

STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman
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CALHOUN COUNTY, TEXAS

PREPARED IN COOPERATION WITH THE UNITED STATES
DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY

MAY 1941

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CALHOUN COUNTY, TEXAS

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

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Work Projects Administration Project 13784

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Analyses made and report mimeographed by
WORK PROJECTS ADMINISTRATION
Project 17276

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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
May 15, 1941

CALHOUN COUNTY, TEXAS

Introduction

By

W. O. George, Assistant Geologist
United States Geological Survey

This publication contains records of 266 wells, 45 test wells, 36 drillers' logs and 312 chemical analyses of water obtained from the wells.

In 1935, a memorandum on the ground water in Calhoun County, Texas, together with records of wells, drillers' logs, and water analyses, and a map showing location of wells, by John T. Lonsdale, was released in photostatic form by the United States Department of the Interior, Geological Survey in cooperation with the Texas Board of Water Engineers and Engineering Experiment Station of Agricultural and Mechanical College of Texas. Only a few photostat copies were released for distribution.

On January 5, 1940 the Work Projects Administration started a more complete inventory supplemented by a program of test hole drilling, sponsored by the State Board of Water Engineers in cooperation with the Federal Geological Survey, with Carl E. Johnson as project supervisor. The field work was completed in August 1940.

Mr. Lonsdale's memorandum is included in this release. Nearly all of the wells observed by Mr. Lonsdale were revisited by Mr. Johnson and changes in water levels were recorded and additional water samples were obtained for more complete analyses. The map has been revised but the wells observed by Mr. Lonsdale retain the same numbers as were shown on the original map.

The analyses were made by chemists employed on Work Projects Administration Project No. 17276 under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, University of Texas, and E. W. Lohr, Chemist of the Quality of Water Division of the Federal Geological Survey. The Bureau of Industrial Chemistry furnished laboratory space and equipment. The analyses in this release are tabulated in parts per million. A number of these analyses are also given in milligram equivalents per liter for the convenience of those who prefer this form of expressing the quality of water.

This release was typed by typists employed on Work Projects Administration Project No. 17276.

The records serve as a guide to land owners, well drillers and others who need information regarding wells, the depth to ground water in different parts of the county, and the quality and chemical character of water yielded by the wells. They afford a basis for the more intensive investigation that is now being carried on by the State Board of Water Engineers in cooperation with the Federal Geological Survey.

Ground water in Calhoun County, Texas

By John T. Lonsdale

Introduction

The brief report that follows is based chiefly on a study of records of wells in Calhoun County obtained in June, July, and August, 1934, for the most part by the writer, but in part by J. C. Gunley, junior engineer in the United States Geological Survey under an appointment by the Administrator of Public Works. Older published data relating to the geology and occurrence of ground water in the county given by Taylor ^{1/} and Deussen ^{2/} together with unpublished information obtained by Deussen ^{3/} have also been consulted. Most of the well data that have been obtained are given in the accompanying tables. The location of the wells is shown on the accompanying map, each well being given a number that corresponds to the number assigned to it in the tables. The data in the tables relating to the chemical character of the well waters were determined from tests and partial analyses in the Water Resources laboratory of the Geological Survey at Washington, D. C. (See pages 51 and 52).

General description of Calhoun County

Calhoun County borders on the Gulf of Mexico and is approximately midway between Corpus Christi and Freeport. It has an area of about 560 square miles, of which bays and lagoons comprise approximately one-half. It includes all of Matagorda Island, an offshore bar that has an area of approximately 50 square miles.

The county is part of a region of considerable historic interest, some of the important events in Texas history having occurred here. Indianola, destroyed by a hurricane in 1876, was the port of entry for many of the earlier immigrants to Texas, and was an important coast town for many years. Port Lavaca, the county seat, was shelled by United States gunboats during the Civil War.

In 1930 the county had a population of 5,325, and Port Lavaca, the county seat and largest town, had 1,337. The smaller towns are: Seadrift, Port O'Connor, Long Mott, Green Lake, Meyser, Olivia, and Kaney. Approximately three-fourths of the mainland part of the county is devoted to ranching. The remainder is farmed, the chief crop being cotton. Matagorda Island is used only for ranching. An important seafood industry centers around Port Lavaca, Port O'Connor, and Seadrift.

Topography and drainage

The surface of the county slopes southeastward toward the Gulf, northern parts of the country having altitudes of about 45 feet. Along the coast, in some places, there is a wave-cut cliff 18 to 22 feet high, but in others the slope is gradual. The area landward from the top of the wave-cut cliff at the same elevation or higher forms the Beaumont terrace. Other less distinct terraces exist in the area. Guadalupe River, which forms the western boundary of the county, and Lavaca River are the principal streams. A part of the land between these streams has very poor natural drainage and is artificially drained by an extensive canal system.

^{1/} Taylor, T. U., Underground waters of the Coastal Plain of Texas: U. S. Geol. Survey Water-Supply Paper 130, 1907.

^{2/} Deussen, Alexander, Geology of the Coastal Plain of Texas west of Brazos River: U. S. Geol. Survey Prof. Paper 126, 1924.

^{3/} Deussen, Alexander, Unpublished well data in the files of the U. S. Geological Survey at Washington, D. C., obtained in 1913.

Rainfall

According to records of the United States Weather Bureau the average rainfall at Lavaca during 14 years (1901-1913, and 1926) amounted to 36.16 inches, of which about 25 inches occurred during April to October, inclusive.

Geology

The geologic formations exposed at the surface in Calhoun County are: the Beaumont clay (Quaternary), and Recent stream and terrace deposits. The Beaumont consists of deltaic deposits of yellowish, bluish, gray, and pink clays with subordinate amounts of yellowish and bluish sands. Its outcrop area includes most of the northern and central parts of the county. It has its maximum thickness near the coast but even there probably does not exceed 250 feet. The Beaumont is underlain by the Lissie formation (Quaternary) and the Lissie in turn is underlain by the Goliad (Pliocene) sand. These formations are exposed in Victoria and Jackson Counties which adjoin Calhoun County on the north and are reached by wells at various depths throughout the county. They consist of sands and gravels with interbedded clays and probably have a combined thickness of at least 1,500 feet. Recent river and coastal alluvium deposits extend far up the Guadalupe river and, together with wind blown sand occupy an extensive belt along the coast.

The exposed and unexposed formations dip to the southeast at very low angles. The beds in the Beaumont clay probably have a dip that is not much greater than the slope of the present land surface, but underlying beds have a somewhat steeper dip. Although considerable drilling for oil has been carried on in the area, there is no authentic report of abnormal subsurface structural conditions.

Water-bearing sands and gravels and well development

The entire county is underlain by water-bearing beds of sand and gravel in the Beaumont clay, Lissie formation, and Goliad sand and in parts of it the sands in Recent deposits also carry water. Generally, in a given area several water-bearing beds, ranging in depth from a few feet to several hundred feet, are encountered by wells. Well drilling in the county has been controlled by the quality and quantity of water desired for a given use. Domestic farm wells require only a small supply but the water must be potable. Ranch wells for large herds of stock require larger supplies, but a greater range in quality is permissible. The type of well development in parts of the county has also been largely determined by local drilling conditions. Wells throughout the county either have a flow or the water levels in them are within a few feet of the surface.

Seventy-three flowing wells were visited representing, it is estimated, about 80 percent of the flowing wells of the county. The reported depths of these wells (see tables of well records) are as follows: five less than 300 feet; twenty-four between 300 and 400 feet; twenty-three between 400 and 600 feet; nineteen between 600 and 900 feet; two more than 900 feet. The static levels in the flowing wells were found to range from a fraction of a foot to about 19 feet above the surface. Based on measurements made in the course of the investigation, or reliable records of measurement by the owner or other persons, the discharge of the wells in gallons a minute is as follows: twenty-six less than 10; thirty-two from 10 to 20; four, more than 20; one (No. 56) 50. It is estimated that the total flow of all the wells visited amounts to approximately 700 gallons a minute.

Flowing wells could probably be obtained in all parts of the county by drilling to a sufficient depth. Areas in which flowing wells are most common are as follows: (1) The northeastern part of the county where the Goliad sand is a source of artesian water; (2) the peninsula between Lavaca Bay and Caranacahua Bay; (3) the area east of Caranacahua Bay; (4) the southern part of the county, south of a line between Port Lavaca and Seadrift. The north-central part of the county does not

have flowing wells partly because the surface is somewhat high so that wells shallower than 500 feet will not flow, and partly because the area is a farming one in which small wells are adequate for domestic supply and a few head of stock, and therefore no particular need has thus far developed for putting down deep wells.

The well water is used principally for domestic purposes and for watering stock. The public supplies of Port Lavaca and Port O'Connor are from wells. A few small gardens are irrigated and several cotton gins are supplied from wells.

Well-drilling methods

The deeper wells and many of the shallow ones have been drilled with rotary outfits capable of drilling to depths of approximately 1,000 feet, the principal difficulty encountered in the deeper drilling being to keep the drill stem free in the soft poorly consolidated formations that underlie the area. As in many Texas localities, one or two drillers have put down most of the deeper wells and the methods used in drilling and completing the wells is a result of their individual experience. Many shallow bored wells have been put down by the property owners themselves. In such wells 2 to 3 inch casing is generally used and in many instances the pump cylinder is placed above the ground and rests on the end of the casing.

Galvanized iron casing is used in practically all the cased wells, since it resists corrosion better than other types. In the deeper wells it is usual to set 8 to 20 feet of screen in the water sand, but in many of the shallow wells no screen is used and the open end of the casing is set in the sand. There are comparatively few dug wells in the county.

Quality of well waters

The water from most of the wells of the county are comparatively highly mineralized, waters with a distinct saline taste being common. The chloride content and hardness of the water in different localities and at different depths, however, vary within fairly wide limits whereas the bicarbonate remains fairly constant. The quality of the water in individual areas is briefly discussed in the pages following.

Ground water in individual areas

(See map and tables of well records, drillers' logs, and analyses)

Heyser. - The upland part of this area is underlain by a thin cover of Beaumont clay beneath which the Lissie and Goliad sands are encountered. The lowland part in the valley of the Guadalupe River is underlain by Recent deposits. Records of 21 wells, including 2 oil tests, were obtained in the area. The water wells range in depth from 45 feet to 928 feet, and those that are more than 400 feet have a flow. In the shallow wells the water levels are from 25 to 50 feet below the surface. The deepest wells draw from sands that are more than 700 feet below the surface, although they penetrate water-bearing sands at shallower depths. In 12 of the 13 deep wells from which samples were taken, the waters contain chloride ranging from 310 to 482 parts per million; hardness, from 45 to 120, and bicarbonate from 298 to 408. The water from one deep well (No. 11) contains 1,090 parts per million of chloride. The water from the 3 shallow wells Nos. 1, 2, and 21 average somewhat lower in chloride and much higher in hardness than that from the deep wells.

Kamey. - The wells that are deeper than 250 feet in this area probably derive water from the Lissie-Goliad sands, and the shallower wells from sands in the Beaumont. Thirteen water wells, ranging from 21 to 630 feet in depth, were visited in the area. One flowing well (No. 36, 630 feet deep) was found. The water level in the nonflowing wells ranges from 12 to 26 feet beneath the surface. The water

from most of the wells is highly mineralized. Wells 30 and 31, 250 feet deep, yield water that is fresher and softer than that from the other wells visited in the district. The water from the flowing well is so salty that it could be classed as almost a brine.

Olivia.- Twenty-six wells were visited in this district of which 22, ranging in depth from 262 to 620 feet, have a flow. Very few shallow wells have been used in the area since it was demonstrated, about 1908, that good artesian water could be obtained at fairly shallow depths. Of the two deep wells that do not have a flow one is on relatively high ground and the other is finished in a comparatively shallow sand at 203 feet. Well 71 was found to have the highest artesian head of any of the wells visited in this vicinity, the water in it rising to about 27 feet above sea level. Well 56 flows at 19 feet above the well mouth, but the well is located only slightly above tide level. It is reported that the artesian head has dropped about 2 feet and the yield of the wells declined since the first well was drilled in 1907. The water from the flowing wells in this area averages fresher and softer than the water from any group of wells in the county.

Green Lake.- The depths of the 17 water wells visited in this area are as follows: 10 from 35 to 90 feet; 6 from 216 to 268 feet; one 580 feet. The waters from the shallow wells contain chloride ranging from 50 to 930 parts per million, and hardness ranging from 270 to 1,000 parts per million, while those from the deeper group contain chloride ranging from 650 to 1,090 parts per million, and hardness from 360 to 550 parts per million. The water from the 580-foot well has 2,380 parts of chloride and 1,000 parts of hardness.

Port Lavaca.- The depths of 23 of the 25 water wells visited in this area are as follows: 7 from 20 to 60 feet; 13 from 203 to 375 feet, and 2 between 800 and 900 feet. Three of the wells that are only a few feet above tide level have a flow. In much of this area all the sands that have been exploited contain water that is highly mineralized. The freshest and softest water sampled in the area comes from wells that are several miles west of Port Lavaca.

Magnolia Beach. The wells visited in this area range in depth from 150 to 802 feet. A part of the wells have a flow and the water levels in all but one of the nonflowing wells is less than 15 feet beneath the surface. Without exception, the wells that were sampled yield water of poor quality. The chloride content ranges from 690 to 2,350 parts per million; hardness from 140 to 950, and bicarbonate from 290 to 536.

Seadrift.- Of the 26 wells that were visited in the Seadrift area 12 are less than 100 feet in depth, and 13 are between 200 and 365 feet. Ten of the deeper wells have a flow. Most of the wells yield water that is highly mineralized. A few wells less than 100 feet deep in deposits of alluvial and wind-blown sands of Recent age yield water that is comparatively fresh and soft.

Port O'Connor.- The wells visited in this area range in depth from 20 feet to 625 feet, and 18 of them have a flow. Nearly all the wells yield water that is comparatively salty, the water from well 220 being the freshest.

Records of wells in Calhoun County, Texas

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

No.	Distance from Port Lavaca	Owner	Driller	Date	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
1	15 miles west	H. T. Marshall	R. Snyder	1927	65	3 $\frac{1}{2}$	0.0 1.1
2	14 $\frac{1}{2}$ miles west	J. G. Cook	J. G. Cook	1933	56	3 $\frac{1}{2}$	0.0 1.6
3	14 $\frac{1}{2}$ miles west	P. H. Welder	G. H. Laughter	1922	740	2 $\frac{1}{2}$	0.0
1/ 4	15 miles west	do.	do.	1922	827	2 $\frac{1}{2}$	--
1/ 5	12 $\frac{1}{4}$ miles west	do.	J. M. O'Neil	1934	304	4	0.0
d/ 6	11 miles west	do.	E. F. Powell	1915	912	2 $\frac{1}{2}$	0.0
d/ 7	do.	do.	--	Old	900 \pm	2 $\frac{1}{2}$	0.0
d/ 8	13 $\frac{1}{4}$ miles west	do.	E. C. Elwood	1928	845	2 $\frac{1}{2}$	0.0
d/ 9	14 miles west	do.	--	Old	700 \pm	2	0.0
1/ 10	do.	do.	G. H. Laughter	--	850	2 $\frac{1}{2}$	0.0
2/ 11	15 $\frac{3}{4}$ miles west	do.	E. T. Elwood	1928	490	2	0.0
d/ 12	13 $\frac{1}{4}$ miles west	do.	B. F. Powell and G. H. Laughter	--	753	2	--
1/ 13	13 miles west	do.	B. F. Powell	1916	382	2 $\frac{1}{2}$	--
1/ 14	11 $\frac{1}{2}$ miles west	do.	B. F. Powell and G. H. Laughter	--	881	2 $\frac{1}{2}$	0.0
d/ 15	11 $\frac{1}{2}$ miles west	do.	do.	1915	923	2 $\frac{1}{2}$	0.0
d/ 16	10 $\frac{1}{4}$ miles west	do.	B. F. Powell	1916	874	2	--
1/ 17	10 $\frac{1}{4}$ miles west	do.	--	Old	900 \pm	2	0.0
d/ 18	8 $\frac{1}{2}$ miles west	do.	--	Old	900 \pm	2 $\frac{1}{2}$	0.0
1/ 19	16 $\frac{1}{2}$ miles west	do.	Southwest Oil Corporation	1934	6,230	13	--
1/ 20	11 miles west	do.	do.	1934	6,463	--	--

a/ Measuring point was usually top of casing, top of pipe clamp or top of well curb.

b/ C, cylinder; T, turbine; H, hand; W, windmill; A, air lift; cf, centrifugal; E, electric; G, gas; S, steam. Number indicates horsepower.

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

No.	Water level		Pump	Use	Remarks
	Depth below measuring point (ft.)	Date of measurement			
1	50	July 23, 1934	C, W	D, S	Cased to bottom. Reported dependable supply.
	52.1	May 15, 1940			
2	27	July 23, 1934	Cf, E, $\frac{1}{4}$	D, I	Cased to bottom. Irrigates lawn and $\frac{1}{4}$ -acre garden. Reported yield, 5 gallons a minute in May, 1940.
	29.9	May 15, 1940			
3	+10+	July 13, 1934	Flows	D, S	Cased to bottom. Flow 7 gallons a minute in July, 1934, and May, 1940. Temperature 80° F. in July, 1934. See log.
	+ 8.5+	May 15, 1940			
4	--	1934	Flows	S	
5	25+	e/ 1934	St	Ind	Cased with 274 feet of blank pipe, and 30 feet of screen. Used for drilling oil test. See log.
6	+15+	July 12, 1934	Flows	S	Flow 15 gallons a minute; temperature 78° F in July, 1934. Another water-bearing bed at 559 feet. See log.
7	+8	July 13, 1934	Flows	S	Reported flow, 15+ gallons a minute in July, 1934.
8	+20+	do.	Flows	S	Flow 38 gallons a minute in July, 1934. Casing: 825 feet of blank pipe and 20 feet of screen. Temperature
9	+3+	do.	Flows	S	Flow one gallon a minute in July, 1934. See log. 82+° F in July, 1934.
10	+13+	do.	Flows	S	Flow 10 gallons a minute; temperature 76° F in July, 1934. Gas reported at 364 feet. See log.
11	+2	do.	Flows	S	Gas reported at 423 feet. See log.
12	--	--	Flows	S	Reported flow, 10+ gallons a minute in 1934. Gas reported at 758 feet. See log.
13	--	--	Flows	S	Flowed in 1934. See log.
14	+10+	July 13, 1934	Flows	S	Flow 10 gallons a minute; temperature 91° F in July, 1934. See log.
15	+10+	do.	Flows	S	Flow 12 gallons a minute; temperature 91° F in July, 1934. Another water-bearing bed at 633 feet. See
16	--	--	Flows	S	Flowed in 1934. See log. log.
17	+3+	July 13, 1934	Flows	S	Flow 10 gallons a minute in July, 1934.
18	+15+	do.	Flows	S	Flow 15 gallons a minute in July, 1934.
19	--	--	--	N	Oil test. See log.
20	--	--	Nore	N	Do.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of Wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
	21 11 $\frac{1}{2}$ miles west	J. F. Clark	--	1934	45	4	0.0
	22 12 miles west	R. B. Roof	J. M. O'Neil	1920	70	4	0.9
	23 13 $\frac{3}{4}$ miles west	Humble Oil & Refining Co.	Wilfred Brown	1937	1,082	8 $\frac{1}{2}$	0.0
	24 7 $\frac{1}{2}$ miles west	J. W. McKamey Est.	W. E. Shell	1939	200+	8	1.4
	25 8 miles west	C. E. Boyd	J. M. O'Neil	1931	65	4	1.2
	26 9 miles west	W. S. McKamey Est.	W. S. Shell	1907	80	2	0.0
a/	27 7 $\frac{1}{4}$ miles northwest	R. H. Hollen	Frank Kisiah	1930	30	5	0.0
a/	28 6 $\frac{1}{2}$ miles northwest	Mrs. W. W. Wilson	--	--	27	2 $\frac{1}{2}$	0.0
a/	29 6 miles northwest	J. E. Drusac	W. E. Shell	1917	100	2	0.0
a/	30 6 $\frac{3}{4}$ miles west	J. W. McKamey	J. W. McKamey	1907	25	2	--
	31 7 $\frac{1}{2}$ miles west	do.	W. E. Shell	1914	250	2	0.0
a/	32 7 miles west	L. J. Foster	J. M. O'Neil	1923	70	4 $\frac{1}{2}$	0.0
a/	33 6 $\frac{1}{2}$ miles west	do.	W. E. Shell	--	240	3	--
a/	34 5 $\frac{3}{4}$ miles northwest	do.	L. J. Foster	--	30	2	0.0
a/	35 do.	do.	J. M. Newlin	1928	60	4	0.0
a/	36 do.	E. R. Adams	L. Patterson	1934	630	6	0.0
a/	37 do.	do.	Mills, Bennett Production Co.	1934	6,521	13- 3/8	--
	38 4 $\frac{1}{4}$ miles northwest	Six Mile School	L. Peterson	1917	31	2	0.0
a/	39 4 $\frac{1}{2}$ miles north	J. A. Elder	--	1915	24	24	0.0
	40 7 miles northwest	E. H. Hengst	E. H. Hengst	1932	24	1 $\frac{1}{4}$	0.0
	41 6 miles northwest	J. Pecena	--	1938	50	2	0.0
	42 5 $\frac{1}{2}$ miles northwest	W. J. Cervenka	W. J. Cervenka	1934	40	2 $\frac{1}{2}$	0.0
	43 3 $\frac{1}{2}$ miles northwest	W. F. Holloman	W. F. Holloman	1920	24	1 $\frac{1}{2}$	0.0
44	2 miles northwest	Texas Natural Gas Co.	D. F. Rowllins	--	45	2 $\frac{1}{2}$	0.0

No.	Water level		Purp and power b/	Use of water c/	Remarks
	Depth below measure- ing point (ft.)	Date of measure- ment			
21	30.5	July 18, 1934	C,W	D,S	Reported dependable supply.
	33.8	May 15, 1940			
22	22.2	Mar. 19, 1940	C,G, 5	D,S	Cased to bottom.
23	+25	May 15, 1940	T,St, 50	Ind	Cased with 1,022 feet of blank 8 $\frac{1}{4}$ -inch pipe and 60 feet of 5 $\frac{1}{2}$ -inch screen. Supplies water for refinery.
24	2.5	Apr. 15, 1940	C,W	D,S	Cased to bottom. Reported strong supply. See log.
25	13.8	May 21, 1940	C,W	D,S	Reported dependable supply.
26	13 $\frac{1}{2}$ 17 $\frac{1}{2}$	e/ 1934 1940	C,W	D,S	Cased to bottom.
27	20	e/ 1934	C,W	S	
28	19	e/ 1934	-,H	D,S	
29	13	June 22, 1934	C,W	D,S	Cased with 88 feet of blank pipe and 12 feet of screen. Other water-bearing beds at 21 and 40 feet. Temperature 73 $^{\circ}$ F in June, 1934.
30	--	--	-,H	D,S	
31	12 14	e/ 1934 1940	C,W	D,S	Cased to bottom.
32	19.5	July 4, 1934	C,W	S	Do.
33	--	--	C,W	S	Yield 5 gallons a minute; temperature 73 $^{\circ}$ F in 1934.
34	26	July 4, 1934	C,W	S	Cased to bottom. Yield 5 gallons a minute; temperature 73 $^{\circ}$ F in July, 1934. "North Well."
35	24	do.	C,W	S	Yield 3 gallons a minute; temperature 73 $^{\circ}$ F in July, 1934.
36	+ 0.9	Aug. 7, 1934	St	Ind	Cased with 610 feet of blank pipe, and 20 feet of screen. Used for drilling oil test. See log.
37	--	--	None	N	Oil test. See log.
38	17 18	June 22, 1934 e/ 1940	C,W	P	Cased to bottom. Supplies water for school.
39	20	June 22, 1934	-,H	D,S	Dug well.
40	20	e/ 1940	C,W	D,S	Cased to bottom.
41	22	e/ 1940	C,H	D,S	Do.
42	16	e/ 1940	C,H	D,S	Do.
43	5	e/ 1940	C,H	D,S	Do.
44	13	e/ 1940	C,W	Ind	Cased to bottom. Used for cooling purposes.

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
45	3 $\frac{3}{4}$ miles west	City of Port Lavaca	Layne-Texas Co.	1934	244	10	0.0
46	4 $\frac{1}{4}$ miles west	Frank Gerryk	F. J. Gerryk	1933	35	2	0.0
47	2 $\frac{1}{2}$ miles west	T. E. Cook	J. M. Newlin	1935	26	1 $\frac{1}{4}$	0.0
48	1 $\frac{1}{4}$ miles west	Mrs. B. Wilson	--	1932	30	1 $\frac{1}{4}$	0.0
49	1 $\frac{1}{4}$ miles southwest	E. V. Bouquet	E. V. Bouquet	--	29	1 $\frac{1}{2}$	--
50	2 $\frac{3}{4}$ miles southwest	W. F. Holloman	J. M. O'Neil	1938	300 ⁺	1 $\frac{1}{2}$	0.0
<u>a/</u> 51	4 miles northeast	J. H. Tucker	V. E. Damstrom	1914	335	2	0.0
<u>b/</u> 52	7 miles northeast	Mrs. C. T. Traylor	do.	1917	445	2	0.0
<u>a/</u> 53	7 $\frac{1}{2}$ miles east	do.	do.	1917	345	2	0.0
54	10 $\frac{3}{4}$ miles northeast	Arvid Swenson	do.	1929	365	2	0.0
55	12 miles northeast	Olivia Gin Co.	do.	1934	401	4	0.0 1.3
56	13 $\frac{3}{4}$ miles northeast	W. R. Sells	do.	1909	262	2	0.0
57	14 $\frac{1}{4}$ miles northeast	do.	do.	1926	470	2	0.0
<u>a/</u> 58	11 miles northeast	Mrs. B. Samuelson	do.	1904	60	4	0.0
59	11 $\frac{1}{2}$ miles east	Gustof Swenson	do.	1908	380	2	0.0
<u>a/</u> 60	12 $\frac{1}{2}$ miles east	Lennis Peterson	do.	1920	218	2	0.0
61	13 miles east	Rose, Sample & Drushel	do.	1910	345	2	0.0
62	11 $\frac{1}{2}$ miles east	R. T. Damstrom	do.	1918	480	2	0.0

No.	Water level Depth Date of below measure- ment power measur- ment ing point b/ (ft.) c/	Pump and power	Use of water: c/	Remarks
45	14.0 Jan. 5, 1940	T,E, S	F	Cased to bottom. Reported yield, 140 gallons a minute with 14 feet drawdown. Supplies water to city.
46	13 e/ 1940	C,H	D,S	Cased to bottom. A similar well is 50 feet away.
47	13 e/ 1940	C,H	D,S	Do.
48	12.0 May 20, 1940	C,W	D,S	Do.
49	10 e/ 1940	C,H	S	Cased to bottom. Reported fails in drought.
50	27.2 Apr. 5, 1940	C,W	D,S	Cased to bottom.
51	+ 8 June 22, 1934	Flows	S	Cased with 325 feet of blank pipe and 12 feet of screen. Temperature 80° F; flow 10 gallons a minute in June, 1934. See log.
52	+ 7 June 25, 1934	Flows	S	Cased with 323 feet of blank pipe and 12 feet of screen. Temperature 77° F; flow 16 gallons a minute in June, 1934.
53	+ 8 do.	Flows	S	Cased with 333 feet of blank pipe and 12 feet of screen. Temperature 78° F; flow 20 gallons a minute in June, 1934. Other water-bearing beds at 60 and 215 feet.
54	+ 2 June 20, 1934 + 0.5 Apr. 9, 1940	Flows	D,S	Cased with 557 feet of blank pipe and 8 feet of screen. Flow: June, 1934, 2 gallons a minute; April, 1940, 4 gallons a minute. Temperature 77° F in 1934. See log.
55	2.6 June 20, 1934 6.5 Apr. 9, 1940	C,W	Ind	Cased with 16 feet of blank 4-inch pipe; 377 feet of blank 2-inch pipe and 8 feet of screen. Supplies water for gin. See log.
56	+19 June 20, 1934 + 4 Apr. 9, 1940	Flows	S	Cased with 254 feet of blank pipe and 8 feet of screen. Flow: June, 1934, 50 gallons a minute; April, 1940, 10 gallons a minute. Temperature 76° F in June, 1934.
57	+ 8 June 20, 1934 + 4 Apr. 9, 1940	Flows	D,S	Cased with 458 feet of blank pipe and 8 feet of screen. Flow: June, 1934, 20+ gallons a minute; April, 1940, 8 gallons a minute. Temperature 76° F in June, 1934. See log.
58	13 June 22, 1934	- ,H	D,S	Cased to bottom.
59	+ 3.5 July 30, 1934 1.3 Apr. 9, 1940	C,H	D,S	Flow: 1908, 12 gallons a minute; July, 1934, 3 gallons a minute. Stopped flowing in 1935.
60	5 June 20, 1934	C,W	D,S	Cased with 210 feet of blank pipe and 8 feet of screen. Temperature 74° F in June, 1934. See log.
61	+ 4 June 22, 1934 + 4 Apr. 9, 1940	Flows	D,P	Cased with 333 feet of blank pipe and 12 feet of screen. Other water-bearing beds at 60 and 215 feet. Flow: 10 gallons a minute in June, 1934 and April, 1940. Temperature 77° F in June, 1934. Supplies water for 30
62	+ 5+ June 20, 1934 + 5 Apr. 9, 1940	Flows	D,S	Cased with 468 feet of blank pipe and 12 feet of screen. Flow: June, 1934, 5 gallons a minute; April, 1940, 8 gallons a minute. Temperature 75° F in June, 1934. See log.

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a/</u>
63	11 miles east	C. J. Damstrom	V. E. Damstrom	1914	380	2	0.0
64	10 $\frac{1}{2}$ miles east	V. E. Damstrom	do.	1918	370	2	0.0
65	10 $\frac{1}{2}$ miles east	C. E. Dilworth	do.	1915	392	2	0.0
<u>66</u>	10 $\frac{1}{4}$ miles east	do.	do.	1917	345	2	0.0
<u>67</u>	10 $\frac{1}{2}$ miles east	do.	do.	1917	365	2	0.0
<u>68</u>	11 $\frac{1}{4}$ miles east	do.	do.	1917	420	2	0.0
<u>69</u>	8 miles east	do.	do.	1917	480	2	0.0
70	14 $\frac{1}{2}$ miles east	Carancahua Club	R. M. Snodgrass	1926	512	2 $\frac{1}{2}$	0.0
71	16 miles east	G. F. Stovall	G. P. Barnett	1922	620	2	0.0
72	do.	El Campo Colony	do.	1922	566	2	0.0
73	16 $\frac{1}{2}$ miles east	Mrs. Charles Schicke	do.	1915	560	2	0.0
<u>74</u>	do.	G. F. Stovall	do.	1924	560	2	--
75	13 miles east	B. W. Trull	J. H. Powell	1915	330	2	0.0
<u>76</u>	10 $\frac{1}{2}$ miles east	Mrs. C. T. Traylor	J. W. Young	1910	554	7	0.0
77	10 miles east	C. Peterson	Victor E. Damstrom	1917	500+	2	0.0
78	10 $\frac{1}{2}$ miles east	Guy Cavallin	do.	1919	248	2	0.0
79	11 miles east	do.	do.	1926	80	4	1.2

No.	Water level		Pump	Use	Remarks
	Depth below measur- ing point (ft.)	Date of measure- ment			
63	+ 4	July 30, 1934	Flows	D,S	Cased with 372 feet of blank pipe and 8 feet of screen. Flow: July, 1934, 5 gallons a minute; April, 1940, 10+ gallons a minute.
	+ 3	Apr. 9, 1940			
64	+ 4	June 20, 1934	Flows	D,S	Cased with 360 feet of blank pipe and 10 feet of screen. Flow: 191 ^o , 18 gallons a minute; June, 1934, 5 gallons a minute; April, 1940, 15 gallons a minute. Temperature 75 ¹⁰ F. in June, 1934.
	+ 4	Apr. 9, 1940			
65	+ 7	June 20, 1934	Flows	D	Cased with 334 feet of blank pipe and 12 feet of screen. Flow: 1915, 25 gallons a minute; June, 1934, 9+ gallons a minute; April, 1940, 10 gallons a minute. See log.
	+ 5	Apr. 3, 1940			
65	+ 7.5	June 25, 1934	Flows	S	Cased with 333 feet of blank pipe and 12 feet of screen. Another water-bearing bed at 60 feet. In June, 1934, temperature 79 ^o F; flow 3 gallons a minute.
67	+	do.	Flows	D,S	Cased with 353 feet of blank pipe and 12 feet of screen. In June, 1934, flow, 8 gallons a minute; temperature 30 ^o F.
68	+ 5	do.	Flows	S	Cased with 408 feet of blank pipe and 12 feet of screen. In June, 1934, flow, 15 gallons a minute; temperature 79 ^o F.
69	+ 7	do.	Flows	S	Cased with 323 feet of blank pipe and 12 feet of screen. Other water-bearing beds at 60 and 450 feet. Temperature 77 ^o F; flow, 20 gallons a minute in June, 1934.
70	+ 20	1936	Flows	D,P	Cased with 494 feet of blank pipe and 15 feet of screen. Another water-bearing bed at 320 feet. Flow: 1926, 30 gallons a minute; June, 1934, 18 gallons a minute; April, 1940, 10 gallons a minute. Temperature 77 ^o F in June, 1934.
	+ 3	June 21, 1934			
	+ 3	Apr. 10, 1940			
71	+ 17.3	June 21, 1934	Flows	D,S	Cased with 600 feet of blank pipe and 20 feet of screen. Supplies water for 10 tourist cabins. June, 1934 flow, 15 gallons a minute; temperature 30 ^o F.
	+ 12	Apr. 10, 1940			
72	+ 13	June 21, 1934	Flows	D,S,P	Cased with 544 feet of blank pipe and 22 feet of screen. Other water-bearing beds at 140 and 330 feet. June, 1934, flow, 35 gallons a minute; temperature 80 ^o F. Supplies water for 15 tourist cabins.
	+ 5	Apr. 10, 1940			
73	+ 15+	June 21, 1934	Flows	D,S	Cased with 540 feet of blank pipe and 20 feet of screen. Flow: June, 1934, 15 gallons a minute; April, 1940, 10 gallons a minute.
	+ 3	Apr. 10, 1940			
74	--	--	Flows	S	Cased with 540 feet of blank pipe and 20 feet of screen. Flowed in 1934.
75	+ 8+	June 21, 1934	Flows	S	Cased with 315 feet of blank pipe and 15 feet of screen. Flow: June, 1934 and April, 1940, 5 gallons a minute.
76	2	July 30, 1934	C,W	S	Originally flowed.
77	+ 2+	Apr. 3, 1940	Flows	D,S	Cased to bottom. Flow, 10 gallons a minute in April, 1940.
78	5	e/	C,W	D,S	Cased to bottom. Supplies water for house and 150 head of cattle.
79	20.3	Apr. 9, 1940	C,W	D,S	Cased to bottom. Supplies water for 50 head of cattle.

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
80	13 $\frac{1}{4}$ miles east	W. R. Seils	Victor E. Damstrom	1909	400 ⁺	2	0.0
81	11 miles east	A. A. Swenson	do.	1932	390	3 $\frac{1}{2}$	0.9
82	10 miles east	E. Wilson	do.	1925	390	2	0.0
83	3 $\frac{1}{2}$ miles southwest	E. B. Thompson	J. M. O'Neil	1929	200 ⁺	2	0.0
84	3 $\frac{1}{8}$ miles southwest	J. V. Koenig Est.	do.	1926	270 ⁺	1 $\frac{3}{4}$	0.0
85	4 miles southwest	Mrs. A. Carter	do.	1926	305	1 $\frac{1}{2}$	0.0
86	12 $\frac{1}{2}$ miles west	Green Lake Loan & Security Co.	M. Salzer	1926	70	4	2.1
87	8 $\frac{1}{2}$ miles west	do.	do.	1910	75	3 $\frac{1}{2}$	0.0 0.6
d/ 88	11 $\frac{1}{2}$ miles southwest	F. L. Fredericks	R. Snyder	1926	72	4 $\frac{1}{2}$	0.0
3/ 89	do.	R. G. & A. L. Smith	The Texas Company	1931	6,500	--	--
d/ 90	12 $\frac{1}{2}$ miles southwest	T. P. Traylor	M. Salzer	1930	75	4	0.0
d/ 91	11 $\frac{1}{2}$ miles southwest	Green Lake Gin Co.	do.	1927	73	4 $\frac{1}{2}$	0.0
92	11 miles southwest	C. L. Fredericks	--	1914	75	4	0.0 1.8
93	9 $\frac{1}{2}$ miles southwest	Green Lake Loan & Security Co.	M. Salzer	--	35	5	0.0 2.3
d/ 94	11 $\frac{1}{2}$ miles southwest	do.	J. M. O'Neil	1928	265	4	1.7
d/ 95	10 $\frac{1}{2}$ miles southwest	H. J. Hahn	L. Weaver	1928	72	4 $\frac{1}{2}$	0.0
d/ 96	12 $\frac{1}{2}$ miles southwest	P. R. Austin Est.	-- Campbell	1919	90	4	0.0
97	9 $\frac{3}{4}$ miles southwest	J. J. Welder	do.	1914	62	6	0.0
d/ 98	8 miles southwest	Moreman Community Gin	J. M. O'Neil	1928	268	2	--

No.	Water level Depth below measuring point (ft.)	Date of measure- ment	Pump and power	Use of water	Remarks
			b/	c/	
80	1.2	Apr. 9, 1940	C,W	D,S	Cased to bottom. Flowed until 1935.
81	3.9	Apr. 10, 1940	C,W	D,S	Cased with 378 feet of blank pipe and 14 feet of screen. Originally flowed.
82 + 2		Apr. 9, 1940	Flows	D,S	Cased with 382 feet of blank pipe and 8 feet of screen. Flow, 8 gallons a minute in April, 1940.
83	23	e/ 1940	C,W	D,S	Cased to bottom.
84	5	e/ 1940	C,W	D,S	Cased to bottom. Originally flowed.
85	26	e/ 1940	C,W	D,S	Cased to bottom.
86	48.2	Mar. 19, 1940	C,W	D,S	Do.
87		July 23, 1934	C,W	D,S	Do.
	22.7	Apr. 16, 1940			
88	32.2	July 25, 1934	C,W	D,S	Do.
89	--	--	None	N	Oil test. See log.
90	40	e/ 1940	C,W	D,S	Cased to bottom.
91	32.5	July 20, 1934	C,G, 2	D,S, Ind	Cased to bottom. Supplies water for gin and five houses.
	42.3	Mar. 14, 1940			
92	56	July 23, 1934	C,W	D,S	Cased to bottom.
	23.2	Mar. 19, 1940			
93	21	July 23, 1934	C,H	D,S	Do.
	24.9	Apr. 24, 1940			
94	38.6	Mar. 14, 1940	C,W	D,S	Cased with 255 feet of blank pipe and 10 feet of screen. Supplies water for 25 cabins during cotton season.
95	23.5	July 20, 1934	C,W	D,S	Cased to bottom.
96	29	July 20, 1934	C,W	D,S	Do.
	33.2	Mar. 14, 1940			
97	30	July 20, 1934	C,W	S	Do.
	19.7	Apr. 19, 1940			
98	19	e/ 1934	-H	D,S,I	Cased with 262 feet of blank pipe and 6 feet of screen.

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) _{a/}
99	7½ miles southwest	Doyle Moreman	J. M. O'Neil	1928	265	2	--
1/100	8 miles southwest	F. J. Thomas	do.	1930	580	2	--
2/101	11 miles southwest	T. A. McDonald	do.	1928	225	2	--
1/102	9½ miles south	Mrs. L. Marsh	do.	1927	265	2	0.0
3/103	12½ miles southwest	D. L. McDonald Est.	do.	1928	216	4	--
104	do.	Calhoun County	F. B. Campbell	1939	226	4	0.0
105	13 miles southwest	John Tillery	do.	1925	51	4	0.0
106	12 miles southwest	H. T. Sonneman	H. T. Sonneman	1910	115	6	0.0
107	12 miles southwest	John Pilgram	J. M. O'Neil	1926	210	4	0.0
108	do.	W. F. Henie	do.	1928	212	2½	0.0
109	11 miles southwest	A. E. McDonald	do.	1929	32	1½	0.0
110	do.	C. Fox	do.	1930	80	1½	0.0
111	7¼ miles west	Alex Livingston Est.	do.	1901	20	2	0.0
112	5 miles west	Charles Brett	do.	1932	220	3½	0.0 1.6
113	5 miles west	L. J. Foster	W. E. Shell	1914	240	2½	--
114	3¼ miles northwest	A. E. McDonald	E. Speigel	1912	60	5½	0.0 0.8
1/115	3 miles northwest	Frank Lee Est.	J. H. Lee	1930	30	1¼	--
116	6½ miles west	J. A. Martin	J. M. Newlin	1916	48	4	0.0
117	5½ miles west	A. Y. Smith	do.	1906	30+	2	0.0
118	4¾ miles west	L. J. Foster	J. M. O'Neil	1930	201	2	0.0 1.2

No.	Water level		Date of measurement	Pump and power	Use of water	Remarks
	Depth below measuring point (ft.)	e/				
99	18+	e/	1934	C, W	D, S	Cased with 239 feet of blank pipe and six feet of screen. Supplies water for house and 100 head of cattle.
	19+	e/	1940			
100	12+	e/	1934	C, W	S	Cased with 570 feet of blank pipe and 10 feet of screen. Another water-bearing bed at 265 feet.
101	15+	e/	1934	C, W	D, S	Cased with 219 feet of blank pipe and 6 feet of screen.
102	8	e/	1934	C, W	D, S	Cased with 259 feet of blank pipe and 6 feet of screen.
	18	e/	1940			
103	22+	e/	1934	C, W	D, S	Cased with 60 feet of 4-inch and 150 feet of 2-inch blank pipe and 6 feet of screen. Another water-bearing bed at 60 feet.
104	16+	e/	1940	C, W	P	Cased to bottom. Supplies water for "Long Mott" School.
105	14.0		Mar. 11, 1940	C, W	D, S	Cased to bottom.
106	13+	e/	1940	C, W	D, S	Cased with 75 feet of 6-inch and 40 feet of 4-inch blank pipe.
107	23+	e/	1940	C, W	Ind	Cased with 190 feet of blank pipe and 20 feet of screen. Supplies water for gin.
108	16+	e/	1940	C, W	D, S	Cased to bottom.
109	23+	e/	1940	C, W	D, S	Do.
110	26+	e/	1940	C, W	S	Do.
111	13		July 23, 1934	C, W	D, S	Do.
112	13.5		June 25, 1934	C, W	D, S	Do.
	16.7		Apr. 11, 1940			
113	--		--	C, W	S	Cased to bottom. Other water-bearing beds at 25 and 60 feet.
114	12.5		June 23, 1934	C, W	S	Cased to bottom.
	13.8		Apr. 11, 1940			
115	22+	e/	1934	C, W	D, S	Do.
116	15.5		July 23, 1934	C, W	D, S	Do.
117	20+	e/	1940	C, W	D, S	Do.
118	12+	e/	1934	C, W	D, S	Cased with 195 feet of blank pipe and 6 feet of screen.
	16.5		Apr. 11, 1940			

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
119	3 $\frac{1}{2}$ miles	Mrs. E. Runk	J. M. O'Neil	1932	203	3	0.0
120	3 $\frac{1}{2}$ miles west	E. F. Kupatt	E. F. Kupatt	1932	28	6	0.0
121	2 miles west	W. A. Shofner	--	1914	233	2	--
122	5 $\frac{1}{4}$ miles southwest	do.	W. F. Kupatt	1914	51	4	0.0 0.9
123	3 miles southwest	W. P. Bracher	J. M. O'Neil	1934	240	3	0.0
124	In Port Lavaca	City of Port Lavaca	do.	1928	276	6	0.0
125	do.	do.	Layne-Texas Co.	1928	874	--	--
126	do.	Ice, Light & Power Co.	Ice, Light & Power Co.	1938	265	4	--
127	do.	Smith Bros.	J. M. O'Neil	1927	350	2	0.0
128	do.	S. C. Tisdale	do.	1930	245	2	0.0
129	2 $\frac{1}{2}$ miles southwest	A. F. Mickle	W. E. Shell	1919	256	2	--
130	1 mile southeast	Oblate Fathers	J. M. O'Neil	1929	375	2 $\frac{1}{2}$	0.0
131	1 $\frac{1}{2}$ miles south	M. P. & L. Rylander	W. E. Shell	1922	133	2	0.0
132	2 miles south	J. M. Mickle	do.	1909	134	2	0.0
133	2 $\frac{1}{2}$ miles south	Mrs. W. W. Wilson	A. Rendon	1932	360	2	--
134	1 mile northwest	J. M. Newlin, et al	World Oil Co.	1923	3,005	12 $\frac{1}{2}$	--
135	6 $\frac{1}{4}$ miles southwest	J. M. Martin	J. M. Newlin	1922	50	4	1.8
136	7 $\frac{1}{2}$ miles southwest	R. C. Woods	R. C. Woods	1935	44	4	1.9
137	9 $\frac{1}{2}$ miles southwest	Green Lake Loan & Security Co.	J. C. Williams	1936	70	4	0.0
138	10 $\frac{1}{2}$ miles southwest	C. A. Krause	A. Weaver	1926	60	4 $\frac{1}{2}$	0.0
139	12 miles southwest	L. R. Coward	B. Castle	1934	70	1 $\frac{1}{2}$	0.8
140	4 $\frac{1}{2}$ miles southwest	H. Thomas	J. M. O'Neil	1932	360	1 $\frac{1}{2}$	0.0
141	5 $\frac{1}{2}$ miles southwest	E. Hamilton	J. B. Shreate	1938	70	1 $\frac{1}{2}$	0.0
142	5 $\frac{1}{2}$ miles south	C. D. Fenner	--	1900+	60+	2	0.0

No.	Water level Depth below measuring point (ft.)	Date of measure- ment	Pump and power b/	Use of water c/	Remarks
119	8	June 23, 1934	C,H	D,S	Cased with 180 feet of blank pipe and 15 feet of screen. Other water-bearing beds at 15 and 60 feet.
	13.7	Apr. 11, 1940			
120	19	June 23, 1934	C,W	D,S	Cased to bottom.
121	6+	e/ 1934	C,W	D,S	
122	23.3	July 6, 1934	C,W	D,S	Cased to bottom.
	24.2	Apr. 19, 1940			
123	7	July 24, 1934	C,W	D,S	Cased with 234 feet of blank pipe and 6 feet of screen. An old well reworked.
124	7	July 30, 1934	A,L, 15	P	Cased with 246 feet of 6-inch and 5 feet of 4 $\frac{1}{2}$ -inch blank pipe and 25 feet of screen. Supplies water for
125	--	--	None	N	Abandoned. Salt water from City of Port Lavaca. sand at 301 feet. See log.
126	8+	e/ 1934	None	N	Abandoned.
127	+14	July 30, 1934	Flows	D,I	Cased with 330 feet of blank pipe and 20 feet of screen. Flow, 15 gallons a minute July, 1934.
128	+ 5	do.	Flows	D,I	Cased with 239 feet of blank pipe and 6 feet of screen.
129	7+	e/ 1934	C,W	D,I	
130	3	July 30, 1934	--G, --	D	Cased with 365 feet of blank pipe and 10 feet of screen.
131	9	Aug. 19, 1934	C,H	S	Cased with 125 feet of blank pipe and 3 feet of screen. Salt water. Other water-bearing beds at 20
132	9	do.	--	N	and 100 feet.
133	+ 5+	e/ 1934	Flows	S	Cased with 354 feet of blank pipe and 6 feet of screen. Flowing in 1934.
134	--	--	None	N	Oil test. See log.
135	17.9	Apr. 14, 1940	C,W	D,S	Cased to bottom.
136	16.4	do.	C,W	D,S	Do.
137	17.0	do.	C,W	D,S	Do.
138	30+	e/ 1940	C,W	D,S	Do.
139	56.0	Mar. 14, 1940	C,E, 1/3	D,S	Do.
140	19+	e/ 1940	C,W	D,S	Do.
141	14+	e/ 1940	C,H	D	Do.
142	12+	e/ 1940	C,E	D,S	Do.

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
143	5½ miles south	C. V. Hartman	J. M. O'Neil	1931	300+	2	0.0
144	6 miles south	W. D. Stevens	do.	1937	370	1½	0.0
145	6¼ miles south	C. V. Hartman	do.	1930	300+	1½	0.0
d/146	6¼ miles southwest	F. C. Thomas	The Texas Co.	1930	5,956	13-3/8	--
d/147	5¼ miles south	F. Jaster	M. Landcraft	1925	344	2	0.0
d/148	4½ miles south	J. R. Garner	J. M. O'Neil	1927	228	2	0.0
d/149	3¼ miles south	J. E. Briggs	--	Old	802	2	0.0
d/150	5½ miles south	A. L. Rebag	G. Raymark & M. Landcraft	1926	296	2	0.0
d/151	8 miles south	Temple Lumber Co.	J. M. O'Neil	1927	313	4	0.0 1.4
d/152	5 miles southeast	C. Peck	--	Old	--	3	0.0
d/153	6½ miles southeast	G. E. & C. Cole	J. M. O'Neil	1920	365	2	0.0
d/154	7 miles southeast	C. M. Foster	do.	1922	185	2	0.0
d/155	8¾ miles south	A. D. Gibson	H. Allen	1924	150	2	0.0
d/156	8½ miles south	Crain & Rich	J. B. Watkins	1924	366	4	0.0
d/157	9½ miles south	do.	--	1924	240	2½	0.0
d/158	10¼ miles south	L. J. Foster	W. E. Shell	1924	240	2	--
d/159	9¾ miles south	do.	H. Allen	1909	700	3	0.0
d/160	8¼ miles southeast	do.	--	Old	300+	3	0.0
d/161	9¾ miles southeast	Bayside Beach Co.	J. M. O'Neil	1926	365	2	0.0
162	8½ miles south	W. D. Stevens	do.	1935	350+	1½	0.0
163	7¾ miles south	Dr. D. W. Lucky	do.	1939	360	1½	0.0

^{a/} Measuring point was usually top of casing, top of pipe clamp or top of well curb.

^{b/} C, cylinder; Cf, centrifugal; T, turbine; H, hand; W, windmill; A, air lift; E, electric; G, gasoline; St, steam. Number indicates horsepower.

No.	Water level		Date of measurement	Pump and power by	Use of water c/	Remarks
	Depth below measuring point (ft.)	e/				
143	13+	e/	1940	C,W	D,S	Cased to bottom.
144	25+	e/	1940	C,W	S	Do.
145	17+	e/	1940	C,W	S	Do.
146	--	--	--	None	N	Oil test. See log.
147	17+	e/	1934	C,W	D,S	Cased with 338 feet of blank pipe and 6 feet of screen.
	13+	e/	1940			
148	13+	e/	1934	C,W	D,S	Cased with 222 feet of blank pipe and 6 feet of screen.
	13+	e/	1940			
149	+ 2+		Aug. 11, 1934	Flows	S	Flow, 2+ gallons a minute August, 1934.
150	4		July 3, 1934	C,H	D,S	Cased with 292 feet of blank pipe and 4 feet of screen.
151	5.3		July 6, 1934	C,W	S	Cased with 40 feet of 4-inch and 265 feet of 2-inch blank pipe and 6 feet of screen.
	6.2		Mar. 21, 1940			
152	12.8		July 3, 1934	C,H	S	
153	+ 4+		do.	C,W	D,S	Cased with 359 feet of blank pipe and 6 feet of screen. Flow, 7 gallons a minute July, 1934.
154	12+	e/	1934	C,W	D,S	Cased with 175 feet of blank pipe and 10 feet of screen.
155	12+	e/	1934	C,W	S	Temperature 75 $\frac{1}{2}$ ° F in 1934.
156	+ 1		July 3, 1934	C,W	S	Temperature 76° F in July, 1934.
157	12		do.	C,W	S	Temperature 77° F in July, 1934.
158	12+	e/	1934	C,W	S	Temperature 75 $\frac{1}{2}$ ° F in 1934.
159	+ 2		July 3, 1934	Flows	S	Temperature 73° F in July, 1934.
160	+ 1		do.	C,W	S	
161	+ 3		do.	Flows	S	Cased with 355 feet of blank pipe and 10 feet of screen. Flow, 5 gallons a minute July, 1934.
162	22+	e/	1940	C,W	S	Cased to bottom.
163	17+		do.	C,W	D,S	Do.

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

Records of wells in Calhoun County--Continued

No.	Distance from Port Lavaca	Owner	Driller	Date	Depth completed (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
164	9 miles south	Robert Streeter	Robert Streeter	1939	70	4	1.1
165	8 $\frac{3}{4}$ miles south	O. P. Roemer	J. M. O'Neil	1912	330	2	0.0
166	do.	D. C. Roemer	do.	1910	300	1 $\frac{1}{2}$	0.0
167	do.	O. P. Roemer	do.	1920	335	2	0.0
168	9 $\frac{1}{2}$ miles south	Dr. F. Roemer	P. L. Campbell	1925	75	3	0.0
169	9 miles southwest	O. Roemer	B. Newland	1939	70	2	0.0
170	10 $\frac{1}{4}$ miles	O. R. Doworaczyk	J. M. O'Neil	--	275	4	1.8

No.	Distance from Seadrift	Owner	Driller	Date	Depth completed (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
171	4 $\frac{3}{4}$ miles northwest	W. D. Stevens	W. D. Stevens	--	29	5- 3/16	0.0
d/172	3 $\frac{1}{4}$ miles north	Noel Walker	Noel Walker	1928	82	4 $\frac{1}{2}$	0.0 1.1
d/173	4 miles north	T. A. McDonald	J. M. O'Neil	1928	240	4 $\frac{1}{2}$	0.0
d/174	3 miles northwest	J. Roemer	J. Roemer	1932	15	6	0.0
d/175	2 $\frac{3}{4}$ miles northwest	do.	do.	1894	90	4	0.0
d/176	2 miles north	Isabella Walker	--	--	59	4	0.0
177	3 $\frac{1}{4}$ miles northeast	L. R. Johnson	P. B. Campbell	1928	75	4	0.0 0.0
d/178	2 $\frac{1}{4}$ miles northwest	M. G. Cloudt Est.	--	--	68	6	0.0
d/179	4 $\frac{1}{2}$ miles east	Scott F. Taylor	J. M. O'Neil	1928	273	4	0.0
d/180	7 $\frac{1}{2}$ miles east	P. R. Austin Est.	do.	1927	309	2	0.0
d/181	In Seadrift	R. Ryan	P. B. Campbell	1932	78	4 $\frac{1}{2}$	0.0
d/182	do.	John Dierlam, Hotel LaFitte	W. E. Shell	1914	320	3	0.0

^{a/} Measuring point was usually top of casing, top of pipe clamp or top of well curb.

^{b/} C, cylinder; Cf, centrifugal; T, turbine; H, hand; W, windmill; A, air lift; E, electric; G, gasoline; St, steam. Number indicates horsepower.

Water level					
No.	Depth below measuring point (ft.)	Date of measurement	Pump and power	Use of water	Remarks
			b/	c/	
164	13.7	Apr. 8, 1940	C,W	S	Cased to bottom.
165	14 ⁺	e/ 1940	C,W	D,S	Do.
166	15 ⁺	e/ 1940	C,W	D,S	Do.
167	12 ⁺	e/ 1940	C,W	S	Do.
168	+ 0.5	Mar. 20, 1940	Flows C,H	D,S	Cased to bottom.
169	13 ⁺	e/ 1940	C,W	S	Do.
170	6.0	Mar. 20, 1940	C,W	D,S	Do.

Water level					
No.	Depth below measuring point (ft.)	Date of measurement	Pump and power	Use of water	Remarks
			b/	c/	
171	21.5	July 6, 1934	C,W	D,S	Cased to bottom.
	21.6	Mar. 11, 1940			
172	20	July 20, 1954	C,W	D,S	
	21.6	Mar. 8, 1940			
173	14.6	July 20, 1934	C,W	D,S	Cased with 20 feet of 4 ⁺ -inch and 214 feet of 2-inch blank pipe and 6 feet of screen.
174	14	July 6, 1934	C,W	S	
175	16	do.	C,H	D,S	
176	18.5	do.	C,W	D,S	
177	16	July 6, 1934	C,W	D,S	Cased to bottom.
	16 ⁺	e/ 1940			
178	20	July 6, 1954	C,W	D,S	
179	2	July 27, 1934	C,W	D,S	Cased with 20 feet of 4-inch and 243 feet of 2-inch blank pipe and 10 feet of screen.
180	+ 0.3	July 10, 1934	C,W	S	Cased with 301 feet of blank pipe and 8 feet of screen. Known as "Buzzard" well.
181	16	July 6, 1934	C,E	S	Cased to bottom. Temperature 76 ¹⁰ ° F in July, 1934.
182	+ 0.5	do.	C,E	D	

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells in Calhoun County--Continued

No.	Distance from Seadrift	Owner	Driller	Date	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
183	In Seadrift	City of Seadrift	--	1912	360+	4	0.0
d/184	2 $\frac{1}{2}$ miles east	John Gates	W. E. Shell	1913	65	6	0.0 1.2
185	2 $\frac{3}{4}$ miles east	Missouri Pacific R.R.	J. M. O'Neil	1934	201	2	0.0
d/186	2 miles southeast	A. L. Gaines	A. L. Gaines	1926	24	2	0.0
d/187	3 $\frac{1}{2}$ miles southeast	J. J. Welder	G. H. Laughter	--	477	2 $\frac{1}{2}$	0.0
d/188	do.	do.	--	Old	60	4 $\frac{1}{2}$	0.0
189	4 $\frac{1}{4}$ miles southeast	do.	J. M. O'Neil	1926	265	2	0.0
190	3 $\frac{1}{4}$ miles southeast	do.	do.	1934	92	8	0.0 1.0
d/191	4 $\frac{1}{2}$ miles southeast	do.	G. H. Laughter	--	334	2 $\frac{1}{2}$	0.0
192	4 miles south	do.	do.	1923	325	2 $\frac{1}{2}$	0.0
d/193	5 $\frac{1}{4}$ miles southeast	do.	J. M. O'Neil	1924	286	2 $\frac{1}{2}$	0.0
d/194	5 $\frac{1}{2}$ miles southeast	do.	G. H. Laughter	1923	327	2 $\frac{1}{2}$	0.0
d/195	6 $\frac{1}{4}$ miles southeast	do.	J. M. O'Neil	1926	350	2	0.0
196	7 $\frac{1}{4}$ miles southeast	do.	do.	1926	325	2	0.0
197	6 $\frac{1}{2}$ miles east	do.	do.	1939	30	4	2.1
198	5 miles southeast	do.	do.	1938	31	4	2.3
199	3 $\frac{3}{4}$ miles southeast	do.	Coronado Oil Co.	1939	85	6	3.0
200	2 $\frac{1}{2}$ miles southeast	City of Seadrift	Sprigel & Richardson	1939	86	6	0.0
201	1 $\frac{1}{2}$ miles southeast	A. E. Nulliers	A. E. Nulliers	1939	22	1 $\frac{1}{2}$	0.0
202	In Seadrift	A. Howes	W. E. Shell	1925	360	2	0.5
203	$\frac{3}{4}$ mile west	George Bindewald	-- Livingston	1914	300+	4	1.1
204	2 miles northwest	J. P. Hardy	J. P. Hardy	1915	46	4	0.0

No.	Water level Depth below measuring point (ft.)	Date of measure- ment	Pump and power b/	Use of water c/	Remarks
183	14	July 6,	C,W	D,S	
184	16	July 27, 1934 9.1 Mar. 6, 1940	C,W	D,S	Cased to bottom.
185	6+	e/ 1934	C,W	S	Cased with 170 feet of blank pipe and 10 feet of screen. Known as "Lela Pens" well.
186	11+	e/ 1934	C,W	D,S	
187	+0.5	July 9, 1934	C,W	S	See log.
188	20	do.	C,W	S	
189	+4	e/ 1934 0.0 Mar. 8, 1940	C,W	S	Cased with 250 feet of blank pipe and 15 feet of screen.
190	28	July 9, 1934 36 Feb. 20, 1940	C,W	D	Cased to bottom. Known as "Ranch House" well.
191	+4+	e/ 1934	Flows	S	Flowed salty water in 1934. Known as "Wat" well. See log.
192	+0.5	July 9, 1934 0.0 Mar. 8, 1940	C,W	S	Cased with 315 feet of blank pipe and 10 feet of screen. Known as "Mosquito Point" well. See log.
193	+2	July 9, 1934	Flows	S	Cased with 276 feet of blank pipe and 10 feet of screen. Flowed salty water in July, 1934.
194	+2	do.	C,W	S	See log.
195	+2	do.	Flows	S	Cased with 340 feet of blank pipe and 10 feet of screen. Flow 5 gallons a minute, July, 1934.
196	+2	do.	Flows	S	Cased with 305 feet of blank pipe and 20 feet of screen. Another water-bearing bed at 260 feet. Known
197	20.0	Mar. 8, 1940	C,W	S	Cased to bottom. Known as "Steel Mill" well.
198	15.2	do.	C,W	S	Cased to bottom. Known as "Cut-off" well.
199	15.0	do.	St.	Ind	Cased to bottom. Yield 90 gallons a minute. Used for drilling oil test.
200	12+	e/ 1940	Cf,E, 2	P	Cased top 70½ feet. Yield 48 gallons a minute from gravel. Supplies water for City of Seadrift.
201	5+	e/ 1940	C,H	D,S	Cased to bottom.
202	10.2	Feb. 24, 1940	C,W	D	Cased with 340 feet of blank pipe and 20 feet of screen.
203	11.2	Mar. 6, 1940	C,W	D,S	Cased to bottom.
204	25+	e/ 1940	C,W	D,S	Do.

Records of wells in Calhoun County--Continued

No.	Distance from Seadrift	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
205	1 $\frac{3}{4}$ miles northwest	E. P. Hardman	E. P. Hardman	1912	46	4	0.0
d/206	8 $\frac{1}{2}$ miles east	San Antonio Loan & Trust Co.	J. M. O'Neil	1925	422	2	0.0
207	13 miles east	do.	do.	1934	550	2	0.0
d/208	14 $\frac{1}{4}$ miles east	do.	do.	1934	556	2	0.0
209	16 $\frac{1}{4}$ miles east	do.	do.	1928	709	2	0.0
d/210	15 $\frac{1}{2}$ miles east	do.	do.	1934	26	2	0.0
211	15 $\frac{1}{2}$ miles east	do.	do.	1928	560	2	0.0
212	18 miles east	do.	do.	1928	530	2	0.0
d/213	do.	do.	W. E. Shell	1901	494	--	0.0
214	16 $\frac{1}{2}$ miles east	do.	J. M. O'Neil	1934	571	2	0.0
215	In Port O'Connor	City of Port O'Connor	W. E. Shell	1910	630	4	0.0
d/216	do.	do.	do.	--	150	--	0.0
d/217	do.	do.	do.	--	1,300	--	--
d/218	do.	Mrs. W. Pickett	George Wallington	1922	27	2	0.0
d/219	do.	Thomas Reagan	J. M. O'Neil	1932	316	2 $\frac{1}{2}$	0.0
220	do.	M. F. Munsch	M. F. Munsch	1934	150	1 $\frac{1}{2}$	0.0 1.0
d/221	19 miles east	C. E. Fisher	J. M. O'Neil	1928	226	2	--
d/222	18 $\frac{1}{4}$ miles east	United States Coast Guard	do.	1934	301	2	0.0
d/223	10 $\frac{1}{2}$ miles east	W. L. Moody	Continental Oil Co.	1934	419	7	0.0

No.	Water level Depth below measuring point (ft.)	Date of measure- ment	Pump and power b/	Use of water c/	Remarks
205	13.5	Mar. 8, 1940	C,W	S	Cased to bottom.
206	+0.3	July 10, 1934	Flows	S	Cased with 402 feet and 20 feet of screen. Known as "Coloma" well.
207	+6+	e/ 1934	Flows	D,S	Cased with 534 feet of blank pipe and 16 feet of screen. Flow, 15 gallons a minute in 1934; 10 gallons a minute March, 1940. Temperature 77° F in 1934.
208	+9+	e/ 1934	Flows	S	Cased with 538 feet of blank pipe and 18 feet of screen. Flow, 20+ gallons a minute in 1934. Known as "John Wood" well. See log.
209	+4+	e/ 1934	Flows	S	Cased with 689 feet of blank pipe and 20 feet of screen. Temperature 77° F in 1934. Flow, 6 gallons a minute in 1934 and in March 1940. Known as "New Powder Horn" well.
210	6+	e/ 1934	C,W	S	
211	+6+	e/ 1934	Flows	S	Cased with 540 feet of blank pipe and 10 feet of screen. Flow, 8+ gallons a minute in 1934; 5 gallons a minute in March, 1940. Temperature 77° F in 1934.
212	+1.5	July 10, 1934	Flows	D,S	Cased with 520 feet of blank pipe and 10 feet of screen. Flow, 3+ gallons a minute in July, 1934; 5 gallons a minute in March, 1940. Known as "Griffin" well.
213	+6+	e/ 1934	Flows	N	1940. Known as "Broad Bayou" well.
214	+7+	e/ 1934	Flows	S	Cased with 561 feet of blank pipe, and 10 feet of screen. Temperature 79° F in 1934. Flow, 20+ gallons a minute in 1934; 5 gallons a minute March, 1940.
215	+6.5	e/ 1934	Flows	P	Cased with 590 feet of blank pipe and 20 feet of screen. Flow, 15 gallons a minute in 1934; 50 gallons a minute February 1940. Supplies water for City of Port O'Connor. Known as "Boggy Bayou" well. See log.
	+6.5	e/ 1940			
216	1.5	e/ 1934	None	N	Water-bearing bed at 110 feet.
217	--	--	None	N	Water-bearing bed at 630 feet.
218	2	July 27, 1934	C,W	D,S	
219	+5	July 27, 1934	Flows	Ind	Cased with 302 feet of blank pipe and 14 feet of screen. Temperature 76° F in March, 1934. Flow, 15 gallons a minute July, 1934. Used for cooling purposes by ice plant.
	+6.0	Mar. 4, 1940			
220	0	July 27, 1934	C,G, 1	D,S	Cased to bottom. See log.
	12.0	Feb. 23, 1940			
221	--	--	Flows	D	Cased with 226 feet of blank pipe and 6 feet of screen. Flow, 5 gallons a minute July, 1934.
222	+2+	Aug. 14, 1934	Flows C,E, 1/2	D	Cased with 291 feet of blank pipe and 10 feet of screen. Flow, 1 gallon a minute August, 1934.
223	12+	e/ 1934	S+	Ind	Used for drilling oil test.

Records of wells in Calhoun County--Continued

No.	Distance from Seadrift	Owner	Driller	Date completed	Depth (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) _{a/}
224	10 $\frac{3}{4}$ miles east	W. L. Moody	M. Landcraft	1954	449	2	0.0
225	12 $\frac{3}{4}$ miles east	do.	J. M. O'Neil	1924	625	2	0.0
226	13 miles east	do.	do.	1924	450+	2	0.0
227	15 miles east	San Antonio Loan & Trust Co.	do.	--	540	2 $\frac{1}{2}$	0.0
228	14 miles east	W. L. Moody	do.	1924	530	2 $\frac{1}{2}$	0.0
229	14 $\frac{1}{2}$ miles east	do.	do.	1924	535	4	0.0
230	16 miles east	do.	--	1930	20	2	0.0
231	16 $\frac{1}{2}$ miles east	San Antonio Loan & Trust Co.	A. Nutt	1936	25	2	0.0
232	18 $\frac{3}{4}$ miles east	United States Coast Guard	M. F. Munsch	1939	495	2	0.0
233	18 miles east	Dan Bremer	E. A. Munsch	1939	240	2	0.0
234	18 $\frac{1}{4}$ miles east	E. A. Munsch	do.	1939	230	2	0.0
235	In Port O'Connor	Sidney Albrecht	M. F. Munsch	1938	140	1 $\frac{1}{2}$	0.0
236	do.	Thomas Reagan	do.	1932	150	2	0.0
237	16 $\frac{1}{2}$ miles east	San Antonio Loan & Trust Co.	A. Nutt	1939	22	2	0.0
238	14 miles east	do.	Rebasters & Pomeroy	1940	1,180	2 $\frac{1}{2}$	0.0
239	10 $\frac{1}{4}$ miles east	do.	--	1938	25	2	--
240	10 $\frac{1}{2}$ miles east	do.	--	1937	25	2	--
241	do.	W. L. Moody	--	1933	22	2	--
242	7 $\frac{1}{2}$ miles east	San Antonio Loan & Trust Co.	A. Nutt	1937	25	2	--
243	6 miles east	G. Durham	G. Durham	1932	25	1 $\frac{1}{2}$	0.0
244	5 $\frac{1}{4}$ miles east	J. J. Dalehite	L. Woolridge	1939	21	2	0.0

Water level									
No.	Depth below measuring point (ft.)	Date of measurement	Pump and power	Use of water	Remarks				
224	+3	Aug. 14, 1934	Flows	S	Cased to bottom. Flow, 5 gallons a minute August, 1934; 7 gallons a minute March, 1940.				
	+2	Mar. 4, 1940							
225	+2+	Aug. 14, 1934	Flows	S	Cased with 615 feet of blank pipe and 10 feet of screen. Temperature 78° F. in August, 1934. Flow, 5 gallons a minute August, 1934 and March, 1940. Known as "Little Brush" well.				
226	+4+	do.	Flows	S	Cased to bottom. Temperature 78° F. in August, 1934. Flow, 8+ gallons a minute August, 1934; 9 gallons a minute March, 1940. Known as "Queen" well.				
227	+6+	July 10, 1934	Flows	S	Cased to bottom. Temperature 78° F. in July, 1934. Flow, 10 gallons a minute July, 1934 and March, 1940. Known as "Stevenson" well.				
228	+4+	July 13, 1934	Flows	S	Cased with 505 feet of blank pipe and 25 feet of screen. Temperature 73° F. in July, 1934. Flow, 35 gallons a minute originally; 10 gallons a minute July, 1934; 20 gallons a minute March, 1940. Known as "Big" well.				
	+4	Mar. 4, 1940							
229	+5+	e/ 1934	Flows	S	Cased to bottom. Temperature 79° F. in 1934. Flow, 15+ gallons a minute in 1934; 8 gallons a minute March, 1940.				
	+5	Mar. 4, 1940							
230	5+	e/ 1934	C,W	D,S	Cased to bottom.				
231	3	e/ 1940	C,W	D,S	Do.				
232	+7	Feb. 24, 1940	Flows	D	Cased with 475 feet of blank pipe and 20 feet of screen. Flow, 7 gallons a minute February, 1940. Supplies water for Coast Guard Station.				
233	5	e/ 1940	C,G, 5	D,S	Cased with 230 feet of blank pipe and 10 feet of screen. Originally flowed.				
234	10	e/ 1940	C,E, 1	D,S	Cased with screen point on bottom.				
235	1	e/ 1940	C,E, 1/2	D	Cased with 135 feet and 5 feet of screen. Reported yield, 15 gallons a minute.				
236	6	e/ 1940	C,G, 25	D,Ind	Cased with 140 feet and 10 feet of screen. Supplies water for ice plant. Originally flowed.				
237	5	e/ 1940	C,W	D,S	Cased to bottom.				
238	+2	Feb. 14, 1940	Flows	D,S	Cased with 1,140 feet of blank pipe and 40 feet of screen. Flow, 3 gallons a minute in February, 1940.				
239	--	--	C,W	S	Cased with screen point on bottom. See log.				
240	--	--	C,W	D,S	Do.				
241	--	--	C,W	D,S	Do.				
242	--	--	C,W	S	Do.				
243	6	e/ 1940	C,W	S	Do.				
244	6	e/ 1940	C,W	D,S	Do.				

Records of wells in Calhoun County--Continued

No.	Distance from Seadrift	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
245	5 $\frac{1}{4}$ miles east	J. J. Dalehite	L. Woolridge	1939	22	2	0.0
246	4 $\frac{1}{2}$ miles east	A. L. Chauder	A. L. Chauder	1939	22	2	0.0
247	4 $\frac{1}{2}$ miles east	J. J. Welder	J. M. O'Neil	1936	75	4	2.6
248	5 miles east	J. J. Dalehite	L. Woolridge	1939	24	2	0.0
249	do.	M. E. Lee	M. E. Lee	1935	22	1 $\frac{1}{2}$	0.0
250	3 miles east	L. Woolridge	W. E. Shell	1912	70	4	1.6
251	2 $\frac{1}{4}$ miles east	A. B. Clark	W. F. Denner	--	25	2	0.8
252	do.	Goff Est.	--	1926	24	1 $\frac{1}{2}$	0.0
253	1 mile east	Thomas Dowdy	David Williams	1925	65	4	0.9
254	In Seadrift	City of Seadrift	W. E. Shell	1922	312	1 $\frac{1}{2}$	0.0
255	$\frac{3}{4}$ mile northeast	Clarence Barton	Clarence Barton	1934	65	4	0.0
256	2 miles north	A. Makay	A. Makay	1902	54	4	--
257	2 $\frac{1}{2}$ miles north	W. F. Holloman	A. L. Newley	1930	65	2	0.0
258	4 miles north	T. A. McDonald	T. A. McDonald	--	78	4	2.0
259	3 miles north	G. L. Smith	G. L. Smith	1940	54	3	1.1
260	4 $\frac{1}{4}$ miles northeast	Mrs. S. McCowan	-- Campbell	1920	50	4	0.0
261	4 $\frac{3}{4}$ miles northeast	Paul Boone	Paul Boone	1938	78	4	0.0
262	1 $\frac{1}{2}$ miles southeast	Charles Dierlam	Charles Dierlam	1933	10	30	1.7
263	1 $\frac{3}{4}$ miles southeast	Walter Viles	--	--	--	--	--
264	do.	do.	--	--	20	--	--
265	2 miles southeast	W. J. Brownell	--	1913	21	--	--
266	In Seadrift	City of Seadrift	Layne-Texas Co.	1936	361	10	--

a/ Measuring point was usually top of casing, top of pipe clamp or top of well curb.

b/ C, cylinder; Cf, centrifugal; T, turbine; H, hand; W, windmill; A, air lift; E, electric; G, gasoline; St, steam. Number indicates horsepower.

No.	Water level		Date of measurement in: point (ft.)	Pump and power b/ c/	Use of water d/ e/	Remarks
	Depth below measur- ment (ft.)	e/ 1940				
245	7	e/ 1940		C,W	S	Cased with screen point on bottom.
246	6	e/ 1940		C,W	D,S	Cased with screen point on bottom. Reported sunoly fails in drought.
247	16.2	Mar. 8, 1940		C,W	S	Cased to bottom.
248	7	e/ 1940		C,W	S	Cased with screen point on bottom.
249	6	e/ 1940		C,W	D,S	Do.
250	9.8	Mar. 6, 1940		C,W	D,S	Cased to bottom.
251	6.0	do.		C,W	D,S	Do.
252	6	e/ 1940		C,W	D,S	Cased with screen point on bottom.
253	12.9	Mar. 6, 1940		C,W	D,S	Cased to bottom.
254	16	Feb. 24, 1940		C,W	S	Cased with 302 feet of blank pipe and 10 feet of screen.
255	13.5	Mar. 6, 1940		C,W	S	Cased to bottom.
256	13	e/ 1940		C,W	D,S	Do.
257	20	e/ 1940		C,W	D,S	Cased to bottom. Supplies water for seven houses in cotton season.
258	18.0	Mar. 8, 1940		C,W	S	Cased to bottom.
259	13.0	Mar. 19, 1940		C,W	D,S	Do.
260	22	e/ 1940		C,W	D,S	Do.
261	17	e/ 1940		C,W	S	Do.
262	8.0	June 7, 1938		None	D,S	Dug well cased with oil barrels.
263	--	--		--	--	Well 264 is 150 feet south.
264	--	--		B,H	S	No casing used.
265	--	--		C,H	D,S	Do.
266	3	e/ 1936		I, I, 10	P	Reported 23 feet drawdown pumping 92 gallons a minute, September, 1936. See log and casing record.

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

b/ No water sample collected for analysis.

e/ Water level reported.

Table of Drillers' Logs, Calhoun County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 3</u>		
(P. H. Welder Owner)		
Black soil - - - - -	2	2
White and yellow clay - - - -	38	40
Sand and gravel - - - - -	10	50
White clay - - - - -	80	130
Sand - - - - -	20	150
Yellow clay and boulders - - -	10	160
Sand - - - - -	10	170
Yellow clay - - - - -	10	180
Sand - - - - -	35	215
Streaks of sand and clay - - -	25	240
Coarse sand - - - - -	20	260
Blue clay - - - - -	15	275
Sand - - - - -	10	285
Blue clay - - - - -	10	295
Sand - - - - -	20	315
Blue and yellow clay - - - -	25	340
Sand - - - - -	20	360
Blue clay and boulders - - -	10	370
Sand - - - - -	10	380
Blue clay - - - - -	20	400
Red and yellow clay - - - -	30	430
Sand - - - - -	10	440
White and yellow clay - - - -	100	540
Hard and soft blue streaks -	40	580
Fine blue sand - - - - -	10	590
Blue and yellow clay - - - -	110	700
Red clay and boulders - - - -	10	710
Red and blue clay - - - - -	10	720
Sand and gravel, some gas - - -	20	740

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 4</u>		
(P. H. Welder Owner)		
Soil - - - - -	2	2
Yellow clay - - - - -	14	16
Sand - - - - -	14	30
Yellow clay - - - - -	70	100
Sand - - - - -	10	110
Blue clay - - - - -	10	120
Sand - - - - -	10	130
Yellow clay - - - - -	5	135
Sand - - - - -	10	145
Yellow clay - - - - -	10	155
Sand - - - - -	20	175
Blue clay - - - - -	10	185
Sand - - - - -	15	200
Blue clay - - - - -	15	215
Sand - - - - -	35	250
Blue clay - - - - -	10	260
Sand - - - - -	30	290

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 4-Continued</u>		
Blue hard clay - - - - -	10	300
Sand - - - - -	10	310
Blue clay - - - - -	8	318
Sand - - - - -	7	325
Light blue clay - - - - -	10	335
Sand - - - - -	10	345
Red and brown clay - - - - -	55	400
Sand - - - - -	10	410
Brown clay - - - - -	10	420
Sand - - - - -	20	440
Brown clay - - - - -	10	450
Good sand - - - - -	10	460
Narrow streaks sand and clay - - - - -	55	515
Blue hard clay - - - - -	35	550
Good sand - - - - -	10	560
Red and white clay - - - - -	45	605
Fine blue sand - - - - -	20	625
White and red clay - - - - -	95	720
Sand - - - - -	5	725
White and blue clay - - - - -	35	760
Red clay - - - - -	40	800
Fine sand - - - - -	5	805
Rock and clay - - - - -	2	807
Coarse sand - - - - -	20	827

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 5</u>		
(P. H. Welder Owner)		
Soil - - - - -	5	5
White clay and pebbles - - - -	18	23
White clay, sheets fine sand -	10	33
Clay and sand, broken - - - -	12	45
Yellow clay - - - - -	10	55
Light gray sugar sand - - - -	11	66
Yellow clay - - - - -	56	122
Sharp coarse white sand - - -	9	131
Yellow clay - - - - -	21	152
Sand - - - - -	16	168
Sand, clay, and boulders - - -	22	190
Fine sand - - - - -	10	200
Yellow clay and rock - - - - -	5	205
Coarse gray sand, water - - -	24	229
White clay - - - - -	11	240
Sand - - - - -	6	246
Clay and boulders (line) - - -	28	274
Sand - - - - -	30	304

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 6</u>		
(P. H. Welder Owner)		
(Continued on next page)		

Table of Drilling in Grant Colhoun County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 6--Continued</u>		
Soil - - - - -	2	2
Red clay - - - - -	13	20
Sand - - - - -	24	44
Red clay - - - - -	76	120
Sand - - - - -	180	300
White clay - - - - -	13	313
Clay and rock - - - - -	12	325
Sand - - - - -	19	344
Clay - - - - -	12	356
Sand - - - - -	38	394
Clay - - - - -	20	414
Rock and sand - - - - -	20	434
Clay - - - - -	20	454
Sand - - - - -	10	464
Soft clay - - - - -	30	494
Hard rock - - - - -	3	497
Dark sand - - - - -	27	524
Clay and rock - - - - -	20	544
Good sand - - - - -	18	562
Brown sand - - - - -	32	594
Sand - - - - -	22	616
Clay - - - - -	12	628
Sand - - - - -	16	644
Clay - - - - -	7	651
Sand - - - - -	10	661
Dark brown clay - - - - -	62	723
Sand rock - - - - -	8	731
Fine sand - - - - -	14	745
Clay, rock, and sand - - - - -	53	798
Hard black and white clay - - - - -	30	828
Clay and rock - - - - -	30	858
Red clay - - - - -	5	863
Coarse sand - - - - -	22	885

Driller's log of well 7

(F. H. Welder Owner)

Sand - - - - -	2	2
Clay - - - - -	10	12
Sand - - - - -	13	25
Red clay - - - - -	30	55
Coarse sand - - - - -	20	75
Red clay - - - - -	5	80
Fine brown sand - - - - -	10	90
White clay - - - - -	10	100
Sand - - - - -	15	115
White clay - - - - -	25	140
Fine sand - - - - -	10	150
Gravel and sand - - - - -	22	172
Clay - - - - -	2	174
Sand - - - - -	30	204

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 8--Continued</u>		
Clay - - - - -	1	205
Sand - - - - -	13	218
Boulders - - - - -	6	224
Brown shale - - - - -	11	235
Fine sand - - - - -	5	240
Blue clay - - - - -	18	258
Sand - - - - -	15	273
White clay - - - - -	7	280
Sand and gravel - - - - -	13	293
Clay - - - - -	2	300
Sand - - - - -	3	303
Red and blue clay - - - - -	14	322
Sand - - - - -	5	327
Hard clay - - - - -	63	390
Sand - - - - -	7	400
Red clay - - - - -	31	433
Sand and rock - - - - -	5	438
Clay - - - - -	22	460
Coarse sand - - - - -	7	467
Mixed clay - - - - -	28	495
Sand and rock - - - - -	7	502
Hard clay - - - - -	3	505
Sand - - - - -	2	507
Clay - - - - -	3	510
Sand - - - - -	13	523
White and blue clay - - - - -	175	698
Sand and rock - - - - -	12	710
White and blue clay - - - - -	70	780
Sand - - - - -	10	790
Red shale - - - - -	25	815
Sand and gravel - - - - -	30	845

Driller's log of well 10

(P. W. Welder Owner)

Yellow clay - - - - -	50	50
Sand - - - - -	10	60
Streaks yellow clay and sand - - - - -	162	222
Blue and brown clay - - - - -	143	365
Very hard rock - - - - -	1	366
Blue and brown clay - - - - -	145	511
Red and blue clay - - - - -	20	531
White, blue and red clay - - - - -	160	691
Soft light blue clay - - - - -	40	731
Soft red clay - - - - -	20	751
Striped red and blue clay - - - - -	40	791
Sand - - - - -	2	793
Clay, red and blue - - - - -	5	798
Sand, gravel, gas - - - - -	16	814

Table of Driller's logs, Calhoun County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 11</u>		
(P. H. Welder Owner)		
Soil - - - - -	5	5
Sand - - - - -	10	15
Mud - - - - -	5	20
Sand and gravel - - - - -	25 1/2	27 1/2
Gravel - - - - -	15	29 1/2
Blue clay - - - - -	10	30 1/2
Coarse gravel - - - - -	20	32 1/2
Clay - - - - -	2	34 1/2
Sand - - - - -	13	37 1/2
Clay - - - - -	10	47 1/2
Sand - - - - -	10	57 1/2
Brown clay - - - - -	56	113 1/2
Coarse sand (gss) - - - - -	7	120 1/2
Clay - - - - -	20	140 1/2
Sand - - - - -	2	142 1/2
White clay - - - - -	13	155 1/2
Sand - - - - -	6	161 1/2
White clay - - - - -	16	177 1/2
Sand - - - - -	10	187 1/2

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 12</u>		
(P. H. Welder Owner)		
Brown sand - - - - -	10	10
White sand - - - - -	10	20
Yellow clay - - - - -	40	60
Blue clay - - - - -	60	120
Sand - - - - -	5	125
Wood - - - - -	3	128
Blue and white clay - - - - -	52	180
Blue clay - - - - -	40	220
Hard rock - - - - -	1	221
Sand - - - - -	9	230
Light blue clay - - - - -	70	300
Sand - - - - -	20	320
Narrow streaks sand and clay - - - - -	40	360
Sand - - - - -	15	375
Hard blue clay - - - - -	20	395
Hard white rock - - - - -	2	397
Streaks red clay and sand - - - - -	47	444
Streaks blue clay and sand - - - - -	36	480
Sand - - - - -	15	495
Very hard red clay - - - - -	5	500
Sand, strong or carries water - - - - -	26	526
Red and blue clay - - - - -	100	626
Soft white clay and rusty rock - - - - -	5	631
Pack sand - - - - -	15	646
Soft white clay, hard blue clay - - - - -	64	710

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 12-Continued</u>		
Gravel, gss - - - - -	18	758

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 13</u>		
(P. H. Welder Owner)		
Soil - - - - -	2	2
Red clay - - - - -	15	17
Sand - - - - -	15	32
Clay - - - - -	10	42
Sand - - - - -	25	67
White clay - - - - -	41	108
Sand - - - - -	10	118
Clay - - - - -	14	132
Sand - - - - -	20	152
Good sand - - - - -	45	197
White clay - - - - -	4	201
Sand - - - - -	42	243
Clay - - - - -	6	249
Sand - - - - -	27	276
Clay - - - - -	5	281
Sand - - - - -	12	293
White clay - - - - -	27	320
Fine sand - - - - -	15	335
White, blue clay - - - - -	71	406
Sand - - - - -	7	413
Brown clay - - - - -	12	425
Sand - - - - -	40	465
White and red clay - - - - -	20	485
Sand - - - - -	10	495
White and blue clay - - - - -	23	518
Sand - - - - -	11	529
Blue and white clay - - - - -	13 1/2	542 1/2
Sand - - - - -	6	548 1/2
Red clay - - - - -	4 1/2	553 1/2
Sand and gravel - - - - -	3 1/2	557 1/2

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 14</u>		
(P. H. Welder Owner)		
Brown dirt - - - - -	10	10
Sand - - - - -	20	30
Yellow clay - - - - -	30	60
Coarse sand - - - - -	16	76
Red clay - - - - -	24	100
White clay - - - - -	20	120
Sand - - - - -	15	135
Streaks clay and rock - - - - -	2	137
Sand and thin rock - - - - -	15	152
Sand - - - - -	25	177

(Continued on next page)

Table of Driller's Logs, Colliery County-Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 14-Continued</u>		
(P. H. Welder Owner)		
Blue clay	10	135
Sand	10	145
Blue clay	10	155
Sand	25	180
Blue clay	10	190
White clay	30	220
Sand	10	230
Light blue clay	70	300
Rock	1	301
Sand	9	310
Light blue clay	25	335
Soft yellow clay	10	345
Sand	15	360
Light blue clay	30	390
Hard blue clay	30	420
Soft blue clay	40	460
Hard blue clay	50	510
Blue and brown clay	50	560
Sand	20	580
Yellow clay	41	621
Blue and red clay	46	667
Sand	10	677
Blue and red clay	50	727
Hard	10	737
Blue and red clay, show oil	30	767
Sand and gravel	21	788

Driller's log of well 15

(P. H. Welder Owner)		
Soil	2	0
Red clay	3	3
Fine sand	10	13
Red clay	20	33
Good sand	35	68
Red clay	40	108
Fine sand	5	113
Soft red clay	30	143
Good sand	30	173
Clay	5	178
Good sand	15	193
White and blue clay	20	213
Good sand	26	239
Clay	7	246
Good sand	17	263
Fine sand and clay	2	265
Hard sand	20	285
Dark clay	12	297
Mixed clay	73	370
Sand	7	377
Dark clay	40	417

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 15-Continued</u>		
Sand	10	427
Hard blue clay	105	532
Sand	7	539
Clay	2	541
Fine sand	5	546
Brown sand	5	551
Good sand	10	561
Blue clay	25	586
Fine sand	17	603
Clay	10	613
Fine sand	2	615
Blue and red clay	100	715
Fine sand	2	717
Red hard clay	20	737
Good sand	13	750

Driller's log of well 16

(P. H. Welder Owner)		
Soil	2	0
Clay	20	20
Sand	50	70
Red clay	10	80
Clay	60	140
Fine sand	5	145
Good sand	40	185
Mixed clay	10	195
Fine sand	10	205
White clay	1	216
Good sand	30	246
Clay	7	253
Good sand	20	273
White clay	45	318
Mixed clay	45	363
Rock	2	365
Blue and white clay	10	375
Fine sand	10	385
White clay	40	425
Good sand	42	467
Blue clay	16	503
Sand	15	518
Clay	5	523
Good sand	15	538
Blue and white clay	110	648
Fine sand	15	663
Blue and white clay	117	780
Sand	3	783
Clay	3	786
Sand	5	791
Blue and red clay	26	817
Sand	20	837

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

	Thickness (feet)	Depth (feet)
Part of Driller's log of well 14		
Southwest Oil Corporation, P. H. Welder No. 2		
Surface - - - - -	35	35
Water sand - - - - -	135	170
Shale - - - - -	2	172
Sand and gravel - - - - -	62	234
Sticky shale - - - - -	12	246
Sand and boulders - - - - -	23	269
Hard sand rock - - - - -	2	271
Shale and boulders - - - - -	17	288
Sand soft and hard streaks - - - - -	56	344
Shale and boulders - - - - -	53	397
Sand and boulders - - - - -	23	420
Sticky shale - - - - -	23	443
Sand - - - - -	11	454
Shale and boulders - - - - -	75	529
Sand and hard streaks showing gas - - - - -	8	537
Sticky shale and boulders - - - - -	42	579
Gumbo - - - - -	83	662
Hard sand gas show - - - - -	23	685
Pink gumbo - - - - -	104	789
Sand and gravel - - - - -	53	842
Sticky shale pink - - - - -	47	889
Sticky shale and lime - - - - -	22	911
Gumbo - - - - -	18	929
Sticky shale and lime - - - - -	43	1072
Sand - - - - -	33	1105
Shale - - - - -	12	1117
Sand - - - - -	16	1133
Sticky shale - - - - -	24	1157
Shale and lime - - - - -	14	1171
Lime and shale - - - - -	13	1184
Sand and boulders - - - - -	42	1226
Gumbo - - - - -	12	1238
Sandy shale and boulders - - - - -	21	1259
Gumbo - - - - -	12	1271
Shale - - - - -	155	1426
Gumbo - - - - -	30	1456
Sand and boulders, hard streaks - - - - -	28	1484
Gumbo - - - - -	32	1516
Hard sand - - - - -	12	1528
Gumbo - - - - -	170	1708
Gumbo - - - - -	13	1721
Fair sand and shells - - - - -	45	1766
Gumbo, yellow - - - - -	20	1786
Hard shale and sand - - - - -	22	1808
Sticky shale - - - - -	53	1861
Hard sand - - - - -	16	1877

	Thickness (feet)	Depth (feet)
Part of driller's log of well 19--Cont.		
Gumbo and lime - - - - -	25	1892
Hard sand and shale - - - - -	16	1914
Sticky shale and lime - - - - -	12	1926
Total Depth - - - - -		1938
Part of Driller's log of well 20		
Southwest Oil Corporation, P. H. Welder No. 1		
Soil - - - - -	4	4
Clay and shale - - - - -	26	30
Sand - - - - -	5	35
Sand and streaks shale - - - - -	35	120
Shale - - - - -	40	160
Sandy clay or caliche - - - - -	70	230
Sand - - - - -	10	240
Sticky shale - - - - -	13	253
Sand and boulders - - - - -	12	265
Sticky shale and boulders - - - - -	25	290
Sticky shale - - - - -	73	363
Sand shale and boulders - - - - -	50	413
Sandy shale - - - - -	27	440
Sticky shale - - - - -	43	483
Sand - - - - -	48	531
Sticky shale - - - - -	53	584
Sand, hard and soft streaks - - - - -	53	637
Sticky shale and shell - - - - -	33	670
Sand - - - - -	14	684
Sticky shale casing seat - - - - -	10	694
Sticky shale - - - - -	78	772
Shale and shells - - - - -	77	849
Sticky shale - - - - -	67	916
Sandy shale - - - - -	11	927
Sand, water and gas show - - - - -	8	935
Sand - - - - -	27	1002
Sticky shale, brown - - - - -	39	1041
Gumbo - - - - -	22	1063
Sand water, sulphur - - - - -	12	1075
Sand - - - - -	42	1117
Sticky shale - - - - -	51	1168
Sand, water - - - - -	10	1178
Sand - - - - -	14	1192
Shale and shells - - - - -	23	1215
Gumbo - - - - -	4	1219
Sand - - - - -	12	1231
Shale - - - - -	96	1327
Sand - - - - -	4	1331
Fresh water sand - - - - -	10	1341
Sand and boulders - - - - -	56	1397
Hard pack sand and rock - - - - -	17	1414

Table of Drillers' Logs Oilhoun County -Continued

	Thickness (feet)	Depth (feet)
Part of driller's log of well 20-Cont.		
Sticky shale	16	1705
Sticky shale	8	1573
Sand	20	1573
Sand shale and boulders	9	1572
Shale and boulders	55	1647
Sticky shale	73	1720
Sand	2	1722
Sandy shale	8	1730
Sand	12	1742
Total depth		2480

Driller's log of well 36

(E. R. Adams Owner)

Yellow clay	35	55
Sand	3	63
Yellow clay	13	76
Sand	9	85
Yellow clay	15	100
Sand	10	110
Clay	480	590
Sand	40	630

Driller's log of well 37

Hills Bennett Production Company
and Duck Oil Company, E. R. Adams
Number 1

Surface	50	50
Sand and gravel	350	400
Sticky shale	50	450
Sand and gravel	100	550
Sticky shale	31	581
Sand and boulders	61	642
Sticky shale	318	960
Sandy shale	21	981
Shale	32	1013
Sand and boulders	147	1160
Sticky shale	20	1180
Sand and boulders	35	1265
Sticky shale	20	1285
Shale	116	1301
Sand	119	1420
Shale	46	1466
Sand	40	1506
Shale	279	1785
Sand and boulders	50	1835
Shale	105	1940
Sand and boulders	30	1970
Shale	80	2050
Sticky shale and lime	100	2150
Rock - broken	27	2177
Hard sand, boulders	31	2208

	Thickness (feet)	Depth (feet)
Driller's log of well 37-Continued		
Sticky shale	132	2400
Shale and lime	40	2440
Sticky shale	140	2500
Sandy shale	50	2550
Sticky shale	50	2600
Broken rock	28	2628
Sticky shale	30	2658
Sand and boulders	5	2663
Sandy shale and lime	62	2725
Shale	70	2795
Sandy shale and lime	35	2830
Shale and shell	30	2860
Sticky shale	238	3098
Sand	27	3125
Sticky shale	15	3140
Sandy shale and lime	50	3190
Sticky shale	190	3380
Sticky shale and lime	45	3425
Sticky shale	85	3510
Sandy shale and lime	65	3575
Sticky shale	40	3615
Sandy shale	40	3655
Sticky shale	30	3685
Sand, boulders	10	3695
Sticky shale and lime	125	3820
Sticky shale	65	3885
Sandy shale and lime	15	3900
Sandy lime, hard	4	3904
Hard sand	24	3928
Sticky shale	2	3930
Shale	30	3960
Sand	55	4015
Sand and boulders	35	4050
Sticky shale	35	4085
Sandy shale and lime	15	4100
Sticky shale	36	4136
Hard sandy lime	12	4148
Sandy lime	2	4150
Shale	22	4172
Sand	24	4196
Shale	24	4220
Sandy lime	8	4228
Shale and lime	42	4270
Sticky shale	13	4283
Sticky shale and lime	12	4395
Hard lime	19	4404
Shale and lime	70	4474
Sand	18	4452
Sticky shale	16	4468
Sand and shale	6	4474

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Table of Driller's Logs Calhoun County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 37--Continued</u>		
Sticky shale with sand breaks - - - - -	6	4450
Sand, lime and shell - - - - -	62	4512
Sticky shale - - - - -	4	4546
Sand - - - - -	23	4574
Hard sandy lime - - - - -	5	4579
Sand - - - - -	5	4584
Sandy shale - - - - -	32	4616
Shale - - - - -	30	4646
No record - - - - -	5	4651
Sandy shale - - - - -	29	4680
Sticky shale - - - - -	21	4701
Tough shale and lime - - - - -	36	4737
Shale and lime - - - - -	23	4760
Sticky shale - - - - -	38	4842
Shale - - - - -	42	5280
Sandy shale - - - - -	110	5400
Sand and shell - - - - -	46	5446
Sandy shale - - - - -	42	5482
Sand - - - - -	432	5920
Sand and shale - - - - -	30	5950
Hard sand and shale - - - - -	12	5962
Hard sandy shale - - - - -	4	5966
Hard sand and shale - - - - -	24	5990
Sticky shale - - - - -	38	6028
Sand - - - - -	22	6120
Sandy shale - - - - -	52	6172
Hard sand, shale - - - - -	10	6182
Sticky shale - - - - -	23	6210
Sand - - - - -	25	6235
Hard sandy shale - - - - -	20	6255
Sandy shale - - - - -	13	6268
Shale - - - - -	32	6300
Hard sandy shale - - - - -	25	6325
Sand - - - - -	59	6384
Sand and shale - - - - -	26	6410
Sandy shale - - - - -	111	6521

Driller's log of well 51

(J. H. Tucker Owner)

Shell - - - - -	7	7
Sandy clay & loose stuff - - - - -	135	142
Gray hard clay - - - - -	163	205
Sand - - - - -	30	235

Driller's log of well 54

(A. Svenson Owner)

Mixed clay - - - - -	60	60
Fine sand - - - - -	20	80
Tough gray-blue clay - - - - -	273	353
Sand - - - - -	12	365

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 55</u>		
(Olivia Gin Company Owner)		
Soil - - - - -	2	2
Clay, reddish with white rocks - - - - -	16	18
Fine sand - - - - -	8	26
Red clay - - - - -	64	90
Blue and red clay - - - - -	10	100
Fine gray sand - - - - -	5	105
Blue and red clay - - - - -	10	115
Fine gray sand - - - - -	11	126
Clay, blue - - - - -	34	160
Sand, lime - - - - -	37	197
Clay bluish - - - - -	31	228
Clay, 6" rock at bottom - - - - -	18	246
Gray and blue clay fine shells - - - - -	21	267
Clay - - - - -	38	305
Blue clay & iron white shell - - - - -	20	325
Clay, fine white stuff - - - - -	21	346
Blue clay - - - - -	29	375
Sand - - - - -	20	395
Sand, rock and shell - - - - -	5	401

Driller's log of well 37

(W. R. Sells Owner)

Clay - - - - -	40	40
Fine sand - - - - -	20	60
Gray clay - - - - -	238	348
Fine white sand - - - - -	12	360
Hard gray clay - - - - -	92	452
Sand - - - - -	18	470

Driller's log of well 60

(L. Peterson Owner)

Red and blue clay - - - - -	60	60
Fine sand - - - - -	20	80
Clay - - - - -	35	115
Coarse sand - - - - -	15	130
Clay, hard gray - - - - -	73	203
Coarse gravelly sand - - - - -	15	218

Driller's log of well 62

(R. T. Damstrom Owner)

Red and blue clay - - - - -	60	60
Fine sand - - - - -	20	80

(Continued on next page)

Table of Driller's Logs, Calhoun County--Continued.

	Thickness (feet)	Depth (feet)
Driller's log of well 62-Continued		
Gray clay, white streaks, blue and red clay, last		
5' gray tough clay - - - - -	284	364
Whitish sand - - - - -	16	380
Blue soft clay - - - - -	15	395
Mottled blue, red & green clay	63	458
Whitish soft limy rock - - - -	10	468
Coarse water sand - - - - -	12	480

Driller's log of well 65		
(J. E. Dilworth Owner)		
Clay - - - - -	60	60
Fine sand - - - - -	20	80
6" & 4" rock		
Mined clay - - - - -	260	340
Mined clay - - - - -	36	376
Sand - - - - -	20	396

Part of Driller's log of well 69		
The Texas Company, Smith No. 1.		
Surface Soil - - - - -	4	4
Clay - - - - -	59	63
Sand - - - - -	20	83
Clay and gravel - - - - -	50	133
Sand - - - - -	25	158
Clay - - - - -	10	168
Gumbo - - - - -	15	184
Sand - - - - -	53	237
Gumbo - - - - -	10	253
Sand and boulders - - - - -	30	303
Gumbo - - - - -	55	358
Sand and boulders - - - - -	42	410
Gumbo - - - - -	35	445
Sand and boulders - - - - -	28	473
Gumbo - - - - -	60	533
Sand and boulders - - - - -	35	568
Gumbo - - - - -	15	583
Sand and boulders - - - - -	8	591
Gumbo - - - - -	33	624
Sand and boulders - - - - -	53	677
Gumbo - - - - -	23	700
Sand and boulders - - - - -	64	764
Gumbo - - - - -	20	784
Sand and boulders - - - - -	5	789
Gumbo - - - - -	30	819
Sand and boulders - - - - -	33	852
Gumbo - - - - -	31	883
Sand and boulders - - - - -	26	909

	Thickness (feet)	Depth (feet)
Part of driller's log of well 69-Continued		
Gumbo - - - - -	25	1002
Sand and boulders - - - - -	13	1020
Gumbo - - - - -	12	1032
Sand and boulders - - - - -	23	1055
Gumbo - - - - -	81	1136
Sand and boulders - - - - -	25	1161
Gumbo - - - - -	35	1199
Sand and boulders - - - - -	70	1275
Gumbo - - - - -	66	1341
Sand and boulders - - - - -	26	1370
Gumbo - - - - -	22	1392
Sand and boulders - - - - -	86	1478
Gumbo - - - - -	30	1508
Sandy gumbo - - - - -	10	1518
Gumbo - - - - -	25	1543
Sand and boulders - - - - -	10	1553
Gumbo - - - - -	32	1585
Sand and boulders - - - - -	34	1619
Gumbo - - - - -	20	1639
Sand and boulders - - - - -	4	1643
Gumbo - - - - -	21	1664
Sand and boulders - - - - -	5	1669
Total depth - - - - -		5500

Driller's log of well 115		
(Abandoned City Well, Pt. Lawrence)		
Black soil - - - - -	5	5
Sand - - - - -	18	23
Clay - - - - -	214	237
Sand - - - - -	29	266
Gumbo - - - - -	74	340
Sand - - - - -	39	379
Gumbo - - - - -	114	493
Sand (not good) - - - - -	10	503
Gumbo - - - - -	283	786
Sand - - - - -	10	796
Gumbo - - - - -	5	801
Sand, coarse salt water - - - -	73	874

Part of driller's log of well 134		
World Oil Company, L. B. Ruth No. 1.		
Black soil - - - - -	3	3
Yellow clay - - - - -	19	22
Quick sand - - - - -	41	63
Yellow clay - - - - -	3	66
Gray sand - - - - -	14	80

(Continued on next page)

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

Thickness		Depth		Thickness		Depth	
(feet)		(feet)		(feet)		(feet)	
Part of driller's log of well 134-Cont'd.				Part of driller's log of well 146-Cont'd.			
Yellow clay	3	73		Clay	120	120	
Gray sand	7	80		Sand and clay	54	174	
Hard gray sand and boulders	17	97		Clay	103	232	
Sandy red shale	3	100		Sand and boulders	30	262	
Hard gray pebb. sand	10	110		Clay	50	312	
Light red clay	6	116		Sand	40	352	
Gray sand	14	130		Clay	23	375	
Yellow clay	6	136		Sand and boulders	140	515	
Water sand	3	139		Clay	57	572	
Hard lime rock	1	140		Sand	10	582	
Gray sand	5	145		Clay	11	593	
Yellow clay	4	149		Clay and boulders	64	657	
Gray sand	6	155		Clay	13	670	
Yellow clay and boulders	15	170		Sand and boulders	45	715	
Shale	3	173		Clay and boulders	20	735	
Yellow gumbo and boulders	17	190		Sand and boulders	46	781	
Yellow gumbo	17	207		Clay	107	888	
Blue shale and crystal				Gumbo and clay	6	894	
gypsum	4	211		Gumbo	5	899	
Blue shale	10	221		Sand	15	914	
Gray gumbo	4	225		Gumbo	103	1017	
Gray shale	12	237		Sand and boulders	12	1029	
Yellow gumbo	15	252		Gumbo	77	1106	
Boulders and yellow gumbo	17	269		Gumbo and lime	110	1216	
Gray lime and shale	3	272		Gumbo	40	1256	
Gray gumbo	20	292		Gumbo and lime	60	1316	
Gray shale	7	299		Gumbo and boulders	14	1330	
Gray gumbo	14	313		Sand and clay	47	1377	
Gray shale and fine sand	45	358		Sand and boulders	20	1397	
Gray gumbo	4	362		Gumbo	30	1427	
Gray shale	2	364		Sand and clay	13	1440	
Water sand	7	371		Sand and gumbo	40	1480	
Water sand and shells	7	378		Gumbo	8	1488	
Yellow gumbo	13	391		Gumbo and lime	15	1503	
Yellow gumbo and boulders	10	401		Gumbo and sand	8	1511	
Sandy shale	11	412		Sand and boulders	58	1569	
Gravel	10	422		Gumbo	20	1589	
Gray shale	5	427		Sand	31	1620	
Yellow gumbo	3	430		Sand and clay	18	1638	
Sandy shale, yellow	4	434		Sand	35	1673	
Yellow gumbo	10	444		Gumbo and lime	38	1711	
Yellow shale and soft lime				Sand	26	1737	
rock	28	472		Gumbo	30	1767	
Yellow gumbo	11	483		Sand	32	1799	
Soft sandy lime rock	3	486		Gumbo	22	1821	
Yellow gumbo	30	516		Gumbo and sand	8	1829	
Soft lime rock	4	520		Gumbo	17	1846	
Total depth		3005		Gumbo and sand	41	1887	
				Sand	35	1922	
				Gumbo and lime	25	1947	
				Gumbo	117	2064	
Part of driller's log of well 146							

(Continued on next page)

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

Part of Driller's log of well 145--Cont'd.		Driller's log of well 187			
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Sand, shale and boulders	57	2303	(J. J. Welder Owner)		
Gumbo	27	2330	Sand	30	30
Sand	11	2341	Sand and clay streaks	20	100
Gumbo and lime	21	2362	White clay	10	110
Sand	19	2381	Sand	20	130
Gumbo	22	2403	Blue clay	70	200
Sand and boulders	70	2473	Very dark material	15	215
Gumbo	43	2516	Sand	10	225
Sand and boulders	45	2561	Dark blue clay	55	280
Gumbo	13	2574	Blue sand	15	295
Sand and boulders	17	2591	Hard blue clay	25	320
Gumbo	10	2601	Coarse blue sand	24	344
Rock	3	2604	Hard blue clay	108	452
Gumbo and lime	15	2619	White, red, yellow clay	5	457
Gumbo	19	2638	Hard red sand	5	462
Sand and shale	13	2651	Coarse red sand	12	474
Gumbo	20	2671			
Shale and sand	45	2716	<u>Driller's log of well 181</u>		
Sand	26	2742	(J. J. Welder Owner)		
Gumbo and sand	29	2771	Soil	2	2
Gumbo	8	2779	Clay	10	12
Sand	15	2794	Sand	38	50
Gumbo	17	2811	White clay	13	63
Shale and gumbo	61	2872	Sand	1	64
Gumbo	23	2895	Red and yellow clay	26	90
Shale and sand	36	2931	Sand	10	100
Gumbo	19	2950	Red and yellow clay	40	140
Gumbo and shale	72	3022	Caliche	1	141
Sand and shale	21	3073	Soft yellow clay	19	160
Sand	15	3088	Sand	10	170
Gumbo	14	3102	Red and blue clay	50	220
Shale and gumbo	23	3130	Sand	20	240
Sand	16	3146	Blue clay	30	273
Sticky shale	16	3162	Sand	10	283
Sand	12	3174	Hard blue clay	30	320
Gumbo	22	3196	Sand and gas	14	334
Sand	16	3212			
Sticky shale	61	3273	<u>Driller's log of well 182</u>		
Gumbo	17	3290	(J. J. Welder Owner)		
Sticky shale	13	3303	Soil	2	2
Shale	32	3335	Clay	3	10
Sticky shale	34	3369	Sand	20	30
Sticky white shale, streaks hard shale	140	3517	Yellow clay	5	35
Sticky shale	94	3611	Sand	10	45
Sand	12	3623	Dark red clay	5	50
Sand, shale and lime	36	3659	Yellow clay	45	95
Sticky shale and lime	14	3673	Sand	5	100
Sticky shale	67	3740	Yellow clay	95	195
Sand	37	3777	Sand	20	215
Sticky shale	50	3827			
Total depth		5956	(Continued on next page)		

Table of Drillers' Logs, Calhoun County-Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 192-Continued</u>		
Red and blue clay - - - - -	35	250
Blue clay - - - - -	45	295
Shell and mud - - - - -	5	300
Wood - - - - -	2	302
Hard blue clay - - - - -	6	308
Red sand - - - - -	17	325

Driller's log of well 194

(J. J. Welder Owner)

Sand - - - - -	60	60
Yellow clay - - - - -	25	85
Sand - - - - -	20	105
Red and yellow clay - - -	47	152
Sand - - - - -	8	160
Red and yellow clay - - -	52	212
Sand - - - - -	18	230
Soft yellow and brown clay - - - - -	30	260
Blue and yellow clay - - -	50	310
Sand and gravel - - - - -	17	327

Driller's log of well 208

(F. F. Austin Owner)

Stiff red clay - - - - -	140	140
Sand salt water - - - - -	20	160
Fresh water sand and shell -	10	170
Blue clay - - - - -	45	215
Fresh water mud - - - - -	15	230
Clay, Artesian sand - - - -	256	486
Artesian sand - - - - -	70	556

Driller's log of well 214

(P. R. Austin Owner)

Red clay - - - - -	10	10
Pine sand - - - - -	30	40
Tough yellow clay - - - - -	153	193
Fresh water sand - - - - -	17	210
No record - - - - -	334	544
Artesian sand - - - - -	27	571

Driller's log of well 220

(H. F. Munsch Owner)

Sand with streaks blue clay - - - - -	43	43
Yellow clay - - - - -	70	113
Blue clay with shells - - -	17	130
Sand - - - - -	20	150

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 266</u>		
Black soil - - - - -	4	4
Sandy clay - - - - -	6	10
Fine grain red sand - - -	22	34
Sandy clay - - - - -	22	56
Sand - - - - -	13	69
Sandy clay - - - - -	34	103
Sandy clay and shell - - -	53	156
Sticky shale - - - - -	50	206
Sand - - - - -	20	226
Sticky shale - - - - -	10	334
Sand - - - - -	10	353
Sticky shale - - - - -	8	361
Total depth - - - - -		361
Casing Record: Top to 295 feet.		
10-inch blank pipe cemented in place.		
225 to 291 feet, 5 $\frac{1}{8}$ -inch blank pipe;		
291 to 320 feet, 5 $\frac{1}{8}$ -inch screen;		
320 to 331 feet, 5 $\frac{1}{8}$ -inch blank pipe;		
331 to 349 $\frac{1}{2}$ feet, 5 $\frac{1}{8}$ -inch screen;		
349 $\frac{1}{2}$ to 356 $\frac{1}{2}$ feet, 5 $\frac{1}{8}$ -inch screen;		
356 $\frac{1}{2}$ to 358 feet, set nipple and valve.		

Logs of test wells drilled by U. P. A. labor in Calhoun County, Texas

	Thickness (feet)	Depth (feet)
<u>Well 300</u>		
Cleared land, no grass or brush, side of county road, 2 1/2 miles southeast of Seadrift. Altitude, 10.1 feet.		
Light-gray sand - - - - -	4	4
Light-gray clay and sand - - - - -	1	5
Gray sand and clay - - - - -	11	16
Red sand - - - - -	14	30
Gray sand - - - - -	5	35
Gray clay and shell - - - - -	1	36
Light-blue clay - - - - -	5	41
Light-blue clay and shell - - - - -	2	43
Blue clay - - - - -	3	46
Blue clay and shell - - - - -	3	49
Red clay - - - - -	2	51
See p. 56 for chemical analyses of samples taken at 17, 25, 35, 45 and 51 feet. Water level 6 feet below ground level. 36 hours after hole completed. February 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 301</u>		
Cleared land, no grass or brush, side of county road, 1 1/2 miles southeast of Seadrift. Altitude, 6.9 feet.		
Gray sand - - - - -	4	4
Red sand - - - - -	4	8
Dark-gray sand - - - - -	3	11
Light-gray sand - - - - -	2	13
Red sand - - - - -	4	17
Sand and boulders - - - - -	2	19
Red sand - - - - -	7	26
Hard red clay - - - - -	6	32
Light-blue clay - - - - -	13	45
Blue clay and shell - - - - -	4	49
Caliche boulders - - - - -	2	51
Fine-grained gray sand - - - - -	7	58
See p. 57 for chemical analyses of samples taken at 7, 56 and 58 feet. Water level 5 feet below ground level. 36 hours after hole completed. January 31, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 302</u>		
Grass 1 foot high, side of county road, 2 miles east of Seadrift. Altitude, 9.3 feet.		
Dark-colored soil - - - - -	1	1
Dark-gray sand - - - - -	5	6
Gray sand - - - - -	3	9
Red sand - - - - -	13	22
Red clay - - - - -	3	25
Hard yellow clay - - - - -	7	32
Hard gray clay - - - - -	9	41

	Thickness (feet)	Depth (feet)
<u>Well 302--Continued</u>		
Soft red clay - - - - -	10	51
Caliche and boulders - - - - -	2	53
Caliche and sand boulders - - - - -	5	58
Water level 14 feet below ground level 36 hours after hole completed. January 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 303</u>		
Grass 1 foot high, side of county road, 2 1/2 miles east of Seadrift. Altitude, 12.2 feet.		
Surface sand - - - - -	4	4
Clay and sand - - - - -	1	5
Yellow sand - - - - -	3	8
Sand and caliche - - - - -	1	9
Yellow sand - - - - -	1	10
White sand - - - - -	6	16
Yellow water sand - - - - -	10	26
Clay, shell and sand - - - - -	4	30
Yellow sand and boulders - - - - -	1	31
Gray sand - - - - -	1	32
Blue clay - - - - -	1	33
Blue clay and shell - - - - -	2	35
Brown sand - - - - -	1	36
Brown clay - - - - -	3	39
Gray clay - - - - -	1	40
Gray clay and caliche - - - - -	10	50
Red sand and shell - - - - -	5	55
Hard caliche - - - - -	1	56
Sand, caliche and shell - - - - -	1	57
See p. 58 for chemical analyses of samples collected at 26, 33, 48 and 52 feet. Water level 14 feet below ground level 36 hours after hole completed. January 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 304</u>		
Grass 1 foot high, side of county road, 3 miles east of Seadrift. Altitude, 3.7 feet.		
Black soil - - - - -	4	4
Gray sand - - - - -	4	8
Yellow sand - - - - -	12	20
Brown sand - - - - -	11	31
Gray clay - - - - -	5	36
Sandy gray clay - - - - -	1	37
Hard blue clay - - - - -	4	41
Gray clay - - - - -	2	43
Blue clay - - - - -	2	45
Brown clay - - - - -	4	49
(Continued on next page)		

Logs of T. P. A. test wells in Calhoun County--Continued

	Thickness (feet)	Depth (feet)
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Well 304--Continued

See p. 55 for chemical analyses of sample collected at 35 feet. Water level 16 feet below ground level, 35 hours after hole completed. January 14, 1940.

Well 305

Tall grass, side of county road, 3 1/2 miles east of Seadrift. Altitude, 13.6 feet.

Surface sand	3	3
Clay and sand	1	4
Gray clay	1	5
Clay and caliche	3	8
White sand	1	9
Hard white clay	1	10
Yellow sand	3	13
Clay and caliche	3	16
Yellow sand	6	22
Gray sand	8	30
Brown clay	3	33
Brown sand	4	37
Gray clay	7	44
Gray clay and caliche	2	46
White clay and caliche	4	50
Gray sand and caliche	4	54
Yellow sand	1	55
Gray sand	5	60

See p. 58 for chemical analyses of samples collected at 32, 46, 51, 55 and 60 feet. Water level 14 feet below ground level, 36 hours after hole completed. February 1, 1940.

Well 306

Tall grass, side of county road, 4 miles east of Seadrift. Altitude, 12.3 feet.

Black soil	2	2
Grey clay	3	5
White sand	4	9
Yellow sand	8	17
Brown sand	4	21
Yellow sand	2	23
Brown sand	1	24
Gray sand	2	26
Hard brown clay	4	30
Brown sand	2	32
Hard blue clay	3	35
Gray sand	2	37
Gray clay and caliche	3	40
Hard blue clay	12	52
Red clay	1	53
Yellow sand	3	56

	Thickness (feet)	Depth (feet)
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Well 306--Continued

See p. 58 for chemical analyses of samples collected at 23, 30, 35, 38, 47 and 53 feet. Water level 10 feet below ground level, 36 hours after hole completed. February 2, 1940.

Well 307

Brush 2 feet high, roots 2 feet below surface. C. Barton tract, 1 1/2 miles east of Seadrift. Altitude, 14.0 feet.

Yellow sand	2	2
Gray sand	1	3
White clay and caliche	1	4
Yellow clay and caliche	8	12
Fine-grained yellow sand	7	19
Brown sand	9	28
Fine-grained yellow sand	8	36
Hard blue clay	16	52
Fine-grained yellow sand	11	63

See p. 59 for chemical analyses of samples collected at 17, 28, 37, 47 and 58 feet. Water level 13 feet below ground level, 36 hours after hole completed. July 21, 1940.

Well 308

Cleared land, no brush or grass, side of county road, 5 miles east of Seadrift. Altitude, 12.9 feet.

Dark-colored soil	1	1
Dark-blue clay	3	4
Red clay and caliche	3	7
Fine-grained red sand	3	10
Coarse-grained red sand	2	12
Brown sand	13	25
Hard blue clay	2	27
Blue clay and caliche	2	29
Blue clay, wet	5	34
Blue clay and sand	1	35

See p. 59 for chemical analyses of samples collected at 17, 19, 21, 37, 50, 52 and 57 feet. Water level 9 feet below ground level, 36 hours after hole completed. February 21, 1940.

Well 309

Tall grass, side of county road, 1 1/2 miles east of Seadrift. Altitude, 12.7 feet.

Surface sand	6	6
Gray sand	15	21

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 309--Continued</u>		
Brown sand - - - - -	4	25
Brown sand and shell - - -	6	31
Brown clay - - - - -	4	35
Fine-grained brown sand - -	5	40
Hard blue clay - - - - -	12	52
Brown clay - - - - -	3	55
Red clay - - - - -	7	62
Brown sand - - - - -	2	64
Brown clay - - - - -	2	66
Brown clay and caliche - -	2	68
Gray clay - - - - -	4	72
Hard brown clay - - - - -	1	73
Gray clay - - - - -	2	75
See p. 59 for chemical analyses of samples collected at 21, 26, 32, 39, 45, 55, 59, 63, 66, 72 and 75 feet. Water level 5 feet below ground level 36 hours after hole completed. February 10, 1940.		

<u>Well 310</u>		
Scattered low brush side of county road. 5 miles east of Seadrift. Altitude 11.9 feet.		
Gray clay and caliche - - -	2	2
White clay - - - - -	6	8
Blue clay - - - - -	3	11
Fine-grained brown sand - -	23	34
Hard brown clay - - - - -	2	36
Brown sand - - - - -	1	37
Soft brown clay - - - - -	2	39
Fine-grained brown sand - -	5	44
Clay and shell - - - - -	2	46
Gray sand and shell - - - -	1	47
Gray sand - - - - -	13	60
Light blue clay - - - - -	2	62
Gray sand - - - - -	3	65
Blue clay - - - - -	3	68
Gray sand and clay - - - -	3	71
Gray sand - - - - -	1	72
See p. 59 for chemical analyses of samples collected at 10, 28, 36, 39, 48, 55, 60, 62, 64, 68 and 72 feet. Water level 6 feet below ground level 36 hours after hole completed. February 13, 1940.		

<u>Well 311</u>		
Tall grass, side of county road, 5½ miles east of Seadrift. Altitude, 12.6 feet.		
Surface sand - - - - -	3	3

	Thickness (feet)	Depth (feet)
<u>Well 311--Continued</u>		
Fine-grained white sand - -	4	7
Brown sand - - - - -	3	10
Coarse-grained gray sand -	4	14
Fine-grained black sand - -	11	25
Black sand and shell - - -	5	30
Gray sand - - - - -	6	36
Brown clay - - - - -	5	41
Brown sand - - - - -	6	47
Blue clay and caliche - - -	8	55
Gray clay and caliche - - -	4	59
Blue clay - - - - -	5	64
Brown sand and clay - - -	7	71
Brown clay - - - - -	3	74
See p. 60 for chemical analyses of samples collected at 15, 32, 40, 64, and 31 feet. Water level 6 feet below ground level 36 hours after hole completed. February 22, 1940.		

<u>Well 312</u>		
Cleared land, no grass or brush, side of county road, 6 miles east of Seadrift. Altitude, 10.1 feet.		
Sandy gray clay - - - - -	3	3
Yellow sand - - - - -	5	8
Gray sand - - - - -	3	11
Dark-gray sand - - - - -	5	16
Gray sand and shell - - -	9	25
Brown sand - - - - -	4	29
Gray sand - - - - -	3	32
Brown sand - - - - -	3	35
Brown clay - - - - -	6	41
Blue clay - - - - -	4	45
Gray clay - - - - -	4	49
Brown clay - - - - -	9	58
Brown sand - - - - -	4	62
Brown sand and caliche -	5	67
Gray clay and caliche - -	3	70
White sand and caliche -	3	73
See p. 60 for chemical analyses of samples collected at 8, 16, 32, 37, 45, 50, 55, 57, 62, 67 and 72 feet. Water level 3 feet below ground level, 36 hours after hole completed. February 29, 1940.		

<u>Well 313</u>		
Brush 1½ feet high, side of county road, 6 miles east of Seadrift. Altitude, 11.0 feet		
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 313--Continued</u>		
White sand - - - - -	3	3
Dark-brown sand - - - - -	3	11
Gray sand - - - - -	7	18
Gray sand and shell - - - - -	5	24
Brown sand and shell - - - - -	20	44
Brown clay, wet - - - - -	2	46
Brown clay and sand - - - - -	4	50
Hard light-blue clay - - - - -	5	55
Blue clay, wet - - - - -	7	62
Gray clay - - - - -	7	69
Gray sand - - - - -	4	73
See p. 50 for chemical analyses of samples collected at 19, 24, 30, 44, 46 and 50 feet. Water level 5 feet below ground level, 36 hours after hole completed. February 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 314</u>		
Cleared land, no grass or brush. See Taylor tract, 5 miles east of Seadrift. Altitude, 10.3 feet.		
Dark-gray sand - - - - -	1	1
White sand - - - - -	3	4
Gray sand - - - - -	1	5
Yellow clay and sand - - - - -	1	6
Gray sand - - - - -	8	14
Dark-gray sand - - - - -	10	24
Sandy brown clay - - - - -	12	36
Blue clay - - - - -	13	50
Blue clay and caliche - - - - -	4	54
Brown clay - - - - -	10	64
Brown sand - - - - -	4	68
See p. 50 for chemical analyses of samples collected at 14, 26, 36, 54 and 73 feet. Water level 4 feet below ground level, 24 hours after hole completed. July 25, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 315</u>		
Brush 1 1/2 feet high, roots 2 feet below surface, side of county road, 1/2 miles southeast of Seadrift. Altitude, 7.7 feet.		
Fine-grained gray sand - - - - -	5	5
Fine-grained brown sand, wet - - - - -	4	9
Gray sand, wet - - - - -	6	15
Dark-blue sand and shell - - - - -	5	20
Light-brown sand - - - - -	7	27
Dark-blue sand - - - - -	8	35
Gray sand and shell - - - - -	4	39
Black sand and shell - - - - -	7	46

	Thickness (feet)	Depth (feet)
<u>Well 315--Continued</u>		
Brown sandy clay and shell - - - - -	4	50
Gray sand and caliche - - - - -	6	56
Coarse-grained gray sand - - - - -	1	57
Fine-grained gray sand - - - - -	2	59
Sandy coarse-grained blue clay - - - - -	1	60
See p. 60-61 for chemical analyses of samples collected at 20, 25, 46, 56 and 63 feet. Water level 5 feet below ground level, 48 hours after hole completed. March 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 316</u>		
Brush 4 feet high, roots 3 feet below surface, side of county road, 7 1/2 miles southeast of Seadrift. Altitude, 6.2 feet.		
Gray sand - - - - -	3	3
White sand - - - - -	1	4
Gray sand - - - - -	1	5
Brown sand - - - - -	2	7
Gray sand - - - - -	10	17
Fine-grained brown sand - - - - -	1	18
Dark-blue sand - - - - -	2	20
Fine-grained gray sand - - - - -	4	24
Gray sand and shell - - - - -	2	26
Gray sand - - - - -	2	28
Sandy brown clay, wet - - - - -	15	43
See p. 61 for chemical analyses of samples collected at 21, 24, 40, 45 and 50 feet. Water level 9 feet below ground level, 48 hours after hole completed. March 23, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 317</u>		
Brush 3 feet high, roots 2 1/2 feet below surface, side of county road, 7 1/2 miles east of Seadrift. Altitude, 7.6 feet.		
White surface sand - - - - -	2	2
Coarse-grained gray sand - - - - -	3	5
Brown sand, wet - - - - -	3	8
Gray sand, wet - - - - -	5	13
Coarse-grained dark-gray sand - - - - -	5	18
Gray sand and shell - - - - -	11	29
Dark-blue sand and shell - - - - -	2	31
Gray sand and shell - - - - -	14	45
Brown sand and shell - - - - -	5	50
Sandy brown clay - - - - -	8	58
Sandy gray clay - - - - -	3	61
Hard blue clay - - - - -	2	63

(Continued on next page)

Log of W. P. A. test wells in Calhoun County - - Continued

	Thickness (feet)	Depth (feet)
<u>Well 317--Continued</u>		
Soft gray clay	4	57
Sandy gray clay and caliche	6	77
Coarse-grained gray sand	3	75
See p. 61 for chemical analyses of samples collected at 17, 27, 41, 53, 60, 57 and 74 feet. Water level 7 feet below ground level 48 hours after hole completed. March 21, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 318</u>		
Brush 1 foot high, roots 2 feet below surface. C. Stienberg tract. 7 1/2 miles east of Seadrift. Altitude, 8.1 feet.		
Fine-grained white sand	3	3
Gray sand	2	5
Brown sand	2	7
Gray sand	7	14
Brown sand	10	24
Soft brown clay, wet	1	25
Gray sand	5	31
Soft brown clay	4	35
Hard blue clay	1	36
Fine-grained gray sand and caliche	8	44
Hard blue clay	4	48
Sand and clay, wet	1	49
Brown clay	4	53
Gray sand	3	56
See p. 61 for chemical analyses of samples collected at 16, 25, 35, 43, 50, 56, 70, 73 and 76 feet. Water level 5 feet below ground level 48 hours after hole completed. March 20, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 319</u>		
Brush 1 foot high, roots 2 feet below surface. C. Stienberg tract. 7 miles east of Seadrift. Altitude 9.6 feet.		
White sand	4	4
Sandy white clay	2	6
Sandy white silt	4	10
Fine-grained brown sand	3	13
Fine-grained gray sand	10	23
Gray sand	3	26
Gray sand and shell	15	41
Brown sand	5	47
Sandy brown clay	7	54
Hard blue clay	4	58

	Thickness (feet)	Depth (feet)
<u>Well 319--Continued</u>		
Hard yellow clay	6	64
Gray clay	11	75
Gray sand	3	78
See p. 61 for chemical analyses of samples collected at 10, 17, 20, 27, 37, 45, 61 and 76 feet. Water level 7 feet below ground level 48 hours after hole completed. March 10, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 320</u>		
Brush 2 feet high, roots 2 feet below surface, Scott Taylor tract, 6 1/2 miles east of Seadrift. Altitude, 11.2 feet.		
Gray sand	1	1
White sand	4	5
Fine-grained white sand, wet	3	8
Gray sand	17	25
Gray sand and shell	5	30
Coarse-grained gray sand	5	35
Gray sand and shell	2	37
Gray sand	6	43
Brown clay, wet	8	51
Blue clay	5	57
Soft gray clay and caliche	4	61
Gray sand	11	72
Sandy brown clay	2	74
See p. 61 for chemical analyses of samples collected at 6, 26, 31, 37, 53, 64, 69 and 72 feet. Water level 5 feet below ground level 48 hours after hole completed. March 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 321</u>		
Brush 1 1/2 feet high, roots 1 foot below surface, side of county road, 6 1/2 miles east of Seadrift. Altitude, 13.8 feet.		
Fine-grained gray sand	5	5
Fine-grained white sand, wet	4	9
Light-gray sand	7	16
Dark-gray sand	21	37
Brown sand	5	42
Brown clay and shell	11	53
Blue clay	6	59

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

	Thickness (feet)	Depth (feet)
<u>Well 321--Continued</u>		
Red clay and caliche, wet	10	57
Sandy red clay	6	73
See p. 62 for chemical analyses of samples collected at 23, 37, 39, 57 and 73 feet. Water level 5 feet below ground level, 48 hours after hole completed. April 10, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 322</u>		
Tall grass, side of county road, 7 miles east of Seadrift. Altitude, 14.8 feet.		
Fine-grained white sand	4	4
Gray sand, clay and caliche	4	8
Fine-grained sand	5	13
Dark-gray sand	3	16
Dark-gray sand and shell	25	41
Brown clay	4	45
Hard brown clay	4	49
Blue clay and caliche	7	56
Blue clay	6	62
Blue and brown clay	6	68
Sandy brown clay	6	74
See p. 62 for chemical analyses of samples collected at 13, 29, 40, 45, 62, 69 and 74 feet. Water level 7 feet below ground level, 36 hours after hole completed. April 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 323</u>		
Tall grass, side of county road, 7 miles east of Seadrift. Altitude, 13.1 feet.		
Light-gray sand	5	5
Red clay and sand, wet	7	12
White sand	5	17
Gray sand, roots	1	18
Dark-gray sand and shell	5	23
Gray sand	13	36
Gray sand and shell	4	40
Brown sand and shell	8	48
Hard blue clay	3	51
Blue clay and caliche	4	55
Blue clay	5	60
Red clay	3	63
Sandy red clay	9	72

See p. 62 for chemical analyses of samples collected at 18, 29, 38, 41, 63, 69 and 72 feet. Water level 5 feet below ground level, 40 hours after hole completed. April 21, 1940.

	Thickness (feet)	Depth (feet)
<u>Well 324</u>		
Tall grass, side of county road, 2 1/4 miles east of Seadrift. Altitude, 9.4 feet.		
Yellow clay and caliche	5	5
Fine-grained yellow sand	6	11
Brown sand	25	36
Brown clay	2	41
Blue clay	6	50
Brown and blue clay	3	58
Blue clay	9	67
See p. 62 for chemical analyses of samples collected at 16, 26, and 46 feet. Water level 5 feet below ground level, 48 hours after hole completed. April 21, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 325</u>		
Tall grass, side of county road, 5 1/2 miles east of Seadrift. Altitude, 13.0 feet.		
Gray sand	1	1
White sand	2	3
Light-gray clay, wet	4	7
Gray sand, wet	9	16
Dark-gray sand	1	17
Blue clay and sand	1	18
Dark-gray sand	9	27
Dark-gray sand and shell	1	28
Gray sand	10	38
Gray sand and shell	1	39
Gray sand	1	40
Sandy brown clay	10	50
Blue clay	4	54
Blue clay and caliche	2	56
Blue clay	5	61
Sandy brown clay	1	62
Brown sand	9	71
See p. 62 for chemical analyses of samples collected at 7, 20, 40, 61 and 65 feet. Water level 5 feet below ground level, 48 hours after hole completed. April 26, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 326</u>		
Grass and brush 2 feet high, side of county road, 9 1/2 miles east of Seadrift. Altitude, 15.0 feet.		
Fine-grained white sand	4	4
Yellow clay	2	6

(Continued on next page)

Logs of T. P. A. Test wells in Calhoun County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 326--Continued</u>		
Sandy gray clay	1	1
Fine-grained gray sand	5	6
Fine-grained dark-colored sand	6	12
Brown sand, very fine	10	22
Coarse-grained brown sand	8	30
Brown sand	5	35
Brown clay	9	44
Blue clay	10	54
Sandy gray clay	2	56
Gray sand	2	58
Fine-grained gray sand	3	61
See p. 62 for chemical analyses of samples collected at 13, 29, 38, 60, 61 and 63 feet. Water level 8 feet below ground level, 36 hours after hole completed. May 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 327</u>		
Tall grass, side of county road, 10 miles east of Seadrift. Altitude, 14.2 feet.		
Dark-gray sand	3	3
Gray sand	3	6
White sand, wet	5	11
Dark-gray sand	4	15
Gray sand	3	18
Dark-gray sand	3	21
Gray sand and shell	2	23
Gray sand	6	29
Gray sand and shell	2	31
Gray sand	10	41
Brown clay, wet	9	50
Hard blue clay	8	58
Blue clay and celiche	4	62
Gray sand	2	64
Brown sand	1	65
See p. 61 for chemical analyses of samples collected at 21, 30, 41, 64 and 67 feet. Water level 4.5 feet below ground level, 36 hours after hole completed. May 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 328</u>		
Edge of Powder Horn lake, Powder Horn Ranch tract, 10 1/2 miles east of Seadrift. Altitude, 5.2 feet.		
Yellow clay	3	3
Fine-grained yellow sand	4	7
Fine-brown sand and gravel	0	7
Sandy brown clay and gravel	2	11
Brown sand and rock	5	16
Yellow sand	3	19

	Thickness (feet)	Depth (feet)
<u>Well 328--Continued</u>		
Brown clay and gravel	3	22
Brown clay	6	28
Brown sand	5	33
Blue clay, wet	23	56
See p. 63 for chemical analyses of samples collected at 8, 14, 16, 24, 28, 33, 39, 44, 50 and 55 feet. Water level 4 feet below ground level, 24 hours after hole completed. July 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 329</u>		
Powder Horn Ranch tract, 10 1/2 miles east of Seadrift. Altitude, 6.2 feet.		
Gray sand	3	3
Red clay	6	9
Gray sand, wet	3	12
Brown sand	5	17
Brown clay, wet	8	25
Brown sand and shell	2	27
Brown sand and clay	4	31
Hard blue clay	2	33
Hard blue clay	6	39
Soft brown clay	1	40
Brown clay, wet	4	44
Blue clay	6	50
Gray sand and clay	5	55
Blue clay	2	57
Gray sand	1	58
See p. 63 for chemical analyses of samples collected at 17, 24, 30, 50, 55, 60, 65 and 67 feet. Water level 4 feet below ground level, 36 hours after hole completed. July 10, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 330</u>		
Cleared land, no crops or brush. Powder Horn Ranch tract, 10 1/2 miles east of Seadrift. Altitude, 3.2 feet.		
White sand	5	5
Clay and celiche	2	7
Yellow clay	2	9
Gray sand, wet	9	18
Brown sand	4	22
Brown clay	8	30
Brown sand	3	33
Soft brown clay, wet	9	42
Hard blue clay	6	48
Blue and brown clay	16	64
Gray sand	3	67
See p. 63 for chemical analyses (Continued on next page)		

Lens of W. P. A. test wells in Calhoun County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 330--Continued</u>		
of samples collected at 12, 20, 21, 32, 61 and 67 feet. Water level 6 feet below ground level 48 hours after hole completed. June 26, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 331</u>		
Brush 1 foot high, roots 1 1/2 feet below surface. Powder Horn Ranch tract, 10 1/2 miles east of Seadrift. Altitude, 5.7 feet.		
Fine-grained white sand	8	8
Light-brown sand	3	11
Fine-grained gray sand	8	19
White sand	4	23
Brown sand	9	32
Brown clay, wet	8	40
Brown sand	7	47
Blue clay	7	54
Hard brown clay	5	59
Brown clay	3	62
Gray sand	5	67
See p. 64 for chemical analyses of samples collected at 23, 36, 51, 63 and 67 feet. Water level 7 feet below ground level. 48 hours after hole completed. June 24, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 332</u>		
Brush 2 feet high, roots 2 feet below surface. Powder Horn Ranch tract, 10 1/2 miles east of Seadrift. Altitude, 14.2 feet.		
Gray sand	1	1
White sand	4	5
Sandy red clay	7	12
Gray sand	8	20
Brown clay	1	21
Gray sand and shell	3	24
Hard blue clay	17	41
Brown clay	4	45
Hard blue and brown clay	14	59
Yellow sand	3	62
See p. 64 for chemical analyses of samples collected at 36, 59, 64, and 67 feet. Water level 4 feet below ground level. 36 hours after hole completed. June 19, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 333</u>		
Brush 2 feet high, roots 2 feet below surface. Powder Horn Ranch tract, 10 1/2 miles east of Seadrift.		

	Thickness (feet)	Depth (feet)
<u>Well 333--Continued</u>		
Altitude 15.6 feet.		
White sand	4	4
Yellow clay	3	7
Sandy blue clay	3	10
Fine-grained gray sand	3	13
Fine-grained white sand and shell	4	17
Fine-grained brown sand	5	22
Fine-grained light-brown sand and shell	4	26
Brown sand	11	37
Light-brown sand	3	40
Brown clay	10	50
Hard blue clay	5	55
Sandy gray clay	7	62
Fine-grained white sand	2	64
See p. 64 for chemical analyses of samples collected at 11, 12, 21, 22, 31, 40, 57, 63 and 65 feet. Water level 3 feet below ground level 24 hours after hole completed. June 19, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 334</u>		
Cleared land, no grass or brush. W. L. Moody tract, 10 miles east of Seadrift. Altitude, 13.2 feet.		
Gray sand	1	1
White sand	2	3
Brown sand, wet	3	6
Light-brown sand, wet	12	18
Gray sand	4	22
Brown sand and clay	3	25
Gray sand and shell	13	38
Brown clay	1	39
Gray sand and shell	1	40
Gray sand	7	47
Gray sand and shell	1	48
Brown clay, wet	6	54
Blue clay, wet	2	56
Blue clay and shell	1	57
Blue clay	2	59
Blue clay and caliche	2	61
Gray sand and clay	1	62
Blue and brown clay	2	64
Gray sand	2	66
See p. 64 for chemical analyses of samples collected at 12, 11, 22, 29, 35, 47, 62 and 66 feet. Water level 4 feet below ground level, 36 hours after hole completed. May 22, 1940.		

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

Well 335	
Thickness (feet)	Depth (feet)
Brush 3 feet high, roots 3 feet below surface, W. L. Moody tract, 10 miles east of Seadrift. Altitude, 10.0 feet.	
Fine-grained white sand - - - 4	4
Gray clay and caliche - - - 2	6
Gray sand and caliche - - - 4	10
Fine-grained white sand - - - 4	14
Fine-grained light-gray sand - - - - - - - - - 2	16
Brown sand - - - - - - - - 2	18
Dark-gray sand and shell - 15	33
Dark-gray sand - - - - - 4	37
Light-brown sand - - - - - 10	47
Light-brown sand and shell - 2	49
Brown clay - - - - - - - 6	55
Hard blue clay - - - - - 9	64
Sandy blue clay - - - - - 5	69
Fine-grained gray sand - - - 3	72
See p. 64 for chemical analyses of samples collected at 11, 27, 40, 45, 50, 56, 70 and 72 feet. Water level 6 feet below ground level, 72 hours after hole completed. May 27, 1940.	

Well 336	
Thickness (feet)	Depth (feet)
Brush 2 feet high, roots 2 feet below surface, W. L. Moody tract, 10 miles east of Seadrift. Altitude, 9.6 feet.	
Light-gray sand - - - - - 6	6
Gray sand, wet - - - - - 1	7
Brown sand - - - - - - - 6	13
Dark-gray sand - - - - - 7	20
Dark-gray sand and shell - 11	31
See p. 65 for chemical analyses of samples collected at 20 and 31 feet. Water level 5 feet below ground level, 36 hours after hole completed. May 25, 1940.	

Well 337	
Thickness (feet)	Depth (feet)
Cleared land, no grass or brush. W. L. Moody tract, 10½ miles east of Seadrift. Altitude, 6.7 feet.	
Gray sand - - - - - - - - 5	5
Brown clay and sand - - - - 4	9
Gray sand, wet - - - - - 4	13
Gray sand and shell - - - - 17	30
Gray clay and shell - - - - 2	32
Gray sand and shell - - - - 12	44
Gray sand and clay - - - - 3	47

Well 337--Continued	
Thickness (feet)	Depth (feet)
Gray sand - - - - - - - - 2	49
Brown clay and shell - - - 6	55
Blue clay - - - - - - - - 4	59
Brown clay and caliche - - 1	60
Blue clay - - - - - - - - 3	63
Brown clay - - - - - - - - 10	73
Dark-gray sand - - - - - 1	74
Blue clay - - - - - - - - 1	75
Gray sand - - - - - - - - 1	76
See p. 65 for chemical analyses of samples collected at 13, 26, 30, 35, 40, 48, 73 and 75 feet. Water level 7 feet below ground level, 72 hours after hole completed. May 29, 1940.	

Well 338	
Thickness (feet)	Depth (feet)
Cleared land, no grass or brush. W. L. Moody tract, 10½ miles east of Seadrift. Altitude, 5.1 feet.	
Fine-grained brown sand - - 2	2
Sandy gray clay - - - - - 1	3
White clay - - - - - - - 3	6
Fine-grained blue sand - - 4	10
Fine-grained gray sand - - 3	13
Dark-gray sand - - - - - 6	19
Coarse-gray shell - - - - 4	23
Light-brown sand - - - - 6	29
Dark colored sand and shell - - - - - - - - 10	39
Gray shell and sand - - - - 4	43
Fine-grained brown sand - - 4	47
Brown clay - - - - - - - 3	50
Blue clay and shell - - - 2	52
Blue clay - - - - - - - 10	62
Fine-grained white sand - - 2	64
See p. 65 for chemical analyses of samples collected at 14, 19, 24, 29, 34, 40, 50, 58, 61 and 64 feet. Water level 1 foot below ground level, 36 hours after hole completed. June 4, 1940.	

Well 339	
Thickness (feet)	Depth (feet)
Tall grass, side of county road, 11 miles east of Seadrift. Altitude, 14.9 feet.	
Fine-grained dark colored sand - - - - - - - - 6	6
Yellow sand and clay - - - 2	8
Fine-grained light-brown sand - - - - - - - 9	17

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Log of W. P. A. test wells in Calhoun County--Continued

Thickness		Depth	
		(feet)	(feet)
<u>Well 339--Continued</u>			
White sand and shell	- - -	3	20
Fine-grained brown sand	- -	9	29
Brown sand	- - - - -	3	32
Fine-grained brown sand	- -	2	34
Dark-brown sand	- - - - -	9	43
Brown clay, wet	- - - - -	4	47
Brown clay	- - - - -	6	53
Blue clay	- - - - -	6	59
Hard blue clay	- - - - -	6	65
Gray sand	- - - - -	5	70
See p. 65 for chemical analyses of samples collected at 12, 32, 49, 60, 66, and 70 feet. Water level 5 feet below ground level, 36 hours after hole completed. May 17, 1940.			

Thickness		Depth	
		(feet)	(feet)
<u>Well 340</u>			
Tail cross, side of county road, 1 1/2 miles east of Seadrift. Altitude, 15.1 feet.			
Dark-gray sand	- - - - -	1	1
White sand	- - - - -	2	3
Dark-gray sand and clay	- -	1	4
Brown and yellow clay	- - -	3	7
Sandy brown clay, wet	- - -	1	8
Gray sand	- - - - -	4	12
Dark-gray sand	- - - - -	4	16
Gray sand and shell	- - -	11	27
Gray sand	- - - - -	8	35
Gray sand and shell	- - -	1	36
Brown clay	- - - - -	1	37
Brown sand	- - - - -	6	43
Brown clay, wet	- - - - -	1	44
Brown sand	- - - - -	2	46
Brown clay	- - - - -	10	56
Hard blue clay	- - - -	8	64
Gray sand	- - - - -	3	67
See p. 65 for chemical analyses of samples collected at 13, 34, 41, 61 and 67 feet. Water level 7 feet below ground level, 36 hours after hole completed. May 15, 1940.			

Thickness		Depth	
		(feet)	(feet)
<u>Well 341</u>			
Brush 1 foot high, roots 4 feet below surface, side of county road, 1 1/2 miles east of Seadrift. Altitude, 12.6 feet.			
Dark-gray sand	- - - - -	1	1
White sand	- - - - -	6	7
Light-gray sand, wet	- - - -	5	12
Dark-gray sand	- - - - -	11	23
Brown clay	- - - - -	1	24

Thickness		Depth	
		(feet)	(feet)
<u>Well 341--Continued</u>			
Dark-gray sand	- - - - -	13	37
Dark-gray sand and shell	- -	9	46
Brown clay	- - - - -	2	48
Gray sand and shell	- - - -	2	50
Brown clay	- - - - -	6	56
Blue clay	- - - - -	4	60
Gray sand	- - - - -	1	61
Blue and brown clay	- - - -	3	64
Gray sand	- - - - -	2	66
Brown and blue clay	- - - -	6	72
Gray sand	- - - - -	1	73
See p. 65 for chemical analyses of samples collected at 12, 22, 25, 35, 48, 60, 64 and 72 feet. Water level 6 feet below ground level, 24 hours after hole completed. June 12, 1940.			

Thickness		Depth	
		(feet)	(feet)
<u>Well 342</u>			
Grass 1 foot high, 2 feet below surface, side of county road, 1 1/2 miles east of Seadrift. Altitude, 12.6 feet.			
Fine-grained white sand	- - -	3	3
Light-brown sand	- - - - -	3	6
Brown sand	- - - - -	9	15
Light-brown sand	- - - - -	13	28
Dark-gray sand	- - - - -	2	30
Dark-gray silt	- - - - -	5	35
Fine-grained brown sand	- -	10	45
Fine-grained gray sand	- -	5	50
Brown clay	- - - - -	6	56
Blue clay	- - - - -	2	58
Sandy blue clay	- - - - -	5	63
Fine-grained gray sand	- -	4	67
See p. 66 for chemical analyses of samples collected at 21, 30, 40, 55, 60, 64 and 67 feet. Water level 5 feet below ground level, 36 hours after hole completed. June 12, 1940.			

Thickness		Depth	
		(feet)	(feet)
<u>Well 343</u>			
Brush 1 foot high, roots 1 foot below surface, side of county road, 1 1/2 miles east of Seadrift. Altitude, 10.2 feet.			
Light-gray sand	- - - - -	4	4
Gray and yellow sand	- - -	4	8
Gray sand	- - - - -	6	14
Gray sand and shell	- - -	4	18
Blue sand and shell	- - -	7	25
Brown sand	- - - - -	2	27
(Continued on next page)			

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

	Thickness (feet)	Depth (feet)
Well 343--Continued		
Sandy brown clay	1	28
Dark-gray sand	17	45
Brown clay	11	56
Hard blue clay	5	61
Blue clay, wet	1	62
See p. 56 for chemical analyses of samples collected at 8, 14, 25, and 62 feet. Water level 4 feet below ground level, 24 hours after hole completed. July 16, 1940.		
Well 344		
Brush 1 foot high, roots 1 1/2 feet below surface, side of county road, 15 miles east of Seadrift. Altitude, 10.9 feet.		
White sand	2	2
Brown sand	2	4
Sandy yellow clay	6	10
White sand and shell	9	19
Coarse, dark-colored sand shell	4	23
Blue sand and shell	2	25
Brown sand	7	32
Light-brown sand	11	43
Brown clay	3	46
Brown sand	2	48
Brown clay	4	52
See p. 55 for chemical analyses of samples collected at 3, 19, 29, 39 and 48 feet. Water level 4 feet below ground level, 24 hours after hole completed. July 16, 1940.		

	Thickness (feet)	Depth (feet)
Well 345		
City of Seadrift tract, 2 1/2 miles southeast of Seadrift. Altitude, 15.3 feet.		
Sandy var soil	2	2
Red and yellow clay	4	6
Yellow argillaceous sand	5	11
Fine-grained brown sand	5	16
Brown sand, some shells	1	17
Sandy clay with concretions	1	18
Fine-grained brown sand and shells	5	23
Brown sand and concretions	2	25
Brownish-gray sand	2	27
Dark brownish-gray sand	8	35
Dark brownish-gray sand and shells	1	36
Blue clay	3	39
Blue clay and shells	18 1/2	57 1/2
Green and brown clay and shells, some lignite	4 1/2	62
Sticky blue clay	6	68
Sandy blue clay	3	71
--(Water at 72 feet)		
Brownish-colored sand, fine and clayey	2	73
Blue-gray clayey sand	2	75
Blue-gray sand	3	78
Coarse-grained sand, shells, concretions, and balls of clay	2	80
Blue clay	1	81
See p. 58 for chemical analyses of samples collected at 53 feet. Water level 10.3 feet below ground level, 24 hours after hole completed. June 30, 1938.		

Results of field tests of samples collected and tested in June, July and August, 1934 by the United States Geological Survey.

Farts per million

Well No.	Hardness	Bicarbonate	Chloride	Well No.	Hardness	Bicarbonate	Chloride	Well No.	Hardness	Bicarbonate	Chloride
1	340	456	255	67	25	484	124	133	720	308	2,145
2	370	420	120	68	15	448	65	134	-	-	-
3	90	364	342	69	40	456	322	146	-	-	-
4	90	378	368	70	15	360	74	147	320	330	1,010
5	-	-	-	71	20	420	151	148	300	410	785
6	45	380	310	72	25	434	68	149	900	290	2,350
7	85	408	358	73	40	456	73	150	290	442	690
8	85	298	372	74	-	-	-	151	600	312	1,235
9	120	376	425	75	30	372	54	152	850	370	1,620
10	65	376	388	76	90	378	820	153	140	532	935
11	240	232	1,090	86	270	390	290	154	410	444	1,360
12	-	-	-	87	340	448	50	155	320	323	1,390
13	-	-	-	88	370	462	204	156	900	440	2,260
14	75	378	482	89	-	-	-	157	360	370	1,540
15	80	373	425	90	600	452	540	158	950	364	1,390
16	-	-	-	91	700	448	600	159	750	344	2,430
17	95	376	425	92	600	424	450	160	160	536	722
18	95	386	455	93	380	400	242	161	160	484	890
19	-	-	-	94	420	312	700	171	1,500	2,035	2,035
20	-	-	-	95	770	428	420	172	600	364	770
21	840	394	365	96	1,000	356	930	173	900	348	1,210
26	321	492	310	97	900	392	760	174	1,500	356	2,590
27	600	440	715	98	460	326	860	175	900	468	1,155
28	950	408	1,100	99	360	364	650	176	700	374	900
29	1,000	304	1,520	100	1,000	214	2,380	177	800	404	875
30	180	456	252	101	450	360	815	178	800	462	865
31	310	404	310	102	490	324	1,090	179	200	534	595
32	750	388	1,350	103	550	320	735	180	340	463	825
33	900	396	960	111	550	468	920	181	1,400	320	2,460
34	700	328	1,070	112	220	406	320	182	500	296	1,245
35	1,100	352	1,175	113	180	460	206	183	400	324	995
36	370	562	2,055	114	900	356	1,110	184	410	332	515
37	-	-	-	115	540	484	530	185	150	378	445
38	290	500	460	116	430	363	258	186	170	148	46
39	1,100	324	1,135	117	360	493	135	187	500	308	1,440
51	130	380	1,070	118	220	423	310	188	90	158	45
52	95	376	900	119	130	482	198	189	1,500	252	3,100
53	40	416	470	120	850	418	1,330	190	260	384	180
54	15	504	167	121	600	263	1,045	191	-	-	-
55	15	390	118	122	340	430	310	192	1,000	208	2,940
56	25	454	51	123	350	354	610	193	-	-	-
57	20	336	61	124	390	314	1,135	194	900	230	3,730
58	330	312	540	125	-	-	-	195	-	-	-
59	-	-	-	126	-	-	-	196	-	-	-
60	75	484	280	127	360	336	1,620	206	450	422	1,975
61	15	392	50	128	370	330	1,130	207	140	473	1,655
62	10	464	198	129	290	422	930	208	320	416	2,395
63	-	-	-	130	600	324	1,850	209	600	336	4,795
64	10	400	137	131	-	-	-	210	390	500	1,050
65	15	401	130	132	-	-	-				
66	20	470	95								

(Continued on next page)

Results of field tests of samples collected and tested in June, July and August, 1934 by the United States Geological Survey--Continued.

Parts per million

Well No.	Hardness	Bicarbonate	Chloride
211	80	51	1,150
212	85	576	1,040
213	-	-	-
214	130	446	1,565
215	215	140	1,450
216	-	-	-
217	-	-	-

Well No.	Hardness	Bicarbonate	Chloride
218	800	286	1,695
219	150	576	980
220	210	370	395
221	140	526	875
222	320	676	1,705
223	800	302	2,650
224	450	340	1,620

Well No.	Hardness	Bicarbonate	Chloride
225	420	360	3,500
226	320	446	2,110
227	220	400	2,080
228	150	444	1,765
229	130	422	1,922
230	800	348	1,560

Partial analyses of water from wells in Calhoun, 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, Chemist; 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.)	Cal- (Ca)	Magne- (Mg)	Sodium and potassium (Na+K) (calc.)	Sulphate bicarbonate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
1	H. T. Marshall	65	Apr. 14, 1940	852	103	20	202	390	45	290	b/	337
2	J. G. Cook	56	do.	627	108	20	109	403	32	160	b/	352
3	P. H. Welder	740	do.	858	18	10	316	366	3	330	b/	86
21	J. F. Clark	45	May 14, 1940	764	101	23	167	476	39	200	b/	349
22	R. B. Roof	70	Mar. 19, 1940	640	84	20	142	464	34	132	b/	292
23	Humble Oil & Refining Co.	1,082	Apr. 14, 1940	899	59	6	289	360	37	330	b/	174
24	J. W. McKamey Est.	200 1/2	Apr. 15, 1940	840	61	22	238	415	64	250	b/	244
c/ 25	C. E. Boyd	65	May 21, 1940	461	102	10	68	403	10	73	b/	296
26	W. S. McKamey Est.	80	Apr. 15, 1940	985	110	27	233	439	78	320	b/	387
31	J. W. McKamey	250	do.	-	-	-	-	-	-	1,050	b/	-
38	Six Mile School	21	Apr. 11, 1940	675	43	12	213	512	37	110	b/	158
40	E. H. Hengst	24	May 21, 1940	1,191	85	23	351	549	80	380	b/	309
41	J. Pecena	30	do.	1,431	133	29	373	451	146	520	b/	453
42	W. T. Cervenka	40	do.	1,493	250	76	189	409	226	550	b/	937
43	W. F. Holloman	24	Apr. 11, 1940	1,556	-	-	-	342	84	740	b/	-
44	Texas Natural Gas Co.	45	do.	5,052	-	-	-	329	439	2,660	b/	-
45	City of Port Lavaca	244	Apr. 5, 1940	753	39	14	247	476	28	190	b/	153
46	Frank Gerryk	35	May 20, 1940	2,585	184	53	726	384	213	1,220	b/	676
47	T. E. Cook	26	do.	2,693	264	78	641	439	244	1,250	b/	993
48	Mrs. B. Wilson	30	do.	1,878	110	58	540	305	10	1,010	b/	511
c/ 49	E. V. Bouquet	29	Apr. 5, 1940	7,638	622	230	1,885	517	95b	3,790	b/	3,502
50	W. F. Holloman	300 1/2	do.	1,827	94	47	553	378	37	910	b/	429
54	Arvid Swenson	365	Apr. 9, 1940	731	8	8	283	476	3	190	b/	50
55	Olivia Gin Co.	401	do.	526	6	9	200	378	12	112	b/	50
56	W. R. Sells	262	do.	474	8	8	182	451	5	50	b/	50
57	do.	470	do.	398	9	6	147	329	14	59	b/	49
59	Gustaf Swenson	380	do.	503	7	5	194	390	13	80	b/	39

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 37

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Partial analyses of water from wells in Calhoun County, Texas--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.) ³
61	Rose, Sample & Drushel	345	Apr. 9, 1940	450	8	2	178	384	20	54	b/	-	26
62	R. T. Damstrom	480	do.	733	8	4	288	451	11	200	b/	-	37
63	C. J. Damstrom	380	do.	576	4	6	225	390	15	132	b/	-	34
64	V. E. Damstrom	370	do.	585	6	7	225	397	12	140	b/	-	45
65	C. E. Dilworth	392	do.	561	-	-	-	403	15	134	b/	-	-
70	Carancahus Club	512	Apr. 10, 1940	489	4	4	193	354	13	100	b/	0.8	27
71	G. F. Stovall	620	do.	621	2	9	243	415	8	156	b/	-	40
72	El Campo Colony	566	do.	509	1	5	205	427	16	70	b/	1.5	23
73	Mrs. Charles Schicke	560	do.	527	10	9	198	451	12	77	b/	-	60
75	B. W. Trull	330	do.	423	7	6	160	372	16	50	b/	-	44
77	C. Peterson	500+	Apr. 9, 1940	1,157	1	13	449	403	6	490	b/	1.2	53
c/78	Guy. Cavallin	248	do.	1,071	10	8	416	458	1	410	b/	2.2	55
79	do.	80	do.	952	71	56	212	403	117	295	b/	0.3	410
80	W. R. Sells	400+	do.	522	2	4	209	372	10	114	b/	-	22
81	A. A. Swenson	390	-	525	9	5	201	390	17	100	b/	1.0	43
82	E. Wilson	390	Apr. 9, 1940	535	14	3	158	390	18	150	b/	-	47
83	E. B. Thompson	200+	May 20, 1940	1,057	62	27	318	378	14	450	b/	-	267
84	J.V.Koenig Estate	270+	Apr. 5, 1940	1,678	94	42	503	317	13	870	b/	-	406
85	Mrs. A. Carter	305	do.	1,364	58	27	443	403	27	610	b/	0.7	257
86	Green Lake Loan & Security Co.	70	Mar. 19, 1940	491	45	16	124	268	34	134	b/	0.3	180
87	do.	75	Apr. 16, 1940	430	49	12	110	403	10	51	b/	-	173
92	C. L. Fredericks	75	Mar. 19, 1940	1,316	164	41	269	433	209	420	b/	-	580
93	Green Lake Loan & Security Co.	35	Apr. 24, 1940	751	126	25	129	366	41	250	b/	-	415
97	J. J. Welder	62	Apr. 19, 1940	-	-	-	-	-	-	770	b/	-	-
99	Doyle Moreman	265	do.	-	-	-	-	-	-	700	b/	-	-
104	Calhoun County	226	Mar. 11, 1940	1,789	178	65	402	390	186	760	b/	0.2	715
105	John Tillery	51	do.	2,205	204	65	528	421	299	900	b/	-	780
106	H. T. Sonneman	115	do.	2,238	191	70	550	390	268	960	b/	-	763
c/107	John Pilgram	210	do.	1,450	114	45	382	238	32	760	b/	0.3	468

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 67.

Partial analyses of water from wells 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.)
108	W. F. Henie	212	Mar. 14, 1940	1,253	110	39	320	329	47	575	b/	-	434
109	A. E. McDonald	92	Mar. 19, 1940	2,130	-	-	-	439	322	840	b/	-	-
110	C. Fox	80	do.	3,333	369	132	617	451	1,013	980	b/	-	1,467
111	Alex Livingston Est.	20	Apr. 24, 1940	-	-	-	-	-	-	1,000	b/	-	-
112	Charles Brett	220	Apr. 11, 1940	846	55	21	256	378	11	320	b/	-	223
113	L. J. Foster	240	do.	730	50	16	227	421	3	230	b/	0.7	190
114	A. B. McDonald	60	do.	-	-	-	-	-	-	1,100	b/	-	-
116	A. J. Martin	48	Apr. 24, 1940	766	137	23	120	323	72	255	b/	-	439
117	A. Y. Smith	30 $\frac{1}{2}$	do.	611	106	25	93	445	39	92	b/	0.7	365
118	L. J. Foster	201	Apr. 11, 1940	873	54	18	269	427	22	300	b/	-	211
119	Mrs. E. Runk	203	do.	-	-	-	-	-	-	460	b/	-	-
c/ 122	W. A. Snofner	51	Apr. 19, 1940	1,020	90	28	267	473	90	310	b/	0.7	342
135	J. M. Martin	50	do.	578	88	20	109	378	51	124	b/	-	302
136	R. C. Woods	44	do.	962	69	23	276	390	51	350	b/	1.0	269
137	Green Lake Loan and Security Co.	70	do.	610	102	25	98	293	31	210	b/	-	355
138	C. A. Krause	60	Mar. 19, 1940	659	105	22	13	458	34	150	b/	-	354
139	L. R. Coward	70	Mar. 14, 1940	932	43	15	307	500	71	250	b/	-	169
140	H. Thomas	360	Apr. 8, 1940	1,112	39	23	369	354	26	480	b/	0.7	194
141	E. Hamilton	70	do.	2,254	-	-	-	287	244	1,070	b/	-	-
142	C. D. Fenner	60 $\frac{1}{2}$	Mar. 21, 1940	3,416	333	118	776	293	303	1,740	b/	-	1,318
143	C. V. Hartman	300 $\frac{1}{2}$	do.	1,508	70	30	481	427	47	670	b/	-	296
144	W. D. Stevens	370	Apr. 8, 1940	2,690	-	-	-	268	10	1,570	b/	-	-
145	C. V. Hartman	300 $\frac{1}{2}$	do.	1,559	41	39	515	360	57	730	b/	-	264
162	W. D. Stevens	350 $\frac{1}{2}$	Apr. 8, 1940	5,265	376	180	1,360	238	312	2,920	b/	0.3	1,681
163	D. W. Luckey	360	do.	2,230	-	-	-	220	12	1,300	b/	-	-
164	Robert Streeter	70	do.	3,912	-	-	-	195	10	2,390	b/	-	-
165	O. F. Roemer	330	Mar. 21, 1940	2,562	-	-	-	275	16	1,480	b/	0.4	-
166	D. C. Romer	300	do.	2,337	172	71	630	281	16	1,310	b/	-	724
167	O. F. Roemer	335	do.	2,000	120	54	580	329	34	1,050	b/	-	524

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 67

Partial analyses of water from wells in Calhoun 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.)	Bicar-bonate (H ₂ O ₃)	Sul-fate (SO ₄)	Chlo-ride (Cl)	Ni-trate (NO ₃)	Fluor-ide (F)	Total hardness as CaCO ₃ (calc.)
168	Dr. F. Roemer	75	Mar. 20, 1940	2,561	171	67	724	305	49	1,400	b/	-	701
169	O. P. Roemer	70	do.	1,932	-	-	-	354	55	1,000	b/	-	-
170	O.R. Doworacziyk	275	do.	1,830	114	47	531	317	32	950	b/	-	479
171	W. D. Stevens	29	Mar. 11, 1940	3,103	446	99	557	433	386	1,400	b/	-	1,521
177	L. R. Johnson	75	Mar. 20, 1940	2,301	-	-	-	366	827	850	b/	-	-
183	City of Seadrift	360+	May 6, 1933	-	-	-	-	-	-	939	b/	-	-
185	Missouri Pacific R.R.	201	Feb. 6, 1940	1,092	35	18	374	372	32	450	b/	0.3	161
139	J. J. Welder	265	Mar. 8, 1940	4,720	290	157	1,306	250	14	2,330	b/	-	1,372
190	do.	92	Feb. 20, 1940	936	112	45	202	268	40	455	b/	0.4	463
192	do.	325	Mar. 8, 1940	4,827	326	176	1,273	207	15	2,930	b/	-	1,539
196	do.	325	do.	5,460	211	119	1,743	231	9	3,240	b/	-	1,019
197	do.	30	do.	980	65	24	290	403	23	330	b/	-	260
193	do.	31	do.	561	53	15	147	226	7	228	b/	0.3	194
199	do.	85	do.	194	23	9	41	140	9	43	b/	0.4	96
200	City of Seadrift	86	Nov. 13, 1933	534	-	-	152	326	32	136	b/	-	162
200	do.	36	Feb. 24, 1940	516	51	17	152	317	24	134	b/	-	145
201	A. E. Nulliers	22	--	1,303	213	30	241	421	42	570	b/	-	669
c/202	A. Howes	360	Feb. 24, 1940	1,299	76	29	393	348	30	600	b/	0.5	303
203	George Bindewald	300+	Mar. 6, 1940	1,522	92	43	436	317	75	720	b/	0.5	406
204	J. P. Hardy	46	Mar. 8, 1940	2,207	186	99	472	384	531	730	b/	-	871
205	E. P. Hardman	46	do.	3,371	431	128	604	360	661	1,370	b/	0.1	1,604
207	San Antonio Loan & Trust Co.	550	Mar. 5, 1940	3,084	40	20	1,156	182	1	1,630	b/	-	132
209	do.	709	do.	2,301	17	10	889	512	1	1,130	b/	1.3	86
211	do.	560	do.	2,125	17	10	321	561	1	1,000	b/	-	86
212	do.	530	do.	7,617	130	67	2,763	317	1	4,500	b/	-	601
214	do.	571	do.	2,904	26	15	1,106	439	1	1,540	b/	-	129
215	City of Port O'Connor	630	Feb. 3, 1940	2,871	35	16	1,082	421	1	1,530	b/	1.4	155
220	M. F. Munsch	150	do.	940	70	31	259	384	1	390	b/	-	304
224	W. L. Moody	449	Mar. 4, 1940	2,826	84	49	956	329	5	1,570	b/	0.4	410
225	do.	625	do.	5,311	135	70	1,348	360	1	3,030	b/	0.5	623

a/ Sulphate less than 10 parts per million.

o/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 67.

Partial analyses of water from wells 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.)
226	T. L. Moody	450 ^a	Mar. 4, 1940	3,579	59	32	1,307	366	1	2,000	b/	-	280
227	San Antonio Loan and Trust Co.	540	Mar. 5, 1940	3,603	41	26	1,346	384	1	2,000	b/	-	211
228	J. L. Moody	530	Mar. 4, 1940	3,427	44	23	1,279	403	3	1,880	b/	-	204
229	do.	535	do.	3,074	40	20	1,150	433	1	1,650	b/	-	182
230	do.	20	Feb. 19, 1940	2,983	160	117	812	403	190	1,500	b/	0.4	879
231	San Antonio Loan and Trust Co.	25	Mar. 5, 1940	1,336	90	51	351	342	71	600	b/	0.3	437
233	Dan Bremer	240	Feb. 19, 1940	1,228	22	18	448	586	47	405	b/	-	126
234	E. A. Munsch	230	do.	1,308	26	18	474	561	34	480	b/	0.7	142
235	Sidney Albrecht	140	Feb. 23, 1940	1,039	50	27	327	415	1	430	b/	0.4	237
236	Thomas Regan	150	Mar. 4, 1940	974	45	29	301	354	5	420	b/	0.4	233
237	San Antonio Loan and Trust Co.	22	Mar. 5, 1940	522	45	10	146	220	10	200	b/	0.4	156
238	do.	1,180	Feb. 14, 1940	32,213	1,008	781	10,379	281	1	19,900	b/	-	5,730
239	do.	25	do.	873	-	-	-	281	20	393	b/	-	-
240	do.	25	do.	729	87	25	153	232	71	275	b/	-	320
241	W. L. Moody	22	Feb. 19, 1940	551	-	-	-	232	40	195	b/	-	-
242	San Antonio Loan and Trust Co.	25	Feb. 24, 1940	372	30	19	77	201	11	136	b/	-	202
243	G. Durham	25	Feb. 7, 1940	1,575	119	51	415	403	97	690	b/	0.2	506
244	J. J. Dalehite	21	Jan. 24, 1940	358	65	8	63	201	17	106	b/	0.1	195
245	do.	22	Jan. 30, 1940	206	42	9	25	122	13	58	b/	-	141
246	A. L. Chauder	22	Feb. 7, 1940	1,366	75	42	394	354	91	590	b/	-	361
247	J. J. Welder	75	Mar. 8, 1940	949	48	20	295	220	28	450	b/	-	202
248	J. J. Dalehite	24	Jan. 30, 1940	754	145	28	113	232	24	360	b/	-	477
249	M. E. Lee	22	Jan. 7, 1940	2,464	288	21	630	549	115	1,140	b/	-	808
250	L. Woolridge	70	Mar. 6, 1940	948	106	50	186	299	49	410	b/	-	471
251	A. B. Clark	25	do.	5,109	278	135	670	305	516	1,360	b/	-	1,248
252	Goff Est.	24	Jan. 31, 1940	1,837	219	79	369	384	36	930	b/	0.4	874
253	Thomas Dowdy	65	Mar. 6, 1940	3,185	258	130	745	268	340	1,580	b/	0.1	1,180
254	City of Sadsrift	312	Feb. 24, 1940	1,860	100	44	564	329	20	970	b/	0.4	432

^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 67

Partial analyses of water from wells 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.)
	255 Clarence Barton	65	Mar. 5, 1940	2,247	284	121	584	305	488	1,220	b/	-	1,210
	256 A. McKay	54	Mar. 8, 1940	2,016	157	67	498	317	318	820	b/	-	666
	257 W. F. Holloman	64	do.	2,043	170	72	494	360	260	870	b/	-	719
	258 T. A. McDonald	78	do.	3,743	446	160	687	305	610	1,690	b/	-	1,774
	259 G. L. Smith	54	Mar. 19, 1940	3,711	390	148	719	305	964	1,340	b/	-	1,582
	260 Mrs. S. McGown	50	Mar. 20, 1940	3,218	273	131	682	403	964	970	b/	-	1,220
c/	261 Paul Boone	78	do.	3,630	404	142	734	238	423	1,810	b/	-	1,592
	262 Charles Durham	10	Mar. 8, 1938	1,060	-	-	-	372	25	460	b/	-	-
	263 Walter Viles	--	June 9, 1938	1,008	-	-	-	342	37	310	144	-	-
	264 do.	20	do.	513	-	-	-	268	17	172	b/	-	-
	265 W. S. Brownell	21	June 8, 1938	248	-	-	-	183	14	50	b/	-	-
	266 City of Seadrift	327	Apr. 24, 1936	2,386	132	55	614	330	53	1,112	b/	-	553
	266 do.	356	May 2, 1936	2,471	129	51	658	320	57	1,164	b/	-	534
	266 do.	361	June 17, 1936	2,442	142	54	632	341	49	1,148	b/	-	575
	300 W. P. A. Test	17	Jan. 31, 1940	199	-	-	-	110	16	55	b/	-	-
	300 do.	23	do.	267	42	6	53	134	17	82	b/	-	128
	300 do.	35	Feb. 1, 1940	410	85	8	65	281	14	100	b/	-	245
	300 do.	45	Feb. 2, 1940	365	--	-	-	232	9	104	b/	-	-
	300 do.	50	Feb. 5, 1940	356	42	15	73	134	20	140	b/	0.4	169
	301 do.	51	Jan. 29, 1940	1,334	208	72	152	354	463	255	b/	0.5	814
	301 do.	56	Jan. 30, 1940	1,183	--	-	-	268	362	288	b/	-	-
	301 do.	58	do.	1,181	142	54	200	287	354	290	b/	-	579
	303 do.	26	Jan. 10, 1940	1,327	--	-	-	378	61	595	b/	-	-
	303 do.	33	Jan. 11, 1940	1,668	121	60	435	348	81	800	b/	0.1	552
	303 do.	48	Jan. 13, 1940	902	45	25	270	207	45	415	b/	-	215
	303 do.	52	do.	944	85	22	252	372	57	345	b/	-	304
	304 do.	36	Jan. 13, 1940	576	70	27	116	329	39	162	b/	0.1	287
c/	305 do.	32	Jan. 29, 1940	5,046	693	260	821	122	122	3,090	b/	-	2,800
	305 do.	46	Jan. 30, 1940	1,545	--	-	-	171	31	870	b/	-	-
	305 do.	51	do.	1,292	172	68	222	281	32	660	b/	-	712
	305 do.	55	Jan. 31, 1940	1,276	-	-	-	287	39	630	b/	0.3	-
	305 do.	60	do.	1,287	155	62	247	281	45	640	b/	-	643
	306 do.	23	Jan. 29, 1940	745	105	24	143	146	41	360	b/	-	360

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 67

Partial analyses of water from wells 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.)
	W. P. A. Test	30	Jan. 30, 1940	1,055	-	-	-	268	37	500	b/	-	-
c/	do.	35	do.	1,120	162	35	216	281	39	530	b/	0.3	552
	do.	39	Jan. 31, 1940	1,204	-	-	-	256	39	600	b/	-	-
	do.	47	do.	959	143	39	165	183	21	500	b/	-	519
	do.	53	Feb. 1, 1940	945	136	44	159	189	21	490	b/	-	522
	do.	17	July 16, 1940	699	67	34	166	500	22	165	b/	-	306
	do.	28	do.	830	98	33	182	451	25	370	b/	-	381
	do.	37	July 19, 1940	1,079	116	53	223	295	38	503	b/	-	508
	do.	53	July 20, 1940	835	-	-	-	268	20	575	b/	-	-
	do.	58	do.	881	127	41	153	275	17	408	b/	0.6	485
	do.	13	Feb. 14, 1940	335	79	10	36	281	20	48	b/	-	241
	do.	19	do.	583	52	20	154	415	23	130	b/	-	212
	do.	21	Feb. 15, 1940	591	-	-	-	372	25	150	b/	-	-
	do.	35	do.	4,772	430	156	1,150	537	362	2,410	c/	-	1,716
	do.	50	Feb. 19, 1940	3,071	329	107	684	226	79	1,760	b/	-	1,261
	do.	52	Feb. 20, 1940	2,529	-	-	-	128	33	1,520	b/	-	-
	do.	57	do.	2,504	302	103	498	159	43	1,480	b/	-	1,179
c/	do.	21	Feb. 2, 1940	1,004	66	26	289	293	43	435	b/	-	271
	do.	26	do.	937	-	-	-	311	20	418	b/	-	-
	do.	72	do.	1,246	-	-	-	275	25	630	b/	-	-
	do.	39	Feb. 5, 1940	1,426	174	60	278	165	63	770	b/	-	682
	do.	45	Feb. 6, 1940	1,401	-	-	-	183	53	770	b/	-	-
	do.	55	do.	1,229	-	-	-	165	16	730	b/	-	-
	do.	59	Feb. 7, 1940	1,231	-	-	-	140	17	730	b/	-	-
	do.	63	do.	1,500	-	-	-	169	20	730	b/	-	-
	do.	66	Feb. 8, 1940	1,239	-	-	-	146	17	700	b/	-	-
	do.	72	Feb. 9, 1940	1,550	211	70	197	134	16	790	b/	0.5	713
	do.	75	do.	1,283	184	68	202	146	17	740	b/	-	742
	do.	10	Feb. 2, 1940	6,474	633	245	1,456	384	346	3,620	b/	-	2,591
	do.	28	Feb. 6, 1940	6,577	-	-	-	262	362	3,740	b/	-	-
	do.	36	do.	7,443	-	-	-	384	386	4,210	b/	-	-
	do.	39	do.	4,770	436	149	1,151	183	264	2,680	b/	-	1,702
	do.	48	Feb. 7, 1940	6,382	-	-	-	244	323	3,660	b/	-	-
	do.	55	Feb. 8, 1940	6,099	655	184	1,377	171	299	3,500	b/	-	2,393

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 67

Partial analyses of water from wells 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.)
310	W. P. A. Test	60	Feb. 2, 1940	6,110	-	-	-	165	275	3,570	b/	-	-
310	do.	62	do.	6,048	574	169	1,474	305	291	3,390	b/	-	2,129
310	do.	64	Feb. 9, 1940	6,473	-	-	-	207	370	3,695	b/	-	-
310	do.	68	do.	7,069	-	-	-	311	394	4,000	b/	-	-
c/ 310	do.	72	Feb. 12, 1940	7,553	880	225	1,631	293	453	4,240	b/	-	3,124
311	do.	15	Feb. 14, 1940	432	-	-	-	116	94	130	b/	-	-
311	do.	32	Feb. 15, 1940	296	37	9	66	165	17	85	b/	-	131
311	do.	40	do.	332	35	8	85	183	17	96	b/	-	120
311	do.	64	Feb. 20, 1940	542	-	-	-	299	33	160	b/	-	-
311	do.	71	Feb. 21, 1940	534	29	9	174	293	14	162	b/	2.4	111
312	do.	8	Feb. 23, 1940	2,925	112	76	917	866	344	1,150	b/	-	592
312	do.	16	do.	1,154	73	29	334	356	75	463	b/	-	304
312	do.	32	-	1,248	-	-	-	360	43	570	b/	-	-
312	do.	37	Feb. 24, 1940	1,325	-	-	-	281	55	650	b/	-	-
312	do.	45	Feb. 26, 1940	1,294	88	42	351	171	39	690	b/	-	391
312	do.	50	do.	1,223	-	-	-	201	18	660	b/	-	-
c/ 312	do.	55	do.	1,002	58	32	288	201	14	510	b/	1.3	275
312	do.	57	Feb. 27, 1940	979	70	27	272	189	17	500	b/	-	287
312	do.	62	do.	921	-	-	-	220	15	460	b/	-	-
312	do.	67	Feb. 28, 1940	865	-	-	-	220	20	420	b/	-	-
312	do.	72	do.	801	39	16	256	268	16	340	b/	1.6	164
313	do.	19	Feb. 21, 1940	548	62	20	121	238	43	185	b/	-	237
313	do.	24	Feb. 23, 1940	442	-	-	-	244	16	140	b/	-	-
313	do.	30	do.	479	-	-	-	262	10	160	b/	-	-
313	do.	44	Feb. 24, 1940	713	62	28	171	287	25	280	b/	-	272
313	do.	48	do.	956	81	29	252	342	26	400	b/	0.4	323
313	do.	69	Feb. 26, 1940	996	73	31	271	220	13	500	b/	-	309
314	do.	14	July 15, 1940	725	51	28	186	268	96	232	b/	-	242
314	do.	26	do.	831	62	24	228	238	25	375	b/	-	255
314	do.	36	July 16, 1940	1,039	-	-	-	311	37	468	b/	-	-
314	do.	69	July 22, 1940	974	-	-	-	226	18	488	b/	-	-
c/ 314	do.	73	July 24, 1940	939	63	27	266	183	12	480	b/	1.1	266
315	do.	20	Mar. 20, 1940	2,155	96	28	691	342	189	980	b/	-	356
315	do.	35	Mar. 21, 1940	1,584	64	37	489	378	84	710	b/	0.1	313

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 57

Partial analyses of water from wells 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.)
315	W. P. A. Test	46	Mar. 22, 1940	2,184	-	-	-	360	119	1,100	b/	-	-
315	do.	56	Mar. 25, 1940	3,107	-	-	-	268	172	1,690	b/	-	-
315	do.	63	do.	3,143	203	75	893	390	147	1,620	b/	-	816
316	do.	24	Mar. 19, 1940	1,661	42	28	574	366	12	820	b/	-	222
316	do.	34	do.	13,111	429	388	4,040	610	701	7,250	b/	-	2,670
316	do.	40	Mar. 20, 1940	18,685	-	-	-	781	1,200	10,450	b/	-	-
316	do.	45	do.	21,746	936	573	6,529	805	1,456	11,850	b/	-	4,694
316	do.	50	Mar. 21, 1940	21,646	934	594	6,443	738	1,612	11,700	b/	-	4,776
317	do.	13	Mar. 12, 1940	955	50	29	281	203	61	390	b/	-	243
317	do.	27	do.	847	73	25	323	317	30	340	b/	-	285
317	do.	41	Mar. 14, 1940	1,263	102	35	736	287	49	600	b/	-	402
317	do.	53	Mar. 15, 1940	1,746	155	45	452	348	82	640	b/	-	573
317	do.	60	do.	2,067	205	55	502	262	116	1,060	b/	0.2	739
317	do.	67	Mar. 18, 1940	1,834	-	-	-	207	93	980	b/	-	-
317	do.	74	Mar. 19, 1940	1,776	201	55	395	195	81	950	b/	-	726
318	do.	16	Mar. 8, 1940	1,920	36	42	652	220	57	1,020	b/	-	261
318	do.	25	do.	1,450	88	40	426	451	24	650	b/	-	386
318	do.	35	Mar. 11, 1940	1,666	82	51	494	397	64	780	b/	-	417
318	do.	43	do.	2,312	141	72	613	494	93	1,050	b/	-	649
c/ 318	do.	50	Mar. 12, 1940	2,504	198	78	650	403	130	1,250	b/	0.3	815
318	do.	56	do.	2,548	251	79	606	381	104	1,370	b/	-	954
318	do.	60	Mar. 14, 1940	2,449	-	-	-	268	116	1,320	b/	-	-
318	do.	73	Mar. 15, 1940	1,856	230	81	300	207	35	1,050	b/	-	905
318	do.	76	Mar. 18, 1940	1,795	214	82	349	146	28	1,050	b/	-	870
319	do.	10	Mar. 4, 1940	4,149	-	-	-	311	253	2,360	b/	-	-
319	do.	15	do.	3,856	213	101	1,122	334	201	2,030	b/	-	947
319	do.	20	do.	3,679	-	-	-	458	207	1,925	b/	-	-
319	do.	27	Mar. 5, 1940	5,351	287	144	1,557	409	272	2,890	b/	-	1,309
319	do.	37	do.	7,062	444	204	1,953	451	409	3,830	b/	-	1,951
319	do.	46	Mar. 6, 1940	7,273	535	235	1,878	275	460	4,030	b/	-	2,305
319	do.	61	Mar. 7, 1940	5,373	506	233	1,190	146	172	3,200	b/	-	2,224
c/ 319	do.	76	Mar. 8, 1940	4,345	441	208	908	250	85	2,580	b/	0.4	1,958
320	do.	6	Feb. 29, 1940	480	31	9	175	85	83	180	b/	-	116
320	do.	26	do.	1,323	90	33	365	525	52	525	b/	-	320

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

c/ Analysis of selected wells are given in milligram equivalents per liter on page 67

Partial analyses of water from wells 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.)
320	W. P. A.	31	Mar. 4, 1940	1,588	122	34	451	433	43	710	b/	-	446
320	do.	37	do.	1,699	-	-	-	464	59	790	b/	-	-
320	do.	58	Mar. 5, 1940	2,080	-	-	-	366	75	1,070	b/	-	-
320	do.	64	Mar. 6, 1940	1,912	-	-	-	317	51	1,010	b/	-	-
320	do.	69	do.	1,849	-	-	-	311	43	980	b/	-	-
320	do.	72	Mar. 7, 1940	1,911	133	62	518	293	43	1,010	b/	1.4	588
321	do.	23	Mar. 22, 1940	436	52	11	102	201	26	146	b/	-	177
321	do.	37	Mar. 26, 1940	778	63	15	222	275	18	325	b/	-	219
321	do.	39	do.	925	-	-	-	360	14	390	b/	-	-
321	do.	67	Apr. 3, 1940	936	72	27	255	250	17	440	b/	0.8	292
321	do.	73	Apr. 8, 1940	914	-	-	-	244	18	440	b/	-	-
322	do.	13	Apr. 3, 1940	726	114	19	138	354	51	226	b/	-	362
322	do.	29	do.	1,533	-	-	-	561	51	640	b/	-	-
322	do.	40	Apr. 4, 1940	2,587	192	73	697	439	139	1,270	b/	-	780
322	do.	45	Apr. 8, 1940	2,479	-	-	-	311	135	1,300	b/	-	-
c/ 322	do.	62	Apr. 10, 1940	1,452	114	54	368	244	35	760	b/	-	509
322	do.	69	Apr. 11, 1940	1,537	-	-	-	262	39	810	b/	-	-
322	do.	74	Apr. 13, 1940	1,127	64	37	321	256	35	540	b/	0.7	313
323	do.	18	Apr. 10, 1940	371	39	15	86	183	5	136	b/	-	159
323	do.	29	do.	379	-	-	-	220	10	118	b/	-	379
323	do.	38	Apr. 11, 1940	430	42	15	108	220	5	152	b/	-	164
323	do.	41	do.	477	-	-	-	244	8	170	b/	-	-
323	do.	63	Apr. 16, 1940	502	31	12	151	189	5	210	b/	-	128
323	do.	69	do.	508	-	-	-	220	11	200	b/	-	-
323	do.	72	Apr. 19, 1940	527	18	16	172	232	6	202	b/	1.0	110
324	do.	16	Apr. 15, 1940	1,594	73	38	489	549	184	540	b/	-	339
324	do.	26	Apr. 16, 1940	7,018	504	289	1,717	329	586	3,760	b/	-	2,448
c/ 324	do.	46	Apr. 19, 1940	8,204	490	264	2,279	329	199	4,810	b/	-	2,307
325	do.	7	do.	476	43	32	103	397	17	86	b/	-	240
325	do.	22	Apr. 20, 1940	407	-	-	-	372	5	61	b/	-	-
325	do.	42	Apr. 22, 1940	922	95	32	222	403	15	360	b/	-	370
325	do.	61	Apr. 23, 1940	1,437	-	-	-	281	68	710	b/	-	-
325	do.	65	Apr. 24, 1940	1,437	115	49	374	244	68	730	b/	0.5	490
326	do.	13	do.	297	51	12	47	195	12	76	b/	-	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 67

Partial analyses of water from wells 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.)
326	W. P. A. Test	29	Apr. 24, 1940	290	-	-	-	195	12	78	E/	-	-
326	do.	35	Apr. 25, 1940	371	46	11	83	207	12	114	E/	-	162
326	do.	60	May 6, 1940	676	35	12	211	207	31	280	E/	-	138
326	do.	62	do.	668	-	-	-	268	29	260	E/	-	-
326	do.	68	May 8, 1940	693	43	12	214	293	27	250	E/	1.1	158
327	do.	21	Apr. 25, 1940	432	70	15	67	232	16	141	E/	-	259
327	do.	30	Apr. 26, 1940	463	-	-	-	238	15	170	E/	-	-
327	do.	41	May 6, 1940	618	55	22	154	140	20	300	E/	-	224
327	do.	64	May 7, 1940	1,178	104	33	304	220	27	600	E/	0.5	396
327	do.	67	May 8, 1940	1,130	-	-	-	207	30	585	E/	-	-
328	do.	8	June 24, 1940	26,731	880	1,052	7,734	500	2,144	14,675	E/	-	6,525
328	do.	14	June 25, 1940	44,904	-	-	-	427	3,352	25,150	E/	-	-
328	do.	19	do.	63,798	-	-	-	427	3,937	57,000	E/	-	-
328	do.	24	do.	72,261	-	-	-	390	4,716	46,200	E/	-	-
c/ 328	do.	28	July 3, 1940	84,168	1,912	3.48 ^a	25,166	195	4,911	48,600	E/	-	19,100
328	do.	33	do.	84,280	-	-	-	329	4,872	49,300	E/	-	-
328	do.	39	July 5, 1940	68,880	-	-	-	354	3,703	40,500	E/	-	-
328	do.	44	do.	61,520	-	-	-	287	2,962	36,500	E/	-	-
328	do.	50	July 6, 1940	39,018	-	-	-	266	1,442	23,500	E/	-	-
328	do.	55	July 8, 1940	38,875	2,789	1,481	9,850	220	1,247	23,400	E/	-	13,062
329	do.	14	June 24, 1940	11,756	391	401	3,517	244	702	6,625	E/	-	2,628
c/ 329	do.	24	June 25, 1940	31,912	-	-	-	378	3,235	17,275	E/	-	-
329	do.	32	do.	37,568	1,571	1,681	10,113	354	4,054	20,075	E/	-	10,838
329	do.	50	July 3, 1940	18,127	1,415	702	4,411	226	1,013	10,475	E/	-	1,422
329	do.	55	July 5, 1940	13,195	1,101	521	3,147	220	468	7,850	E/	-	4,896
329	do.	60	July 6, 1940	12,346	-	-	-	220	390	7,425	E/	-	-
329	do.	65	July 8, 1940	8,791	726	366	2,090	195	188	5,325	E/	-	3,321
329	do.	67	July 9, 1940	9,437	-	-	-	171	214	5,750	E/	-	-
330	do.	12	June 19, 1940	2,268	85	42	737	464	136	1,040	E/	-	336
330	do.	20	do.	1,981	-	-	-	348	121	975	E/	-	-
330	do.	28	-	1,097	81	25	307	226	58	515	E/	-	306
330	do.	32	June 20, 1940	1,143	-	-	-	354	33	515	E/	-	-
330	do.	61	June 22, 1940	659	-	-	-	299	16	250	E/	-	-
c/ 330	do.	67	June 24, 1940	616	22	14	205	275	11	228	E/	0.9	114
331	do.	23	June 19, 1940	401	-	-	-	207	12	137	E/	-	-

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 37

Partial analyses of water from wells 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)	Fiberide (F)	Total hardness as CaCO ₃ (calc.)
331	W. P. A. Test	23	June 19, 1940	401	-	-	-	207	12	137	b/	-	-
331	do.	36	do.	495	42	12	138	220	8	187	b/	-	152
331	do.	51	June 20, 1940	589	-	-	-	214	5	260	b/	-	-
331	do.	63	June 22, 1940	573	-	-	-	299	13	198	b/	-	-
331	do.	67	do.	606	42	17	176	305	14	206	b/	1.0	175
332	do.	38	June 14, 1940	4,051	-	-	-	305	265	2,190	b/	-	-
332	do.	59	do.	4,530	448	220	938	348	278	2,475	b/	-	2,026
332	do.	64	June 18, 1940	4,507	-	-	-	354	288	2,435	b/	-	-
332	do.	67	do.	4,522	443	222	937	329	278	2,480	b/	0.4	2,022
333	do.	11	June 11, 1940	914	88	33	211	256	106	350	b/	0.2	355
333	do.	12	June 12, 1940	1,535	73	27	495	537	66	610	b/	-	292
c/ 333	do.	21	do.	983	107	27	239	342	22	420	b/	-	377
333	do.	22	do.	476	-	-	-	207	24	174	b/	-	-
333	do.	31	do.	513	69	12	114	232	22	182	b/	-	222
333	do.	40	do.	597	-	-	-	293	16	214	b/	-	-
333	do.	57	June 14, 1940	702	83	41	127	177	20	344	b/	-	375
333	do.	63	do.	703	96	36	122	207	18	326	b/	0.6	387
333	do.	65	June 18, 1940	693	-	-	-	183	17	332	b/	-	-
334	do.	12	May 16, 1940	692	78	37	119	171	164	210	b/	-	348
334	do.	18	do.	577	-	-	-	159	117	180	b/	-	-
334	do.	22	do.	400	59	15	72	189	29	128	b/	-	209
334	do.	29	May 18, 1940	615	98	20	99	226	129	158	b/	-	327
c/ 334	do.	38	do.	688	76	30	150	317	26	250	b/	0.2	313
334	do.	47	May 20, 1940	857	100	25	193	281	71	330	b/	-	350
334	do.	62	May 21, 1940	1,563	198	45	331	244	59	810	b/	-	683
334	do.	66	do.	1,941	244	58	409	232	76	1,040	b/	-	846
335	do.	11	May 18, 1940	13,728	762	489	3,714	299	1,116	12,500	b/	-	3,910
335	do.	27	do.	17,850	-	-	-	439	1,195	10,100	b/	-	-
335	do.	40	May 20, 1940	20,479	-	-	-	403	1,195	11,800	b/	-	-
335	do.	45	May 21, 1940	21,854	1,118	619	6,313	262	1,175	13,500	b/	-	5,342
335	do.	50	do.	18,770	-	-	-	390	1,155	10,750	b/	-	-
335	do.	56	do.	16,812	1,083	504	4,579	317	890	9,600	b/	-	4,782
335	do.	70	May 22, 1940	11,317	-	-	-	238	288	6,850	b/	-	-

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 67

Partial analyses of water from wells 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.)
335	W. P. A. Test	72	June 24, 1940	10,113	684	295	2,765	226	208	6,050	b/	-	2,922
336	do.	20	May 22, 1940	540	76	18	108	256	22	190	b/	-	266
336	do.	31	May 24, 1940	1,378	70	36	416	268	22	700	b/	0.2	322
337	do.	13	do.	709	43	25	201	281	22	280	b/	-	210
337	do.	26	do.	2,565	165	73	719	329	86	1,360	b/	-	715
337	do.	30	May 25, 1940	5,745	374	214	1,492	293	378	3,140	b/	-	1,817
337	do.	35	do.	6,412	-	-	-	378	443	3,500	b/	-	-
337	do.	40	do.	7,754	-	-	-	403	548	4,250	b/	-	-
337	do.	48	do.	7,576	622	294	1,814	342	468	4,210	b/	-	2,761
337	do.	73	May 28, 1940	6,030	-	-	-	159	157	3,630	b/	-	-
c/ 337	do.	75	do.	5,900	721	290	1,076	171	179	3,550	b/	0.2	2,994
338	do.	14	May 25, 1940	84,324	-	-	-	214	4,230	50,200	b/	-	-
338	do.	19	do.	113,633	-	-	-	232	5,444	67,600	b/	-	-
338	do.	24	do.	120,264	2,770	4,715	36,363	244	6,461	69,800	b/	-	2,631
338	do.	29	do.	120,833	-	-	-	220	7,442	70,400	b/	-	-
338	do.	34	do.	130,070	-	-	-	214	8,225	75,600	b/	-	-
338	do.	40	May 27, 1940	132,548	-	-	-	183	8,225	77,200	b/	-	-
338	do.	50	do.	103,705	-	-	-	220	5,288	61,400	b/	-	-
338	do.	58	May 28, 1940	53,760	-	-	-	195	960	33,400	b/	-	-
338	do.	61	June 3, 1940	46,582	-	-	-	18	723	29,000	b/	-	-
338	do.	64	do.	50,043	2,967	1,483	13,010	183	685	30,800	b/	-	16,014
339	do.	12	May 8, 1940	802	128	35	141	573	16	200	b/	-	461
339	do.	32	May 9, 1940	753	83	31	167	342	27	275	b/	-	334
c/ 339	do.	49	May 13, 1940	11,899	1,372	436	2,450	171	653	6,900	b/	-	5,224
339	do.	60	May 14, 1940	3,920	505	148	762	92	47	2,410	b/	-	1,871
339	do.	66	do.	2,907	407	124	511	146	33	1,760	b/	-	1,526
339	do.	70	May 16, 1940	2,946	424	136	489	122	27	1,810	b/	-	1,619
340	do.	18	May 10, 1940	1,643	93	39	483	378	142	700	b/	-	394
340	do.	34	do.	7,652	470	268	2,067	555	390	4,190	b/	-	2,275
340	do.	41	May 13, 1940	8,403	-	-	-	268	400	4,870	b/	-	-
340	do.	64	May 14, 1940	3,851	-	-	-	140	43	2,350	b/	-	-
340	do.	67	do.	4,293	640	138	775	116	49	2,630	b/	-	2,170
341	do.	12	June 4, 1940	740	29	27	216	159	80	310	b/	-	182

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 67

Partial analyses of water from wells 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.)
341	W. P. A. Test	22	June 4, 1940	403	68	13	72	262	17	104	b/	-	223
341	do.	25	do.	472	-	-	-	262	16	150	b/	-	-
341	do.	35	June 5, 1940	576	-	-	-	329	17	180	b/	-	-
341	do.	48	June 6, 1940	1,949	198	56	475	549	90	860	b/	-	724
341	do.	60	June 7, 1940	2,002	230	71	431	311	67	1,050	b/	-	869
341	do.	64	do.	1,957	-	-	-	329	59	1,025	b/	-	-
c/ 341	do.	72	June 11, 1940	1,803	192	65	405	317	55	930	b/	0.4	750
342	do.	21	June 5, 1940	738	57	23	198	268	18	305	b/	-	238
342	do.	30	do.	862	-	-	-	238	18	410	b/	-	-
342	do.	40	do.	941	68	23	267	250	19	440	b/	-	264
342	do.	55	June 6, 1940	1,987	203	59	468	214	82	1,070	b/	-	752
342	do.	60	June 7, 1940	2,002	-	-	-	177	63	1,130	b/	-	-
342	do.	64	do.	2,110	-	-	-	214	74	1,170	b/	-	-
342	do.	67	June 11, 1940	1,980	214	65	443	134	62	1,130	b/	0.2	805
343	do.	8	-	3,294	108	76	1,043	628	390	1,368	b/	-	582
343	do.	14	July 9, 1940	2,277	-	-	-	525	156	1,040	b/	-	-
343	do.	25	July 10, 1940	2,645	184	71	728	403	154	1,310	b/	-	754
c/ 343	do.	62	July 15, 1940	3,402	351	120	770	171	67	2,010	b/	0.2	1,369
344	do.	8	July 10, 1940	10,040	411	370	2,821	366	1,208	5,050	b/	-	2,548
344	do.	19	do.	2,103	108	60	621	427	109	995	b/	-	517
344	do.	29	do.	2,057	-	-	-	354	97	1,042	b/	-	-
344	do.	39	July 12, 1940	3,258	260	117	806	207	183	1,790	b/	-	1,132
344	do.	48	July 15, 1940	-	-	-	-	171	109	2,100	b/	-	-
345	do.	81	July 7, 1940	525	37	19	146	328	24	136	b/	1.0	170

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 67

1
2

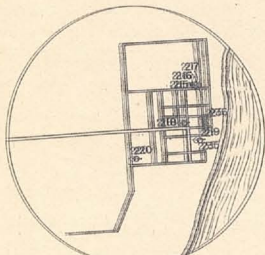
Chemical analyses--Continued

Results are in milligram equivalents per liter.

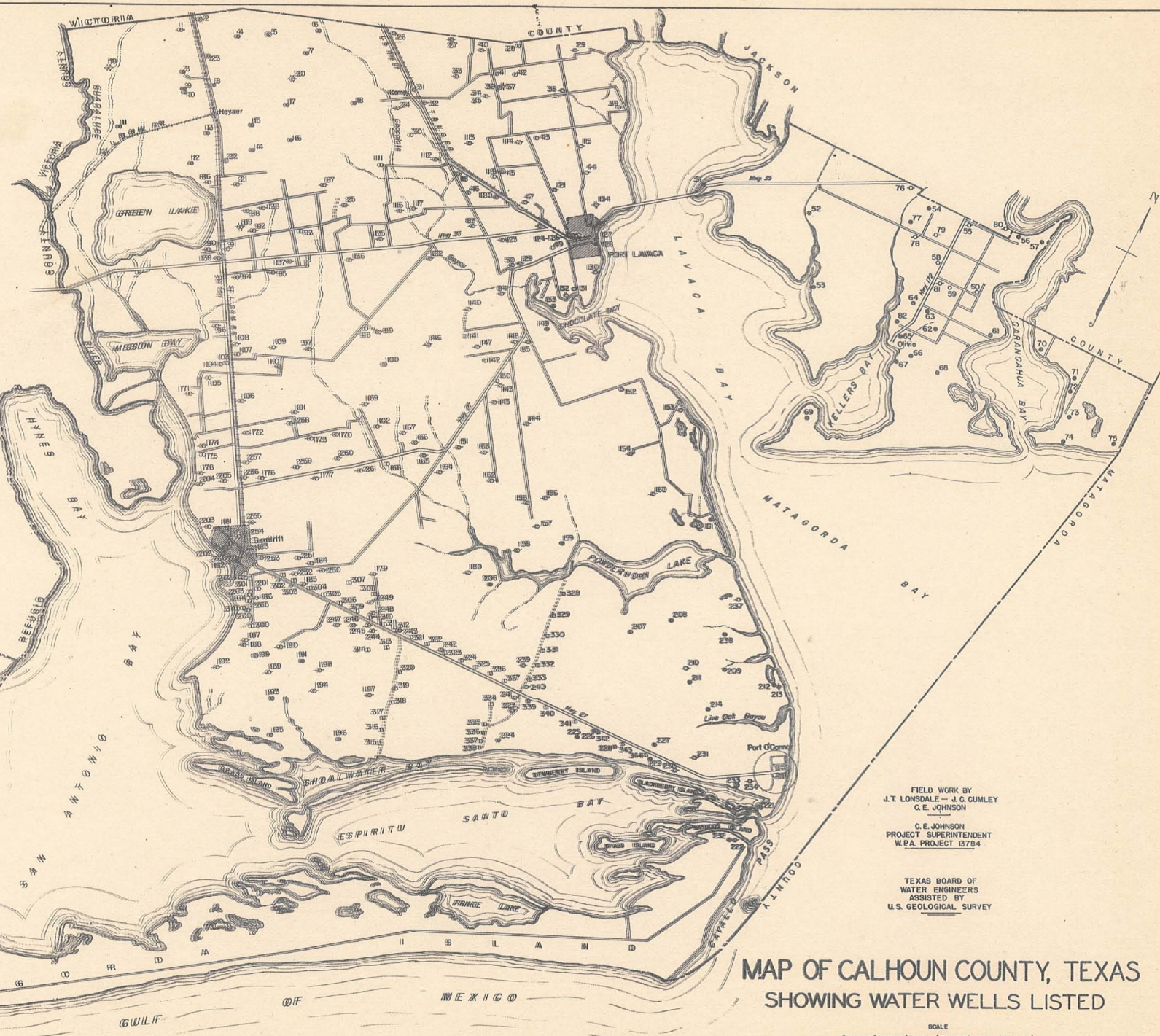
Well	Owner	Depth of well (ft.)	Date of collection	Results are in milligram equivalents per liter.									
				Total hardness as CaCO ₃ (calc.)	Calcium (Ca)	Magnesium (Mg)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Iron (Fe)	Aluminum (Al)	Calcium (Ca)	Fluoride (F)
25	C. J. Boyd	55	May 21, 1940	5.92	4.10	0.82	2.02	6.60	0.21	2.06	0.01	-	17.74
49	E. V. Boquet	29	Apr. 5, 1940	50.04	31.12	18.92	81.94	5.20	19.89	106.89	-	-	263.96
78	Guy Cavallin	248	Apr. 9, 1940	1.10	0.48	0.62	18.10	7.50	0.02	11.56	0.12	-	38.40
107	John Pilgram	210	Mar. 11, 1940	9.36	5.68	3.68	16.63	3.90	0.66	21.43	0.02	-	51.95
122	W. A. Shofner	51	Apr. 19, 1940	6.84	4.52	2.32	11.61	7.80	1.37	8.71	0.04	-	36.90
171	J. D. Stevens	29	Mar. 11, 1940	30.42	22.30	8.12	24.20	7.10	8.04	39.42	-	-	109.24
202	A. Howes	360	Feb. 24, 1940	6.16	3.80	2.36	17.08	5.70	0.62	16.92	0.03	-	46.40
215	City of Port O'Connor	630	Feb. 23, 1940	3.10	1.76	1.34	47.04	3.90	0.02	43.15	0.07	-	100.28
244	J. J. Dalehite	21	Jan. 24, 1940	3.90	3.26	0.64	2.74	3.30	0.35	2.99	0.01	-	13.24
261	Paul Boone	78	Mar. 20, 1940	31.34	20.18	11.66	61.93	3.90	8.82	51.05	-	-	127.54
305	W. P. A. Test	32	Jan. 29, 1940	56.00	34.64	21.36	35.69	2.00	2.54	87.15	-	-	183.38
306	do.	35	Jan. 30, 1940	11.04	8.12	2.92	9.35	4.60	0.32	11.91	0.02	-	40.78
309	do.	21	Feb. 2, 1940	5.42	3.28	2.14	12.57	4.80	0.90	12.27	-	-	35.98
310	do.	72	Feb. 12, 1940	62.48	43.96	18.50	70.92	4.80	9.02	119.58	-	-	266.80
312	do.	57	Feb. 27, 1940	5.74	3.48	2.26	11.51	3.10	0.35	14.10	-	-	35.10
314	do.	73	July 24, 1940	5.32	3.14	2.18	11.53	3.00	0.25	13.54	0.06	-	33.70
318	do.	50	Mar. 12, 1940	16.30	9.88	6.42	28.76	6.60	2.71	35.25	0.02	-	89.12
319	do.	76	Mar. 8, 1940	39.16	22.06	17.10	39.46	4.10	1.76	72.76	0.02	-	157.24
322	do.	62	Apr. 10, 1940	10.18	5.70	4.48	15.70	4.00	0.73	21.43	-	0.02	52.36
324	do.	46	Apr. 19, 1940	46.14	24.52	21.62	99.07	5.40	4.15	135.66	-	-	290.42
328	do.	28	July 3, 1940	382.00	95.60	286.40	1094.18	3.20	102.31	370.67	-	-	2952.33
329	do.	24	June 25, 1940	-	-	-	-	6.20	67.40	427.21	-	-	-
330	do.	67	June 24, 1940	2.28	1.10	1.18	8.93	4.50	0.23	6.43	0.05	-	22.42
333	do.	21	June 12, 1940	7.54	5.34	2.20	10.37	5.60	0.16	11.85	-	-	35.82
334	do.	58	May 18, 1940	6.26	3.82	2.44	6.53	5.20	0.54	7.05	0.01	-	25.58
337	do.	75	May 28, 1940	59.88	36.04	23.84	46.78	2.80	3.74	100.12	0.01	-	213.32
339	do.	49	May 13, 1940	104.48	65.58	35.90	106.52	2.80	13.60	194.60	-	-	422.00
341	do.	72	June 11, 1940	15.00	9.62	5.38	17.59	5.20	1.14	26.23	0.02	-	65.18
343	do.	62	July 15, 1940	27.38	17.54	9.84	33.49	2.80	1.38	56.69	0.01	-	121.74

BASE COMPILLED FROM
LAND OWNERSHIP MAP
HIGHWAY PLANNING SURVEY MAP
AND FIELD NOTES

- EXPLANATION—
- WELL WITH HAND PUMP, BUCKET, OR BAILER
 - ⊕ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ⊗ WELL WITH PUMPING PLANT—5 HORSE POWER OR LARGER
 - ⊙ UNUSED WELL
 - ⊖ FOLLOWING WELL (abandoned)
 - ⊕ WELL DRILLED TO TEST FOR OIL OR GAS
 - ⊕ TEST WELL DRILLED BY W/P.A. LABOR



1/4" = 1 Mile



FIELD WORK BY
J.T. LONSDALE - J.C. CUMLEY
G.E. JOHNSON
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PROJECT SUPERINTENDENT
W.P.A. PROJECT 15784

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

MAP OF CALHOUN COUNTY, TEXAS
SHOWING WATER WELLS LISTED

SCALE
0 1 2 3 4 5 6 MILES