECORD: 113 feet of 15¼-inch casing; 912 feet of 12½-inch casing; 3,096 feet of 9-inch casing; and 5,030 feet of 6 5/8-inch casing.

Driller's log of well 100

Producers Oil Company. Pickering No. 2. 11½ miles east of Center.

Sand and clay- - - - - -	43	43
Sand and shale - - - - -	67	110
Packed sand and shale- -	24	134
Packed sand- - - - - - -	5	139
Lignite- - - - - - - - -	2	141
Packed sand and shale- -	21	162
Rock- - - - - - - - - - -	2	164
Packed sand - - - - - - -	43	207
Sand rock- - - - - - - -	1	208
Packed sand- - - - - - -	13	221
Gumbo- - - - - - - - - -	10	231
Packed sand- - - - - - -	17	248
Packed sand and shale- -	55	303
Hard packed sand- - - -	18	321
Packed sand- - - - - - -	57	378

(Continued on next page)

Table of Drillers' Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 100 continued		
Shale	12	390
Packed sand	18	408
Hard sand rock	2	410
Packed sand	2	412
Hard sand rock	1	413
Packed sand with streaks of clay	27	440
Rock	1	441
Packed sand	40	481
Sand and gravel	20	501
Packed sand	20	521
Sand and gravel	26	547
Packed sand	157	704
Sandy gumbo	21	725
Hard packed gumbo	10	735
Hard rock	2	737
Hard packed sand	23	760
Packed sand	50	810
Lignite	5	815
Sandy gumbo	7	822
Packed sand	12	834
Hard rock	2	836
Packed sand	30	866
Rock	2	868
Sandy gumbo	17	885
Packed sand	14	899
Gumbo	19	918
Lignite	12	930
Packed sand	13	943
Gumbo	9	952
Hard lime rock	3	955
Lignite	4	959
Packed sand	8	967
Mud and gumbo	9	976
Gumbo	18	994
Sand and boulders	27	1021
Gumbo and boulders	40	1061
Gumbo	24	1085
Lime rock	3	1088
Sandy gumbo	16	1104
Hard rock	2	1106
Sandy gumbo	8	1114
Gumbo	4	1118
Hard lime rock	2	1120
Gumbo	9	1129
Hard rock	3	1132
Sandy gumbo	10	1142
Shale	20	1162
Gumbo	42	1204
Rock	1	1205
Gumbo	44	1249
Shale and sand	1	1250
Rock	18	1268
Gumbo	22	1290

	Thickness (feet)	Depth (feet)
Driller's log of well 100 continued		
Gumbo and boulders	39	1329
Shale and boulders	20	1349
Gumbo	2	1351
Gumbo and boulders	27	1378
Gumbo, shale, and boulders	20	1398
Shale and boulders	19	1417
Gumbo	5	1422
Gumbo and shale	13	1435
Tough gumbo	12	1447
Shale	39	1486
Gumbo	47	1533
Shale and boulders	33	1566
Gumbo	54	1620
Shale and boulders	10	1630
Gumbo and boulders	32	1662
Shale	4	1666
Gumbo	1	1667
Lime rock	6	1673
Gumbo	12	1685
Gumbo and boulders	51	1736
Shale and boulders	39	1775
Gumbo	35	1810
Shale and gumbo	6	1816
Gumbo	22	1838
Hard shale	30	1868
Gumbo	6	1874
Sand and pyrite	54	1928
Chalk rock	4	1932
Gumbo	12	1944
Chalk rock	31	1975
Tough gumbo	50	2025
Chalk rock	15	2040
Shale	50	2090
Gumbo	67	2157
Chalk	321	2478
Tough gumbo	62	2540
Sandy gumbo	23	2563
Gumbo	3	2566
Rock	1	2567
Gumbo	3	2570
Shale, lime, rock, and shells	19	2589
Shale	15	2604
Sand rock	1	2605
Shale	8	2613
Gumbo	9	2622
Shale and sand	13	2635
Hard sand rock	3	2638
Gumbo	28	2666
TOTAL DEPTH		2666

Table of Drillers' Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 105		
Sebastian & Smith, S. K. Fowler No. 1. 6 miles east of Center.		
Surface materials	3	3
Clay	7	10
Sand	20	30
Sand and gravel	70	100
Rock	3	103
Hard sand	47	150
Gumbo	25	175
Rock	1	176
Gumbo	24	200
Sandy gumbo	40	240
Hard sand and boulders	50	290
Rock	1	291
Hard sand	37	328
Gumbo	12	340
Sand and boulders	50	390
Sand and shale	41	431
Hard sand rock	2	433
Hard lime rock	1	434
Lime rock	1	435
Sand and boulders	75	510
Rock	1	511
Hard sand	19	530
Sand	15	545
Rock	1	546
Sand and boulders	84	630
Sand and shale	63	693
Hard lime rock	2	695
Sand	35	730
Hard lime rock	2	732
Hard sand	8	740
Sand and gumbo	40	780
Lignite	10	790
Rock	1	791
Sand and boulders	69	860
Rock	2	862
Hard shale, gray sand, and gumbo	30	892
Hard sandy shale	8	900
Hard rock	5	905
Broken rock, show of gas	10	915
Hard sand	29	944
Hard lime rock	1	945
Sand and boulders	59	1004
Hard sand rock	1	1005
Gumbo	17	1022
Sandy gumbo	5	1027
Gummy shale	6	1033
Gumbo	10	1043
Hard lime rock	2	1045
Sand and gumbo	5	1050
Gumbo	60	1110
Gummy shale and boulders	30	1140
Gumbo	20	1160
Lime rock	2	1162

	Thickness (feet)	Depth (feet)
Driller's log of well 105 continued		
Shale and boulders	23	1185
Hard rock	1	1186
Gummy shale	32	1218
Gumbo and hard shale	67	1285
Rock	1	1286
Broken chalk rock	22	1308
Rock	1	1309
Gumbo	19	1328
Shale and boulders	73	1401
Gumbo	17	1418
Broken chalk	32	1450
Shale and boulders	40	1490
Broken chalk	25	1515
Gumbo	23	1538
Shale and boulders	152	1690
Broken chalk	10	1700
Shale and gumbo	17	1717
Gumbo	3	1720
Shale	8	1728
Tough gumbo	30	1758
Soft shale	40	1798
Tough gumbo	6	1804
Chalky shale	3	1807
Hard shale and sand	12	1819
Gumbo	13	1832
Shale	13	1845
Gumbo	7	1852
Gummy shale	46	1898
Hard chalk rock	61	1959
Hard sandy chalk	13	1972
Hard gray rock	8	1980
Shale	15	1995
Broken chalk	45	2040
Sandy shale	118	2158
Hard lime	124	2282
Sandy lime	149	2431
Broken gummy lime	42	2473
TOTAL DEPTH		3634
Driller's log of well 129		
Shelby Oil Company and Sloane Prospecting Co., F. B. Samford No. 1. 4½ miles south of Center.		
Surface materials	18	18
Shale	90	108
Sandy shale	402	510
Shale and shells	323	833
Lime and shells	2	835
Sticky shale	28	863
Shale and shells	45	908
Sticky shale	27	935
Sandy shale	30	965
Shale	65	1030

(Continued on next page)

Table of Drillers' Logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 129 continued		
Shale and shells- - - - - -	13	1043
Sandy shale- - - - - - - -	67	1110
Shale- - - - - - - - - - -	6	1116
Sandy shale- - - - - - - -	25	1141
Lime and shells- - - - - -	1	1142
Shale- - - - - - - - - - -	58	1200
Lime and shells- - - - - -	1	1201
Shale- - - - - - - - - - -	44	1245
Shale and shells- - - - - -	55	1300
Shale- - - - - - - - - - -	45	1345
Lime- - - - - - - - - - -	2	1347
Sandy shale- - - - - - - -	50	1397
Shale- - - - - - - - - - -	68	1465
Lime and shells- - - - - -	2	1467
Sticky shale- - - - - - - -	43	1510
Sandy shale- - - - - - - -	20	1530
Shale- - - - - - - - - - -	21	1551
Lime and shells- - - - - -	1	1552
Shale- - - - - - - - - - -	28	1580
Sandy shale- - - - - - - -	40	1620
Shale- - - - - - - - - - -	53	1673
Shale and shells- - - - -	101	1774
Shale- - - - - - - - - - -	56	1830
Lime and shells- - - - -	2	1832
Shale- - - - - - - - - - -	33	1865
Shale and shells- - - - - -	47	1912
Shale- - - - - - - - - - -	33	1945
Lime and shells- - - - - -	1	1946
Sandy shale- - - - - - - -	9	1955
Shale- - - - - - - - - - -	75	2030
Shale and boulders- - - -	35	2065
Shale- - - - - - - - - - -	103	2168
Hard shale- - - - - - - -	101	2269
Shale and shells- - - - - -	20	2289
Broken chalk- - - - - - - -	366	2655
Hard chalk- - - - - - - - -	175	2830
TOTAL DEPTH - - - - - - - -		3795

Driller's log of well 134

_____, G. C. & S. F. R. R. Co.
½ mile east of Center.

Yellow clay- - - - - - - -	10	10
Brown shale- - - - - - - -	96	106
Lignite- - - - - - - - - -	2	108
Brown shale- - - - - - - -	132	240
Sand- - - - - - - - - - -	10	250
Brown shale- - - - - - - -	70	320
White sandstone- - - - - -	10	330
Brown shale- - - - - - - -	26	356
Lignite- - - - - - - - - -	2	358
Brown shale- - - - - - - -	14	372
White sandstone- - - - - -	2	374
Brown shale- - - - - - - -	42	416
"Stone" coal - - - - - - -	1	417

	Thickness (feet)	Depth (feet)
Driller's log of well 134 continued		
Brown shale- - - - - - -	26	443
Sandstone- - - - - - - -	2	445
Brown shale- - - - - - -	72	517
Sandstone- - - - - - - -	3	520
Brown shale- - - - - - -	36	556
Sandstone- - - - - - - -	1	557
Brown shale- - - - - - -	5	562
Gray sandstone - - - - -	2	564
White water sand - - - -	50	614
Brown shale- - - - - - -	9	623

Driller's log of well 157

Catch Cart Texas Oil Co., Holt No. 2.
12 miles southwest of Center.

Sandy clay- - - - - - -	60	60
Gummy shale- - - - - -	12	72
Rock and lignite- - - -	60	132
Shale- - - - - - - - - -	72	204
Rock- - - - - - - - - -	1	205
Shale and boulders - - -	165	370
Sandy shale- - - - - - -	190	560
Rock- - - - - - - - - -	1	561
Shale- - - - - - - - - -	59	620
Sandy rock- - - - - - -	6	626
Gumbo- - - - - - - - - -	24	650
Sandy shale and boulders- - - - - - - - - -	90	740
Sandy shale- - - - - - -	220	960
Packed sand- - - - - - -	210	1170
Hard sandy shale - - - -	95	1265
Gummy shale- - - - - - -	115	1380
Gumbo- - - - - - - - - -	52	1432
Rock- - - - - - - - - -	82	1514
Gumbo- - - - - - - - - -	20	1534
Rock - - - - - - - - - -	11	1545
Gumbo and shale- - - - -	82	1627
Sand rock - - - - - - -	3	1630
Gumbo and boulders - - -	210	1840
Hard brown sand rock and sandy lime- - - - - -	25	1865
Shale and gumbo- - - -	520	2385
Gumbo- - - - - - - - - -	15	2400
Gumbo and shale - - - -	50	2450
Gumbo- - - - - - - - - -	22	2472
Black shale- - - - - - -	273	2745
Shale with streaks of shells- - - - - - -		3000
TOTAL DEPTH - - - - - -		3000

Driller's log of well 184

R. Franklin Smith, O. H. Polley No. 1.
21¼ miles southeast of Center.

Surface materials- - - -	10	10
White water sand- - - -	20	30

(Continued on next page)

Table of Drillers' logs, Shelby County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 184 continued		
Brown shale	70	100
Sand	20	120
Brown shale	55	175
Sand	5	180
Hard lime	2	182
Lime breaks	59	241
Sand and shale	13	254
White water sand	46	300
Sandy shale	200	500
Gas and water sands	73	573
Sand and boulders	21	594
Shale	6	600
Lime breaks	26	626
Sand	22	648
Hard sandy lime	2	650
Hard lime	2	652
Hard sandy lime	2	654
Sand	26	680
Shale	15	695
Sandy shale	29	724
Lime and shells	2	726
Sand, gas	6	732
Hard packed sand	75	807
Hard rock	23	830
Shale and boulders	150	980
Hard rock	2	982
Gumbo	33	1015
Sandy shale	10	1025
Lime	4	1029
Gumbo	11	1040
Shale	50	1090
Gumbo	74	1164
Shale and boulders	31	1195
Shale	18	1213
Tough gumbo	57	1270
Hard lime rock	4	1274
Sand and boulders	55	1329

	Thickness (feet)	Depth (feet)
Driller's log of well 184 continued		
Hard lime	2	133[illegible]
Tough gumbo	17	1318
Hard lime rock	4	1352
Shale	8	1360
Hard lime rock	2	1362
Sand	8	1370
Hard lime rock	4	1374
Sandy shale	16	1390
Hard sand	10	1400
Gumbo	15	1415
Gummy shale	165	1580
Lime and shells	1	1581
Shale	45	1626
Gummy shale	74	1700
Shale	84	1784
Lime and shells	1	1785
Shale and shells	10	1795
Shale and boulders	100	1895
Chalk with soft breaks	38	1933
Chalk and sandy shale	15	1948
Chalk	69	2017
Chalk with soft break	2	2019
Hard chalk	2	2021
Chalk	17	2038
Chalk with streaks of soft shale	100	2138
Shale	57	2195
Hard chalk	23	2218
Shale	9	2227
Hard chalk	148	2375
Blue chalk and broken shale	35	2410
Hard chalk	70	2480
Sandy shale	55	2535
Sand	25	2560
TOTAL DEPTH		3553

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

	Thickness (feet)	Depth (feet)
Well 8		
Top of hill, S. Kelly tract, A. Cameron survey, 16½ miles northwest of Center.		
Surface materials- - - - -	2	2
Red clay- - - - - - - - -	5	7
Yellow clay- - - - - - - -	6	13
Brown clay- - - - - - - - -	3	16
Black clay- - - - - - - - -	6	22
March 4, 1937.		
Well 10		
E. W. Wicker tract, John Bradley and wife survey, 15⅔ miles northwest of Center.		
Gray materials- - - - - -	2	2
Yellow materials- - - - -	2	4
Red materials- - - - - -	3	7
Light-red materials - - -	3	10
Gray materials- - - - - -	3	13
Gray water sand - - - - -	3	16
Struck water at 16 feet.		
May 1, 1937.		
Well 13		
S. T. Rhodes tract, J. P. Wood survey, 12½ miles northwest of Center.		
Gray sand- - - - - - - - -	2	2
Red shale- - - - - - - - -	2	4
Yellow sandy shale- - - -	4	8
Yellow sand- - - - - - - -	6	14
Soapstone- - - - - - - - -	1	15
Dark-brown sand- - - - - -	2	17
Light-brown sand - - - - -	2	19
Gray sand- - - - - - - - -	4	23
Struck water at 22 feet.		
Water level, 21 feet below top of ground, ½ hour after hole completed.		
May 1, 1937.		
Well 17		
Near northwest corner Bob Conway tract, Henry Conway survey, 10⅔ miles west of Center.		
Gray sand- - - - - - - - -	2	2
Red clay- - - - - - - - -	1	3
Yellow clay- - - - - - - -	1	4
Light-yellow shale - - - -	5	9
Light-blue soapstone - - -	5	14
Blue-gray sand- - - - - -	2	16
Blue water sand - - - - - -	5	21
Struck water at 20 feet.		
Water level, 19 feet below top of ground, ½ hour after hole completed.		
May 3, 1937.		
Well 19		
L. Brown tract, John Richards survey, 10½ miles northwest of Center.		
Gray sand- - - - - - - - -	2	2
Red shale- - - - - - - - -	4	6
Yellow shale - - - - - - -	4	10
White sand- - - - - - - -	6	16
Yellow sand - - - - - - -	3	19
Rock- - - - - - - - - - -		19
April 30, 1937.		
Well 21		
J. C. Richards tract, John Richard survey, 11 miles northwest of Center.		
Gray sand- - - - - - - - -	3	3
Red shale- - - - - - - - -	6	9
Yellow shale - - - - - - -	2	11
Yellow rocky sand- - - - -	1	12
Struck water at 11 feet.		
Water level, 10 feet below top of ground, ½ hour after hole completed.		
April 30, 1937.		
Well 22		
J. C. Richard tract, John Richard survey, 11½ miles northwest of Center.		
Gray sand- - - - - - - - -	3	3
Yellow shale - - - - - - -	2	5
Red shale- - - - - - - - -	2	7
Sandy soapstone- - - - - -	2	9
White clay - - - - - - - -	2	11
Rock- - - - - - - - - - -		11
April 30, 1937.		
Well 23		
Northeast corner Phil Bussey tract, W. C. Wetheren survey, 12⅔ miles northwest of Center.		
Surface materials- - - - -	1	1
Red clay- - - - - - - - -	2	3
Yellow clay - - - - - - -	3	6
Brown soapstone and sand -	2	8
Gray soapstone and sand- -	2	10
Light-gray sand- - - - - -	5	15
Light-brown water sand - -	2	17
Struck water at 15 feet.		
Water level, 15 feet below top of ground, 1 hour after hole completed.		
April 30, 1937.		
Well 24		
Brown tract, S. O'Bannon survey, 12 miles northwest of Center.		
Surface materials- - - - -	1½	1½

(Continued on next page.)

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

	Thickness (feet)	Depth (feet)
Well 24 continued		
Red clay- - - - - - - - - -	4½	6
Blue clay- - - - - - - - -	3	9
Joint clay - - - - - - - -	3	12
Clay and sand- - - - - - -	4	16
Sand- - - - - - - - - - -	2	18
Struck water at 9 feet.		
April 26, 1937.		

Well 27

M. L. Green tract, J. Bowlin survey, 12 miles northwest of Center.

Red clay- - - - - - - - - -	4	4
White clay- - - - - - - - -	2	6
Sand rock - - - - - - - - -	2	8
Sand and clay - - - - - - -	14	22
Struck water at 22 feet.		
Water level, 13 feet below top of ground, 1 hour after hole completed.		
April 16, 1937.		

Well 29

Boyd Taylor tract, A. Fincher survey, 11½ miles northwest of Center.

Surface materials- - - - -	2	2
Red clay- - - - - - - - - -	2	4
Red and white clay - - - -	4	8
Yellow clay- - - - - - - -	3	11
Yellow and white clay- - -	4	15
Red clay- - - - - - - - - -	3	18
Red and white clay- - - -	4	22
White clay- - - - - - - - -	3	25
Red sand- - - - - - - - - -	2	27
White sand- - - - - - - - -	4	31
March 11, 1937.		

Well 30

Side of hill, W. E. Gunter tract, 14 miles northwest of Center, in Panola County.

Surface materials- - - - -	4	4
Red clay- - - - - - - - - -	3	7
Yellow sand - - - - - - - -	5	12
Brown sand- - - - - - - - -	9	21
Gray sand- - - - - - - - - -	3	24
Struck water at 21 feet.		
March 17, 1937.		

Well 31

Top of hill, Santa Fe R. R. Co. tract, Jesse Sullins survey, 12½ miles north of Center.

Surface materials- - - - -	2	2
Red clay- - - - - - - - - -	4	6
Sandy clay- - - - - - - - -	5	11
Yellow sand- - - - - - - -	6	17

	Thickness (feet)	Depth (feet)
Well 31 continued		
White sand- - - - - - - - -	4	21
Water level, 13 feet below top of ground, 1 hour after hole completed.		
March 9, 1937.		

Well 32

Top of hill, C. S. McNeill tract, 14 miles north of Center, in Panola County.

Surface materials- - - - -	3	3
Red clay- - - - - - - - - -	6	9
Rock, shale and clay - - -	4	13
Yellow clay- - - - - - - -	5	18
Quicksand- - - - - - - - -	3	21
Struck water at 19 feet.		
March 17, 1937.		

Well 33

Side of hill, C. S. McNeill tract, 14 miles north of Center, in Panola County.

Red clay- - - - - - - - - -	4	4
Red clay and water sand -	2	6
Yellow sand - - - - - - - -	4	10
White sand - - - - - - - -	4	14
Yellow and white sand- - -	2	16
Struck water at 11 feet.		
March 16, 1937.		

Well 37

Santa Fe R. R. Co. tract, in northeast corner of J. H. Holeman survey, 9 miles north of Center.

Surface materials- - - - -	2	2
Red clay- - - - - - - - - -	6	8
Red sand- - - - - - - - - -	5	13
White sand- - - - - - - - -	6	19
Red sand- - - - - - - - - -	8	27
White sand- - - - - - - - -	3	30
March 8, 1937.		

Well 38

T. Wood Smith tract, H. McKelvey survey, 4¾ miles north of Center.

Sand- - - - - - - - - - - -	8	8
Clay- - - - - - - - - - - -	10	18
Struck water at 10 feet.		
Water level, 4 feet below top of ground, 1 hour after hole completed.		
April 19, 1937.		

Well 40

R. Innis tract, John Scarborough survey, 5½ miles north of Center.

Red sand- - - - - - - - - -	3	3

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 40 continued		
Red clay- - - - - - - - - -	5	8
Yellow clay - - - - - - - - -	2	10
White sand- - - - - - - - - -	4	14
White clay- - - - - - - - - -	3	17
Struck water at 17 feet.		
Water level, 16 feet below top of ground, 1 hour after hole completed.		
April 19, 1937.		

Well 43

W. R. Pickering Lumber Co. tract, J. M. Wiggins survey, 10½ miles north of Center.

Surface materials- - - - -	1	1
Orange-colored clay- - - -	1	2
Red clay- - - - - - - - - -	2	4
Grey soapstone- - - - - - -	1	5
Brown sand rock - - - - - -	1	6
Gray water sand - - - - - -	1	7

Water level, 4 feet below top of ground, 1 hour after hole completed.
April 9, 1937.

Well 44

S. P. R. R. Co. tract, John Patterson survey, 11½ miles north of Center.

Surface materials- - - - -	1	1
Red clay- - - - - - - - - -	8	9
Grey sand- - - - - - - - - -	6	15
Brown sand- - - - - - - - -	6	21
Quicksand- - - - - - - - - -	7	28

March 30, 1937.

Well 45

S. P. R.R. Co. tract, Lucy M'ngle survey, 12½ miles north of Center.

Surface materials- - - - -	1	1
Red sand- - - - - - - - - -	18	19
Light-gray sand - - - - - -	5	24
Yellow sand- - - - - - - - -	1	25
Gray sand- - - - - - - - - -	3	28
Light-yellow sand- - - - -	7	35
White sand- - - - - - - - -	5	40
Orange-colored sand- - - -	6	46
Brown sand- - - - - - - - -	1	47
Light-gray water sand - - -	5	52

Water level, 50 feet below top of ground, 1 hour after hole completed.
April 13, 1937.

Well 47

Jess Hooper tract, near north line of H. Thomas survey, 10 miles north of Center.

Dark-gray sand- - - - - - -	2	2
Red clay- - - - - - - - - -	2	4

	Thickness (feet)	Depth (feet)
Well 47 continued		
Sandy yellow clay- - - -	2	6
Gray water sand- - - - - -	3	9
Struck water at 9 feet.		
Water level, 5 feet below top of ground, 1 hour after hole completed.		
April 9, 1937.		

Well 53

Top of hill, W. R. Pickering Lumber Co. tract, Samuel Strickland survey, 6 miles northeast of Center.

Surface materials- - - -	1	1
Red clay- - - - - - - - - -	5	6
Yellow clay- - - - - - - -	1	7

April 20, 1937.

Well 56

Pickering Lumber Co. tract, G. Russell survey, 6 miles northeast of Center.

Gray sand- - - - - - - - - -	2	2
Blue gumbo- - - - - - - - -	3	5
Sandy clay- - - - - - - - -	4	9
Sand rock- - - - - - - - -	2	11
Yellow sand- - - - - - - -	4	15

Water level, 8 feet below top of ground, ½ hour after hole completed.
April 8, 1937.

Well 57

Warren Heaton tract, H. Ashabraner survey, 7½ miles east of Center.

Sand- - - - - - - - - - - -	3	3
Sand and clay- - - - - - -	3	6
White sand- - - - - - - - -	10	16

Struck water at 16½ feet.
Water level, 16 feet below top of ground, 1 hour after hole completed.
April 14, 1937.

Well 59

Warren Heaton Tract, H. Ashabraner survey, 8½ miles northeast of Center.

Light-gray material- - -	3	3
Light-red material- - -	3	6
Dark-red material- - - -	3	9
White water sand- - - - -	3	12

Struck water at 12 feet.
Water level, 8 feet below top of ground, ½ hour after hole completed.
April 14, 1937.

Well 61

Valley, H. Lawson tract, Joel White survey, 8½ miles northeast of Center.

White sand- - - - - - - - -	5	5

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 61 continued		
Yellow sand- - - - - - - -	4	9
Red clay- - - - - - - - - -	2	11
Yellow sand- - - - - - - -	5	16

April 22, 1937.

Well 65

Lee Cox tract, C. A. Tuton survey, 12 miles northeast of Center.

Dark-gray sand- - - - - - -	1	1
Light-gray sand - - - - - -	3	4
Yellow clay- - - - - - - -	1	5
Red clay- - - - - - - - - -	3	8
Red sandy clay - - - - - -	5	13
Light-brown sand- - - - - -	4	17
Yellow water sand- - - - -	1	18

Water level, 14.6 feet below top of ground, ½ hour after hole completed.
April 2, 1937.

Well 66

A. O. Thiddon tract, Mannan Smith survey, 13½ miles northeast of Center.

Light-brown sand- - - - -	2	2
Sandy clay- - - - - - - -	10	12
Sandy shale - - - - - - -	12	24
Yellow sand - - - - - - -	10	34
Brown sand- - - - - - - -	7	41
Light-brown sand- - - - -	2	43
White sand- - - - - - - -	1	44
Orange-colored sand - - -	2	46
Gray sand - - - - - - - -	1	47
Red sand- - - - - - - - -	3	50
Water sand- - - - - - - -	2	52

Water level, 50 feet below top of ground, ½ hour after hole completed.
April 4, 1937.

Well 71

J. H. Holiday tract, S. O. Pennington survey, 12½ miles northeast of Center.

White sand- - - - - - - -	3⅕	3⅕
Red clay- - - - - - - - -	3	6⅕
Sand and clay - - - - - -	2½	9
White clay- - - - - - - -	3	12
Shale- - - - - - - - - -	2	14
Sand and clay - - - - - -	3	17
Soapstone- - - - - - - -	2	19
Sand and clay - - - - - -	4	23
Soapstone - - - - - - - -	3	26
Sand rock - - - - - - - -	2	28
Soapstone - - - - - - - -	6	34

Struck water at 32 feet.
Water level, 31 feet below top of ground, 6 hours after hole completed.
April 22, 1937.

	Thickness (feet)	Depth (feet)
Well 78		
D. J. Watts tract, Thomas Bristow survey, 12⅕ miles northeast of Center.		
Gray sand- - - - - - - - -	3	3
Brown sand - - - - - - - -	2	5
Yellow and white sand- - -	2	7
White sand - - - - - - - -	1	8
Brown and white sand - - -	2	10
White sandy clay - - - - -	6	16
Yellow sand- - - - - - - -	3	19
White water sand - - - - -	3	22

Struck water at 20 feet.
Water level, 19 feet below top of ground, 1 hour after hole completed.
April 9, 1937.

Well 81

East side of road, on ridge running northwest, Pickering Lumber Co. tract, 1. Talbot survey, 11 miles northeast of Center.

Surface materials- - - - -	1	1
Red clay- - - - - - - - - -	3	4
Yellow clay - - - - - - - -	2	6
Gray sand- - - - - - - - -	3	9
Yellow sand- - - - - - - -	4	13
Dark-brown sand- - - - - -	1	14
Gray soapstone - - - - - -	1	15
Yellow clay- - - - - - - -	1	16
Gray soapstone - - - - - -	1	17
Brown water sand - - - - -	2	19

Water level, 15 feet below top of ground, 1 hour after hole completed.
April 3, 1937.

Well 82

Sam Houston National Forest tract, P. J. Leggins survey, 11½ miles northeast of Center.

Sand- - - - - - - - - - -	1	1
Red clay- - - - - - - - -	3	4
Red shale and clay - - - -	4	8
Yellow sandy clay- - - - -	5	13
Yellow sand- - - - - - - -	3	16
Fine-grained white sand- -	7	23
Sandy soapstone- - - - - -	2	25
Grayish-yellow sand- - - -	10	35
Brown sand - - - - - - - -	2	37
Gray sand- - - - - - - - -	3	40
Light-brown sand - - - - -	6	46
White sand- - - - - - - -	5	51
Orange-colored sand- - - -	1	52
Light-gray sand - - - - - -	2	54
Dark-gray sand- - - - - - -	4	58

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 82 continued		
Fine light-gray sand- - - -	4	62
Light orange-colored sand -	2	64
Soapstone- - - - - - - - - -	1	65
Fine gray sand- - - - - -	2	67
March 30, 1937.		

Well 83

Pickering Lumber Co. tract, Stephen English survey, 11 miles northeast of Center.

Surface materials- - - - -	1	1
Red clay- - - - - - - - - -	1	2
Orange-colored clay- - -	2	4
Yellow clay- - - - - - - -	3	7
Light-yellow sand- - - -	4	11
Gray soapstone- - - - - -	3	14
Yellow sand- - - - - - - -	8	22
Light-yellow sand- - - - -	2	24
Gray sand- - - - - - - - -	3	27
Yellow sandy clay- - - - -	1	28
Gray sandy clay- - - - - -	3	31
Shale- - - - - - - - - - -	1	32
April 7, 1937.		

Well 84

Sam Houston National Forest tract, Stephen English survey, 11 miles northeast of Center.

Surface sand- - - - - - - -	1	1
Light orange-colored sand -	3	4
Yellow sandy clay- - - - -	7	11
Brown sand- - - - - - - - -	5	16
Light brown sand- - - - -	5	21
Grayish orange-colored sand- - - - - - - - - -	7	28
Gray water sand- - - - - -	5	33

Water level, 15 feet below top of ground, $\frac{1}{2}$ hour after hole completed.
April 7, 1937.

Well 88

E. Deemer survey, 12 miles east of Center.

Gray sand- - - - - - - - -	1	1
Red clay- - - - - - - - - -	3	4
Red shale- - - - - - - - -	4	8
Yellow sandy clay- - - - -	5	13
Yellow sand- - - - - - - -	3	16
Fine white sand- - - - - -	7	23
Sandy soapstone- - - - - -	2	25
Gray and yellow sand - - -	10	35
Brown sand- - - - - - - - -	2	37
March 27, 1937.		

	Thickness (feet)	Depth (feet)
Well 91		
Frost Johnson Lumber Co. tract, Aaron Castleberry survey, 15 miles east of Center.		
Brown sand- - - - - - - - -	3	3
Yellow sand - - - - - - - -	5	8
Coarse quicksand- - - - -	1	9
Yellow sand- - - - - - - -	1	10
Struck water at 9 feet.		
Water level, 9 feet below top of ground, $\frac{1}{2}$ hour after hole completed.		
April 8, 1937.		

Well 93

Side of hill, Pickering Lumber Co. tract, James Stoddard survey, near northeast corner of Aaron Castleberry survey, $15\frac{1}{2}$ miles east of Center.

Red shale- - - - - - - - -	3	3
Yellow sand- - - - - - - -	3	6
Gray and yellow sand - -	3	9
Bentonite- - - - - - - - -	4	13
Yellow and white sand- -	1	14
Yellow sand- - - - - - -	2	16
Bentonite- - - - - - - -	2	18
Lignite- - - - - - - - -	1	19
March 26, 1937.		

Well 102

Sam Houston National Forest tract, at the northwest corner of W. J. Thomas survey, 10^1 miles east of Center.

Surface materials- - - -	4	4
Red clay- - - - - - - - -	5	9
Yellow clay - - - - - - -	4	13
White clay- - - - - - - -	$3\frac{1}{3}$	$16\frac{1}{3}$
Struck water at 9 feet.		
April 23, 1937.		

Well 107

Top of hill, R. H. Bell tract, T. English survey, 7 miles east of Center.

Surface materials- - - - -	2	2
Yellow sand- - - - - - - -	4	6
Yellow clay- - - - - - - -	4	10
Yellow sand- - - - - - - -	1	11
Struck water at 9 feet.		
Water level, 6.2 feet below top of ground, $1\frac{1}{2}$ hours after hole completed.		
April 14, 1937.		

Well 109

Sam Houston National Forest tract, approximate center of B. H. Simpson

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 109 continued		
survey, 9½ miles east of Center.		
Surface materials - - - - -	1	1
Red clay- - - - - - - - - -	3	4
Yellow clay- - - - - - - -	2	6
Red gravel - - - - - - - -	2	8
Black gumbo- - - - - - - -	2	10
Red sand- - - - - - - - - -	1	11
Black gravel and lignite- -	4	15
Rock- - - - - - - - - - - -		15
Struck water at 11 feet.		
Water level, 7.9 feet below top of ground, 3 hours after hole completed.		
April 2, 1937.		

Well 113

W. F. Morrison tract, Allen Hailey survey, 8 miles southeast of Center.

Sand- - - - - - - - - - - -	1	1
Red clay- - - - - - - - - -	2	3
Sandy clay- - - - - - - - -	3	6
Red sand- - - - - - - - - -	2	8
Sand- - - - - - - - - - - -	3	11
Water sand - - - - - - - - -	3	14
Rock- - - - - - - - - - - -		14

Struck water at 11 feet.
May 4, 1937.

Well 118

Ben Smith tract, J. McFadden survey, 4½ miles east of Center.

Gray sand- - - - - - - - - -	3	3
Red clay - - - - - - - - - -	5	8
Sandy clay - - - - - - - - -	9	17

Struck water at 17 feet.
Water level, 15 feet below top of ground, 1 hour after hole completed.
April 15, 1937.

Well 120

Southwest corner Will Booth tract, Kneel Black survey, 3½ miles northeast of Center.

Surface materials- - - - -	1	1
Red clay- - - - - - - - - -	3	4
Grey soapstone and sand- -	2	6
White sand- - - - - - - - -	2	8
Brown sand- - - - - - - - -	1	9
White sand- - - - - - - - -	2	11
Red sand- - - - - - - - - -	1	12
Light-gray sand- - - - - -	2	14
Brown sand- - - - - - - - -	1	15
Dark gray water sand - - -	4	19

Water level, 17 feet below top of ground, 1 hour after hole completed.
May 18, 1937.

	Thickness (feet)	Depth (feet)
Well 121		
W. P. Hopkins survey 2¼ miles north of Center.		
Gray materials- - - - - -	1	1
Light red materials - - -	2	3
Yellow materials- - - - -	3	6
Dark-gray materials - - -	4	10
Coarse sand- - - - - - - -	2	12
Coal- - - - - - - - - - - -	1	13
Soapstone - - - - - - - -	3	16
Blue sand- - - - - - - - -	1	17

Struck water at 10 feet.
Water level, 10 feet below top of ground, ½ hour after hole completed.
April 19, 1937.

Well 124

Frost Lumber Co. tract, Z. C. Walker survey, 2 miles southeast of Center.

Sand- - - - - - - - - - - -	2	2
Brown sand - - - - - - - -	2	4
Brown shale and sand- - -	2	6
Dark-brown sand- - - - - -	3	9
Light yellow sand- - - - -	3	12
Orange-colored sand- - -	1	13
Light-gray sand- - - - - -	1	14
Dark-gray sand- - - - - -	1	15
Light-gray water sand - -	1	16

Water level, 14 feet below top of ground, ½ hour after hole completed.
April 9, 1937.

Well 126

Z. C. Walker survey, 2½ miles southeast of Center.

Surface materials- - - - -	1	1
White sand- - - - - - - - -	2	3
Red sand- - - - - - - - - -	3	6
Yellow clay - - - - - - - -	4	10
Gray sand- - - - - - - - -	3	13
Blue shale- - - - - - - - -	4	17
Quicksand- - - - - - - - -		17

Struck water at 24 feet.
May 2, 1937.

Well 127

Santa Fe R. R. Co. tract, Z. C. Walker survey, 2¾ miles southeast of Center.

Sandy materials- - - - - -	1	1
Red clay- - - - - - - - - -	1	2
Brown shale and sand - - -	4	6
Orange-colored sand - - -	2	8
Gray sand- - - - - - - - -	2	10
Gray shale and sand - - -	1	11
Light-gray water sand - -	2	13

May 4, 1937.

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

	Thickness (feet)	Depth (feet)
Well 139		
B. W. Pearse tract, N. Smith survey, 1¼ miles northwest of Center.		
Sand- - - - - - - - - - - -	2	2
Red clay- - - - - - - - - -	3	5
Sandy clay- - - - - - - - -	4	9
Yellow clay - - - - - - - -	5	14
Red clay- - - - - - - - - -	4	18
Water sand- - - - - - - - -	3	21
Water level, 19 feet below top of ground, ½ hour after hole completed.		
May 1, 1937.		
Well 162		
Henry Lovell tract, Clement Tutt survey, 8½ miles south of Center.		
Gray sand- - - - - - - - -	4	4
Clay- - - - - - - - - - - -	6	10
Water sand- - - - - - - - -	2	12
Struck water at 10 feet.		
Water level, 9 feet below top of ground, 1 hour after hole completed.		
May 5, 1937.		
Well 163		
Pickering Lumber Co. tract, Clement Tutt survey, 9 miles southeast of Center.		
Gray sand- - - - - - - - - -	1	1
Brown sand - - - - - - - - -	1	2
Red clay- - - - - - - - - -	1	3
Red and white clay - - - - -	2	5
Fine brown sand- - - - - - -	6	11
Fine light-gray sand - - - -	3	14
Bentonite- - - - - - - - - -	2	16
Blue shale - - - - - - - - -	3	19
Fine blue black sand - - - -	2	21
May 5, 1937.		

	Thickness (feet)	Depth (feet)
Well 164		
Top of hill, 2,000 feet north of Evans shop, 150 feet west of State Highway 8, N. B. Evans tract, T. M. Lester survey, 10½ miles southeast of Center.		
Gray sand- - - - - - - - - -	1	1
Red sandy clay - - - - - - -	3	4
Orange-colored sand- - - - -	3	7
Light-brown sand - - - - - -	2	9
Yellow sand- - - - - - - - -	1	10
Light-yellow sand- - - - - -	3	13
Fine-grained gray sand - - -	2	15
Fine-grained dark-grey sand	4	19
Blue sandy shale- - - - - -	4	23
May 4, 1937.		
Well 177		
Top of hill, T. Anderson tract, Asa Biggs survey, 16½ miles southeast of Center.		
Surface materials- - - - -	3	3
Red clay- - - - - - - - - -	10	13
Yellow sand - - - - - - - -	10	23
Struck water at 20 feet.		
Water level, 18 feet below top of ground, ½ hour after hole completed.		
May 26, 1937.		

Partial analyses of water from wells in Shelby 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	J. D. Oliver	22	May 16, 1937	120	8	4	26	24	a/	28	42	38
2	Mrs. -- Sanford	24	Mar. 25, 1937	77	-	-	-	61	a/	13	b/	-
5	Sally McLeroy	28	do.	353	37	5	81	140	86	40	35	114
6	J. H. Wedgeworth Estate	30	do.	675	-	-	-	49	a/	108	352	-
9	Mrs. Shroud Kelley	22	Mar. 4, 1937	-	-	-	-	-	55	120	b/	-
10	W. P. A. test	16	May 1, 1937	2,411	87	107	550	12	1,361	300	b/	656
11	Mrs. Ida Keeling	25	Mar. 26, 1937	120	-	-	-	12	47	28	b/	-
12	W. R. Tyre	22	Apr. 23, 1937	37	-	-	-	12	10	8	b/	-
13	W. P. A. test	23	May 1, 1937	428	25	7	103	37	39	86	150	89
14	J. C. Bogard Estate	17	Apr. 23, 1937	204	30	10	35	134	19	44	b/	116
15	Travis Billingslea	21	Apr. 30, 1937	105	-	-	-	24	31	26	b/	-
16	J. A. Billingslea	13	do.	273	17	5	81	159	58	34	b/	63
17	W. P. A. test	21	May 3, 1937	3,504	425	342	117	-	2,512	108	b/	2,472
18	Willie Honeycutt	25	Apr. 30, 1937	98	8	2	26	31	27	20	b/	26
20	Eula Powers	25	Apr. 23, 1937	304	21	5	79	24	55	100	32	73
21	W. P. A. test	12	Apr. 30, 1937	153	9	8	32	12	66	32	b/	55
24	do.	18	Apr. 26, 1937	320	38	10	64	110	40	86	28	136
26	Ed Bogard	22	Mar. 24, 1937	118	-	-	-	61	a/	34	b/	-
27	W. P. A. test	22	Apr. 16, 1937	1,155	-	-	-	128	352	355	b/	-
28	Phillip Whittaker	23	Mar. 24, 1937	356	-	-	-	31	78	136	b/	-
29	W. P. A. test	31	Mar. 11, 1937	-	-	-	-	-	24	26	b/	-
31	do.	21	Mar. 9, 1937	-	-	-	-	-	18	11	40	-
35	J. W. Butler	16	Mar. 16, 1937	886	30	47	217	6	86	400	103	269
36	H. E. Finklea	32	do.	269	27	14	36	-	144	40	b/	124
37	W. P. A. test	30	Mar. 8, 1937	7,700	-	-	-	-	4,298	1,030	b/	-
38	do.	18	Apr. 19, 1937	96	-	-	-	12	43	16	b/	-
39	Guy Stacy	62	Apr. 20, 1937	326	-	-	-	183	a/	108	b/	-
40	W. P. A. test	17	Apr. 19, 1937	82	-	-	-	24	27	15	b/	-
41	W. T. Cobb	27	Apr. 9, 1937	638	24	26	166	12	43	285	38	166
42	Ralph Jopling	26	do.	448	15	-	137	12	39	140	111	40

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

Partial analyses of water from wells in Shelby 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)
43	W. P. A. test	7	Apr. 9, 1937	54	-	-	-	12	18	12	b/	-
45	do.	52	Apr. 13, 1937	183	-	-	-	49	88	12	b/	-
46	H. L. Jackson	23	Apr. 8, 1937	1,008	-	-	-	12	117	530	b/	-
47	W. P. A. test	9	Apr. 9, 1937	40	-	-	-	12	a/	15	b/	-
48	G. W. May	23	Apr. 7, 1937	509	-	-	-	12	47	265	141	-
49	J. W. Haight	27	Apr. 8, 1937	155	-	-	-	31	19	52	b/	-
50	Y. D. Carroll	14	Apr. 20, 1937	634	14	11	197	31	70	245	82	82
51	J. J. Ashberry	465	Apr. 22, 1937	3,951	-	-	-	281	303	2,100	b/	-
54	A. D. Colley	43	Apr. 20, 1937	273	-	-	-	171	43	46	b/	-
55	A. G. Cross	20	do.	798	-	-	-	12	350	185	b/	-
57	W. P. A. test	16	Apr. 14, 1937	208	-	-	-	159	25	27	b/	-
58	John Potts	105	May 20, 1937	1,054	14	10	386	451	129	290	b/	76
59	W. P. A. test	12	Apr. 14, 1937	47	-	-	-	12	15	10	b/	-
60	J. R. Lawson	14	Mar. 5, 1937	-	-	-	-	-	a/	13	b/	-
61	W. P. A. test	16	Apr. 22, 1937	431	-	-	-	12	218	72	b/	-
62	S. A. McDaniel	33	do.	1,905	-	-	-	37	618	615	28	-
63	W. E. Oates	18	do.	53	-	-	-	18	a/	24	b/	-
66	W. P. A. test	52	Apr. 4, 1937	127	-	-	-	122	a/	9	b/	-
67	E. B. Childress	20	Mar. 29, 1937	211	25	5	38	31	32	52	44	84
68	Joaquin School Dist.	160	do.	625	-	-	-	494	40	88	20	-
70	Mrs. M. M. Carroll	250	Feb. 1, 1937	958	-	3	394	622	a/	252	b/	12
71	W. P. A. test	34	Apr. 22, 1937	141	-	-	-	12	51	38	b/	-
73	D. B. Siler Light & Power Co.	600	Mar. 29, 1937	712	14	1	281	549	12	134	b/	40
74	J. C. Stubblefield	107	Mar. 30, 1937	871	12	3	342	476	a/	280	b/	42
75	City of Logansport	205	Apr. 14, 1937	110	11	1	30	43	19	28	b/	31
76	Joe Childress	16	Apr. 5, 1937	1,385	98	24	344	79	74	500	306	346
77	J. W. Dickerson, Sr.	19	Mar. 30, 1937	1,084	96	51	178	85	a/	315	398	452
78	W. P. A. test	22	Apr. 9, 1937	491	33	11	125	12	161	155	b/	126
79	J. G. Gordon	14	Apr. 5, 1937	124	-	-	-	24	16	32	24	-
80	M. A. Shaver	29	Mar. 30, 1937	36	-	-	-	24	a/	10	b/	-
81	W. P. A. test	19	Apr. 3, 1937	66	-	-	-	24	19	12	b/	-
84	do.	33	Apr. 7, 1937	100	-	-	-	49	26	15	-	-
85	S. P. Leggett	32	Apr. 6, 1937	180	-	-	-	73	43	38	b/	-
87	R. Sholar	35	do.	672	54	25	139	110	70	180	150	236

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

Partial analyses of water from wells in Shelby 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)
88	W. P. A. test	37	Mar. 27, 1937	85	9	-	20	12	40	10	b/	23
89	A. R. Wilson	27	Apr. 23, 1937	198	-	-	-	31	51	30	41	-
92	Hugh Jones	20	Apr. 8, 1937	117	-	-	-	37	39	10	b/	-
94	E. N. Alford	17	Apr. 23, 1937	104	-	-	-	12	31	32	b/	-
95	Jim Bailey	22	do.	777	-	-	-	146	117	310	b/	-
96	G. L. Golden Est.	37	do.	78	-	-	-	31	a/	30	b/	-
97	Mrs. T. B. Buckley	23	Apr. 22, 1937	305	-	-	-	18	11	100	89	-
98	W. E. Tamplin	20	do.	281	15	15	59	12	a/	110	76	99
99	Sam Houston Nat'l, Spring Forest		do.	54	-	-	-	49	a/	6	b/	-
101	Chas. Crawford	55	Apr. 23, 1937	148	8	4	42	67	31	30	b/	38
102	W. P. A. test	16½	do.	55	-	-	-	12	10	20	b/	-
103	J. F. Smith	29	do.	197	32	4	23	171	a/	24	30	97
104	H. E. Holt	22	Apr. 14, 1937	182	8	-	54	18	31	42	38	20
106	J. L. Fowler	17	do.	125	-	-	-	24	39	32	b/	-
107	W. P. A. test	11	do.	59	-	-	-	18	10	19	b/	-
108	Shelbyville Post Office	34	do.	175	16	4	38	43	43	30	23	58
109	W. P. A. test	15	Apr. 2, 1937	4,443	-	-	-	12	2,180	860	b/	-
110	F. L. Bickham	17	Apr. 14, 1937	563	-	-	-	293	86	90	46	-
111	H. M. Davis	16	May 4, 1937	391	17	5	98	49	15	62	170	68
112	J. B. Sample	11	do.	111	-	-	-	18	39	26	b/	-
113	W. P. A. test	14	do.	196	24	6	34	37	90	24	b/	84
114	Jim T. Cannon	21	do.	110	-	-	-	24	19	30	b/	-
115	D. D. Cammack	22	do.	298	-	-	-	43	47	108	21	-
116	Quincy Green	14	Apr. 14, 1937	67	-	-	-	24	16	16	b/	-
117	Mrs. J. G. Rushing	13	do.	186	15	15	21	18	12	44	70	99
119	Dudley Cook	17	Apr. 20, 1937	379	22	9	102	37	70	138	20	91
120	W. P. A. test	19	May 18, 1937	348	-	-	-	244	78	24	b/	-
121	do.	17	Apr. 19, 1937	3,954	-	-	-	49	802	1,770	b/	-
122	Otis Pleasant	36	Apr. 20, 1937	307	-	-	-	49	62	102	b/	-
123	S. Cook	34	Apr. 1, 1937	96	-	-	-	12	40	19	b/	-
124	W. P. A. test	16	Apr. 9, 1937	-	-	-	-	-	169	60	b/	-
125	T. O. Davis	31	Apr. 1, 1937	192	-	-	-	24	50	64	b/	-
127	W. P. A. test	13	May 4, 1937	58	-	-	-	12	18	14	b/	-

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

Partial analyses of water from wells in Shelby 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)
128	J. K. Sanford Est.	11	May 6, 1937	-	-	-	-	-	a/	14	b/	-
130	Mrs. Pearl Hayes	48	May 7, 1937	153	-	-	-	37	43	40	b/	-
131	Mrs. G. A. Williams	16	May 12, 1937	258	28	3	49	49	39	26	89	82
132	W. S. Mahan	20	May 18, 1937	419	14	30	85	24	a/	162	111	158
133	Cecil Osby	25	Apr. 1, 1937	516	-	-	-	18	129	185	22	-
135	J. K. Sanford Est.	18	May 14, 1937	282	-	-	-	79	39	84	23	-
136	Laurie Daugherty	11	do.	275	12	6	59	12	a/	28	159	54
137	Mrs. T. Wood Smith	18	Apr. 19, 1937	204	-	-	-	122	47	24	b/	-
138	J. F. Willis	17	Apr. 20, 1937	225	-	-	-	12	78	50	20	-
139	W. P. A. test	21	May 1, 1937	2,028	165	65	455	293	684	515	b/	680
140	R. C. Adams	31	Apr. 20, 1937	178	8	-	54	37	35	32	31	19
141	-- Sanford heirs	21	May 21, 1937	720	-	-	-	-	31	200	276	-
142	O. H. Polley	60	May 20, 1937	1,706	189	145	135	122	1,050	120	b/	1,070
143	J. B. Bush, Sr.	21	do.	-	-	-	-	-	20	11	-	-
144	C. C. Locke	33	May 12, 1937	129	31	-	18	85	20	18	b/	78
145	J. T. Oliver	16	May 3, 1937	355	-	-	-	37	a/	126	90	-
146	Bart Gann	35	May 20, 1937	193	-	-	-	37	31	76	b/	-
147	W. A. Crocker	10	May 21, 1937	179	14	3	40	12	105	11	b/	47
148	A. R. Rasberry	19	Apr. 20, 1937	488	24	40	74	-	275	70	b/	225
149	J. D. Holloway	24	do.	94	19	-	8	12	a/	10	46	48
150	J. R. Prince	34	May 3, 1937	278	-	-	-	18	a/	50	132	-
151	T. A. Cook	41	do.	467	43	36	78	116	31	200	22	257
152	A. S. Johnson	22	do.	747	59	18	177	110	66	238	135	220
153	J. M. Burgay Est.	21	do.	348	29	7	87	79	55	100	31	99
154	H. S. Stephenson	25	do.	95	-	-	-	37	10	15	21	-
155	Mathis Stockman	20	Apr. 30, 1937	160	17	6	25	24	20	28	52	69
158	A. P. McSwain	73	May 10, 1937	70	-	-	-	24	a/	7	25	-
159	N. H. Kimbro	13	May 8, 1937	84	-	-	-	61	11	12	b/	-
160	A. Hughes	Spring	May 7, 1937	80	-	-	-	24	31	10	b/	-
161	A. J. Hughes	15	May 8, 1937	154	25	5	16	24	16	30	50	84
162	W. P. A. test	12	May 5, 1937	-	-	-	-	-	a/	15	b/	-
165	N. B. Evans	37	May 4, 1937	-	-	-	-	-	545	160	21	-
166	E. D. Collins	27	do.	160	-	-	-	37	43	12	38	-
168	D. B. Nix	39	do.	258	12	3	76	12	62	88	b/	42
169	Dr. T. L. Hurst	14	May 24, 1937	129	-	-	-	-	39	3	52	-

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

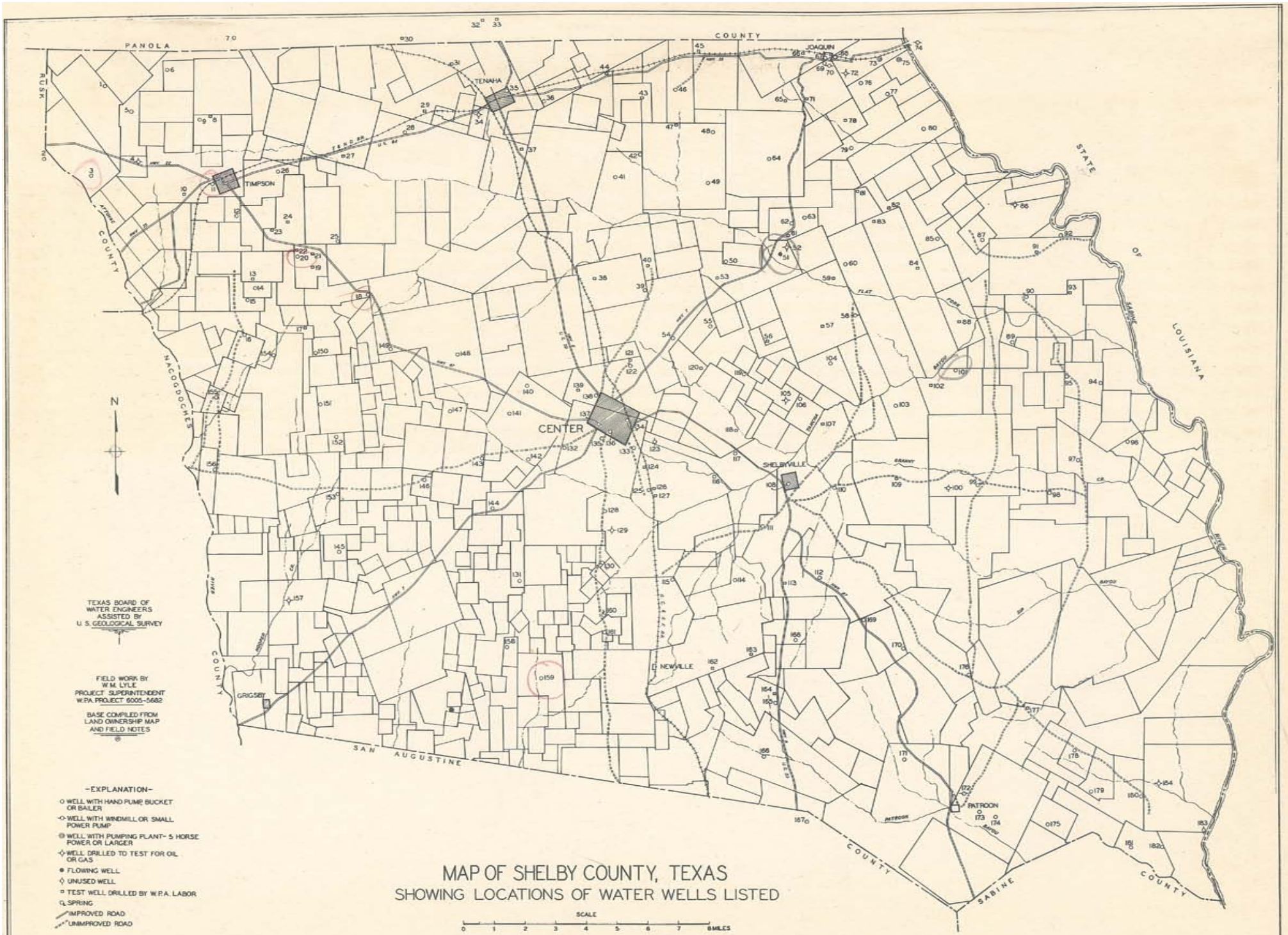
Partial analyses of water from wells in Shelby County--Continued

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)
170	Frank Goodwin	19	May 24, 1937	212	15	-	43	-	31	20	103	40
171	T. M. Alms	12	May 27, 1937	299	32	3	61	31	a/	80	105	92
173	H. L. Bussy	18	do.	710	32	28	185	24	89	320	44	197
174	John O. Clark	16	May 26, 1937	193	-	-	-	49	97	10	b/	-
175	Mrs. M. C. Goodwyn	29	do.	408	50	9	99	275	31	84	b/	161
176	H. S. Sims	20	May 24, 1937	71	-	-	-	31	a/	23	b/	-
177	W. P. A. test	23	May 26, 1937	158	16	5	24	6	a/	35	75	62
178	Mrs. L. T. Wilburn	35	May 25, 1937	69	-	-	-	49	a/	14	b/	-
179	W. T. Lee	17	do.	113	-	-	-	37	43	14	b/	-
180	Dudley Cook	21	do.	305	-	-	-	18	10	68	128	-
181	W. B. Palmer	28	May 26, 1937	99	-	-	-	37	39	9	b/	-
182	G. C. Risinger	17	May 24, 1937	144	19	-	25	18	10	20	61	48

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.



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