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STATE BOARD OF WATER ENGINEERS

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CALLAHAN COUNTY, TEXAS

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

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Work Projects Administration Project 14866

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Analyses made and report mimeographed by

WORK PROJECTS ADMINISTRATION

Project 10443

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

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Austin, Texas
November 20, 1940

CALLAHAN COUNTY, TEXAS

* * *

Introduction

By

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Assistant Geologist

United States Geological Survey

This publication contains records of 216 wells and 7 springs, drillers' logs of 11 wells, logs of 18 test wells, and 167 chemical analyses of water obtained from water wells and springs in Callahan County, Texas.

On January 17, 1940 the Work Projects Administration started an inventory of the water resources of the county with a project sponsored by the State Board of Water Engineers in cooperation with the Federal Geological Survey, with Carl B. Mueller, as project superintendent. In addition to the inventory a number of test holes were put down by WPA labor. The project closed May 16, 1940. The City of Baird was also a co-sponsor for the project. Because of the large amount of work done in the vicinity of the Baird water-well field there was not time to complete the inventory of the county. This was done later by C. R. Follett.

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

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

These projects are a part of a State-wide investigation of the underground water resources of Texas, and are sponsored by the Texas State Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey. Acknowledgment of their cordial interest and cooperation is due the city officials of Baird.

Records of wells and springs in Callahan County, Texas
 (All wells are dug unless otherwise noted in "Remarks" column.)
 (See "Logs of M. E. . . test wells" for all records of test wells.)

No.	Distance from Baird	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/ 1	3½ miles west	T. & P. R. R.	R.R. cut	--	22	--	4.0
✓ 2	do.	City of Baird	Gentle slope	1939	55	---	--
d/ 5	do.	T. & P. R. R.	R.R. cut	Old	32	--	1.0
d/ 4	do.	City of Baird	Gentle slope	--	49	72	0.0
d/ 5	do.	do.	do.	--	39	72	0.0
d/ 6	do.	do.	do.	--	43	72	0.0
d/ 7	do.	do.	do.	--	40	72	0.0
d/ 8	do.	do.	do.	--	43	72	0.0
d/ 9	do.	do.	do.	--	45	72	0.0
d/ 10	do.	do.	do.	--	44	72	0.0
d/ 11	do.	do.	do.	--	44	--	0.0
d/ 12	do.	do.	Hillside	Old	44	72	0.5
18	do.	-- Hays	Rolling	Old	32	24	--
27	do.	J. H. Lindle	Flat	Old	25	48	1.0
41	4½ miles west	T. J. Gray	do.	1934	15	--	2.0
42	4 miles west	W. B. Hallman	do.	--	42	--	3.5
43	do.	C. E. South	Hilltop	--	75	--	--
44	4½ miles northwest	R. D. Dainwood	Hillside	--	50	--	2.0
45	3½ miles northwest	G. B. Jones	Flat	--	22	--	2.5
d/ 46	3½ miles west	T. & P. R. R.	R.R. cut	Old	16	--	0.3
d/ 47	do.	do.	do.	Old	15	--	0.3
d/ 48	3 miles west	--	Gentle slope	Old	28	48	2.0

a/ Measuring point usually top of casing, top of well curb or top of pipe clamp; it was above ground level unless indicated by (-) sign for below ground level.
 b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

(Chemical analysis from these wells are in the table of analysis.)

No.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
1	14.36	Apr. 9, 1940	--	P	Rectangular hole, 10 feet by 52 feet. Concrete lining and cover. Recently reconditioned for city supply.
2	29	e/	Cf,E, 3	P	Rectangular hole 15 feet by 30 feet and 36 feet deep. Concrete lining and cover. Hole deepened by drilling to 55 feet. Reported to have passed through clay and blue shale in drilled portion of hole. Yield small; probably less than 4,000 gallons a day. Reported yield, 38,000 gallons a day.
3	14.69	Apr. 18, 1940	None	N	Rectangular hole. 5 $\frac{1}{2}$ feet by 12 feet, not in use, formerly used by City of Baird
4	29.52	Apr. 28, 1940	T,E, 5	P	Concrete lining. Estimated yield, 40,000 gallons a day.
5	29.98	Apr. 17, 1940	C,E, 5	P	Concrete lining. Estimated yield, 9,000 gallons a day.
6	38.20	do.	T,E, 3	P	Concrete lining. Estimated yield, 2,500 gallons a day.
7	34.48	do.	Cf,E, 3	P	Pump out of order. Reported yield, 6,500 gallons a day.
8	36.60	do.	Cf,E, 3	P	Concrete lining. Estimated yield, 5,000 gallons a day.
9	38.90	do.	Cf,E, 3	P	Concrete lining. Estimated yield, 20,000 gallons a day.
10	36.85	do.	Cf,E, 3	P	Concrete lining. Pump out of order. Reported yield, 4,000 gallons a day.
11	32.35	do.	Cf,E, 3	P	Well dug through and 8 feet below bottom of old tunnel. Estimated yield, 20,000 gallons a day.
12	34.58	Apr. 19, 1940	None	N	Concrete lining. Not used.
18	28	e/	C,H	D,S	Abundant supply reported to come from sand.
27	20.77	Apr. 3, 1940	B,H	--	Abundant supply reported to come from sand. Altitude of measuring point 1,966 feet.
41	15.05	July 12, 1940	H	D,S	
42	39.97	do.	B,H	D,S	
43	65.55	do.	B,H	D,S	
44	44.90	do.	C,W	D,S	
45	15.65	do.	B,H	D,S	
46	7.01	Apr. 9, 1940	--	P	Concrete casing. Diameter 2 feet by 4 feet.
47	5.72	do.	--	N	Diameter 4 feet by 4 feet. Concrete casing. Formerly used by City of Baird.
48	24.73	Apr. 3, 1940	None	N	

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Callahan County--Continued

No.	Distance from Baird	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
53	2½ miles west	T. & P. R. R.	R.R. cut	-- Spring	--	--	--
d/ 54	3 miles west	W. L. Simpson	Hilltop	Old	45	36	--
55	3½ miles west	J. S. Baker	Gentle slope	Old	17	30	4.0
58	3½ miles west	Leo Tyler	Flat	Old	25	30	2.5
59	4 miles west	--	Gentle slope	Old	45	24	2.0
No.	Distance from Clyde	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
60	7¾ miles northwest	J. H. Morrisett	In draw	Old	21	48	2.0
d/ 61	6½ miles northwest	H. Grisham	--	1929	2,175	12½	--
d/ 62	7 miles northwest	do.	--	1939	2,128	10	--
63	7½ miles west	N. A. Estes	Creek bed	1900+	9	42	0.2
d/ 64	7¾ miles west	Kate Leggett	Creek bank	Old	25+	60	--
65	6¼ miles west	H. Grisham	do.	Old	12	18	2.3
66	5½ miles northwest	A. E. Dyer	Flat	Old	30	20	1.9
d/ 67	3¾ miles west	O. E. Kendrick	In draw	1938	17	--	--
d/ 68	1½ miles north	R. A. Smith	Flat	Old	32	24	0.0
69	2 miles northwest	R. P. Taylor	do.	Old	25	36	2.9
70	1 mile north	J. G. Batley	Sandy slope	1910+	42	36	3.0
71	1¾ miles north	J. E. Waggoner	Creek bed	1912	15	24	1.3
d/ 72	2 miles north	--	Ridgetop	--	27	20	0.2
73	2½ miles north	M. W. Carlton	Gentle slope	Old	24	30	1.7
d/ 74	do.	Hollie Cleamer	Flat	Old	16	36	0.2
75	3 miles north	do.	Gentle slope	Old	21	18	1.3

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

b.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
53	Flows	Sept. 20, 1939	--	N	Estimated flow, one gallon a minute.
54	18.23	Apr. 2, 1940	C,W	D,S	Rock casing. Reported strong supply of water from sand.
55	7.71	Feb. 21, 1940	None	D,S	Brick casing.
58	23.03	Jan. 24, 1940	None	N	Brick casing. Reported water has bad odor and brown color.
59	37.57	Mar. 2, 1940	C,W	N	Brick casing. Reported strong supply of water from sand.

c.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
60	13.51	Mar. 2, 1940	C,W	S	Rock casing. Well near surface water reservoir.
61	--	--	None	N	Drilled oil test. See log.
62	--	--	None	N	Do.
63	8.10	July 31, 1940	C,W	D,S	Rock casing to bottom. Reported weak supply in drought.
64	--	--	B,C, H,E	D,S	Rock casing top four feet. Reported supply fails when nearby lake goes dry.
65	13.30	July 31, 1940	C,W	D,S	Brick and rock casing to bottom. Reported weak supply in drought. Well near surface water reservoir.
66	19.08	Feb. 22, 1940	None	N	Rock casing. Water reported from sand.
67	--	--	None	N	No casing used. Reported small seep at top of limestone at seven feet.
68	28.65	Feb. 6, 1940	Cf,G, --	D,S	Rock casing. Water reported from sand. Pump set at 16 feet.
69	17.94	Feb. 22, 1940	None	N	Brick casing top six feet. Water reported from sand.
70	32.97	July 31, 1940	B,H	D,S	Brick casing to bottom. Reported strong supply of water from sand which never fails.
71	11.44	do.	B,H	D,S	Brick and rock cased to bottom. Reported strong supply which never fails.
72	25.75	do.	C,G	S	Rock casing.
73	19.88	do.	C,W	D,S	Brick casing top 25 feet. Reported strong supply.
74	13.05	do.	None	N	Rock casing to bottom. Reported strong supply from sand. Formerly used by school.
75	14.19	do.	B,H	D,S	Rock casing to bottom. Reported strong supply from sand.

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

Records of wells and springs in Callahan County--Continued

No.	Distance from Clyde	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
76	3 $\frac{1}{2}$ miles	L. T. Bagwell	Ridgetop	Old	20	36	3.0
77	do.	do.	In draw	1925+	13	42	1.3
d/ 78	3 $\frac{3}{4}$ miles north	A. C. Klepper	Sandy ridge	1938	1,800+	--	--
79	do.	do.	do.	1940	23	36	2.0
80	4 $\frac{1}{4}$ miles north	L. J. Gorsuch	Gentle slope	--	22	24	1.0
81	6 $\frac{1}{4}$ miles north	J. P. Kennard Est.	do.	Old	35	36	1.0
82	6 $\frac{1}{2}$ miles north	W. Kennard Est.	do.	Old	29	24	1.0
v/ 83	9 $\frac{1}{2}$ miles east	I. N. Jackson	--	1939	875	6- 5/8	--
84	4 $\frac{1}{4}$ miles northeast	Joel Griffen	In draw	Old	9+	60	3.0
85	do.	do.	Creek bottoms	1918	13	28	2.5
d/ 86	do.	do.	Hilltop	-- Spring	--	--	--
87	3 $\frac{1}{2}$ miles northeast	O. W. Johns	Gentle slope	1915+	30	30	--
88	3 miles northeast	Clyde Canday	do.	Old	30	36	--
d/ 89	4 $\frac{1}{2}$ miles northeast	E. Whindham	--	1929	1,601	8 $\frac{1}{2}$	--
d/ 90	4 miles east	Edwin Webb	Gentle slope	Old	13	30	2.5
91	1 $\frac{1}{4}$ miles southeast	W. F. Foster	Flat	Old	31	24	3.0
d/ 92	$\frac{1}{2}$ mile east	D. P. Hollis	--	--	29	--	--
93	do.	J. P. Frew	Flat	1936	25	--	0.0
94	In Clyde	City of Clyde	--	1929	--	104	--
95	1 $\frac{1}{4}$ miles southwest	A. Patty	Gentle slope	Old	36	30	3.0
96	1 $\frac{1}{2}$ miles south	R. V. Powell	Creek bank	Old	9	24	0.7
97	1 $\frac{3}{4}$ miles south	--	Flat	Old	22	36	2.6
98	2 $\frac{1}{2}$ miles southwest	--	Sandy ridge	Old	20	20	5.0
99	do.	C. L. Britton	Flat	Old	35	36	1.5
100	1 $\frac{1}{4}$ miles west	Joe T. Ferry	do.	1900	50	--	1.0
101	1 $\frac{3}{4}$ miles west	D. A. Tessier	Sandy ridge	--	36	36	1.5

No.	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Remarks
	Depth below measuring point (ft.)	Date of measurement			
76	20.85	July 31, 1940	B,H	D,S	Rock casing to bottom. Reported weak supply in drought.
77	12.78	do.	C,W	D,S	Brick casing to bottom. Reported weak supply in drought.
78	--	--	--	--	Drilled oil test. Reported strong supply of water from sand at 35 to 80 feet.
79	23.91	July 31, 1940	B,H	D,S	Rock casing to bottom. Reported strong supply from sand.
80	19.47	Feb. 15, 1940	C,W	S	Rock casing.
81	31.17	do.	C,W	S	Do.
82	27.87	do.	C,W	N	Do.
83	--	--	None	N	Drilled oil test. See log.
84	5.98	Feb. 6, 1940	None	D,S	Rock casing. Reported supply weakens when dirt tank 200 feet southwest goes dry.
85	5.85	July 31, 1940	C,W	D,S	Brick casing. Reported strong supply.
86	--	--	--	S	Reported first known failure occurred in June, 1940.
87	25	<u>e/</u>	C,H	D,S	Rock casing.
88	26.90	Jan. 24, 1940	None	D,S	Rock casing. Reported unable to bail dry.
89	--	--	None	N	Drilled oil test. See log.
90	9.02	July 31, 1940	C,W	D,S	Rock casing. Used to supplement cistern.
91	29.91	Jan. 24, 1940	None	S	Brick casing.
92	--	--	Cf,E, 3	N	Reported pumps dry in 12 hours.
93	16.42	Sept. 21, 1939	Cf,E, 2	I	Measured drawdown, 0.7 foot pumping 160 gallons a minute for five minutes. Reported sand at 16 to 25
94	20	<u>e/</u>	Cf,E, --	P	Brick casing. Reported fails in 1½ hours pumping 300 gallons a minute from sand. feet.
95	27.53	Feb. 8, 1940	C,W	N	Brick casing.
96	5.57	Feb. 6, 1940	C,W	S	Do.
97	15.53	Apr. 30, 1940	None	S	Wood curb.
98	21.00	Aug. 1, 1940	B,H	D,S	Brick casing top eight feet.
99	23.96	Feb. 8, 1940	None	N	Brick casing.
100	20.80	Sept. 21, 1939	C,W	D,S,I	Irrigates small garden. Supplies water for several families.
101	27.70	do.	C,W	D,S,I	Brick and concrete casing. Irrigates small garden.

Records of wells and springs in Callahan County--Continued

No.	Distance from Clyde	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
102	2 miles west	J. O. Barker	Flat	--	37	--	2.5
103	2 $\frac{1}{2}$ miles west	J. Crowley	Creek bank	Old	8	18	2.5
3/104	do.	do.	Side of ridge	Old	54	--	--
105	2 $\frac{1}{2}$ miles west	do.	Gentle slope	Old	20	30	--
106	2 $\frac{1}{2}$ miles west	Gulf Oil Corp.	Flat	1940	--	--	--
107	3 miles west	J. M. Merrick	do.	Old	28	50	0.2
108	3 $\frac{1}{2}$ miles west	Jim Barker	Gentle slope	1936	9	--	0.0
109	4 miles west	W. E. McCollum	Creek bottoms	1937	30	36	2.0
110	do.	do.	do.	1937+	17	6	--
3/111	5 $\frac{1}{2}$ miles west	Gulf Oil Corp.	Ridgetop	--	400+	--	--
112	4 miles west	C. T. Armstrong	Creek bed	Old	12	--	--
4/113	do.	do.	do.	-- Spring	--	--	--
114	4 $\frac{1}{2}$ miles west	C. Flemming	Gentle slope	Old	20	30	2.5
115	5 $\frac{1}{2}$ miles west	Sam D. Spain	Edge of draw	1920+	18	24	2.0
116	5 miles west	Mrs. -- Greer	Hillside	1908	21	30	2.0
117	4 miles southwest	J. D. Hamilton	Sandy ridge	Old	19	24	1.6
118	5 miles southwest	B. Kelton	In draw	1940	12	48	2.5
119	3 $\frac{1}{2}$ miles southwest	R. E. Bourland	Gentle slope	1926	34	36	2.5
120	5 $\frac{1}{2}$ miles southwest	E. P. Miller	do.	Old	25	36	2.4
121	6 miles southwest	W. B. Ferguson	--	Old	35	36	0.0
122	8 miles southwest	W. P. Franklin	Creek bed	1915	7	72	0.0
123	9 $\frac{1}{2}$ miles southwest	Frank E. Smith	Gentle slope	Old	130	6	0.5
124	7 miles southwest	G. Harris	do.	1952	19	36	1.3
125	6 miles southwest	L. M. Farmer, Jr.	In draw	Old	14	36	1.7
126	5 $\frac{1}{2}$ miles south	C. M. Johnston	Gentle slope	Old	27	36	3.0

No.	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Remarks
	Depth below measuring point (ft.)	Date of measurement			
102	29.60	Sept. 21, 1939	C,W	D,S,I	Brick curb. Reported strong supply which has not failed in seven years. Irrigates small garden.
103	8.14	July 31, 1940	B	D,S	Brick casing to bottom. Draws dry in few minutes; fills again in 30 minutes.
104	--	--	None	N	Drilled well. Reported rock from top to bottom and no water.
105	--	--	C,G	D,S	Brick casing to bottom. Reported strong supply from sand.
106	12+	e/	C,G, 60	Ind	Two wells 10 feet apart. East well 18 feet deep, 10 feet in diameter, wood casing to bottom. West well 17 feet deep, 8 feet by 40 feet diameter brick casing. Reported combined yield 35 gallons a minute from sand.
107	16.09	Aug. 1, 1940	B,H	D,S	Rock casing top seven feet. Reported strong supply which never fails.
108	8+	Feb. 12, 1940	None	S	No casing. Well 10 feet by 20 feet diameter. Reported seep at four feet. Reported never fails.
109	17.00	Aug. 1, 1940	C,W	D,S	Rock casing top 18 feet. Drilled well 16 to 30 feet. Reported weak supply from gravel and clay between
110	--	--	C,H	S	Drilled well, galvanized casing to bottom. Reported weak supply from layers of limestone at 15 feet.
111	--	--	None	N	Drilled well. seep between layers of limestone. No water.
112	11	e/	C,W	N	Rock casing top seven feet. Reported weak supply of water in drought. Formerly a spring here.
113	--	--	None	S	Reported first known failure occurred in July, 1940.
114	17.94	Feb. 22, 1940	None	D,S	Brick casing. Reported weak supply in drought.
115	16.35	Aug. 1, 1940	B,C,H	D,S	Brick casing top ten feet. Reported weak supply in drought.
116	21.98	do.	B,H	D,S	Brick and rock casing to bottom. Reported weak supply; formerly strong well.
117	17.54	do.	B,H	D,S	Brick casing to bottom. Reported strong supply from sand.
118	8.31	Feb. 21, 1940	None	S	Rock casing.
119	30.1	Mar. 2, 1940	C,W	D	Brick casing. Reported weak supply.
120	23.55	Feb. 21, 1940	C,W	D,S	Do.
121	31.01	do.	C,W	D,S	Do.
122	6	--	B,H	D,S	Rock casing top six feet. Reported weak supply from clay between layers of rock; fails in drought.
123	37.91	Aug. 1, 1940	C,H	D,S	Drilled well, galvanized iron casing.
124	17.52	Feb. 21, 1940	C,W	D,S	Concrete curb. Reported weak supply.
125	9.34	do.	C,W	D,S	Brick casing.
126	24.00	do.	C,W	D,S	Concrete curb. Reported weak supply.

Records of wells and springs in Callahan County--Continued

No.	Distance from Clyde	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
127	3 1/2 miles southeast	W. S. Bryant	Flat	1935	51	30	3.8
128	4 1/2 miles southeast	I. N. Jackson	In draw	Old	11	120	2.5
129	4 1/2 miles southeast	W. H. Bryant	do.	Old	14	36	1.8
130	5 miles southeast	V. N. Heard Est.	Flat	Old	25	42	1.8
131	6 miles southeast	P. Terrell	do.	Old	37	48	5.0
132	6 3/4 miles east	Joe Glover	Creek bed	--	36	--	0.2
133	9 1/2 miles southeast	Claude Flores	Side of ridge	1876	66	30	3.3

No.	Distance from Putnam	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well	Height of measuring point above ground (ft.) a/
d/201	6 1/2 miles northwest	E. L. Finley	--	1935	413	6	--
d/202	5 1/2 miles north	Cora Grisham	--	1931	449	5	--
203	8 miles north	--	Gentle slope	--	Tank	--	--
204	10 1/2 miles north	Mrs. George Elliot	Flat	Old	31	36	1.3
d/205	8 1/4 miles north	Eugene Green	Ridgetop	1932+	289	--	--
206	5 miles northeast	--	Rolling	--	Tank	--	--
207	3 1/2 miles east	Mrs. W. N. Moore	Creek bottoms	1925+	30	8	2.0
d/208	3/4 mile east	--	In valley	Old	14	36	0.0
d/209	6 1/2 miles west	--	Ridgetop	Old	27	20	1.8
d/210	8 1/2 miles west	Tom Lindham	Gentle slope	1938	520	--	--
211	10 miles southwest	F. L. Seale	--	Old	37	60	--

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Remarks
	Depth below measuring point (ft.)	Date of measurement			
127	21.80	Feb. 7, 1940	None	D,S	Brick casing. Reported never fails.
128	7.63	Feb. 14, 1940	None	D,S	Rock casing. Supplies water for several families.
129	12.34	Feb. 7, 1940	None	N	Rock casing.
130	14.56	Feb. 14, 1940	None	N	Do.
131	32.13	Feb. 7, 1940	None	D,S	Rock casing. Reported never fails. Well below dam in draw.
132	3.98	Sept. 5, 1940	C,G, 2	D,S	Concrete casing. Reported strong and dependable supply.
133	37.67	do.	B,H	D,S	Rock casing to bottom. Reported strong and dependable supply.

No.	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Remarks
	Depth below measuring point (ft.)	Date of measurement			
201	--	--	None	N	Drilled oil test. See log.
202	--	--	None	N	Do.
203	--	Mar. 13, 1940	--	D,S	Earth reservoir. Earth dam: 150 feet long; 10 feet high. Maximum area one acre.
204	24.11	Aug. 2, 1940	C,W	D,S,I	Brick casing. Reported strong supply; never fails. Irrigates small garden.
205	--	do.	None	N	Drilled oil test. Reported salty water and gas flowed from sand at 289 feet.
206	--	Mar. 13, 1940	--	S	Earth reservoir. Earth dam: 100 feet long; 12 feet high. Maximum area one-half acre.
207	17.27	Aug. 2, 1940	C,H	D,S	Drilled oil test; plugged back to 30 feet. Galvanized casing. Reported strong supply; never fails.
208	0.0	<u>e/</u>	None	D,S	Rock casing to bottom. Reported strong supply. Used only in drought.
209	17.92	Sept. 5, 1940	B,H	D,S	Rock casing.
210	--	--	None	N	Drilled oil test. See log.
211	--	--	C,W	D,S	Rock casing to bottom. Reported never fails.

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

Records of wells and springs in Callahan County--Continued

No.	Distance from Cross Plains	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
301	13 miles northwest	T. S. Hudson	Gentle slope	1937	56	36	3.1
d/302	12 $\frac{3}{4}$ miles northwest	W. M. Frico	Flat	Old	23	36	1.9
303	15 $\frac{1}{2}$ miles northwest	--	Hilltop	Old	91	36	1.5
304	15 $\frac{1}{2}$ miles northwest	--	Creek bottoms	Old	16	36	2.0
305	13 $\frac{1}{2}$ miles northwest	--	Ridgetop	Old	17	36	2.0
306	15 miles northwest	Fred Hanson	Flat	Old	22	30	2.1
307	11 $\frac{3}{4}$ miles northwest	Callahan County	Creek bank	-- Spring	--	--	--
308	11 $\frac{3}{4}$ miles northwest	do.	do.	-- Spring	--	--	--
309	9 $\frac{3}{4}$ miles north	Mrs. -- Woody	Hillside	Old	114	6	--
310	10 miles north	W. T. McClure	Gentle slope	Old	18	36	2.0
311	8 $\frac{1}{2}$ miles north	Callahan County School	do.	--	--	--	--
d/312	7 $\frac{1}{2}$ miles north	C. M. Wilcoxsen	do.	1938	42	11	0.3
313	8 $\frac{1}{4}$ miles north	-- Mercer	do.	Old	30	20	2.0
u/314	9 $\frac{1}{2}$ miles north	--	Flat	--	12	60	0.0
315	do.	S. A. Black	Gentle slope	1935	16	30	2.0
316	12 $\frac{1}{2}$ miles north	E. R. Battle	Flat	Old	22	30	3.6
317	12 miles north	E. M. Ray	do.	1937	23	42	2.8
318	8 $\frac{1}{2}$ miles north	--	Gentle slope	Old	--	--	--
319	7 $\frac{1}{2}$ miles north	--	Hillside	--	--	8	--
d/320	3 $\frac{3}{4}$ miles north	Callahan County School	Sandy ridge	--	110	5 $\frac{1}{2}$	3.0
321	4 $\frac{1}{4}$ miles north	Crockett-Powers Est.	do.	Old	75 $\frac{1}{2}$	6	--
322	5 $\frac{1}{4}$ miles north	B. H. Freeland	Ridgetop	Old	130	--	--
d/323	4 miles northwest	--	In valley	Old	11	36	2.5
324	5 $\frac{3}{4}$ miles northwest	T. E. Mitchell	Flat	Old	20	30	--
325	7 miles northwest	B. Randall	Gentle slope	1935	98	4 $\frac{1}{2}$	1.8

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

No.	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Remarks
	Depth below measuring point (ft.)	Date of measurement			
301	35.73	Mar. 21, 1940	C,W	S	Rock casing. Reported strong supply.
302	22.93	do.	C,W	D,S	Do.
303	77.60	Sept. 5, 1940	C,W	D,S	Rock casing.
304	11.71	do.	B,H	D,S	Do.
305	11.25	do.	B,H	S	Rock casing top nine feet.
306	23.29	Mar. 21, 1940	None	N	Rock casing. Reported weak supply.
307	Flows	--	None	S	Estimated flow, two gallons a minute from sand.
308	Flows	--	None	S	Estimated flow, one gallon a minute from sand. Reported never fails.
309	--	--	C,W	D,S	Drilled well. Galvanized casing. Reported strong supply which never fails.
310	12.77	Aug. 8, 1940	C,H,W	D,S	Rock casing to bottom. Reported strong supply which never fails.
311	--	--	C,H	P	Drilled well.
312	37.29	Mar. 19, 1940	B,H	D	Bored well. No casing used.
313	28.01	Aug. 2, 1940	B,C,H,W	D,S	Brick casing to bottom. Reported strong supply which never fails.
314	11.5	do.	None	S	No casing used.
315	12.45	Mar. 19, 1940	B,H	D,S	Rock casing. Reported strong supply. Supplies water for several families.
316	18.91	do.	C,W	D,S	Brick casing to bottom.
317	23.50	do.	None	D,S	Wood curb.
318	--	--	C,W	D,S	Drilled well.
319	--	--	C,W	S	Drilled well. Steel casing. Reported strong supply which never fails.
320	98.41	Aug. 2, 1940	None	P	Drilled well. Galvanized casing.
321	--	--	C,W	D,S	Drilled well. Galvanized casing top three feet.
322	--	--	C,W	D,S	Drilled well. Reported strong supply which never fails.
323	9.22	Aug. 2, 1940	None	D,S	Wood casing.
324	18.48	Mar. 19, 1940	None	D,S	Rock casing. Reported adequate supply which has not failed in 20 years.
325	83.79	do.	B,H	D,S	Bored well. Galvanized casing. Reported strong supply.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Callahan County--Continued

No.	Distance from Cross Plains	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
326	7 $\frac{3}{4}$ miles northwest	A. E. Ellis	Hilltop	1905	84	5	5.0
327	9 miles northwest	W. L. Goble	Hillside	1939	119	5	0.5
328	7 $\frac{1}{2}$ miles northwest	L. N. Coffey Est.	do.	1907	60	5	--
329	6 miles northwest	Burchfield Est.	do.	Old	60	42	5.0
330	4 $\frac{1}{4}$ miles northwest	Odell Est.	do.	Old	72	42	2.3
331	3 $\frac{1}{2}$ miles west	Sawyer Est.	Creek bed	-- Spring		--	--
d/332	2 $\frac{1}{4}$ miles north	Tom Bruce	Hilltop	1930	60	5	1.0
d/333	2 $\frac{1}{2}$ miles northeast	W. R. Irwin	--	1926	3,439	15 $\frac{1}{2}$	--
d/334	2 miles northeast	E. Vestel	Gentle slope	Old	41	36	2.7
335	1 $\frac{1}{4}$ miles north	do.	Flat	1940	23	48	0.5
336	1 mile northeast	City of Cross Plains	do.	1940	47	8	--
d/337	do.	do.	Sandy slope	1926	47	--	5.0
338	do.	do.	do.	1926	50	--	--
339	do.	do.	do.	1926	49	--	--
340	do.	do.	do.	1938	44	60	1.0
341	do.	do.	do.	1926 ⁺	48	8	--
342	do.	do.	do.	1940	48	8	--
343	1 $\frac{1}{4}$ miles east	G. D. Westerman	Flat	Old	33	36	2.7
344	$\frac{3}{4}$ mile east	Mrs. P. T. Jones	Hilltop	Old	56	30	2.6
345	$\frac{1}{2}$ mile east	A. Payne	do.	Old	55	24	--
346	do.	H. M. Gary	Gentle slope	1940	61	6	0.6

No.	Water level		Pump and power	Use of water	Remarks
	Depth below measuring point (ft.)	Date of measurement			
326	63.78	Apr. 4, 1940	C,W	D,S	Drilled well. Galvanized casing to bottom. Reported never fails.
327	87.72	do.	C,G, 2	D,S	Drilled well.
328	50	e/	C,W	D,S	Drilled well. Galvanized casing to bottom. Reported strong supply of water from sand which never fails.
329	61.76	Sept. 5, 1940	B,H	D,S	Brick casing top four feet. Has supplied water for 100 head of stock. Reported supply never fails.
330	71.73	Aug. 2, 1940	B,H	D,S	Wood curb. Reported strong supply which never fails.
331	Flows	Sept. 4, 1940	None	S	Estimated flow about 4 gallons a minute from sandstone. Reported never fails.
332	28.90	Apr. 4, 1940	None	N	Drilled well. Steel casing. Supplied water for oil test.
333	--	--	None	N	Drilled oil test. See log.
334	42.91	Apr. 4, 1940	None	N	Wood curb.
335	17.13	do.	C,H	D,S	
336	29	e/	C,E, 5	N	Drilled well. Steel casing; 27 feet of 8-inch at top; 20 feet of 10-inch perforated at bottom. Reported yield, 16 gallons a minute from sand and gravel.
337	34.30	Sept. 4, 1940	None	N	Dug and drilled wells 4 feet apart connected by 4-inch tunnel at bottom. Drilled well has 47 feet of 8-inch steel casing, perforated below water. 35 feet of 42-inch brick casing at top in dug well. Reported combined yield was 10 gallons a minute.
338	--	--	C,E, 5	P	Dug and drilled wells four feet apart connected by 4-inch tunnel at bottom. Drilled well has 50 feet of 8-inch steel casing perforated below water. 35 feet of 60-inch square brick casing at top in dug well. Reported combined yield 27 gallons a minute.
339	--	--	C,E, 5	P	Dug and drilled wells 10 feet apart connected by 4-inch tunnel at bottom. Drilled well has 49 feet of 8-inch steel casing perforated below water. 48-inch brick casing in dug well. Reported combined yield 19 gallons a minute.
340	31.90	Sept. 4, 1940	C,E, 5	P	Brick casing top 39 feet. Reported yield, 11 gallons a minute from sand and gravel.
341	--	--	C,E, 5	P	Drilled well. Steel casing to bottom, perforated below water. Reported yield, 22 gallons a minute.
342	30	e/	C,E, 5	P	Drilled well. Steel casing; 28 feet of 8-inch at top; 20 feet of 10-inch perforated at bottom. Reported yield, 18 gallons a minute from sand and gravel.
343	25.02	Apr. 4, 1940	C,W	D,S	Brick casing. Reported supply never fails.
344	41.28	do.	None	D,S	Brick casing. Reported strong supply.
345	--	--	C,W	D,S	Do.
346	44.59	Apr. 4, 1940	None	D,S	Drilled well, galvanized iron casing to bottom.

Records of wells and springs in Callahan County--Continued

No.	Distance from Cross Plains	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
347	In Cross Plains	City of Cross Plains	Flat	1918	25	36	1.3
348	$\frac{3}{4}$ mile southwest	C. Neeb	Creek bottoms	1925	23	4	0.3
349	$1\frac{1}{2}$ miles south	Mrs. -- Buttler	do.	Old	17	36	0.0
350	$1\frac{1}{2}$ miles south	Ed. Long	Gentle slope	1904	19	60	0.2
351	$2\frac{1}{2}$ miles south	C. M. Garrett	do.	1890 ⁺	60	6	0.3
d/352	$2\frac{1}{2}$ miles southwest	M. Swofford, et al	--	1925	412	--	--
353	2 miles west	--	--	Old	15	20	1.8
354	$2\frac{1}{2}$ miles west	Harry Young	Flat	Old	12	30	2.9
355	$2\frac{1}{2}$ miles west	do.	Sandy slope	Old	21	48	2.5
356	do.	do.	do.	1934 ⁺	28 ⁺	42	1.5
d/357	$3\frac{1}{2}$ miles west	--	Creek bottoms	Old	13	24	2.1
d/358	$4\frac{1}{2}$ miles west	--	do.	Old	12	36	1.4
359	$4\frac{3}{4}$ miles west	Fred Long	Ridgetop	--	14	20	1.1
360	$5\frac{1}{2}$ miles southwest	O. W. Grey	Creek bottoms	Old	26	42	1.8
361	$8\frac{1}{4}$ miles west	--	Gentle slope	--	Tank	--	--
362	$5\frac{1}{4}$ miles west	Neal Dillard	Sandy slope	1938 ⁺	21	42	2.5
363	$6\frac{1}{2}$ miles west	J. H. Warren	Gentle slope	Old	12	48	5.0
364	8 miles west	A. L. Price	Side of draw	Old	11	48	0.0
d/365	11 miles west	H. F. Phillips	Gentle slope	1913 ⁺	212	5	0.2
366	do.	do.	do.	1920 ⁺	16	30	3.0
367	$11\frac{1}{2}$ miles west	Jerry McDonald	Hillside	1917	12	30	1.0

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

No.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
347	15.84	Sept. 4, 1940	Cf,E, 7½	P	Brick casing to bottom. Seven wells connected with reported combined yield of 90 gallons a minute for 3 hours with 10 feet drawdown; will fill again in 3 hours.
348	12.86	Apr. 4, 1940	None	N	Drilled well, steel casing to bottom.
349	14.00	do.	None	N	Brick casing.
350	10.27	do.	C,W	D,S	Concrete curb. Reported weak supply.
351	24.39	Sept. 4, 1940	C,W	D,S	Drilled well, steel casing. Reported strong supply.
352	--	--	None	N	Drilled oil test. See log.
353	12.73	Aug. 2, 1940	B,H	D,S	Rock casing.
354	11.58	Sept. 4, 1940	B,H	D,S	Rock casing to bottom. Reported supply never fails.
355	21.74	do.	C,W	I	Brick casing top 15 feet. Reported strong supply which never fails from sand and gravel between layers
356	22.70	do.	C,H	I,S	Brick casing top 12 feet. of sandstone 15 to 25 feet. Reported strong supply which never fails.
357	10.74	do.	B,H	D,S	Brick casing top 15 feet. Reported supply never fails.
358	6.05	do.	C,W	D,S	Concrete casing. Formerly used by gin.
359	11.47	do.	B,H	D,S	Brick and rock casing. Reported supply fails in drought.
360	25.29	do.	B,H	S	Rock casing to bottom. Reported supply never fails.
361	--	--	--	D,S	Earth reservoir formed by earth dam: 300 feet long; 10 feet high. Windmill pumps water to house.
362	21.54	Sept. 3, 1940	B,C, H,W	D,S	Galvanized iron casing from 15 to 21 feet. Reported supply never fails.
363	12.66	do.	B,H	S	Wood curb. Reported supply fails in drought.
364	2.93	Apr. 16, 1940	None	D,S	Rock casing.
365	130.73	Sept. 5, 1940	None	N	Drilled well. Galvanized iron casing to bottom. Reported strong supply.
366	14.54	do.	B,H	D,S	Brick casing. Reported strong supply which never fails.
367	4.89	do.	B,C, H,W	D,S	Brick casing. Reported strong supply never fails; supplies water to several families. Will water 50 head of stock in drought.

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

b/ No water sample collected for analysis.

a/ Water level reported.

Records of wells and springs in Callahan County--Continued

No.	Distance from Oplin	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
401	12 miles north	--	Gentle slope	Old	8	36	3.2
402	11 $\frac{1}{2}$ miles north	W. E. Carter	Hillside	-- Spring		--	--
d/403	do.	do.	do.	1912	110	5	0.5
d/404	do.	C. E. Anderson	do.	1940	20	42	0.0
405	do.	do.	do.	Old	12	30	0.0
406	9 $\frac{3}{4}$ miles north	A. M. Joyner	Gentle slope	Old	30	5	0.8
407	9 miles north	--	Rolling	Old	45	30	3.3
408	8 $\frac{3}{4}$ miles north	--	Flat	Old	20	48	2.0
409	6 $\frac{1}{2}$ miles northwest	J. R. Cutbirth	Rolling	1900	23	30	2.3
410	6 $\frac{1}{2}$ miles north	James Ross	Creek bed	Old	8	36	2.0
d/411	4 $\frac{1}{4}$ miles north	G. Loven	--	1937	2,016	10	--
412	8 $\frac{1}{2}$ miles north	--	Rolling	Old	19	36	1.5
413	9 $\frac{1}{4}$ miles north	--	--	1921	13	48	2.0
414	9 miles north	Community Park	Flat	Old	13	36	2.0
415	11 $\frac{1}{2}$ miles north	--	In draw	--	18	36	3.0
416	11 $\frac{3}{4}$ miles north	--	Rolling	--	Tank	--	--
417	12 $\frac{3}{4}$ miles northeast	Owen Rouse	Ridgetop	Old	23	30	1.4
418	12 $\frac{1}{4}$ miles northeast	--	Gentle slope	Old	7	20	2.0
419	12 $\frac{3}{4}$ miles northeast	--	Side of ridge	Old	13	18	3.4
d/420	9 $\frac{1}{2}$ miles east	J. O. Hall	--	1928	3,870	15 $\frac{1}{2}$	--
421	7 miles southeast	W. C. Baines	Creek bank	1917+	27	30	1.2
422	6 $\frac{3}{4}$ miles east	do.	Creek bed	1917+	14	21	2.5
d/423	4 $\frac{1}{2}$ miles east	W. W. Johnson	--	1938	4,336	7	--
424	3 miles east	Ed. Kirkendall	Ridgetop	1940	19	60	0.2
425	2 $\frac{1}{4}$ miles east	Charles Allen	do.	1920+	21	30	2.6

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

No.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
401	8.53	May 2, 1940	None	D,S	Rock casing. Well between two reservoirs; fails when reservoirs go dry.
402	--	Flows	None	D,S	Reported supply never fails.
403	50.26	Aug. 1, 1940	None	D,S	Drilled well. Galvanized iron casing top 70 feet.
404	13.29	do.	None	D,S	Concrete casing bottom 10 feet. Reported weak supply; water from blue clay between layers of rock.
405	6.88	do.	B,H	D,S	Rock casing to bottom. Reported strong supply in wet weather and supplies family in drought.
406	70.86	May 2, 1940	C,W	D,S	Bored well. No casing. Reported supply never fails.
407	47.42	do.	None	N	Rock casing.
408	21.13	Apr. 30, 1940	None	N	Wood curb.
409	20.98	do.	C,W	D,S	Rock casing. Reported strong supply.
410	6.15	Sept. 6, 1940	B,H	D,S	Rock casing to bottom. Reported weak supply which fails in drought.
411	--	--	None	N	Drilled oil test. See log.
412	14.48	Apr. 30, 1940	None	N	Concrete casing.
413	8.52	do.	None	D,S	Rock casing. Reported supply never fails.
414	6.48	May 2, 1940	C,H	D	Rock casing.
415	15.40	Mar. 2, 1940	None	N	Brick casing.
416	--	--	--	D,S	Earth reservoir. Earth dam: 50 feet long; 5 feet high. Maximum area one acre.
417	11.79	Sept. 5, 1940	B,H	D,S	Brick and rock casing top to bottom. Reported strong supply which never fails.
418	4.38	do.	B,H	D,S	Rock casing.
419	14.71	do.	B,H	D,S	Do.
420	--	--	None	N	Drilled oil test. See log.
421	15.47	Sept. 6, 1940	C,W	D,S	Rock casing to bottom. Reported never fails. Fills to top of ground in wet weather.
422	6.56	do.	B,H	D,S	Rock casing to bottom. Reported supply never fails.
423	--	--	None	N	Drilled oil test. See log.
424	17.15	Sept. 6, 1940	C,W	D,S	No casing, wood cover.
425	21.73	do.	B,C, H,G,2	D,S	Brick casing to bottom. Reported yield, three barrels a day.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Callahan County--Continued

No.	Distance from Cplin	Owner	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
426	1 $\frac{3}{4}$ miles east	--	Flat	1920	42	36	2.3
427	1 $\frac{1}{4}$ miles southeast	--	do.	1958	14	36	0.0
428	1 mile east	--	Gentle slope	--	18	96	0.0
429	2 $\frac{1}{2}$ miles northeast	--	do.	--	Tank	--	--
430	2 miles northeast	J. O. Williams	Ridgetop	Old	37	36	5.0
431	4 $\frac{1}{4}$ miles northwest	L. V. Taylor	Rolling	1940	55	36	2.0
432	1 $\frac{1}{2}$ mile west	--	Gentle slope	Old	24	24	2.4
433	2 miles southwest	Callahan County	Sandy slope	Old	12	36	0.0
434	3 $\frac{1}{4}$ miles southwest	-- Bryson	Creek bed	1924	15	24	1.3
435	3 $\frac{3}{4}$ miles west	Albert Betcher	Side of ridge	1925+	22	36	1.3
436	4 $\frac{1}{2}$ miles west	Mrs. T. J. Floyd	Gentle slope	Old	58	5	2.0
437	3 $\frac{1}{4}$ miles northwest	--	In draw	Old	32	42	1.8
438	5 $\frac{3}{4}$ miles northwest	W. O. Marsh	Near draw	Old	24	48	5.4

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

b/ B, bucket; C, cylinder; Cf, centrifugal; T, turbine; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

No.	Water level		Pump and power b/	Use of water c/	Remarks
	Depth below measuring point (ft.)	Date of measurement			
426	38.32	Apr. 30, 1940	C,W	D,S	Concrete curb. Reported adequate supply.
427	7.92	do.	None	N	Rock casing.
428	14.01	Sept. 6, 1940	B,H	D,S	No casing.
429	--	--	None	N	Earth reservoir. Earth dam: 25 feet long; 4 feet high. Maximum area one acre.
430	34.34	Sept. 6, 1940	B,C, H,W	D,S	Rock casing; top four feet. Reported strong supply which never fails.
431	29.97	Apr. 30, 1940	C,W	D,S	Brick casing top 35 feet. Reported strong supply.
432	25.48	Sept. 6, 1940	B,C, H,W	D,S	Rock casing to bottom.
433	7.80	do.	B,H	D,S	Rock casing to bottom. Reported strong supply.
434	12.31	do.	B,H	D,S	Brick casing to bottom. Reported strong supply from sand which never fails.
435	17.87	do.	B,H	D,S	Rock casing top six feet. Reported strong supply from sand which never fails.
436	56.13	do.	C,W	D,S	Drilled well. Galvanized iron casing. Reported strong supply which never fails. Well in east edge of Taylor
437	18.62	Apr. 30, 1940	C,W	S	Rock casing. Reported adequate supply. County.
438	24.61	do.	None	D,S	Wood curb. Reported adequate supply.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Table of Drillers' Logs, Callahan County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 61</u>		
H. Grisham tract, Humble Oil and Refining Company drillers, 12 miles north west of Baird.		
Surface soil - - -	10	10
Gray lime - - -	20	30
Blue shale - - -	5	35
Gray lime- - - -	20	55
Dark-colored shale - -	15	70
Lime - - - - -	25	95
Blue shale - - - -	5	100
Gray lime - - - -	30	130
Blue shale - - - -	5	135
Gray lime- - - -	15	150
Shale- - - - -	5	155
Lime - - - - -	50	205
Blue shale - - - -	30	235
Gray lime- - - -	10	245
Dark-colored shale -	5	250
Gray lime - - - -	20	270
Blue shale - - - -	5	275
Gray lime- - - -	20	305
Dark-colored shale -	15	320
Gray lime- - - -	5	325
White slate - - - -	15	340
Gray lime- - - -	35	375
Blue shale - - - -	5	380
Gray lime- - - -	90	470
White shale and shells-	25	495
Gray shale - - - -	15	510
Gray lime- - - -	40	550
Gray shale - - - -	10	560
Brown shale - - - -	10	570
Light-colored shale -	5	575
Sandy gray lime - - -	55	630
Gray shale - - - -	40	670
Gray lime- - - -	5	675
Sand and water - - -	20	695
Gray lime - - - -	125	820
Shale and shells - -	35	855
Blue shale - - - -	15	870
Gray lime - - - -	30	900
Blue shale- - - -	45	945
Gray lime- - - -	10	955
Shale- - - - -	35	990
White shale - - - -	15	1005
Gray lime- - - -	45	1050
Dark-colored shale -	15	1065
White shale - - - -	20	1085
Gray lime- - - -	25	1110
White shale - - - -	5	1115
Gray lime- - - -	10	1125
White shale - - - -	35	1160

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 61 -Continued</u>		
Gray lime - - - -	5	1165
White shale - - - -	10	1175
White lime - - - -	35	1210
White shale- - - -	15	1225
White lime - - - -	10	1235
White shale- - - -	5	1240
White lime - - - -	50	1290
Light-colored shale -	70	1360
White lime - - - -	5	1365
Red rock- - - - -	15	1380
White lime - - - -	20	1400
Shale- - - - -	60	1460
White lime - - - -	10	1470
Red rock- - - - -	10	1480
White lime - - - -	20	1500
White shale- - - -	80	1580
White lime- - - -	5	1585
Sandy lime- - - -	20	1605
Gray shale- - - -	5	1610
TOTAL DEPTH		2175
CASING RECORD: 1,119 feet of 12 $\frac{1}{2}$ -inch, 1,241 feet of 10-inch, 1,570 feet of 8 $\frac{1}{2}$ -inch, and 2,149 feet of 6-5/8-inch casing.		

Driller's log of well 62

H. Grisham tract, S. G. Hodges driller, 12 miles west of Baird.		
Surface soil - - -	5	5
Lime and broken shale -	30	35
Lime- - - - -	50	85
Blue shale - - - -	4	89
Lime- - - - -	16	105
Blue shale - - - -	5	110
Lime - - - - -	25	135
Lime and broken shale -	30	165
Blue shale and lime shells - - - - -	50	215
Lime and broken shale -	25	240
Lime - - - - -	25	265
Blue shale- - - -	5	270
Lime - - - - -	10	280
Blue shale- - - -	5	285
Lime - - - - -	10	295
Broken lime - - - -	50	345
Broken blue lime - - -	45	390
Lime - - - - -	70	460
Gray lime - - - -	5	465
Broken blue lime - - -	35	500
Blue lime - - - -	5	505
(Continued on next page.)		

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 62 -Continued</u>		
Lime - - - - -	30	535
Shale- - - - -	10	545
Blue shale and lime shells - - - - -	10	555
Brown shale - - - - -	5	560
Blue shale - - - - -	5	565
Lime - - - - -	65	630
Shale- - - - -	12	642
Broken lime and shale-	18	660
Lime - - - - -	38	698
Blue shale - - - - -	2	700
Lime - - - - -	9	709
Lime and shale - - - - -	21	730
Lime - - - - -	25	755
Broken lime and shale-	20	775
Broken lime - - - - -	40	815
Lime - - - - -	23	838
Blue shale - - - - -	12	850
Lime and shale - - - - -	85	935
Broken lime - - - - -	25	960
Lime and shale - - - - -	10	970
Shale, water - - - - -	27	997
Lime - - - - -	48	1045
Blue shale and shells-	15	1060
Lime - - - - -	55	1115
Blue shale - - - - -	25	1140
Lime - - - - -	15	1155
Lime shells - - - - -	5	1160
Blue shale - - - - -	4	1164
Lime, water - - - - -	36	1200
Blue shale - - - - -	19	1219
Lime - - - - -	17	1236
Hard lime- - - - -	25	1260
Lime - - - - -	8	1268
Blue shale - - - - -	7	1275
Lime - - - - -	25	1300
Shale and shells - - - - -	55	1355
Blue shale and lime shells - - - - -	12	1367
Red shale- - - - -	8	1375
Lime - - - - -	27	1402
Shale and lime shells-	13	1415
Red beds - - - - -	8	1423
Lime - - - - -	4	1427
Shale- - - - -	8	1435
Lime and broken shale-	15	1450
Lime - - - - -	15	1465
Red beds - - - - -	10	1475
Lime - - - - -	20	1495
Blue shale - - - - -	10	1505
Red rock - - - - -	5	1510
Lime shells - - - - -	4	1514
Red rock - - - - -	16	1530

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 62 -Continued</u>		
Sandy shale - - - - -	5	1535
Lime - - - - -	15	1550
TOTAL DEPTH		2128
Casing RECORD: 200 feet of 10-inch, 1,255 feet of 8 $\frac{1}{2}$ -inch, and 1,654 feet of 6-5/8-inch casing.		

<u>Driller's log of well 63</u>		
1. 1. Jackson tract, Sam Henderson Driller, 9-3/4 miles northeast of Baird.		
Topsoil lime - - - - -	20	20
Grey lime- - - - -	60	80
Blue shale- - - - -	25	105
Brown shale - - - - -	20	125
Blue shale- - - - -	10	135
Brown shale - - - - -	30	165
Blue shale- - - - -	20	185
Brown shale - - - - -	18	203
Blue shale- - - - -	32	235
Lime - - - - -	20	255
Lime shells - - - - -	17	272
Brown shale - - - - -	5	277
Blue shale- - - - -	8	285
Brown shale- - - - -	5	290
Blue shale - - - - -	12	300
Lime shells- - - - -	10	310
Lime - - - - -	5	315
Blue shale - - - - -	5	320
Sand - - - - -	5	325
Sandy shale - - - - -	10	335
Blue shale- - - - -	30	365
Lime- - - - -	32	397
Blue shale- - - - -	6	403
Red shale - - - - -	2	405
Sandy lime- - - - -	7	412
Blue shale- - - - -	11	423
Lime - - - - -	2	425
Blue shale- - - - -	2	427
Lime - - - - -	11	438
Blue shale- - - - -	26	464
Lime - - - - -	6	470
Blue shale- - - - -	5	475
Sandy shale - - - - -	5	480
Red beds - - - - -	20	500
Blue shale- - - - -	5	505
Lime - - - - -	44	549
Blue shale- - - - -	9	558
Lime - - - - -	10	568
Blue shale- - - - -	42	610
Lime - - - - -	20	630
Sandy shale - - - - -	15	645
Red beds - - - - -	9	654

(Continued on next page.)

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 85 -Continued</u>		
Sand - - - - -	6	660
Lime - - - - -	7	667
Blue shale - - - -	21	688
Red beds - - - - -	3	696
Blue shale - - - - -	44	740
Lime - - - - -	20	760
Gray shale - - - - -	7	767
Lime - - - - -	6	773
Red beds - - - - -	12	785
Sandy shale - - - -	15	800
Red beds - - - - -	4	804
Gray shale - - - - -	4	808
Red beds - - - - -	3	811
Broken sand - - - - -	7	818
Lime - - - - -	3	821
Broken sand - - - - -	25	846
Sand (hole full of water) - - - - -	4	850
Water and sand - - - -	15	865
Blue shale - - - - -	2	867
Red beds - - - - -	2	869
Lime - - - - -	6	875
Red beds - - - - -	2	877
TOTAL DEPTH		879
CASING RECORD: 815 feet of 6-5/8-inch casing.		

Driller's log of well 89

E. Whindham tract, Burton Hartley agent,
4 1/2 miles northeast of Bird.

Lime - - - - -	12	12
Blue shale - - - - -	18	30
Lime - - - - -	25	55
Blue shale - - - - -	7	62
Lime - - - - -	30	92
Blue shale - - - - -	18	110
Red shale- - - - -	12	122
Blue shale - - - - -	65	187
Red shale- - - - -	43	230
Red and blue shale -	20	250
Lime - - - - -	15	265
Blue shale - - - - -	21	286
Red shale- - - - -	12	298
Dark-colored shale -	22	320
Shale and lime - - -	10	330
Lime - - - - -	45	375
Lime and shale - - -	29	404
Lime - - - - -	47	451
Shale- - - - -	5	456
Lime - - - - -	20	476
Lime and shale - - -	17	493

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 89 -Continued</u>		
Red shale - - - - -	5	498
Dry sand - - - - -	4	502
Blue shale - - - - -	13	515
Red shale - - - - -	25	540
Blue shale - - - - -	20	560
Lime - - - - -	4	564
Shale - - - - -	76	640
Broken sand - - - - -	17	657
Gray shale - - - - -	28	685
Lime - - - - -	30	715
Blue shale - - - - -	10	725
Broken sand - - - - -	13	738
Blue shale - - - - -	9	747
Sandy lime - - - - -	30	777
Lime - - - - -	6	783
Shale- - - - -	3	786
Lime - - - - -	10	796
shale and lime - - -	29	825
Blue shale - - - - -	13	838
Lime - - - - -	15	853
Shale- - - - -	12	865
Red shale- - - - -	10	875
Shale and lime - - -	10	885
Lime - - - - -	18	903
Sandy lime - - - - -	19	922
Blue shale- - - - -	6	928
Lime - - - - -	20	948
Dark-colored shale - -	4	952
Shale and lime- - - -	13	965
Shale- - - - -	15	980
Lime - - - - -	17	997
Shale- - - - -	16	1013
Red shale- - - - -	29	1042
Lime - - - - -	23	1065
Shale- - - - -	15	1078
Red shale- - - - -	7	1085
Gray shale- - - - -	10	1095
Lime and shale - - -	23	1118
Lime - - - - -	10	1128
Blue shale - - - - -	9	1137
Red shale- - - - -	13	1150
Lime - - - - -	8	1158
Red shale- - - - -	30	1188
Blue shale - - - - -	4	1192
Water sand - - - - -	10	1202
Red rock - - - - -	14	1216
Water sand - - - - -	14	1230
Sandy lime - - - - -	4	1234
shale- - - - -	8	1242
Lime - - - - -	10	1252
Red rock - - - - -	12	1264

(Continued on next page)

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 89 -Continued</u>		
Blue shale-	4	1268
Lime-	7	1275
Red rock -	5	1280
Gray shale-	4	1284
Lime -	5	1289
Gray shale-	23	1312
Sandy lime-	4	1316
Shale -	2	1318
Lime -	30	1348
Shale -	25	1373
Lime -	10	1383
Shale -	2	1385
Red rock -	13	1398
Lime -	7	1405
Red rock -	12	1417
Lime -	2	1419
Sandy shale	21	1440
Shale-	21	1461
Lime -	1	1462
Shale -	8	1470
Lime -	17	1487
Shale -	2	1489
Lime -	8	1497
Shale -	12	1509
Lime -	8	1517
Blue shale-	16	1533
Lime -	4	1537
Shale -	20	1557
Shale and shells	15	1572
Lime -	23	1595
Shale -	6	1601
TOTAL DEPTH		1601
CASING RECORD: 1,051 feet of 8 $\frac{1}{2}$ -inch, and 1,232 feet of 6-5/8-inch casing.		

Driller's log of well 201

E. L. Finley tract, Hart and Wittker drillers, 7 miles east of Laird.		
Soil -	4	4
Gravel-	32	36
Shale and lime-	92	128
Lime -	7	135
Shale -	15	150
Lime -	10	160
Broken shale	4	164
Lime -	9	173
Broken shale	6	179
Lime -	20	199
Broken shale	26	225
Lime -	5	230
Broken shale	30	260
Lime -	2	262

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 201 -Continued</u>		
Broken shale	14	276
Lime -	7	283
Broken shale	2	285
Lime -	3	288
Broken shale	26	314
Sandy shale	22	336
Lime -	1	337
Shale -	2	339
Lime -	6	345
Shale -	12	357
Lime -	18	375
White shale-	2	377
Brown shale-	10	387
Lime -	6	393
Pink shale -	4	397
Broken shale	1	398
Red rock -	8	406
Sandy shale-	2	408
Sand -	5	413
TOTAL DEPTH		413
CASING RECORD: 407 feet of 6-inch casing.		

Driller's log of well 202

Cora Grisham tract, Hart Bros. drillers, 15 miles east of Baird.		
Soil -	6	6
Lime-	1	7
Clay-	23	30
Blue lime	2	32
Shale -	8	40
Lime -	5	45
Blue shale	5	50
Lime -	3	53
Shale -	3	56
Lime-	6	62
Shale -	12	74
Lime-	6	80
Blue shale	15	95
Gumbo -	15	110
Lime-	6	116
Blue shale	2	118
Lime -	4	122
Blue shale	3	125
Gray shale	10	135
Red beds-	15	150
Gumbo -	5	155
Red beds	5	160
Blue shale	3	163
Lime -	6	169
Red beds	6	175

(Continued on next page.)

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 202 -Continued</u>		
Red rocks-	5	180
Gray shale	30	200
White lime	5	205
Blue lime-	4	209
Shale - - -	19	228
Lime - - - -	2	230
Blue shale	4	234
Lime - - - -	6	240
Shale-	7	247
Lime - - - -	5	252
Shale-	1	253
brown shale	10	263
Blue shale	3	266
Red rock - -	5	271
Sandy shale	7	278
Sand - - - -	3	281
Blue shale	10	291
Water sand	3	294
Red beds - -	3	297
Brown shale	9	306
Blue shale	13	319
Lime - - - -	4	323
Blue shale	7	330
Gray shale	13	343
White lime	8	351
Sandy shale	4	355
Sand and gas	9	364
TOTAL DEPTH		449
CASING RECORD: 405 feet of 5-1/8-inch casing.		

Driller's log of well 210

Tom Windham tract, Ralph C. Hart driller, 3 1/2 miles southwest of Baird.

Clay - - - -	12	12
Red rock - -	6	18
Sandstone	8	26
Lime - - - -	6	32
Shale-	4	36
Lime - - - -	4	40
Blue shale	25	65
Lime - - - -	10	75
Shale-	5	80
Lime - - - -	5	85
Red shale-	3	88
Brown shale	8	96
Red beds - -	10	106
Lime - - - -	16	122
Red beds - -	6	128
Lime - - - -	13	141
Blue shale	61	202

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 210 -Continued</u>		
Lime - - - -	14	216
Blue shale-	8	224
Lime - - - -	14	238
Shale-	10	248
Lime - - - -	18	266
Black lime-	19	285
Blue shale-	29	514
Lime - - - -	7	321
Red rock - -	30	351
Gray shale-	7	358
Lime - - - -	13	371
Shale - - - -	6	377
Lime - - - -	5	382
Iron pyrite	3	385
Shale - - - -	2	387
Lime - - - -	2	389
Blue shale-	8	397
Lime - - - -	7	404
Black shale	8	412
Lime - - - -	7	419
Shale and lime-	11	430
Blue shale-	20	450
Lime - - - -	12	462
Shale - - - -	8	470
Lime - - - -	5	475
Sandy shale	5	480
Lime - - - -	7	487
Shale - - - -	13	500
Lime - - - -	6	506
Sandy shale	10	516
Lime - - - -	4	520
TOTAL DEPTH		520

Driller's log of well 333

. R. Irvin tract, Humble Oil and Refining Company drillers, 2 1/2 miles northeast of Cross Plains.

Clay - - - -	4	4
Gray clay - -	26	30
Red clay - -	25	55
White sand-	20	75
Red rock - -	20	95
Sand- - - - -	5	100
Gray shale-	5	105
Red rock - -	20	125
Gray shale-	15	140
Lime- - - - -	15	155
Red rock-	15	170
Blue shale -	15	185
Lime - - - -	15	200
Gray shale	10	210

(Continued on next page.)

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 323 -Continued</u>		
White lime - - -	28	236
Gray shale- - -	2	240
Lime - - - - -	5	245
Red rock - - - -	30	275
White lime- - - -	15	290
Brown shale - - -	20	310
Sand - - - - -	5	315
Lime - - - - -	20	335
Blue shale - - - -	25	360
Gray shale - - - -	10	370
Lime - - - - -	5	375
Black slate - - - -	35	410
Red rock - - - - -	15	425
Gray shale - - - -	50	475
Red rock - - - - -	40	515
Lime - - - - -	5	520
Gray shale - - - -	25	545
White lime - - - -	10	555
Red rock - - - - -	15	570
Gray shale - - - -	35	605
Lime - - - - -	10	625
Gray shale - - - -	50	675
White lime - - - -	15	690
Gray shale - - - -	100	730
Lime - - - - -	20	810
Red rock - - - - -	20	830
Black shale - - - -	25	855
Gray shale - - - -	20	875
Sand and water - - -	6	881
Lime - - - - -	19	900
Red rock - - - - -	10	910
Water sand, water- -	10	920
White shale - - - -	5	925
Sand and water - - -	12	937
Gray shale - - - -	13	950
Lime - - - - -	45	995
Gray shale- - - - -	120	1115
White lime - - - -	35	1150
Gray shale - - - -	65	1215
Lime - - - - -	25	1240
Gray shale- - - - -	10	1250
White lime- - - - -	5	1255
Gray shale- - - - -	105	1360
White lime- - - - -	20	1380
Red rock - - - - -	10	1390
Brown slate - - - -	5	1395
Lime - - - - -	5	1400
Gray shale - - - -	20	1420
White lime- - - - -	50	1470
Gray shale- - - - -	25	1495
Lime shells - - - -	3	1497
Gray shale- - - - -	30	1527

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 323 -Continued</u>		
Black slate - - - -	18	1545
Gray slate- - - - -	30	1575
Lime - - - - -	10	1585
Gray shale- - - - -	140	1725
Black slate - - - -	15	1740
Gray shale- - - - -	10	1750
White lime- - - - -	10	1760
Gray shale- - - - -	20	1780
Lime- - - - -	25	1805
Gray shale- - - - -	50	1855
Sand and water- - -	47	1902
TOTAL DEPTH		3459
C. S. LUG RECORD: 226 feet of 15 $\frac{1}{2}$ -inch, 572 feet of 12 $\frac{1}{2}$ -inch, 969 feet of 10- inch, 1,772 feet of 8 $\frac{1}{4}$ -inch, and 2,442 feet of 6-5/8-inch casing.		

Driller's log of well 352

M. Swofford et al tract, B. M. Hatfield
driller, 2 miles southwest of Cross
Plains.

Surface soil - - - -	3	3
Red shale- - - - -	2	5
Lime - - - - -	17	22
White shale - - - -	3	25
Light-red shale - - -	20	45
Hard lime- - - - -	15	60
Broken shale - - - -	20	80
Light-red shale - - -	20	100
White shale - - - -	23	123
Brown shale- - - - -	14	137
White lime - - - - -	8	145
White shale- - - - -	10	155
Hard lime- - - - -	8	163
Lime - - - - -	7	170
White shale- - - - -	3	173
Lime- - - - -	7	180
Red bds- - - - -	5	185
Brown shale - - - -	10	195
Red shale - - - - -	20	215
Sandy shale - - - -	7	222
Lime shells - - - - -	1	223
Light-red shale - - -	27	250
White shale - - - -	5	255
Hard lime - - - - -	8	263
White shale - - - -	7	270
Pink shale - - - - -	10	280
Yellow lime- - - - -	10	290
Dry sand - - - - -	13	303
Broken shale - - - -	2	305

(Continued on next page.)

Table of Drillers' Logs, Callahan County -Continued

Driller's log of well 352 -Continued		Driller's log of well 411 -Continued			
Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Red shale- - - -	18	323	Shale and lime shells -	20	530
Lime - - - -	4	327	Lime - - - -	20	550
Yellow shale - - -	11	338	Shale and lime shells -	70	620
Gray lime- - - -	7	345	Lime - - - -	8	628
White shale - - -	12	357	Shale - - - -	52	680
Lime shells - - -	1	358	Hard sandy lime - - -	10	690
Broken shale - - -	7	365	Lime - - - -	5	695
White shale - - -	15	380	Shale - - - -	50	745
Sand - - - -	5	385	Shale and lime shells -	20	765
Broken sand - - -	10	395	Shale - - - -	35	800
Oil sand - - - -	15	410	Sandy lime- - - -	30	830
Salt water sand - -	2	412	Shale - - - -	5	835
TOTAL DEPTH	412	412	Sandy lime- - - -	7	842
			Shale - - - -	23	865
			Dry sand - - - -	7	872
			Shale and lime shells--	4	876
			Hard sandy lime - - -	24	900
			Sandy shale - - - -	3	903
			Lime - - - -	19	922
			Broken water sand,		
			water - - - -	13	935
			Shale - - - -	15	950
			Lime - - - -	10	960
			Shale and lime shells -	10	970
			Sandy lime- - - -	8	978
			Shale - - - -	12	990
			Lime - - - -	10	1000
			Shale - - - -	5	1005
			Sandy lime- - - -	9	1014
			Shale - - - -	1	1015
			Hard lime - - - -	15	1030
			Shale - - - -	18	1048
			Lime - - - -	12	1060
			Shale - - - -	60	1120
			Shale and lime shells -	10	1130
			Shale - - - -	15	1145
			Lime - - - -	15	1160
			Shale - - - -	5	1165
			Red rock - - - -	15	1180
			Shale - - - -	10	1190
			Lime - - - -	42	1232
			Shale - - - -	16	1248
			Red rock - - - -	7	1255
			Broken sandy shale- -	15	1270
			White sand and water -	10	1280
			Shale - - - -	18	1298
			TOTAL DEPTH		2016
			CASING RECORD: 875 feet of 10-inch,		
			1,635 feet of 8-inch, and 1,770 feet of		
			6-5/8-inch casing.		

Driller's log of well 411

Q. Loven tract, H. B. Herring driller,
16 miles southwest of Baird.

Surface soil - - -	3	7
Caliche - - - -	6	9
Yellow clay - - -	5	14
Lime - - - -	16	30
Hard lime- - - -	5	35
Shale and lime shells-	25	60
Shale- - - -	5	65
Lime - - - -	6	71
Shale- - - -	7	78
Lime - - - -	2	80
Shale- - - -	10	90
Shale and lime shells-	15	105
Lime - - - -	6	111
Lime and slate - - -	12	123
Shale and lime shells-	22	145
Lime and slate - - -	30	175
Shale and lime shells-	20	195
Lime and slate - - -	17	212
Shale- - - -	28	240
Shale and lime shells-	15	255
Shale- - - -	10	265
Sand and water - - -	5	270
Shale- - - -	35	305
Lime - - - -	5	310
Shale and lime shells -	20	330
Shale- - - -	10	340
Red beds - - - -	15	355
Shale- - - -	25	380
Lime - - - -	7	387
Shale- - - -	8	395
Lime - - - -	5	400
Shale and lime shells-	40	440
Shale - - - -	63	503
Lime - - - -	7	510

Table of Drillers' Logs, Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 420</u>		
J. O. Hall tract, Humble Oil and Refining Company drillers, 14 ¹ / ₂ miles west of Cross Plains.		
Blue slate - - -	155	155
Gray shale - - -	15	170
Gray lime - - -	10	180
Gray shale - - -	10	190
Blue slate - - -	15	205
Brown lime - - -	20	225
Blue slate - - -	5	230
Lime - - -	5	235
Blue shale - - -	5	240
Hard gray lime - - -	25	265
Brown lime - - -	10	275
Blue slate - - -	10	285
Lime - - -	5	290
Gray shale - - -	20	310
Gray lime - - -	5	315
Gray shale - - -	10	325
Blue slate - - -	10	335
Red beds - - -	25	360
Blue shale - - -	10	370
Blue lime - - -	10	380
Gray lime - - -	10	390
Gray shale - - -	5	395
Gray lime - - -	5	400
Gray shale - - -	5	405
Gray lime - - -	10	415
Blue shale - - -	5	420
Water sand - - -	15	435
Blue slate - - -	50	485
Blue shale - - -	10	495
Slate - - -	20	515
White lime - - -	5	520
Red rock - - -	5	525
Sand - - -	15	540
Blue slate - - -	5	545
Brown lime - - -	10	555
Blue slate - - -	5	560
Blue shale - - -	5	565
Gray lime - - -	30	595
Gray shale - - -	5	600
Red rock - - -	50	650
Blue slate - - -	10	660
Red rock - - -	15	675
Gray lime - - -	10	685
Red rock - - -	40	725
Blue shale - - -	5	730
Red rock - - -	20	750
Blue shale - - -	10	760
Gray lime - - -	15	775
Red rock - - -	40	815

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 420 -Continued</u>		
Gray shale - - -	10	825
Red rock - - -	25	850
Dry sand - - -	30	880
Red rock - - -	30	910
Gray shale - - -	10	920
Red rock - - -	30	950
Gray lime - - -	25	975
Red rock - - -	35	1010
Gray lime - - -	5	1015
Red rock - - -	5	1020
Gray lime - - -	20	1040
Blue shale - - -	30	1070
Red rock - - -	25	1095
Blue shale - - -	10	1105
Gray lime - - -	10	1115
Blue shale - - -	100	1215
Red rock - - -	5	1220
Lime - - -	15	1235
Sand and water - - -	15	1250
Blue shale - - -	20	1270
Gray lime - - -	17	1295
Blue shale - - -	35	1330
Sand and water - - -	120	1450
Blue shale - - -	5	1455
Gray lime - - -	15	1470
Blue shale - - -	95	1565
Gray lime - - -	30	1597
Red rock - - -	8	1605
Gray lime - - -	10	1615
Red rock - - -	10	1625
Blue shale - - -	25	1650
White lime - - -	12	1662
Blue shale - - -	33	1745
Water - - -	10	1755
Gray lime - - -	55	1810
Water - - -	20	1830
Gray lime - - -	16	1846
TOTAL DEPTH		2870

CASING RECORD: 435 feet of 15¹/₈-inch, 820 feet of 12 -inch, 1,464 feet of 10-inch, 1,900 feet of 8¹/₄-inch, 3,034 feet of 6-5/8-inch, and 3,736 feet of 5-3/16-inch casing.

<u>Driller's log of well 423</u>		
W. J. Johnson tract, Hal Hughes driller, 19 miles south of Baird.		
Lime and yellow clay -	30	30
Blue clay - - -	10	40
Lime - - -	2	42
Gumbo - - -	13	55

(Continued on next page)

Table of Driller's Logs, C. Lincoln County -Continued

Thickness (feet)		Depth (feet)	Thickness (feet)		Depth (feet)
<u>Driller's log of well 423 -Continued</u>			<u>Driller's log of well 423 -Continued</u>		
Blue shale and shells-	65	120	Lime - - - - -	42	735
Blue shale - - - - -	15	135	Red rock - - - - -	6	741
Red rock- - - - -	8	143	Lime - - - - -	2	743
Shale and shells - - -	33	175	Blue shale and shells -	12	755
Hard gray shale - - -	27	202	Blue shale- - - - -	3	758
Blue shale - - - - -	23	225	Lime - - - - -	4	762
Lime - - - - -	9	234	Blue shale and shells -	28	790
Blue shale - - - - -	6	240	Blue shale- - - - -	7	797
Red rock- - - - -	22	262	Lime - - - - -	5	802
Shale and shells - - -	13	275	Blue shale and shells -	25	827
Gray lime - - - - -	20	295	Red rock - - - - -	5	832
Lime - - - - -	26	321	Lime - - - - -	4	836
Blue shale - - - - -	4	325	Blue shale- - - - -	6	842
Shale and shells - - -	30	355	Sandy lime- - - - -	9	851
Gray lime- - - - -	15	370	Sandy shale - - - - -	17	868
Lime - - - - -	59	429	Lime - - - - -	3	871
Gray shale - - - - -	11	440	Blue shale - - - - -	4	875
Gray shale and shells-	44	484	Lime - - - - -	6	881
Sandy blue shale - - -	17	501	Sandy blue shale - - -	22	903
Gray shale - - - - -	5	506	Lime - - - - -	1	904
Lime - - - - -	14	520	Blue shale - - - - -	8	912
Blue shale - - - - -	1	521	Lime - - - - -	3	915
Lime - - - - -	19	540	Blue shale - - - - -	18	933
Blue shale - - - - -	11	551	Lime - - - - -	14	947
Sandy gray shale - - -	29	580	Blue shale - - - - -	16	963
Lime - - - - -	7	587	Lime - - - - -	24	987
Blue shale - - - - -	35	620	Red rock - - - - -	20	1007
Shale and shells - - -	20	640	Lime - - - - -	17	1024
Sandy lime - - - - -	37	672	Hrd shale - - - - -	15	1039
Blue shale - - - - -	9	681	Lime and shale - - - -	31	1070
Sand and water - - - -	3	687	TOTAL DEPTH		4336
Blue shale - - - - -	6	693	CASING RECORD: 3,903 feet of 7-inch casing.		

Logs of test wells drilled by W. P. A. labor in Callahan County, Texas

	Thickness (feet)	Depth (feet)
<u>Well 13</u>		
Flat, in City of Baird well field, $3\frac{1}{2}$ miles west of Baird.		
Yellow sand - - -	2	2
Sandy red clay - - -	5	7
Yellow sand - - -	2	9
Sandy red clay - - -	1	10
Yellow sand and gravel-	5	15
Red sand and gravel -	6	21
Sandy yellow clay and small gravel - - -	3	24
Yellow clay	2	26
Red sand- - - -	2	28
April 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 14</u>		
Flat, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,960.		
Yellow sand - - -	3	3
Sandy yellow clay - -	5	8
White sand and small gravel- - - -	3	11
Yellow sand and small gravel- - - -	4	15
Sandy red clay - - -	2	17
Yellow sand and small gravel- - - -	3	20
Yellow sand - - - -	3	23
Yellow sand and gravel- - - -	6	29
Water level, 27 feet below ground level, 72 hours after hole completed. April 24, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 15</u>		
Flat, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,975.		
Yellow sand and clay -	14	14
Sandy red clay - - -	11	25
Yellow sand and clay -	3	28
Yellow clay - - - -	3	31
Sandy red clay - - -	3	34
Sandy red clay and gravel - - - -	4	38
Yellow clay- - - -	4	42
Water level, 35 feet below ground level, 24 hours after hole completed. April 24, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 16</u>		
Hillside, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,997.		
Mostly sand (yellow and red) samples ruined by rain before log made.		
Red and yellow sand -	31	31
Sandy pink clay - - -	6	37
Yellow sand - - - -	10	47
Red sand and yellow clay	1	48
Fine-grained red sand-	5	53
Struck water at 51 feet. Water level, 51 feet below ground level, 72 hours after hole completed. April 8, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 17</u>		
Gentle slope, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,982.		
Yellow surface sand -	2	2
Sandy yellow clay- - -	3	5
Yellow sand - - - -	5	10
Sandy yellow clay- - -	5	15
Fine white sand - - -	9	24
Yellow sand - - - -	1	25
Fine white sand - - -	3	28
Yellow sand - - - -	4	32
Red sand and fine gravel - - - -	2	34
Yellow sand - - - -	2	36
Red water sand - - -	3	39
Red sand and gravel -	2	41
Struck water at 37 feet. Water level, 37 feet below ground level, 24 hours after hole completed. February 21, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 19</u>		
Gentle slope, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,977.		
Yellow surface sand -	3	3
Sandy yellow clay - -	1	4
Chalk, sand and clay -	7	11
Fine white sand - - -	4	15
Gray sand and clay- -	2	17
Fine pink sand- - - -	8	25
Yellow sand and small gravel - - - -	1	26

(Continued on next page.)

Logs of V. P. A. test wells in Callahan County -Continued

	Thickness (feet)	Depth (feet)
<u>Well 19 -Continued</u>		
Red sand and small gravel- - - -	3	29
Yellow sand and gravel- - - -	1	30
Sandy red gravel- - -	5	35
Struck water at 35 feet. February 13, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 20</u>		
Gentle slope, in City of Baird water field, 3½ miles west of Baird. Altitude of ground surface, 1,976.		
Yellow surface sand -	2	2
Sandy gray clay - -	1	3
Sandy red clay - -	1	4
Yellow and red sand -	2	6
Red sand- - - -	1	7
Yellow sand - - -	1	8
Red sand- - - -	8	16
Yellow sand - - -	4	20
White sand - - -	1	21
Yellow sand - - -	11	32
Fine yellow water sand - - - -	1	33
Yellow clay - - -	3	36
Red water sand - -	1	37
Yellow clay - - -	1	38
Yellow water sand -	4	42
Struck water at 32 feet. Water level, 31 feet below ground level, 48 hours after hole completed. January 31, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 21</u>		
Gentle slope, in City of Baird water field, 3½ miles west of Baird. Altitude of ground surface, 1,972.		
Surface sand- - -	1	1
Sandy red clay - -	2	3
Sandy clay and chalk-	2	5
White sand - - -	2	7
Red sand- - - -	4	11
Yellow sand and chalk-	2	13
Red sand- - - -	5	18
Yellow sand - - -	3	21
Yellow sand and small gravel- - - -	2	25
Yellow sand - - -	7	30
Pink sand - - -	1	31
Yellow clay - - -	1	32
Pink sand and clay -	2	34

	Thickness (feet)	Depth (feet)
<u>Well 21 -Continued</u>		
Struck water at 32 feet. Water level, 31 feet below ground level, 48 hours after hole completed. January 31, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 22</u>		
Flat, in City of Baird water field, 3½ miles west of Baird. Altitude of ground surface, 1,966.		
Yellow sand - - -	1	1
Sandy yellow clay- -	5	6
Yellow sand - - -	4	10
White sand - - -	3	13
Yellow sand - - -	1	14
Sandy yellow clay- -	2	16
Sandy white chalk and clay - - - -	2	18
Yellow sand, some gravel - - - -	3	21
Red sand, some gravel-	5	26
Yellow sand - - -	1	27
Red sand and gravel -	3	30
Sandy yellow clay and gravel - - - -	2	32
Struck water at 31 feet. Water level, 31 feet below ground level, 24 hours after hole completed. February 23, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 23</u>		
Flat, in City of Baird water field, 3½ miles west of Baird. Altitude of ground surface, 1,959.		
Yellow surface sand -	1	1
Sandy red clay - -	2	3
Yellow sand, some clay-	1	4
Fine-grained white sand-	2	6
Yellow and white sand-	6	12
Fine-grained white sand - - - -	2	14
Sandy white clay - -	3	17
Yellow sand, some gravel - - - -	1	18
Fine-grained sandy red gravel- - - -	5	23
Sandy yellow clay- -	1	24
Red sand and fine gravel - - - -	2	26
Fine-grained yellow sand - - - -	1	27
White sand and gravel-	2	29
Yellow sand and coarse gravel - - -	1	30

(Continued on next page.)

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

	Thickness (feet)	Depth (feet)
<u>Well 23 -Continued</u>		
Red sand and gravel -	4	34
Sandy yellow clay and coarse gravel - -	4	38
Yellow clay - - -	2	40
Conglomerate- - -	-	-
Struck water at 25 feet. Water level, 24 feet below ground level, 22 hours after hole completed. January 31, 1940.		

<u>Well 24</u>		
Flat, in City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground surface, 1,954.		
Red clay- - - -	1	1
Sandy yellow clay -	6	7
White sand - - -	4	11
Yellow sand - - -	2	13
White sand - - -	1	14
Small gravel- - -	1	15
White chalk and sand-	1	16
Sandy yellow clay -	1	17
Red sand and small gravel- - - -	2	19
Red and yellow sand -	6	25
Red sand and gravel, water - - - -	5	30
Coarse water gravel -	4	34
Rock - - - -	-	34
Struck water at 26 feet. Water level, 26 feet below ground level, 72 hours after hole completed. February 29, 1940.		

<u>Well 28</u>		
Flat, City of Baird water field, $3\frac{1}{2}$ miles west of Baird. Altitude of ground sur- face, 1,963.		
Yellow surface sand -	2	2
Sandy yellow clay -	3	5
Yellow sand and small gravel- - - -	2	7
Fine white sand - -	1	8
Fine yellow sand- -	1	9
Fine yellow sand and small chalk rocks -	1	10
Fine white sand - -	1	11
Sandy yellow clay -	2	13
Fine white sand - -	1	14
Sandy yellow clay -	5	19
Red sand - - - -	2	21
Red sand and small gravel - - - -	6	27

	Thickness (feet)	Depth (feet)
<u>Well 28 -Continued</u>		
Red sand - - - -	3	30
Yellowish-red sand, some gravel- - -	9	39
Struck water at 22 feet. Water level, 20 feet below ground level, 22 hours after hole completed. January 31, 1940.		

<u>Well 49</u>		
Flat, side of County Road, $\frac{1}{2}$ mile west of Baird water field, between road and T. & P. Railroad, $4\frac{1}{4}$ miles west of Baird.		
Yellow sand - - -	1	1
Sandy yellow clay-	2	3
Sandy red clay - -	3	6
Red and white sand -	5	11
Red sand - - - -	2	13
Yellow clay - - -	1	14
Red clay - - - -	8	22
Yellow clay - - -	2	24
Sandy yellow clay-	2	26
Yellow sand - - -	6	32
Struck water at 27 feet. Water level, 27 feet below ground level, 84 hours after hole completed. March 21, 1940.		

<u>Well 50</u>		
Gentle slope, side of County Road, $\frac{1}{2}$ mile west of Baird water field, $4\frac{1}{4}$ miles west of Baird.		
Yellow sand - - -	3	3
Sandy red clay - -	3	6
Red sand - - - -	7	13
Yellow sand and gravel - - - -	1	14
Gray sand, chalk and clay - - - -	3	17
Red sand - - - -	4	21
White sand - - -	1	22
Yellow sand - - -	3	25
Hard red clay- - -	7	32
Yellow clay - - -	9	41
Yellow sand - - -	3	44
Struck water at 36 feet. Water level, 34 feet below ground level, 48 hours after hole completed. March 18, 1940.		

<u>Well 51</u>		
Flat, side of County Road, $\frac{1}{2}$ mile west of Baird.		
(Continued on next page.)		

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

	Thickness (feet)	Depth (feet)
<u>Well 51 -Continued</u>		
Sandy red clay- - -	5	5
Yellow sand and gravel-	1	6
Sandy gray chalk and clay- - - - -	2	8
Red sand - - - -	10	18
Yellow sand - - - -	11	29
Struck water at 23 feet. Water level, 25 feet below ground level hours after hole completed. March 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 52</u>		
Flat, side of County Road, between road and T. & P. Railroad, 1/10 mile west of Baird water field, 3-3/4 miles west of Baird.		
Sandy red surface clay-	3	3
Red and yellow sand -	8	11
Gray sand - - - -	2	13
Gravel and sand - -	2	15
Fine red sand - - -	5	20
Sand and gravel - -	4	24
Yellow clay - - - -	5	29
Red sand and gravel -	3	32
Struck water at 17 feet. Water level, 18 feet below ground level, 64 hours after hole completed. March 12, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 56</u>		
Hillside, side of County Road, 1/4 mile north of Highway 80, on west side of County Road, 3 1/2 miles west of Baird.		
Sandy red clay - - -	3	3
Sandy tan clay and chalk - - - - -	2	5
Pink sand and chalk -	3	8
Yellow sand - - - -	4	12
White sand - - - -	1	13
Sandy yellow clay- -	3	16
Yellow sand - - - -	4	20
Red sand - - - - -	2	22
Red water sand and gravel - - - - -	3	25
Struck water at 23 feet. Water level, 23 feet below ground level, 48 hours after hole completed. March 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 57</u>		
Flat, west side of County Road, 1/2 mile north of Highway 80, 3 1/2 miles west of Baird.		
Sandy red clay - - -	3	3
Sand and chalk - - -	1	4
Yellow sand - - - -	10	14
Red sand - - - - -	8	22
Yellow sand - - - -	8	30
Yellow sand and gravel - - - - -	3	33
March 5. 1940.		

Partial analyses of water from wells and springs in Callahan County, Texas

(Analyzed at The University of Texas under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, and E. W. Lohr, Chemist, U. S. Department of the Interior, Geological Survey; by D. F. Riddell, and H. T. Davidson, Chemists; and Martin Wieland, Jack Ramsey and J. H. Raby, Assistant Chemists. Nitrate and fluoride determined by E. W. Lohr. Results are in parts per million. Well numbers correspond to numbers in table of well records.)

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
18	-- Hays	32	Apr. 18, 1940	327	72	11	38	244	34	52	b/	0.4	227
23	W. P. A. Test	40	Jan. 30, 1940	404	97	19	31	311	34	69	b/	-	322
24	do.	34	Feb. 26, 1940	340	86	12	26	250	30	52	b/	0.4	262
27	J. H. Lindle	25	Apr. 3, 1940	1,199	195	31	204	464	183	330	28	-	614
c/ 28	W. P. A. Test	39	Jan. 29, 1940	337	86	16	21	268	28	54	b/	0.3	280
41	T. J. Gray	15	July 12, 1940	507	-	-	28	446	30	48	b/	-	412
42	W. B. Hallman	42	do.	410	-	-	30	148	36	76	82	-	267
43	C. E. South	75	do.	288	-	-	21	214	20	42	b/	-	218
44	R. D. Dainwood	50	do.	421	-	-	47	187	28	38	118	-	228
45	G. E. Jones	22	do.	509	-	-	34	344	38	95	b/	-	390
49	W. P. A. Test	33	Mar. 21, 1940	766	154	30	93	378	57	240	b/	0.5	509
52	do.	34	Mar. 12, 1940	471	98	18	59	317	34	106	b/	-	316
53	T. & P. R.R.	Spring	Sept. 20, 1939	285	71	12	20	220	36	37	b/	0.5	228
55	J. S. Baker	17	Feb. 21, 1940	530	99	24	68	384	67	70	b/	-	345
c/ 56	W. P. A. Test	25	Mar. 1, 1940	2,203	260	65	466	714	378	660	21	1.1	915
58	Leo Tyler	25	Jan. 24, 1940	1,026	175	98	99	1,183	25	40	b/	1.3	840
59	-	43	Mar. 2, 1940	991	236	34	81	366	92	355	b/	0.4	731
60	J. M. Morrisett	21	do.	370	-	-	-	293	43	28	b/	-	-
c/ 63	N. A. Estes	9	July 31, 1940	562	118	29	43	366	47	63	81	0.8	413
65	H. Grisham	12	do.	393	34	31	83	403	a/	40	-	-	214
66	A. E. Dyer	30	Feb. 22, 1940	1,795	170	142	271	378	244	660	120	2.0	1,007
69	R. P. Taylor	23	do.	1,037	158	31	186	482	142	260	23	-	524
70	J. G. Batley	42	July 31, 1940	794	136	24	115	171	124	279	32	0.1	440
71	J. E. Waggoner	15	do.	757	165	28	84	500	68	155	b/	0.7	527
73	M. W. Carlton	24	do.	1,441	221	41	261	543	175	458	b/	0.3	720
c/ 75	Mollie Clemmer	21	do.	1,419	286	53	53	214	101	176	645	-	933

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
76	L. T. Bagwell	20	July 31, 1940	187	52	6	14	195	a/	16	b/	0.2	154
77	do.	13	do.	655	82	29	121	378	138	89	b/	-	323
79	A. C. Klepper	23	do.	755	120	21	141	500	82	134	b/	0.9	388
c/ 80	L. J. Gorsuch	22	Feb. 15, 1940	391	94	18	21	232	27	62	54	0.8	306
81	J. P. Kennard Est.	35	do.	153	36	12	6	134	16	17	b/	-	137
82	W. Kennard Est.	29	do.	332	93	12	15	311	26	13	20	-	283
84	Joel Griffen	9/	Feb. 6, 1940	938	162	30	126	281	127	255	100	-	529
85	do.	13	July 31, 1940	424	94	16	48	372	48	35	b/	-	300
87	O. W. Johns	30	do.	1,109	158	33	206	439	207	278	b/	0.5	531
88	Clyde Canday	30	Jan. 24, 1940	1,381	267	41	181	378	206	500	b/	0.1	835
91	W. P. Foster	31	do.	1,455	288	43	184	348	178	580	b/	0.3	897
93	J. P. Prew	25	Sept. 21, 1939	688	129	27	97	500	100	88	b/	1.0	431
c/ 94	City of Clyde	-	do.	741	166	24	73	451	100	119	36	0.9	515
95	A. Patty	36	Feb. 8, 1940	1,095	165	32	173	153	236	360	54	-	545
96	R. W. Powell	9	Feb. 6, 1940	1,698	198	56	347	476	301	530	30	1.5	724
97	-	22	Apr. 30, 1940	2,095	208	64	438	695	361	400	282	-	785
c/ 98	-	20	Aug. 1, 1940	844	150	20	119	421	70	122	156	0.3	457
99	C. L. Britton	35	Feb. 8, 1940	556	98	23	75	232	63	166	b/	-	339
100	Joe T. Perry	50	Sept. 21, 1939	1,002	166	40	155	500	144	250	b/	1.1	580
101	D. A. Tessier	36	do.	624	178	16	36	366	40	174	b/	0	510
c/102	J. O. Barker	37	do.	482	109	21	40	366	40	46	45	1.0	358
103	J. Crowley	8	July 31, 1940	657	104	31	99	378	89	131	b/	0.8	389
105	do.	20	do.	2,352	298	55	470	512	578	678	20	0.8	974
106	Gulf Oil Corp.	-	Feb. 8, 1940	336	52	4	75	256	27	50	b/	1.4	148
107	J. M. Merrick	28	Aug. 1, 1940	395	102	14	26	329	17	38	36	0.3	314
108	Jim Barker	9	Feb. 12, 1940	1,843	274	57	294	165	461	660	b/	1.2	920
109	W. E. McCollum	30	Aug. 1, 1940	1,272	127	86	191	378	494	188	-	-	674
110	do.	17	do.	1,347	142	84	211	427	485	214	-	1.4	702
112	C. W. Armstrong	12	do.	577	84	43	70	329	89	118	b/	-	387
114	C. Flemming	20	Feb. 22, 1940	374	85	10	40	293	26	33	36	-	256
115	Sam D. Spain	18	Aug. 1, 1940	866	142	38	109	360	136	168	96	1.3	514
c/116	Mrs. -- Greer	21	do.	229	64	5	14	183	15	17	23	0.6	178

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42.

Partial analyses of water from wells and springs in Callahan County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Cal-cium (Ca)	Magne-sium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bi-car-bonate (HCO ₃)	Sul-phate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluor-ide (F)	Total hardness as CaCO ₃ (calc.)
117	J. D. Hamilton	19	Aug. 1, 1940	656	168	14	40	336	55	104	110	-	479
118	B. Kelton	12	Feb. 21, 1940	1,037	119	48	190	323	138	310	72	1.2	494
119	R. E. Bourland	34	Mar. 2, 1940	884	76	30	195	311	130	165	132	3.1	313
120	E. P. Miller	25	Feb. 21, 1940	700	128	31	51	287	63	46	240	-	449
c/121	W. B. Ferguson	35	do.	1,760	234	31	356	299	344	600	48	0.3	714
122	W. P. Franklin	7	Aug. 1, 1940	574	82	44	59	299	117	60	64	0.8	387
c/123	Frank E. Smith	180	do.	8,024	768	574	1,118	403	3,196	2,150	20	1.3	4,278
124	G. Harris	19	Feb. 21, 1940	340	73	10	42	214	47	43	40	-	226
125	L. M. Farmer, Jr.	14	do.	710	81	24	142	348	177	75	40	-	300
126	C. M. Johnston	27	do.	851	164	24	95	342	75	160	165	-	510
127	W. S. Bryant	31	Feb. 7, 1940	634	140	16	80	433	75	110	b/	-	415
128	I. N. Jackson	11	Feb. 14, 1940	1,021	156	37	162	232	197	355	b/	-	543
129	W. H. Bryant	14	Feb. 7, 1940	1,596	302	43	211	268	298	610	b/	0.3	932
130	V. N. Meard Est.	25	Feb. 14, 1940	1,148	-	-	-	628	138	280	b/	-	-
131	P. Terrell	37	Feb. 7, 1940	86	23	3	4	73	a/	10	b/	0.2	72
132	Joe Glover	36	Sept. 5, 1940	505	66	45	66	421	66	54	-	0.6	348
133	Claude Flores	66	do.	1,396	209	74	119	153	653	102	165	0.6	826
203	-	-	Mar. 13, 1940	125	-	-	-	122	11	6	b/	-	-
c/204	Mrs. George Elliot	31	Aug. 2, 1940	1,101	186	38	127	275	138	237	240	0.4	623
206	-	-	Mar. 13, 1940	141	18	20	5	122	24	9	b/	0.6	127
207	Mrs. W. M. Moore	30	Aug. 2, 1940	1,083	145	49	164	433	407	94	b/	0.3	565
211	F. L. Seale	37	Sept. 5, 1940	329	74	17	28	226	25	74	-	0.2	255
301	T. S. Hudson	36	Mar. 21, 1940	1,616	407	32	40	281	34	320	645	-	1,150
303	-	91	Sept. 5, 1940	289	68	9	28	140	25	88	b/	0.1	206
304	-	16	do.	487	89	15	87	512	14	23	b/	0.5	294
c/305	-	17	do.	3,765	513	205	403	445	404	970	1,050	0.6	2,127
306	Fred Hanson	22	Mar. 21, 1940	124	46	2	-	134	a/	3	b/	0.1	121
307	Callahan County	Spring	do.	336	-	-	-	323	26	22	b/	-	-
308	do.	Spring	do.	332	95	12	16	329	32	15	b/	0.1	288
309	Mrs. -- Woody	114	Aug. 2, 1940	358	90	17	25	348	35	20	b/	0.1	295
310	W. T. McClure	18	do.	224	48	8	24	159	18	32	b/	0.3	155
311	Callahan County School	-	do.	335	96	14	13	323	35	18	b/	-	299

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42.

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Partial analysis of water from wells and springs in Callaway County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
313	-- Mercer	30	Aug. 2, 1940	443	109	25	26	384	39	54	b/	0.7	376
315	S. A. Black	16	Mar. 19, 1940	322	74	19	24	317	18	18	b/	-	262
316	E. R. Battle	22	do.	1,479	206	65	257	445	135	590	b/	-	785
c/317	E. M. Ray	23	do.	2,492	280	57	567	409	308	1,060	b/	0.4	935
318	-	-	Aug. 2, 1940	321	79	11	32	293	16	39	b/	0	242
319	-	-	do.	313	89	12	18	336	15	14	b/	-	272
321	Crockett-Powers Est.	75 1/2	do.	416	96	29	27	403	18	48	b/	0.5	358
c/322	B. H. Freeland	130	do.	466	124	23	25	427	31	53	b/	0.3	404
324	F. E. Mitchell	20	Mar. 19, 1940	419	-	-	-	445	14	22	b/	-	-
325	B. Randall	98	do.	798	133	61	79	311	53	310	b/	-	582
326	A. E. Ellis	84	Apr. 4, 1940	433	-	-	-	354	39	56	b/	-	-
327	W. L. Goble	119	do.	420	108	20	24	390	36	33	b/	-	352
328	E. N. Coffee Est.	60	Sept. 5, 1940	435	99	14	55	451	17	23	b/	0.2	304
329	Purchfield Est.	60	do.	367	91	24	18	366	18	28	b/	0.2	325
330	Odell Est.	72	Aug. 2, 1940	163	46	6	10	159	10	13	b/	0.4	139
331	Sawyer Est.	Spring	Sept. 4, 1940	362	71	16	53	348	18	38	b/	0.5	245
335	E. Vestel	23	Apr. 4, 1940	1,350	266	45	157	378	118	480	98	-	848
336	City of Cross Plains	47	Sept. 4, 1940	890	171	25	133	531	70	210	20	0.4	531
c/338	do.	50	do.	512	85	16	88	378	51	64	21	0.6	280
339	do.	49	do.	735	124	19	129	488	89	110	23	0.7	387
340	do.	44	do.	1,118	198	26	187	567	140	270	b/	0.6	601
c/341	do.	48	do.	997	196	26	140	494	117	250	24	0.5	596
342	do.	48	do.	553	134	21	46	409	39	96	b/	0.3	423
343	C. D. Westerman	33	Apr. 4, 1940	1,766	304	27	311	409	196	700	27	-	872
344	Mrs. P. T. Jones	56	do.	907	164	28	132	354	139	270	b/	0.3	528
345	A. Payne	55	do.	299	60	10	34	159	17	60	40	-	191
346	H. M. Gary	61	do.	1,506	321	59	150	207	71	800	b/	-	1,047
347	City of Cross Plains	25	Sept. 4, 1940	644	146	19	71	422	54	124	23	0.4	442
348	C. Neeb	23	Apr. 4, 1940	1,201	86	54	284	268	181	460	b/	-	439
349	Mrs. -- Butler	17	do.	2,405	258	63	583	427	a/ 1,290	b/	0.4	904	

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42.

Partial analyses of water from wells and springs in Calhoun County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
350	Ed. Long	19	Apr. 4, 1940	447	116	19	31	378	28	67	b/	-	367
351	C. M. Garrett	60	Sept. 4, 1940	771	187	25	35	348	70	100	183	0.3	570
353	-	15	Aug. 2, 1940	1,375	244	53	144	378	109	335	304	0.7	828
c/354	Harry Young	12	Sept. 4, 1940	681	108	45	79	433	39	114	82	1.0	453
355	do.	21	do.	948	148	45	150	464	82	290	b/	0.9	553
356	do.	28	do.	666	98	33	117	500	51	120	-	1.0	380
359	Fred Long	14	do.	119	36	5	4	140	a/	2	-	0.2	113
360	O. W. Grey	26	do.	1,875	154	91	396	214	397	730	b/	0.6	761
361	-	Tank	Apr. 16, 1940	204	30	10	26	73	88	13	b/	1.1	116
362	Neal Dillard	21	Sept. 3, 1940	597	102	48	65	561	31	70	b/	0.4	455
c/363	J. H. Warren	12	do.	806	148	53	48	366	86	110	180	1.4	588
364	A. L. Price	11	Apr. 16, 1940	1,424	100	57	328	445	497	220	b/	2.1	485
366	H. F. Phillips	16	Sept. 4, 1940	1,206	130	56	255	647	144	300	b/	1.9	554
367	Jerry McDonald	12	do.	413	97	14	34	323	35	18	55	0.7	299
401	-	8	May 2, 1940	371	-	-	-	378	28	14	b/	-	-
c/402	W. E. Carter	Spring	Aug. 1, 1940	514	106	21	58	348	76	81	b/	0.6	353
405	C. Z. Anderson	12	do.	338	95	9	17	268	35	29	b/	-	276
406	A. M. Joyner	80	May 2, 1940	423	122	13	20	372	32	35	b/	-	268
407	-	45	do.	281	-	-	-	268	12	28	b/	-	-
408	-	20	Apr. 30, 1940	419	97	27	29	384	10	61	b/	0.5	351
409	J. R. Cutbirth	23	do.	505	128	18	21	305	24	49	115	-	391
410	James Ross	8	Sept. 6, 1940	293	34	11	60	92	39	102	b/	0.4	132
412	-	19	Apr. 30, 1940	1,123	146	93	161	720	26	340	b/	-	747
413	-	13	do.	1,664	178	46	354	384	459	420	b/	1.8	633
414	Community Park	13	May 2, 1940	1,206	167	44	207	360	299	310	b/	1.6	597
415	-	18	Mar. 2, 1940	658	119	17	101	262	91	186	b/	-	365
416	-	Tank	Apr. 30, 1940	115	-	-	-	116	10	4	b/	-	-
417	Owen Rouse	23	Sept. 5, 1940	634	110	45	63	318	82	170	b/	1.4	455
418	-	7	do.	358	90	10	35	311	25	42	b/	0.2	266
c/419	-	13	do.	2,487	262	107	463	214	334	990	225	0.8	1,096
421	W. C. Baines	27	Sept. 6, 1940	497	101	28	42	348	86	46	22	0.8	367
422	do.	14	do.	220	44	13	23	195	25	18	b/	0.8	163
424	Ed. Kirkendall	19	do.	2,902	395	111	478	287	622	1,100	53	2.3	1,443
c/425	Charles Allen	21	do.	689	133	25	84	317	78	170	42	1.1	435

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42.

Partial analyses of water from wells and springs in Callahan County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
426	-	42	Apr. 30, 1940	473	91	28	41	336	37	47	64	-	342
427	-	14	do.	1,499	91	96	318	567	393	300	22	-	624
428	-	18	Sept. 6, 1940	1,306	176	26	267	409	252	360	23	1.1	546
429	-	Tank	Apr. 30, 1940	71	24	3	-	73	a/	3	-	-	72
c/430	J. O. Williams	37	Sept. 6, 1940	486	142	13	19	293	35	108	25	0.3	408
431	L. V. Taylor	35	Apr. 30, 1940	238	50	20	12	220	28	16	b/	-	207
432	-	24	Sept. 6, 1940	214	56	11	12	220	13	14	-	0.3	187
433	Callahan County	12	do.	514	106	28	56	458	27	70	-	1.6	383
434	-- Bryson	15	do.	949	185	32	112	445	233	150	b/	2.4	595
c/435	Albert Betcher	22	do.	1,359	254	40	154	244	175	420	195	1.2	800
436	Mrs. T. J. Floyd	58	do.	299	78	20	11	317	17	16	b/	0.2	277
437	-	32	Apr. 30, 1940	311	88	16	12	329	15	18	b/	0.1	285
438	W. O. Marsh	24	do.	618	136	33	19	238	36	55	222	-	417

a/ Sulphate less than 10 parts per million.

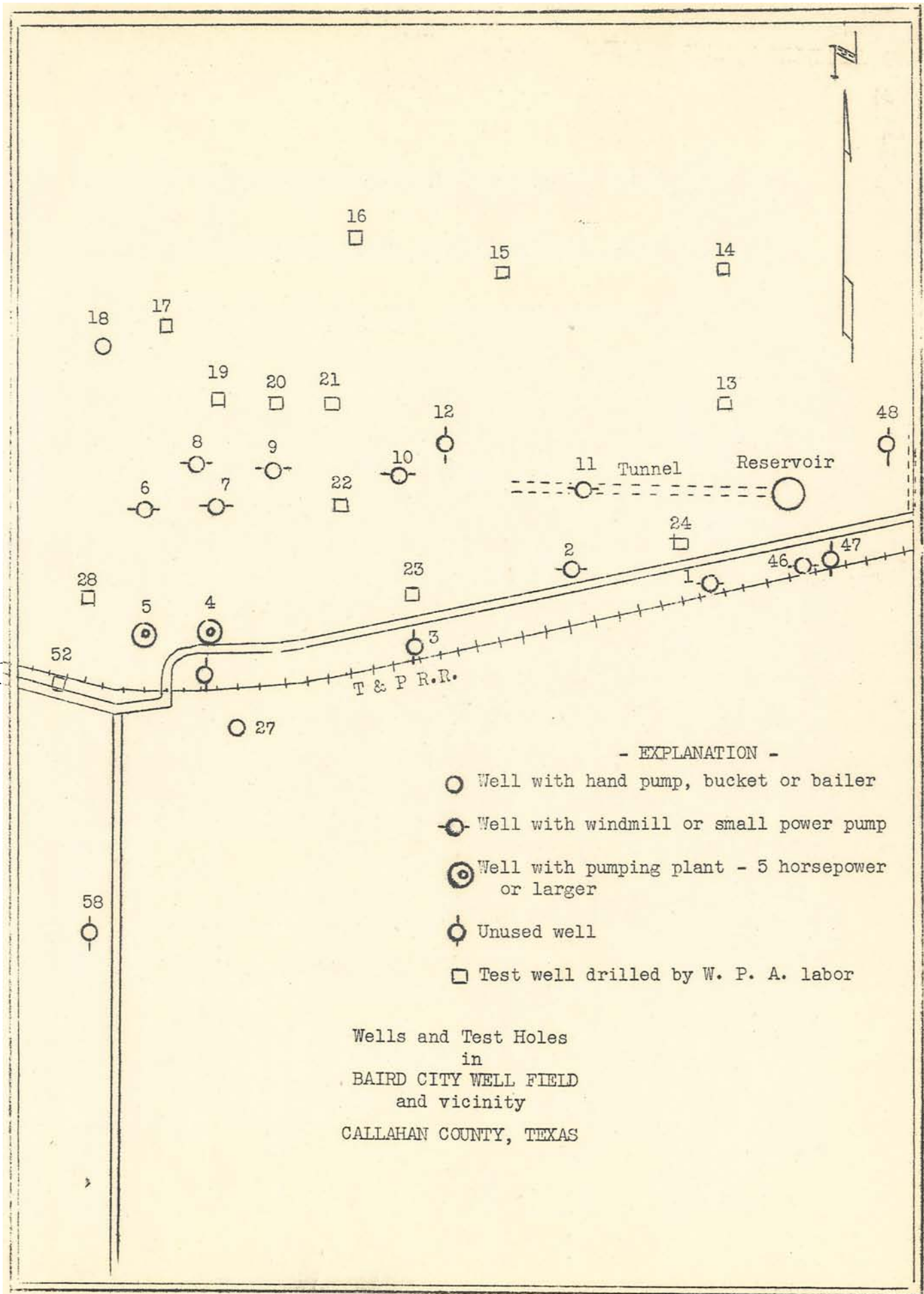
b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 42.

Chemical analyses--Continued

Results are in milligrams equivalents per liter

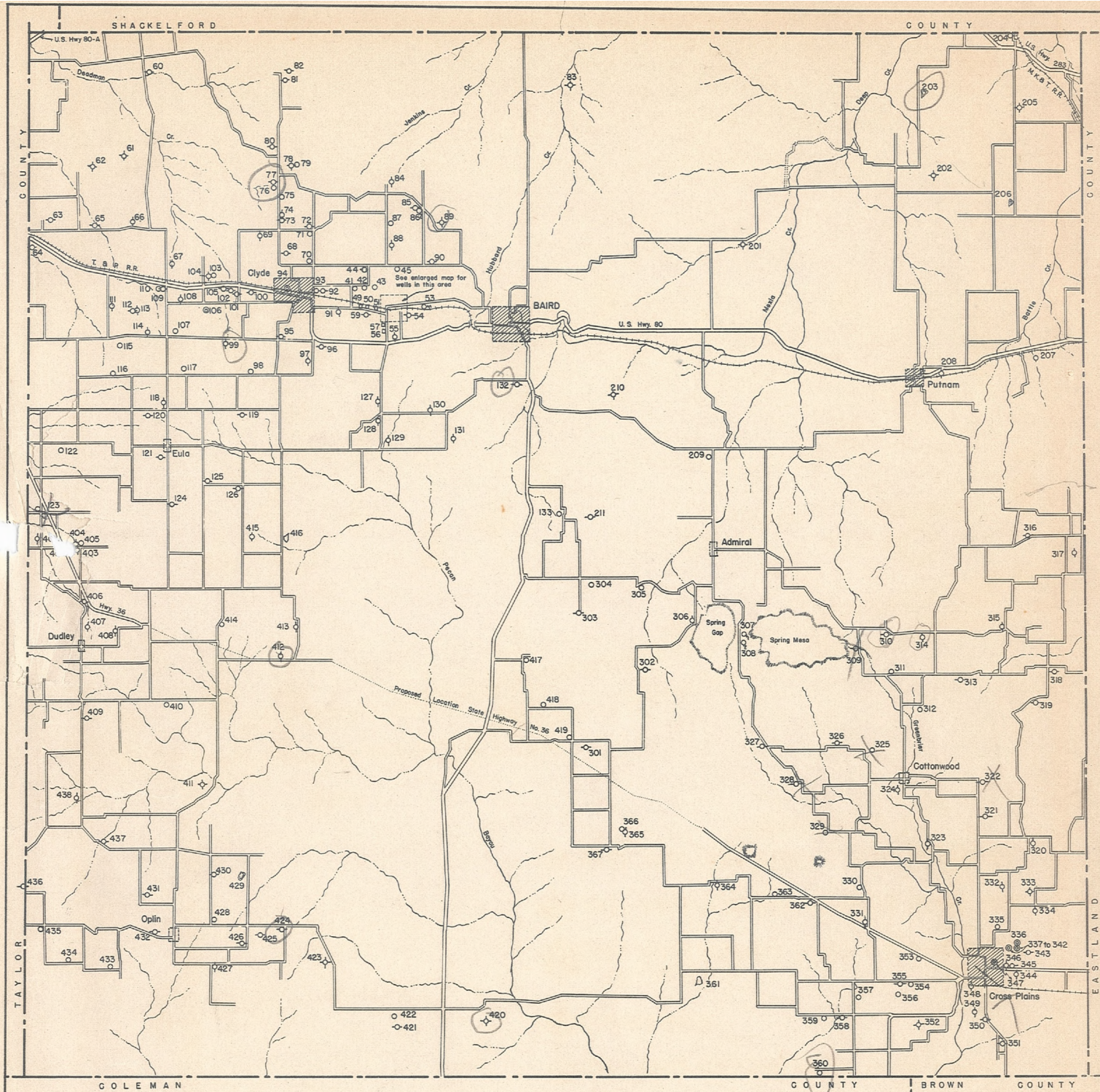
Well	Owner	Depth of well (ft.)	Date of collection	Total hardness as CaCO ₃ (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Total dissolved solids (calc.)
28	W. P. A. Test	39	Jan. 29, 1940	5.60	4.32	1.28	0.90	4.40	0.57	1.52	0.01	-	13.00
56	do.	25	Mar. 1, 1940	18.30	12.98	5.32	20.28	11.70	7.87	18.61	0.06	0.34	77.16
63	N. A. Estes	9	July 31, 1940	8.26	5.88	2.38	1.85	6.00	0.97	1.78	0.04	1.31	20.22
75	Mollie Clemmer	21	do.	18.66	14.30	4.36	2.30	3.50	2.10	4.96	-	10.40	41.92
80	L. J. Gorsuch	22	Feb. 15, 1940	6.12	4.68	1.44	0.90	3.80	0.56	1.75	0.04	0.87	14.04
94	City of Clyde	-	Sept. 21, 1939	10.30	8.30	2.00	3.16	7.40	2.09	3.34	0.05	0.58	26.92
98	-	20	Aug. 1, 1940	9.14	7.48	1.66	5.18	6.90	1.46	3.44	0.01	2.52	28.64
102	J. O. Barker	37	Sept. 21, 1939	7.16	5.46	1.70	1.76	6.00	0.83	1.30	0.05	0.73	17.84
116	Mrs. -- Greer	21	Aug. 1, 1940	3.56	3.18	0.38	0.63	3.00	0.31	0.48	0.03	0.37	8.32
121	W. B. Ferguson	35	Feb. 21, 1940	14.28	11.72	2.56	15.49	4.90	7.18	16.92	0.01	0.77	59.54
123	Frank E. Smith	180	Aug. 1, 1940	85.55	38.40	47.15	48.66	6.60	66.58	60.64	0.07	0.32	268.42
204	Mrs. George Elliot	31	Aug. 2, 1940	12.46	9.30	3.16	5.49	4.50	2.86	6.69	0.02	3.87	35.90
305	-	17	Sept. 5, 1940	42.54	25.64	16.90	17.50	7.30	8.42	27.36	0.03	16.93	120.08
317	E. M. Ray	23	Mar. 19, 1940	18.70	14.02	4.68	24.65	6.70	6.42	29.90	0.02	0.31	86.70
322	B. H. Freeland	130	Aug. 2, 1940	8.08	6.20	1.88	1.07	7.00	0.64	1.50	0.01	-	18.50
338	City of Cross Plains	50	Sept. 4, 1940	5.60	4.26	1.34	3.83	6.20	1.05	1.81	0.03	0.34	18.66
341	do.	48	do.	11.92	9.78	2.14	6.08	8.10	2.43	7.05	0.03	0.39	28.00
354	Harry Young	12	do.	9.06	5.36	3.68	3.44	7.10	0.81	3.22	0.05	1.32	21.00
363	J. H. Warren	12	Sept. 3, 1940	11.76	7.38	4.38	2.09	6.00	1.78	3.10	0.07	2.90	27.70
402	W. E. Carter	Spring	Aug. 1, 1940	7.06	5.30	1.76	2.53	5.70	1.57	2.28	0.03	-	19.18
419	-	13	Sept. 5, 1940	21.92	13.10	8.82	20.14	3.50	6.96	27.92	0.04	3.63	84.12
425	Charles Allen	21	Sept. 6, 1940	8.70	6.66	2.04	3.65	5.20	1.62	4.79	0.06	0.68	24.70
430	J. O. Williams	37	do.	8.16	7.12	1.04	0.82	4.80	0.72	3.05	0.01	0.40	17.96
435	Albert Betcher	22	do.	16.00	12.72	3.28	6.70	4.00	3.64	11.85	0.06	3.14	45.40



- EXPLANATION -

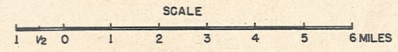
- Well with hand pump, bucket or bailer
- ⊖ Well with windmill or small power pump
- ⊙ Well with pumping plant - 5 horsepower or larger
- ⊕ Unused well
- Test well drilled by W. P. A. labor

Wells and Test Holes
 in
 BAIRD CITY WELL FIELD
 and vicinity
 CALLAHAN COUNTY, TEXAS



MAP OF CALLAHAN COUNTY, TEXAS SHOWING WATER WELLS LISTED

- EXPLANATION —
- WELL WITH HAND PUMP, BUCKET OR BAILER
 - ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ⊙ WELL WITH PUMPING PLANT— 5 HORSE POWER OR LARGER
 - ⋄ WELL DRILLED TO TEST FOR OIL OR GAS
 - ◇ UNUSED WELL
 - SPRING
 - ◻ TEST WELL DRILLED BY W.P.A. LABOR
 - ◡ EARTHEN TANK OR RESERVOIR



FIELD WORK BY
CARL B. MUELLER
PROJECT SUPERINTENDENT
W.P.A. PROJECT 14866



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

BASE COMPILED FROM
STATE HIGHWAY PLANNING SURVEY
COUNTY ROAD MAP