

**TEXAS BOARD OF WATER ENGINEERS**

C. S. Clark, Chairman

A. H. Dunlap, Member

J. W. Pritchett, Member



**CAMP, FRANKLIN AND TITUS COUNTIES, TEXAS**

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

**FEBRUARY 1943**

**REPRINTED APRIL 1950**

CAMP, FRANKLIN AND TITUS COUNTIES, TEXAS

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

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February 1943

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I L L U S T R A T I O N

Map of Camp, Franklin and Titus Counties, Texas, showing water wells and springs.

# CAMP, FRANKLIN AND TITUS COUNTIES= TEXAS

## Introduction

By

W. L. Broadhurst

This publication contains data on wells and springs in Camp, Franklin and Titus Counties, Texas as follows:

Camp County: well records, 46; drillers' logs, 9; water well analyses, 33.

Franklin County: well records, 66; records of springs, 4; drillers' logs, 17; water well analyses, 40.

Titus County: well records, 90; records of springs, 2; drillers' logs, 13; water well analyses, 69.

It also includes a map showing the location of the wells and springs listed in each county, each well or spring being given a number on the map corresponding to the number assigned to it in the records. The field data were obtained by the writer in May, June and July 1942, in connection with a state-wide program of ground-water investigations in Texas conducted by the State Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey.

The water analyses were made by W. W. Hastings, Chemist of the Quality of Water Division of the Federal Geological Survey, and by chemists employed by the Work Projects Administration under the supervision of Mr. Hastings and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry of The University of Texas. The results of the analyses, which relate only to the mineral constituents in the water and not to its sanitary character, are tabulated in parts per million for Camp County on pages 9 to 10; for Franklin County on pages 22 to 23; and for Titus County on pages 37 to 39. For the convenience of those who prefer a different form of expression the analyses of 20 samples from Camp County, 20 samples from Franklin County, and 20 samples from Titus County are given in milligram equivalents per liter on pages 11, 24, and 40, respectively.

The records serve as a guide to land owners, officials of industrial plants, well drillers, and others who need information regarding wells, the depth to ground water in different parts of these counties, and the quantity and chemical character of water yielded by the wells.

A limited number of copies of this release are available for free distribution. They may be obtained by addressing a request to Mr. C. S. Clark, Chairman, Texas State Board of Water Engineers, 302 West 15th Street, Austin, Texas.

CAMP COUNTY, TEXAS

Records of wells, drillers' logs, and water analyses

Records of wells in Camp County, Texas

All wells are drilled unless otherwise stated in remarks

Well	Distance from Pittsburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
1	7 miles northwest	H. C. Jones	H. C. Jones	1939	48	6	1
2	7½ miles northwest	McDonald Bros.	--	1930	3,760	--	--
3	6 miles northwest	R. A. Looney	--	1932	24	36	4.5
4	3½ miles west	A. T. King	--	1920	18	24 <sup>4</sup>	3.5
5	4¼ miles northwest	Rocky Mountain Colored School	--	Old	32	36	3
6	5¼ miles northwest	C. B. Henderson	C. B. Henderson	1941	15	36	2
7	4 miles northwest	Benedum-Trees	--	1928	3,855	--	--
8	3½ miles northwest	Midway School	--	1932	22	36	4
9	4¼ miles north	Karl Johns	Karl Johns	1939	24	30	3
10	2¾ miles north	A. L. Spearman	--	Old	17	48	0.5
11	3½ miles northeast	--	--	--	16	36	3
12	5 miles northeast	Jim Guest	--	Old	36	36	2.5
13	4¼ miles northeast	Garfield School	--	Old	20	48	3
14	1½ miles northeast	J. M. Kent	-- Chillcoat	1930	164	8, 3	0.2
15	¾ mile north	E. R. Reaves	do.	1930	574	6	2
16	In Pittsburg	Southwestern Gas and Electric Co.	--	Old	263	8	--
17	do.	do.	--	Old	346	8	8.6
18	do.	do.	Layne-Texas Co	1923	460	24, 16, 12	--
19	do.	do.	do.	1941	450	--	--
20	do.	do.	do.	1941	466	18, 10	--
21	do.	Pittsburg Cotton Oil Co.	--	1896	275	6	--
22	½ mile west	F. E. Prince Co.	R. H. Dearing and Sons	1921	255	8	1.6
23	1¼ miles west	V. L. Thrash	--	1936	17	36	3

a/ Pump or lift; A, air lift; B, bucket and rope; C, cylinder; J, jet; T, turbine.  
 Power: E, electric; H, hand; Number indicates horsepower.

Chemical analyses of water from some of these wells are shown in a table of analyses on pages 9 to 11.

Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.)	Date of measurement			
1	42.48	May 8, 1942	H	S	Water reported unfit for drinking. Temperature 68° F.
2	--	--	--	--	Oil test. B. D. Tillery lease. See log.
3	17.36	May 8, 1942	H	D	Dug. Temperature 62° F.
4	9.83	May 9, 1942	H	D,S	Dug. Temperature 61° F.
5	33.09	May 8, 1942	H	N	Dug. Temperature 66° F.
6	10.63	May 15, 1942	H	D	Dug. Temperature 61½° F.
7	--	--	--	--	Oil test. John E. Browning lease. See log.
8	20.38	May 8, 1942	H	P	Dug. Temperature 64° F.
9	21.2	May 6, 1942	H	D,S	Dug.
10	6.30	May 11, 1942	J,E	D,S	Dug.
11	11.83	May 13, 1942	H	D,S	Dug.
12	32.38	do.	H	D,S	Dug. Temperature 64° F.
13	6.64	May 7, 1942	H	P	Dug. Temperature 63° F.
14	52.33	May 8, 1942	C	N	Water from sand from 140 to 162 feet. Formerly pumped at rate of 40 to 60 gallons a minute for
15	4.94	do.	None	N	Water from sand at 275 feet. swimming pool. Supply insufficient for cotton gin.
16	--	--	None	N	Yield 37 gallons a minute in 1919.
17	141.40	May 11, 1942	None	N	Water from sand at 212 to 235 feet. Water level reported 15 feet below ground and yield 43 gallons a minute with drawdown of 125 feet in 1919.
18	--	--	T,E 40	P	Reported yield 500 gallons a minute. This well and well 20 furnish public supply of Pittsburg.
19	--	--	None	N	Test. Yield insufficient for city use.
20	--	--	T,E 30	P	Screen at 162-225, 386-407 and 417-449 feet. Reported yield 310 gallons a minute with pumping level at 230 feet when drilled. This well and well 18 furnish public supply of Pittsburg.
21	c/150	--	A	D,Ind	Reported yield 15 gallons a minute. See log.
22	134.90	May 12, 1942	A	D,Ind	Screen from 204 to 239 feet. Water level 124 feet below ground on September 29, 1934. Yield 70 gallons a minute with drawdown of 7 feet after pumping 2½ hours. Temperature 69½° F.
23	13.01	do.	H	S	Dug. Temperature 61° F. See log.

b/ D, domestic; Ind, industrial; S, stock; P, public supply; N, not used.  
c/ Water level reported by driller or owner,

## Records of wells in Camp County--Continued

Well	Distance	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
24	3 $\frac{3}{4}$ miles southwest	Midway School	--	--	12	--	1
25	6 miles southwest	W. C. McGlothlin	--	1938	8,000 <sup>r</sup>	--	--
26	do.	Gulf Oil Corp.	--	1940	8,108	--	--
27	6 $\frac{3}{4}$ miles west	Leesburg School	--	1920	21	30	3
28	8 $\frac{3}{4}$ miles west	Union School	--	--	27	36	3
29	10 miles west	Newsome School	--	1936	18	36	2
30	9 miles southwest	Lone Star School	--	--	14	36	3
31	9 $\frac{1}{2}$ miles southwest	Myrtle Springs School	--	--	25	36	3
32	5 miles southwest	Hickory Hill School	--	--	18	36	3.5
33	5 $\frac{3}{4}$ miles south	Pine School	--	--	--	--	--
34	3 $\frac{3}{4}$ miles south	Crossroad School	--	Old	13	24	1.5
35	3 miles south	H. S. Moss	--	1939	4,551	--	--
36	2 $\frac{1}{2}$ miles south	do.	--	1939	--	--	--
37	2 miles south	J. E. Statham	--	1850	27	36	3.5
38	3 $\frac{1}{2}$ miles east	Verd Downing	--	1907	15	36	2.5
39	5 $\frac{1}{4}$ miles southeast	Ebenezer Junior High School	--	Old	21	36	3
40	5 $\frac{3}{4}$ miles southeast	Jim Guest	--	Old	22	36	3
41	7 miles southeast	Gulf Coast Oil Co.	--	1931	4,028	--	--
42	8 $\frac{1}{2}$ miles southeast	Lindsey Spring School	--	Old	17	36	2
43	8 $\frac{1}{4}$ miles southeast	Center Point Colored School	--	1935	20	72	--
44	8 $\frac{1}{2}$ miles southeast	do.	--	1939	23	96	1.5
45	8 $\frac{1}{4}$ miles southeast	S. R. Dotson	-- Davis	1941	265	3	1
46	10 miles southeast	Holly Springs School	--	Old	29	24	3

a/ Pump or lift: A, air lift; B, bucket end rope; C, cylinder; J, jet; T, turbine. Power: E, electric; H, hand. Number indicates horsepower.



Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.)	Date of measurement			
24	3.85	May 6, 1942	C	P	Dug. Temperature 63° F.
25	--	--	--	--	Oil test. E. Venters lease. Electrical log in the files of Texas Board of Water Engineers shows shale, sandy shale and some sand from 90 to 770 feet and mostly shale or clay from 770 to 1,600 feet. See driller's log.
26	--	--	--	--	Oil test. W. J. Venters lease. See log.
27	8.32	May 9, 1942	C,E	P	Dug. Temperature 62° F.
28	12.00	May 8, 1942	B,H	P	Dug. Temperature 63° F.
29	7.32	do.	J, $\frac{1}{4}$ E	P	Dug. Temperature 64° F.
30	12.05	do.	B,H	P	Dug. Temperature 64° F.
31	23.77	do.	B,H	P	Dug. Temperature 64° F.
32	10.27	do.	B,H	P	Dug. Temperature 64° F.
33	--	--	C,H	P	
34	4.93	May 13, 1942	B,H	P.	Dug. Temperature 68° F.
35	--	--	--	--	Oil test. W. D. Keeling lease. See log.
36	--	--	--	--	Oil test. -- Blackstone lease. Electrical log in files of Texas Board of Water Engineers shows shale interbedded with thin sands from 300 to 1,000 feet and mostly shale or clay from 1,000 to 1,850 feet.
37	13.68	May 13, 1942	B,H	D,S	Dug. Temperature 62° F.
38	8.70	May 14, 1942	B,H	D,S	Dug.
39	9.12	May 7, 1942	B,H	P	Dug. Temperature 61° F.
40	13.02	do.	B,H	D,S	Dug. Temperature 61° F.
41	--	--	--	--	Oil test. L. B. McCaslin lease. See log.
42	10.0	May 7, 1942	B,H	P	Dug. Temperature 61° F.
43	--	--	C,E	P	Dug.
44	6.96	May 7, 1942	C,E	P	Dug. Temperature 63° F.
45	21.83	do.	None	N	See log.
46	25.85	do.	B,H	P	Dug.

b/ D, domestic; Ind, industrial; S, stock; P, public supply; N, not used.  
c/ Water level reported by driller or owner.

Table of drillers' logs of wells in Camp County, Texas

	Thickness (feet)	Depth (feet)
<u>Well 2, partial log</u>		
McDonald Brothers, 7 $\frac{1}{2}$ miles northwest of Pittsburg. Altitude 420 feet.		
Black sand	47	47
Lignite	14	61
Sand and boulders	20	81
Sand	20	101
Lignite and streaks of sand	111	212
Sand and shale	22	234
Broken lignite	80	314
Sand and sandy shale	175	489
"Pepper" sand	311	800
Shale	221	1021
Gumbo	22	1043
Sandy shale	22	1065
Shale	35	1100
Rock	5	1105
Shale	12	1117
Sandy shale	83	1200
Shale and gumbo	397	1597
Sand	18	1615
Shale	42	1657
Sand	54	1711
Shale	34	1745
Sand	16	1761
Sandy shale and gumbo	677	2438
Marly chalk and lime	323	2761
TOTAL DEPTH		3760

	Thickness (feet)	Depth (feet)
<u>Well 7, partial log</u>		
Benedum-Trees, 4 miles northwest of Pittsburg.		
Red sandy clay	8	8
White clay and lignite	32	40
Blue shale and boulders	65	105
Blue sticky shale	25	130
Sand and lignite	80	210
Lignite	20	230
Black shale	95	325
White sandstone	5	330
White sand	60	390
Brown shale	46	436
Brown shale and lignite	24	460
Black shale and boulders	90	550
Blue sandy shale and lime	98	648
White sandstone	1	649
Black shale	18	667
White sandstone	7	674
Gray shale and boulders	344	1018
Black sticky shale	387	1405
Gray gumbo	15	1420

	Thickness (feet)	Depth (feet)
<u>Well 7, partial log--Continued</u>		
Black shale and lime shells	103	1523
Gray gumbo	27	1550
Black sticky shale	57	1607
Lime	1	1608
Blue sandy shale	92	1700
Gray sand	21	1721
Blue sandy shale	69	1790
Gray sand	43	1833
Gray sandy shale	12	1845
Gray gumbo	5	1850
TOTAL DEPTH		3855

	Thickness (feet)	Depth (feet)
<u>Well 20</u>		
Southwestern Gas and Electrical Co. In Pittsburg.		
Red clay	12	12
Sand	26	38
Rock	1	39
Blue clay	10	49
Rock	1	50
Fine-grained hard sand	32	82
Shale and lignite	15	97
Sand	15	112
Shale, lignite and sand	36	148
Sand	49	197
Rock	1	198
Sand	25	223
Shale	3	226
Hard sand with shale rock	23	249
Rock	1	250
Sandy shale and sand streaks	38	288
Shale and lignite	38	326
Fine-grained hard sand	16	342
Sandy shale and sand layers	19	361
Rock	1	362
Sandy shale and sand layers	24	386
Fine-grained hard sand	23	409
Sandy shale	9	418
Hard sand	18	436
Rock	1	437
Hard sand	19	456
Hard shale and lignite	10	466
CASING RECORD: 148 feet of 18-inch and 466 feet of 10-inch. Screen at 162-225, 386-407 and 417-449 feet. Gravel-walled.		

Table of drillers' logs of wells in Camp County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 22</u>		
F. E. Prince Co. $\frac{1}{2}$ mile west of Pittsburg.		
Sand and clay	18	18
Gravel	4	22
Shale and layers of lime rock	123	145
Water sand	45	190
Shale and soapstone	17	207
Lignite	2	209
Slate	3	212
Water sand	26	238
Shale	77	315
Gumbo	10	325
CASING RECORD: 209 feet of 8-inch and 120 feet of 6-inch. Screen: 35 feet of 6-inch from 204 to 239 feet.		

Well 25, partial log

W. C. McGlothlin. 6 miles southwest of Pittsburg. Altitude 381 feet.		
Surface sand and clay	45	45
Shale and boulders	73	118
Sandstone	2	120
Shale and boulders	130	250
Sandy shale	58	308
Shale and boulders	218	526
Sand and boulders	84	610
Shale and boulders	1277	1887
Shale and streaks of sand	31	1918
Shale and boulders	92	2010
Sand	22	2032
Shale	293	2325
Broken chalk	25	2350
Sticky shale	65	2415
Chalk and shale	400	2815
TOTAL DEPTH		7603

Well 26, partial log

Gulf Oil Corporation. 6 miles southwest of Pittsburg. Altitude 375 feet.		
Surface	50	50
Sand	10	60
Shale	60	120
Sand and shale	15	135
Shale	225	360
Sand	80	440
Shale	95	535
Sand and shale	203	738
Sand and shells	52	790
Lime	3	793
Shale	801	1594

	Thickness (feet)	Depth (feet)
<u>Well 26, partial log--Continued</u>		
Sand	92	1686
Shale	54	1740
Sandy shale	72	1812
Shale	583	2395
Chalk and shale	538	2933
TOTAL DEPTH		8108

Well 35, partial log

H. S. Moss. 3 miles south of Pittsburg. Altitude 376 feet.		
Sand	35	35
Sand and shale	100	135
Sand, shells	51	186
Sand and shale	189	375
Shale, shells	225	600
Sand and gravel	10	610
Shale, shells	230	840
Shale	18	858
Shale, shells	383	1241
Shale	68	1309
Sandy shale and shells	92	1401
Shale	61	1462
Shale and lime	61	1523
Shale, shells	122	1645
Sandy shale	180	1825
Chalk	6	1831
Hard streak of lime	3	1834
Chalk	214	2048
TOTAL DEPTH		4551

Well 41, partial log

Gulf Coast Oil Co. 7 miles southeast of Pittsburg. Altitude 410 feet.		
Sand and boulders	184	184
Sticky shale	8	192
Sand, shale and boulders	527	719
Shale and boulders	327	1091
Sand	36	1127
Shale, sand and boulders	79	1206
Rock	2	1208
Lime rock	3	1211
Shale, lime and boulders	785	1996
Gumbo	28	2024
Lime, boulders	7	2031
Grey sand	58	2089
Shale and lime	251	2340
Shale, lime and boulders	32	2372

(Continued on next page)

Table of drillers' logs of wells in Camp County--Continued

	Thickness (feet)	Depth (feet)
Well 41, partial log--Continued		
Sandy shale	128	2500
Shale	50	2550
Lime	6	2556
Shale	96	2652
Shale, lime, chalk	16	2668
Chalk and lime	209	2877
TOTAL DEPTH		4028

	Thickness (feet)	Depth (feet)
Well 45, partial log		
S. R. Dotson. $8\frac{1}{4}$ miles southeast of Pittsburg.		
Surface clay	60	60
Gumbo	38	98
Good water sand	10	108
TOTAL DEPTH		265

Partial analyses of water from wells in Camp County, Texas

analyzed at The University of Texas under the direction of W. W. Hastings, Chemist, U. S. Department of the Interior, Geological Survey, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry. 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	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
b/ 1	H. C. Jones	43	May 3, 1942	2,094	232	163	227	43	393	545	0	3.0	1,251
b/ 3	R. A. Looney	24	do.	41	2.0	4.4	3.7	6	3	5.0	-	20	23
4	A. T. King	18	May 2, 1942	34	0.4	3.9	6.9	18	3	9.0	-	2.0	17
b/ 5	Rocky Mountain Colored School	32	May 8, 1942	581	3.0	40	102	0	407	22	0.1	1.5	185
6	J. B. Henderson	15	May 15, 1942	36	4.8	3.0	3.0	6	7	10	0.3	30	45
8	Midway School	22	May 8, 1942	22	1/2	1.9	5.5	6	5	6.5	0.4	0	8
b/ 9	Karl Johns	24	May 6, 1942	41	2.0	5.6	3.2	6	4	12	-	11	28
10	A. L. Spearman	17	May 11, 1942	56	4.8	3.0	0.9	0	22	11	0.3	9.0	45
11	--	16	May 13, 1942	169	16	5.6	23	0	20	44	0.4	55	63
12	Jim Guest	36	do.	106	7.6	1.7	16	0	15	20	0.3	45	26
b/13	Garfield School	20	May 7, 1942	61	8.0	4.4	7.1	12	15	18	0.3	2.0	38
b/13	Southwestern Gas & Electric Co.	460	Oct. 14, 1941	291	3.6	2.2	95	192	61	10	-	2.0	30
b/20	do.	466	do.	239	3.7	2.1	92	130	65	9.0	-	2.0	30
b/21	Pittsburg Cotton Oil Co.	275	May 6, 1942	231	2.4	4.1	106	232	37	16	0.2	1.0	23
b/22	F. F. Prince Co.	255	do.	334	2.0	2.9	120	133	104	13	0.1	2.0	17
23	V. L. Thrash	17	May 12, 1942	972	30	56	225	0	100	460	0.4	100	305
b/24	Midway School	12	May 6, 1942	153	5.2	9.2	32	12	92	3.0	0.5	0	51
b/27	Leesburg School	21	May 9, 1942	114	24	3.2	12	61	22	10	0.3	12	72
28	Union School	27	May 3, 1942	137	2.8	3.0	33	0	52	30	0.5	1.5	40
b/29	Newsom School	13	do.	144	0.3	3.0	43	35	20	21	0.2	9.0	35
30	Lone Start School	14	do.	85	12	6.3	1.3	0	63	1.0	0.4	0	59
b/31	Myrtle Springs School	25	do.	74	6.3	0.7	19	37	3	11	0.2	15	20
32	Hickory Hill School	13	do.	93	3.4	6.3	12	6	37	16	0.4	9.0	49

a/ Less than 3 parts per million.

b/ Analyses of water from selected wells are given in milligram equivalents per liter on page 11.

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

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
33	Pine School	-	May 6, 1942	41	2.0	5.5	5.0	31	4	8.0	0.1	0	28
b/34	Crossroad School	13	May 13, 1942	76	11	0.7	17	55	12	5.5	0.2	2.0	30
37	J. E. Statham	27	do.	362	44	19	48	12	12	132	0.6	100	187
b/38	Verd Downing	15	May 14, 1942	124	12	5.6	18	12	11	21	0.2	50	53
b/39	Ebenezer Junion High School	21	May 7, 1942	36	0.8	0.7	11	6	7	10	0.2	3.0	5
40	Jim Guest	22	do.	130	8.8	3.0	19	0	3	50	-	41	55
b/42	Lindsey Spring School	17	do.	12	1.2	1.9	a/	0	2	3.5	0.2	3.0	11
b/43	Center Point Colored School	20	do.	610	54	36	88	6	370	58	0.6	0	282
b/44	do.	23	do.	210	2.8	0.7	69	6	83	42	0.3	9.0	10
b/46	Holly Springs School	29	do.	48	12	3.2	0.7	24	15	5.0	0.3	0	42

a/ Less than 3 parts per million.

b/ Analyses of water from selected wells are given in milligram equivalents per liter on page 11.

Chemical analyses--Continued  
Results are in milligram equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
1	H. C. Jones	48	May 8, 1942	11.58	13.44	9.39	0.70	13.71	15.37	0	.13	25.02
3	R. A. Looney	24	do.	0.10	0.36	0.16	0.10	0.06	0.14	-	0.32	0.46
5	Rocky Mountain Colored School	32	do.	0.40	3.30	4.42	0	3.47	0.62	0.01	0.02	3.70
9	Karl Johns	24	May 6, 1942	0.10	0.46	0.14	0.10	0.08	0.34	-	0.18	0.56
13	Garfield School	20	May 7, 1942	0.40	0.36	0.31	0.20	0.31	0.51	0.02	0.03	0.76
18	Southwestern Gas & Electric Co.	460	Oct. 14, 1941	0.43	0.18	4.12	3.15	1.27	0.28	-	0.03	0.61
20	do.	466	do.	0.43	0.17	3.93	2.95	1.35	0.25	-	0.03	0.60
21	Pittsburg Cotton Oil Co.	275	May 6, 1942	0.12	0.34	4.59	3.80	0.77	0.45	0.01	0.02	0.46
22	F. E. Prince Co.	255	do.	0.10	0.12	5.23	3.00	2.16	0.37	0.01	0.03	0.34
24	Midway School	12	do.	0.26	0.76	1.37	0.20	1.925	0.23	0.03	0	1.02
27	Leesburg School	21	May 9, 1942	1.18	0.26	0.51	1.00	0.46	0.28	0.02	0.19	1.44
29	Newsome School	13	May 8, 1942	0.04	0.66	1.87	1.40	0.42	0.59	0.01	0.15	0.70
31	Myrtle Springs School	25	do.	0.34	0.06	0.82	0.60	0.06	0.31	0.01	0.24	0.40
34	Crossroad School	13	May 13, 1942	0.54	0.01	0.75	0.20	0.25	0.16	0.01	0.03	0.60
33	Verd Downing	15	May 14, 1942	0.60	0.46	0.78	0.20	0.23	0.59	0.01	0.81	1.06
39	Ebenezer Junior High School	21	May 7, 1942	0.04	0.06	0.49	0.10	0.15	0.23	0.01	0.05	0.10
42	Lindsay Spring School	17	do.	0.06	0.16	-	0	0.04	0.10	0.01	0.05	0.22
43	Center Point Colored School	20	do.	2.72	2.92	3.83	0.10	7.70	1.64	0.03	0	5.64
44	do.	23	do.	0.14	0.06	2.98	0.10	1.725	1.18	0.02	0.15	0.20
45	Holly Springs School	29	do.	0.58	0.26	0.03	0.40	0.31	0.14	0.02	0	0.84

FRANKLIN COUNTY, TEXAS

Records of wells, springs, drillers' logs and water analyses



Records of wells and springs in Franklin County, Texas

Well	Distance from Mt. Vernon	Owner	Date completed	Type of well	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
1	12 miles northwest	Isom H. Hare	1942	Dug	24	30	3.0
2	do.	do.	1920	Dr.	104	8	--
3	12 miles north	Herman Banks	--	Dug	23	24	1.5
4	10 miles northeast	Humble Oil and Refining Co.	1941	Dr.	4,286	--	--
5	11 miles northeast	do.	1941	Dr.	4,285	--	--
6	do.	do.	1938	Dr.	4,308	--	--
7	12 miles northeast	do.	1941	Dr.	4,314	--	--
8	13 miles northeast	do.	1936	Dr.	1,200	--	--
9	12 miles northeast	Charlie Whitney	1912	Dug	20	27	3.0
10	9 miles northeast	Ralph Smith	--	Dug	15	36	--
11	8 miles north	S. M. Little	--	Dug	21	30	0.0
12	7½ miles northwest	L. S. Harper	1932	Dr.	--	10	--
13	do.	do.	1925	Dug	28	30	2.0
14	4¾ miles northwest	W. A. McGraw	1930	Dug	16	30	2.0
15	4¼ miles northeast	-- Sides	--	Dug	23	30	2.0
16	4¼ miles east	-- School	--	Dug	11	30	3.0
17	5½ miles southeast	J. C. Thornton	1875	Dug	39	36	3.0
18	4 miles southeast	G. C. Cargile	1915	Dug	16	30	2.0
19	1½ miles southeast	A. L. Gray	1937	Dug	17	36	0.5
20	¾ mile southeast	City of Mt. Vernon	1936	Dr.	120	6	--
21	do.	do.	1936	Dr.	120	6	--
22	1 mile south	do.	1936	Dr.	120	6	--

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift: A, air lift; B, bucket and rope; J, jet; T, turbine.  
Power: E, electric; H, hand. Number indicates horsepower.

Chemical analyses of water from some of these wells and springs are shown in a table of analyses on pages 22 to 24.

Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.) a/	Date of measurement			
1	22.50	June 17, 1942	B, H	D, S	Temperature 64°F.
2	--	--	None	N	
3	18.20	June 17, 1942	B, H	D	Temperature 63°F.
4	--	--	--	--	Oil test, J. C. Young No. 5. No important fresh water sand is shown. Electrical log from 307 to 4,286 feet in files of Texas Board of
5	--	--	--	--	Oil test, Penn Fee No. 29 Water Engineers. No important fresh water sand is shown. Electrical log from 307 to 4,285 feet in files of
6	--	--	--	--	Oil test, Penn Texas Board of Water Engineers. Fee No. 3. No important fresh water sand is shown. Electrical log from 218 to 4,308 feet in files of Texas Board of Water Engineers.
7	--	--	--	--	Oil test, P. J. Dawson No. 14, No important fresh water sand is shown. Electrical log from 315 to 962 feet in files of Texas Board of
8	--	--	None	N	Water was salty and well was abandoned. See log. Water Engineers.
9	7.23	June 17, 1942	B, H	D, S	Formerly supplied water for oil well drilling rigs. Temperature 72° F.
10	--	--	B, H	D, S	Formerly supplied water for 100 head of stock, Temperature 56° F.
11	12.49	June 17, 1942	B, H	D, S	Temperature 64° F.
12	d	do.	Flows	S	Oil test. Flow estimated $\frac{1}{2}$ gallons a minute. Temperature 74° F.
13	25.09	do.	B, H	D	Temperature 67° F.
14	14.82	June 16, 1942	B, H	D, S	Temperature 65° F.
15	18.98	June 17, 1942	B, H	D, S	Do.
16	5.35	do.	B, H	P	Temperature 75° F.
17	10.03	June 18, 1942	B, H	D, S	Temperature 67° F.
18	7.72	June 8, 1942	B, H	D	Do.
19	11.23	June 18, 1942	J, E	D	
20	--	--	A, E 7 $\frac{1}{2}$	P	Yield reported 20 gallons a minute. This well and wells 21, 25 and 29 furnish public supply of
21	--	--	A, E 7 $\frac{1}{2}$	P	Yield reported 20 gallons a min- Mt. Vernon. uto. (See well 20.)
22	--	--	None	N	Test well.

c/ D, domestic; P, public supply; S, stock; N, not used.  
d/ Water level reported by driller or owner.

## Records of wells and springs in Franklin County-- Continued

Well	Distance from Mt. Vernon	Owner	Date completed	Type of well	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
23	1 mile south	City of Mt. Vernon	1936	Dr.	120	6	--
24	do.	do.	1936	Dr.	120	--	--
25	do.	do.	--	Spring	Spring	--	--
26	do.	do.	1941	Dr.	27	4	--
27	do.	do.	1941	Dr.	73	4	--
28	do.	do.	1941	Dr.	55	4	--
29	1½ miles southeast	do.	1941	Dr.	80	6	--
30	do.	do.	1941	Dr.	35	4	--
31	1½ miles southeast	do.	1941	Dr.	105	4	--
32	do.	do.	1941	Dr.	70	4	--
33	3 miles southwest	First Nat'l. Bank	1936	Dug	19	--	0.5
34	4½ miles southwest	L. L. Scudder	1941	Dug	24	36	1.5
35	6½ miles southwest	Iven Draper	1934	Dug	34	36	0.5
36	5½ miles south	-- Store	--	Dr.	36	6	2.0
37	4 miles southeast	L. E. Rutland	--	Dug	13	24	2.0
38	5½ miles southeast	Hopewell School	1940	Dug	19	24	0.5
39	6½ miles southeast	P. V. Banks	1937	Dug	26	36	3.0
40	8 miles southeast	W. E. Howk	--	Dug	17	30	3.0
41	8½ miles southeast	L. H. White	--	Dug	31	36	4.0
42	10 miles southeast	Sloan King	--	--	Spring	--	--
43	8½ miles southwest	Texas Highway Dept.	--	--	Spring	--	--
44	10 miles southwest	Cypress School	--	Dug	40	30	2.5
45	13 miles southwest	Pat Dolan	--	Dug	27	48	3.0
46	14 miles southwest	Ralph Martin	--	Dug	26	30	3.0
47	15 miles south	Rock Springs School	--	Dug	28	36	3.0
48	12 miles south	New Hope School	--	Dug	19	36	3.0
49	13 miles south	Clearwater School	--	Dug	28	36	3.0

Well	Water Level		Method of lift b/	Use of water c/	Remarks
	Below measuring point (ft.) a/	Date of Measurement			
23	--	--	None	N	Test well.
24	--	--	None	N	Do.
25	+	June 19, 1942	Flows	P	Flow estimated 15 gallons a minute. (See well 20)
26	--	--	None	N	Test well. See log.
27	--	--	None	N	Do.
28	--	--	None	N	Do.
29	d/ 18	June 8, 1942	T, E, 3	P	Screen from 50 to 60 feet. Yield reported 30 gallons a minute. See log. (See well 20)
30	--	--	None	N	Test well. See log.
31	--	--	None	N	Do.
32	--	--	None	N	Do.
33	8.95	June 11, 1942	B, H	D, S	Temperature 64° F.
34	17.68	do.	B, H	D, S	Temperature 63° F.
35	26.90	do.	B, H	D, S	Temperature 65° F.
36	29.17	June 18, 1942	B, H	D	Temperature 69° F.
37	6.39	June 12, 1942	B, H	D	Temperature 72° F.
38	14.31	do.	J, E	P	Temperature 68° F.
39	23.31	June 18, 1942	B, H	D, S	Temperature 69° F.
40	6.32	do.	B, H	D, S	Temperature 68° F.
41	28.17	do.	B, H	D, S	Temperature 67° F.
42	+	do.	Flows	D, S	Flow 2 gallons a minute from sand.
43	+	June 11, 1942	Flows	P	Flow estimated 3 gallons a minute from sandstone. Temperature 70° F.
44	36.38	do.	J, E	P	Temperature 66° F.
45	18.76	do.	B, H	D, S	Temperature 65° F.
46	17.08	June 16, 1942	B, H	D, S	
47	13.69	June 11, 1942	B, H	P	Temperature 64° F.
48	16.42	do.	B, H	P	do.
49	20.66	do.	B, H	P	Temperature 67° F.

## Records of wells and springs in Franklin County--Continued

Well	Distance from Mt. Vernon	Owner	Date completed	Type of well	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
50	12 miles southeast	J. P. Rozell	--	Dug	18	36	3.0
51	do.	New Hope School	--	Dug	13	36	1.5
52	15 miles south	Mrs. Lilly Gurley	1910	Dr.	160 <sup>x</sup>	2	2.5
53	15½ miles south	W. B. Swanner	1929	Dr.	227	4	5.0
54	16 miles south	T. H. Barrett	1918	Dr.	240	4	4.0
55	16 miles southwest	City of Winnsboro	--	--	Spring	--	--
56	do.	City of Winnsboro No. 1	1926	Dr.	155	36	--
57	do.	City of Winnsboro	1940	Dr.	633	--	--
58	do.	City of Winnsboro No. 2	1940	Dr.	216	13- 3/8	--
59	14 miles south	P. K. Degenther	1923	Dr.	930	--	--
60	9 miles southwest	Geo. L. Pace	1931	Dr.	3,855	--	--
61	2½ miles north	P. J. Dawson	1913	Dr.	2,000	--	1.0
62	4 miles north	Arkansas Fuel Oil	1925	Dr.	3,261	--	--
63	10 miles northeast	Strouble and Strouble	1937	Dr.	4,273	--	--
64	do.	Byrd-Frost Inc.	1937	Dr.	4,315	--	--
65	11 miles northeast	Gray and Wolfe	1937	Dr.	4,324	--	--
66	do.	Dean Bros. and C. D. Lennox	1937	Dr.	4,315	--	--

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift: A, air lift; B, bucket and rope; J, jet; T, turbine.  
Power: E, electric; H, hand. Number indicates horsepower.

Well	Water level Below measuring point (ft.) <u>a/</u>	Date of measurement	Method of lift <u>b/</u>	Use of water <u>c/</u>	Remarks
50	4.90	June 18, 1942	B,H	D	Temperature 78° F.
51	7.08	do.	J,E	P	
52	+	June 11, 1942	Flows	N	Flow 3 gallons a minute. Temperature 66° F.
53	+	do.	Flows	D	Flow 6 gallons a minute. Temperature 67° F.
54	+	do.	Flows	S	Flow 25 gallons a minute. Temperature 68° F.
55	+	Feb. 14, 1942	Flows	N	Flow estimated 100 gallons a minute. Supplies city of Winnsboro until 1926, Temperature 64° F.
56	--	--	T,E, 15	P	Fifteen feet of 8-inch screen near bottom. Yield reported 250 gallons a minute. This well and well 58 furnish water supply of Winnsboro.
57	--	--	--	--	Test well. See log. <span style="float: right;">See log</span>
58	<u>d/</u> 90	--	T,E	P	Yield reported 370 gallons a minute with draw-down of 39 feet. (See well 56)
59	--	--	--	--	Oil test. See log.
60	--	--	--	--	Do.
61	+	July 16, 1942	Flows	S	Oil test. Flow estimated $\frac{1}{2}$ gallons a minute. Sand reported from 1,600 to 1,650 feet.
62	--	--	--	--	Oil test. See log.
63	--	--	--	--	Oil test. Salty water reported in sand from 710 to 770 feet. See log.
64	--	--	--	--	Oil test. Salt water reported in sand from 690 to 758 feet. See log.
65	--	--	--	--	Oil test. See log.
66	--	--	--	--	Oil test. Salty water reported in sand from 720 to 790 feet. See log.

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

d/ Water level reported by driller or owner.

Table of drillers' logs, Franklin County, Texas

		Thickness (feet)	Depth (feet)			Thickness (feet)	Depth (feet)		
<u>Well 8</u>				<u>Well 30</u>					
Humble Oil and Refining Co. 13 miles northeast of Mt. Vernon.				City of Mt. Vernon. 1 $\frac{1}{4}$ miles southeast of Mt. Vernon.					
Surface clay	25	25	Blue shale	35	35				
Yellow clay	35	60							
Shale and shells	273	333							
Sticky shale and shells	312	645							
Sticky shale	155	800							
Gray shale and lignite	130	930							
Sand and shale	57	987							
Shale	48	1035							
Sand and shale	33	1068							
Shale	132	1200							
<u>Well 26</u>				<u>Well 31</u>					
City of Mt. Vernon. One mile south of Mt. Vernon.				City of Mt. Vernon. 1 $\frac{1}{2}$ miles southeast of Mt. Vernon.					
Red clay and sand	15	15	Sandy clay	15	15				
White water-bearing sand	12	27	Blue shale	90	105				
<u>Well 27</u>				<u>Well 32</u>					
City of Mt. Vernon. One mile south of Mt. Vernon.				City of Mt. Vernon. 1 $\frac{1}{2}$ miles southeast of Mt. Vernon.					
Red clay and sand	15	15	Red clay	7	7				
White water-bearing sand	50	65	White sand	11	18				
Blue or gray water-bearing sand	8	73	Sandy clay	17	35				
<u>Well 28</u>				<u>Well 56</u>					
City of Mt. Vernon. One mile south of Mt. Vernon.				City of Winnsboro No. 1. 16 miles southwest of Mt. Vernon.					
Sand and clay	25	25	Surface soil and sand	10	10				
Shale and sand breaks	10	35	Clay	50	60				
Water-bearing sand	10	45	Water-bearing sand	95	155				
Blue shale	10	55	CASING RECORD: 20 feet of 36-inch and 90 feet of 16-inch; 15 feet of 8-inch screen. Gravel-walled.						
<u>Well 29</u>				<u>Well 57</u>					
City of Mt. Vernon. 1 $\frac{1}{4}$ miles southeast of Mt. Vernon.				City of Winnsboro test. 16 miles southwest of Mt. Vernon.					
Red clay and sand	15	15	Sandy clay	20	20				
White water-bearing sand	46	61	Sand and black shale	41	61				
Blue water-bearing sand	18	79	Fine-grained sand	107	168				
Shale	61	140	Sticky shale	16	184				
CASING RECORD: 50 feet of 6-inch; 30 feet of 6-inch screen.				Fine-grained sand				9	193
			Coarse-grained sand				17	210	
			Blue sticky shale				6	216	
			Blue sandy shale				61	277	
			Gray sandy shale				74	351	
			Hard brittle shale				21	372	
			Sand				45	417	

(Continued on next page)

Table of drillers' Logs, Franklin County--Continued

Well 57--Continued			Well 60, partial log		
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
<u>Well 57--Continued</u>			<u>Well 60, partial log</u>		
Sticky shale	5	422	Geo. L. Pace. 9 miles southwest of Mt. Vernon.		
Sand	6	428	Surface sand and shale	86	86
Hard shale	26	454	Lime and shells	1	87
Sand	15	469	Sand and shale	259	346
Sticky shale	64	533	Lime	3	349
Sand with streaks of shale	3	536	Shale	51	400
Sand	17	553	Sand and lime	2	402
Hard rock	1	554	Sandy lime	4	406
Sand	26	580	Sand	16	422
Gumbo	53	633	Shale and sand	28	450
			Sand	78	528
<u>Well 59</u>			Shale	120	648
P. K. Degenther. 14 miles south of Mt. Vernon.			Sand and shale	327	1020
Surface	18	18	Shale	42	1062
Lignite	9	27	Shale and lime	10	1072
Brown sandy shale	11	38	Shale	46	1118
Black shale	10	48	Gumbo	33	1151
Sand and boulders	6	54	Shale	374	1525
Black sticky shale	22	76	Lime	6	1531
Lignite	4	80	Shale	2	1533
Brown sandy shale	70	150	Lime	8	1541
Sand	8	158	Shale	13	1554
Black shale	52	210	Lime	4	1558
Gray water sand	37	247	Sandy shale	15	1573
Gravel and packsand	20	267	Lime	1	1574
Dark shale	60	327	Sand	22	1596
Gumbo and shale	98	425	Sandy shale	44	1640
Rock	2	427	Shale	142	1782
Sandy shale	7	434	Sandy lime	1	1783
Rock	2	436	Sand	7	1790
Shale	11	447	Shale	233	2023
Rock	2	449	Sandy shale	227	2250
Shale	27	476	Gumbo	15	2265
Rock	1	477	Shale	42	2307
Sandy shale	12	489	Sand and shale	40	2347
Gumbo	20	509	Gumbo	13	2360
Sand	27	536	Sandy shale	13	2373
Sand and boulders	20	556	Shale	1	2374
Rock	3	559	Sandy shale	35	2409
Green shale and sand	40	599	Shale	172	2581
Hard rock	1	600	TOTAL DEPTH		3855
Green shale	50	650	<u>Well 62, partial log</u>		
Mixed shale	80	730	Arkansas Fuel Oil Co. 4 miles north of Mt. Vernon.		
Gumbo	50	780	Clay	7	7
Shell and shale	40	820	Sand	28	35
Gumbo and sand	15	835	Sandy clay	20	55
Sand	10	845	Gravel	4	59
Gumbo and sand streaks	20	865	(Continued on next page)		
Shale	65	930			



## Table of Drillers' Logs, Franklin County--Continued

		Thickness (feet)	Depth (feet)			Thickness (feet)	Depth (feet)
<u>Well 62, partial log--Continued</u>				<u>Well 63--Continued</u>			
Hard shale		61	120	Shale and lime		527	3257
Shale and boulders		16	130	Sand		38	3295
Hard shale		221	351	Gummy shale		23	3318
Rock		1	352	Sand		60	3378
Shale		3	355	Sand and gravel		72	3450
Gumbo		3	358	Lime and shale		740	4190
Sticky shale		74	432	Sandy lime		9	4199
Shale and boulders		42	474	Shale and shells		2	4201
Rock		1	475	Sandy gray lime and streaks			
Shale and gumbo		148	623	of shale		3	4204
Sand		27	650	Blue shale poker chips		2	4206
Hard shale		15	665	Lime		5	4211
Hard rock		4	669	Hard sand		1	4212
Water sand		8	677	Sand		7	4219
Rock		2	679	Shale and lime		6	4225
Water sand		10	689	Sand		40	4265
Hard rock		2	691	Lime		4	4289
Shale		4	695	Sand		4	4273
Packsand		10	705				
Sandy shale		171	876	<u>Well 64</u>			
Hard rock		2	878	Byrd-Frost, Inc. 10 miles northeast of			
Hard shale		16	894	Mt. Vernon.			
Hard sandy shale		15	909	Surface clay	25		25
Rock		2	911	Shale and shells	135		160
Sandy shale and boulders	143		1054	Sand and shale	320		480
Sandy shale	20		1074	Shale and shells	210		690
Sticky shale	66		1140	Sand (salty water)	95		785
Shale	326		1466	Shale and shells	690		1475
Chalk	133		1599	Broken chalk	85		1560
Hard shale	626		2225	Shale	70		1630
Sand rock	18		2245	Shale and shells	740		2370
Sandy shale	114		2357	Broken chalk and shale	75		2445
Hard shale	77		2434	Shale and shells	135		2580
Broken lime and shale	84		2518	Shale and lime	20		2600
Sand (salt water)	11		2529	Shale and shells	85		2685
Gumbo	5		2534	Lime and streaks of shale	55		2740
TOTAL DEPTH			3261	Lime and shale	267		3007
				Shale and lime	205		3212
<u>Well 63</u>				Lime and red beds	81		3293
Stroube and Stroube, 10 miles northeast				Lime and streaks of sand	59		3352
of Mt. Vernon. Altitude 363 feet.				Broken lime	48		3400
Sandy shale and lime	480		480	Sand	95		3495
Shale and shells	230		710	Sand and gravel	25		3520
Water sand	60		770	Lime	180		3700
Shale and lime shales	950		1720	Shale and lime	23		3723
Broken chalk	120		1840	Lime	87		3810
Shale and shells	425		2265	Shale	17		3827
Shale and streaks of lime	350		2615	Lime and shale	70		3897
Hard sandy lime	20		2635	Lime	73		3970
Shale	30		2665	Lime and shale	230		4200
Shale and lime	30		2695	Shale	30		4230
Sand	35		2730				

(Continued on next page)

Table of Drillers' Logs, Franklin County--Continued

<u>Well 64--Continued</u>			<u>Well 65--Continued</u>		
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Lime and shale	50	4280	Shale	4	4298
Lime	14	4294	Sand	8	4306
Sandy lime	2	4296	Shale and ash	18	4324
Sand	2	4298			
Sand and lime	17	4315			

<u>Well 65</u>			<u>Well 66</u>		
Gray and Wolfe. 11 miles northeast of Mt. Vernon. Altitude 347 feet.			Dean Bros. and C. D. Lennox. 11 miles northeast of Mt. Vernon. Altitude 369 feet.		
Surface material	150	150	Surface material	50	50
Sand and shale	115	265	Shale and shells	670	720
Shale and shells	385	650	Water sand	70	790
Sand	15	665	Shale and shells	330	1120
Shale and shells	115	780	Shale	170	1290
Shale and boulders	105	885	Shale and shells	70	1360
Shale and sand	85	970	Shale	488	1848
Shale and lime shells	470	1440	Broken chalk	92	1940
Broken chalk	130	1570	Shale	20	1960
Shale and shells	30	1600	Sand	25	1985
Broken shale and hard sand	485	2085	Shale	15	2000
Shale and lime shells	606	2691	Shale and shells	190	2190
Hard lime	34	2725	Sand	30	2220
Hard shale and lime	63	2788	Shale and shells	230	2450
Shells	82	2870	Shale	80	2530
Shale and shells	130	3000	Sandy lime	5	2535
Sand, shale and shells	100	3100	Broken shale, lime and shells	115	2650
Red beds	110	3210	Sand	18	2668
Sand and red beds	115	3325	Shale and shells	2	2670
Broken sand and shale	148	3473	Lime	65	2735
Hard sandy lime	27	3500	Broken shale and lime	23	2758
Gummy lime	8	3508	Shale and shells	212	2970
Lime	87	3595	Sandy lime	30	3000
Lime and shale	53	3648	Shale and shells	50	3050
Lime	167	3815	Red shale	80	3130
Shale	8	3823	Sandy lime shells	30	3160
Lime	108	3931	Lime	36	3196
Broken lime and shale	199	4130	Shale	14	3210
Shale, shells and sand	40	3170	Broken lime	15	3225
Shale and lime	53	4223	Shale and shells	55	3280
Lime	14	4237	Sand	20	3300
Shale and sandy lime	1	4238	Sand, lime and shells	46	3346
Shale	6	4244	Sand	14	3360
Sand	4	4248	Shale and shells	80	3440
Shale	2	4250	Broken lime	20	3460
Sandy shale	3	4253	Shale	15	3475
Shale	5	4258	Lime	602	4077
Shaley sand	8	4266	Broken lime shells	165	4242
Shale	7	4273	Sand	14	4256
Sand	21	4294	shale	12	4268
			Sand	35	4303
			Sandy shale	12	4315

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

Analyzed at The University of Texas under the direction of W. W. Hastings, Chemist, U. S. Department of the Interior, Geological Survey, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry. 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	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
a/ 1	Isom H. Hare	24	June 17, 1942	359	123	2.4	7.3	317	63	5.0	-	2.0	317
3	Herman Banks	23	do.	624	107	21	75	220	170	73	-	70	353
a/ 9	Charlie Whitney	20	do.	266	9.8	3.6	72	12	70	42	-	64	37
10	Ralph Smith	15	do.	334	33	2.4	34	18	63	64	-	123	92
11	S. M. Little	21	do.	294	44	15	26	13	17	75	-	103	169
a/12	L. S. Harper	-	do.	13,265	256	66	4,836	43	2	8,075	-	-	911
13	do	28	do.	633	27	11	189	31	129	252	-	10	112
a/14	W. A. McGraw	16	June 10, 1942	485	58	24	53	43	148	43	-	138	245
15	-- Sides	23	June 17, 1942	139	15	3.5	47	79	63	11	-	10	52
16	-- School	11	do.	46	0.4	1.2	9.0	18	5	14	-	1.0	21
a/17	J. C. Thornton	39	June 18, 1942	103	3.8	2.4	24	24	30	21	-	4.5	32
18	G. D. Cargils	16	June 8, 1942	198	9.6	6.1	53	61	3	55	-	41	49
a/19	A. L. Gray	17	June 18, 1942	985	59	12	246	55	554	63	0.3	24	193
a/21	City of Mt. Vernon	120	June 19, 1942	193	1.7	1.1	22	48	2.6	5.0	0.4	7.5	9
a/29	do.	80	do.	221	13	6.7	49	113	0.7	46	0.4	0.5	63
33	First National Bank	19	June 11, 1942	740	58	58	102	18	33	280	0.3	200	386
a/34	L. L. Scudder	24	do.	2,063	287	102	237	139	1,035	275	0.9	38	1,138
35	Irven Draper	34	do.	273	29	4.9	70	98	7	110	-	4.5	93
36	-- Store	36	June 18, 1942	194	3.6	8.8	53	73	69	15	-	9.0	45
37	L. E. Rutland	13	June 12, 1942	179	6.8	2.2	59	67	30	43	-	0	26
a/38	Hopewell School	19	do.	32	11	3.6	12	24	37	6.0	0.2	0	42
39	P. V. Banks	26	June 13, 1942	302	25	11	53	49	37	34	-	118	107
40	J. E. Howk	17	do.	350	17	12	95	49	63	136	-	3.0	93
a/41	L. H. White	31	do.	94	9.2	4.9	20	61	10	16	-	3.5	43
42	Solan King	Spring	do.	61	3.4	1.2	14	55	3	4.0	0	3.5	26
a/43	Texas Highway Dept.	Spring	June 11, 1942	49	13	2.4	0.5	31	2	5.0	-	11	42
44	Cypress School	40	do.	33	4.8	2.4	20	37	26	5.0	0.2	1.5	22
a/45	Pat. Dolan	27	do.	308	27	12	58	18	5	107	-	90	113

a/ Analyses of water from selected wells and springs are given in milligram equivalents per liter on page 24.

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

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
46	Ralph Martin	26	June 15, 1942	310	17	11	68	43	52	51	0.4	90	87
47	Rock Springs School	28	June 11, 1942	52	7.2	4.9	2.3	18	10	4.0	0.1	14	38
a/48	New Hope School	19	do.	41	4.8	2.4	7.1	12	2	16	0.1	3.0	22
49	Clear Water School	28	do.	148	11	4.9	34	31	55	26	0.1	2.0	48
50	J. P. Rozell	13	June 18, 1942	171	15	14	12	0	100	20	-	10	93
51	New Hope School	13	do.	39	4.4	1.2	8.1	12	2	13	0	4.0	16
a/52	Mrs. Lilly Gurley	160±	June 11, 1942	229	14	6.1	64	140	63	11	0.1	2.0	59
a/53	W. B. Swanner	227	do.	129	9.2	4.9	33	85	30	8.0	0.1	1.0	43
a/54	T. H. Barrett	240	do.	133	9.2	4.9	35	98	26	8.0	0.2	1.0	43
a/55	City of Winnsboro	Spring	Feb. 14, 1942	82	8.8	3.6	12	18	7	10	0.1	32	37
a/58	City of Winnsboro No. 2	216	do.	106	2.4	1.2	40	104	7	4.0	0.1	0	11
a/51	P. J. Dawson	2,000	July 16, 1942	17,074	371	102	6,160	128	2	10,375	0.5	1.0	1,348

a/ Analyses of water from selected wells and springs are given in milligram equivalents per liter on page 24.

Chemical analyses  
Results are in milligram equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
1	Ison H. Hare	24	June 17, 1942	6.14	0.20	1.90	5.20	1.31	0.14	-	0.03	6.34
9	Charlie Whitney	20	do.	0.44	0.30	1.85	0.20	1.463	1.18	-	1.03	0.74
12	L. S. Harper	-	do.	12.82	5.40	3.30	0.70	0.04	227.74	-	-	18.22
14	W. A. McGraw	16	June 16, 1942	2.90	2.00	1.00	0.70	3.08	1.21	-	2.23	4.90
17	J. C. Thornton	39	June 18, 1942	0.44	0.20	1.90	0.40	0.62	0.59	-	0.07	0.64
19	A. L. Gray	17	do.	2.96	1.00	1.50	0.90	11.55	1.78	0.02	0.39	3.96
21	City of Mt. Vernon	120	June 19, 1942	0.08	0.09	0.95	0.79	0.05	0.14	0.02	0.12	0.17
29	do.	80	do.	0.65	0.55	2.14	1.93	0.03	1.30	0.02	0.01	1.20
34	L. L. Scudder	24	June 11, 1942	14.36	8.40	3.30	3.10	21.56	7.76	0.05	0.61	22.76
38	Hopewell School	19	June 12, 1942	0.54	0.30	1.85	0.40	0.77	0.17	0.01	0	0.84
41	L. H. White	31	June 18, 1942	0.46	0.40	1.80	1.00	0.21	0.45	-	0.06	0.86
43	Texas Highway Dept.	Spring	June 11, 1942	0.64	0.20	1.90	0.50	0.04	0.14	-	0.18	0.84
45	Pat Dolan	27	do.	1.36	1.00	1.50	0.30	0.10	3.02	-	1.45	2.36
48	New Hope School	19	do.	0.24	0.20	1.90	0.20	0.04	0.45	0.01	0.05	0.44
52	Mrs. Lilly Gurley	160±	do.	0.63	0.50	1.75	2.30	1.31	0.31	0.01	0.03	1.18
53	W. B. Swanner	227	do.	0.46	0.40	1.80	1.40	0.62	0.23	0.01	0.02	0.86
54	T. H. Barrett	240	do.	0.46	0.40	1.30	1.60	0.539	0.23	0.01	0.02	0.86
55	City of Winnsboro	Spring	Feb. 14, 1942	0.44	0.30	0.52	0.30	0.15	0.28	0.01	0.52	0.74
58	do.	216	do.	0.12	0.10	1.75	1.70	0.15	0.11	0.01	0.00	0.22
61	P. J. Dawson	2,000	July 16, 1942	18.56	8.40	267.32	2.10	0.04	292.61	.03	-	26.96

TITUS COUNTY, TEXAS

Records of wells, springs, drillers' logs and water analyses

Records of wells and springs in Titus County, Texas  
All wells are drilled unless otherwise stated under remarks

Well	Distance from Talco	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
1	In Talco	J. B. Osborn	1936	1,010	--	--
2	3½ miles northwest. In Red River County.	City of Talco	1937	408	20 10¾	2.0
3	1 mile southeast	Humble Oil and Refining Co.	1936	620	--	--
4	1¼ miles southeast	Adams and Lyles No. 1	1937	4,337	--	--
5	2½ miles east	Magnolia Petroleum Co.	1936	840	--	--
6	2¼ miles east	Humble Oil and Refining Co.	1936	4,492	--	--
7	2¼ miles south	Felix Jones	1940	24	36	3.0
8	3¼ miles southeast	Magnolia Petroleum Co.	1925	3,228	--	--
9	3½ miles southeast	Rotondi and O'Neal	1937	2,160	--	--
10	4 miles southeast	Helton Estate	Old	20	24	2.0
11	4¼ miles southeast	Cable Tool Drilling Co.	1937	4,308	--	--
12	6 miles southeast	A. C. Hoffman	Old	21	24	2.0
13	6 miles east	Humble Oil and Refining Co. No. 5	1941	4,330	--	--
14	6 miles east	Humble Oil and Refining Co. No. 1	1939	4,332	--	--
15	6 miles east	Tom Temples	Old	48	8	2.5
16	9 miles southeast	L. H. Wilson	Old	29	36	3.0
17	8½ miles east	Dean Brownlee	--	30	48	3.0
18	12 miles east	Mrs. G. M. Scott	1936	60	6	1.5
19	do.	Hugh Wilson	Old	60	6	1.0
20	15 miles east	C. M. Joiner Leasing Corp.	1936	4,644	--	--
21	13½ miles east	Titus County	--	Spring	--	--

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift: A, air or natural gas; B, bucket and rope; C, cylinder; J, jet; T, turbine.

Power: E, electric; G, gasoline; H, hand. Number indicates horsepower.

Chemical analyses of water from some of these wells and springs are shown in a table of analyses on pages 37 to 40.

Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.) a/	Date of measurement			
1	--	--	None	N	Test well. Owner reports no water sand was encountered.
2	+	May 21, 1942	Flows, T, E, 60	P	Screen from 281 to 403 feet. Natural flow 23 gallons a minute. Reported yield 500 gallons a minute with pumping level at 180 feet. Supplies city of Talco. Temperature 68° F. See log.
3	--	--	None	N	Well was drilled 5 feet into sand. Water was salty, and well was abandoned.
4	--	--	--	--	Oil test. Pat Davis lease. See log.
5	--	--	None	N	Water was salty, and well was abandoned. See log.
6	--	--	--	--	Oil test. Electrical log from 225 to 1,300 feet in files of Texas Board of Water Engineers show no important fresh water sand.
7	20.28	May 22, 1942	J, E	D	Dug. Temperature 61° F.
8	--	--	--	--	Oil test, George Antone lease. See log.
9	--	--	--	--	Oil test, R. L. Helton lease. See log.
10	8.45	May 22, 1942	B, H	D, S	Dug. Temperature 64° F.
11	--	--	--	--	Oil test, Mary B. Edwards lease. See log.
12	17.30	May 22, 1942	B, H	D, S	Dug. Temperature 68° F.
13	--	--	--	--	Oil test, T. G. Templer lease. Electrical log from 350 to 4,338 feet in files of Texas Board of Water Engineers shows no important fresh
14	--	--	--	--	Oil test, T. G. Templer lease. <u>water sand.</u> Electrical log. from 210 to 4,332 feet in files of Texas Board of Water Engineers shows no important fresh water sand.
15	20.10	May 26, 1942	B, H	S	Temperature 66° F.
16	23.20	do.	B, H	S	Dug. Water reported unfit for drinking. Temperature 64° F.
17	28.51	do.	B, H	D	Dug. Temperature 64° F.
18	54.53	do.	B, H	S	Water reported unfit for drinking. Temperature 64° F.
19	30.61	do.	B, H	D, S	Temperature 68° F.
20	--	--	--	--	Oil test, Huernch Estate. See log.
21	+	June 26, 1942	B, H	D	Flow estimated one gallon a minute.

c/ D, domestic; Ind. industrial, N, not used; P, public supply; S, stock.  
d/ Water level reported by owner or driller.



## Records of wells and springs in Titus County--Continued

Well	Distance from from Mt. Pleasant	Owner	Date com- ple- ted	Depth of well (ft.)	Diam- eter of well (in.)	Height of measuring point above ground (ft.)
22	12 miles northeast	J. Z. Bell	Old	51	6	2.5
23	11 miles northeast	Henderson, Myers and Williams	1941	57	6	1.0
24	9 $\frac{1}{2}$ miles northeast	John Phillips	Old	51	36	2.5
25	7 $\frac{1}{2}$ miles northeast	Frank Walker	Old	34	--	3.0
26	9 miles northeast	M. N. Harvey	1924	38	24	3.5
27	10 miles northeast	Raymond Anderson	1926	24	--	2.0
28	8 miles northeast	Argo School	Old	30	24	3.0
29	5 $\frac{1}{2}$ miles northeast	Mrs. J. F. Rogers	Old	24	24	2.5
30	3 miles north	Nevils Chapel School	--	30	36	3.0
31	5 miles northeast	Oak Grove School	Old	11	24	3.0
32	8 $\frac{1}{2}$ miles north	Midway School	1936	16	36	7.0
33	10 miles north	Carl Bowen	1941	25	6	2.0
34	7 $\frac{1}{2}$ miles north	D. D. Lide	1860	27	24	3.0
35	5 $\frac{1}{2}$ miles north	Bev. Gilpin	Old	21	6	1.5
36	3 $\frac{1}{2}$ miles northwest	T. M. Jones	1942	26	6	2.0
37	4 $\frac{1}{2}$ miles northwest	Forest Grove School	--	30	24	2.5
38	6 $\frac{1}{2}$ miles northwest	Aldine Wilburn	Old	23	30	3.0
39	9 miles northwest	Texas Highway Department	1939	20	30	--
40	11 miles northwest	B. L. Hanks	1905	13	30	3.0
41	12 miles northwest	Mrs. J. E. Broughton	1939	27	18	0.0
42	7 miles northwest	C. J. Blackburn	Old	40	6	--
43	8 $\frac{1}{2}$ miles northwest	B. B. Hunnicutt	Old	33	24	2.0
44	9 miles northwest	Allen Tooke	1931	13	24	2.0
45	8 miles west	Winfield School	1940	32	72	2.0
46	7 $\frac{1}{2}$ miles west	Benton School	--	38	6	2.0
47	5 $\frac{1}{2}$ miles west	Progress School	1920	14	36	2.5
48	5 $\frac{1}{2}$ miles west	Mal Hargrove	--	Spring	--	--

Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.) a/	Date of measurement			
22	45.33	June 3, 1942	B,H	S	Temperature 70° F.
23	44.03	do.	B,H	D,S	Do.
24	42.44	do.	B,H	D,S	Dug. Temperature 66° F.
25	25.95	do.	B,H	D,S	Dug. Temperature 68° F.
26	25.60	do.	B,H	D,S	Dug. Temperature 63° F.
27	16.45	do.	B,H	D,S	Dug. Temperature 65° F.
28	25.25	May 26, 1942	B,H	P	Dug. Temperature 66° F.
29	8.38	do.	B,H	D,S	Do.
30	27.81	do.	B,H	P	Dug. Temperature 68° F.
31	7.16	do.	B,H	P	Dug. Temperature 66° F.
32	13.95	do.	B,H	P	Do.
33	6.00	do.	B,H	D,S	Temperature 66° F.
34	9.10	May 22, 1942	B,H	D,S	Dug. Temperature 65° F.
35	1.25	do.	B,H	D,S	Temperature 66° F.
36	6.25	do.	B,H	S	Do.
37	17.69	May 20, 1942	B,H	P	Dug. Temperature 64° F.
38	10.55	do.	B,H	D,S	Dug. Temperature 63° F.
39	--	--	B,H	P	Dug. Temperature 66° F.
40	11.80	May 22, 1942	B,H	D,S	Dug. Temperature 63° F.
41	23.34	do.	B,H	D,S	Dug. Temperature 65° F.
42	--	--	B,H	D,S	Dug.
43	29.84	May 27, 1942	B,H	D,S	Dug. Temperature 66° F.
44	11.52	do.	B,H	D,S	Dug. Temperature 65° F.
45	15.56	do.	J,E	P	Dug. Estimated yield 5 gallons a minute. Temperature 64° F.
46	12.28	May 15, 1942	B,H	P	Temperature 64° F.
47	7.53	do.	B,H	P	Dug. Temperature 62° F.
48	+	do.	Flows	D	Measured flow 3 gallons a minute. Temperature 65° F.

## Records of wells and springs in Titus County-Continued

Well	Distance from Mt. Pleasant	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
49	3 miles west	E. L. Roofoe and S. E. McCaskill	1932	502	6	--
50	1 $\frac{1}{2}$ miles west	Talco Asphalt and Refining Co. No. 1	1937	597	16, 8- $\frac{5}{8}$	0.0
51	do.	Talco Asphalt and Refining Co. No. 2	1941	437	20, 10 $\frac{3}{4}$	0.0
52	2 miles south-west	Humble Pipe Line Co.	1937	430	7	--
53	In Mt. Pleasant	City of Mt. Pleasant	1930	450	--	--
54	do.	Southwestern Gas and Electric Co.	Old	425	--	--
55	do.	City of Mt. Pleasant	1936	430	--	--
56	do.	do.	1936	475	--	--
57	1 $\frac{1}{4}$ miles north	Mrs. W. A. Ford	1936	18	144	0.0
58	do.	Henry Gates	1936	20	144	--
59	1 $\frac{3}{4}$ miles east	Bess Rogers	1931	3,800	--	--
60	3 miles east	H. L. Hess	--	93	6	1.5
61	3 $\frac{1}{2}$ miles north-east	Mrs. Georgie Lee Keith	Old	27	24	5.0
62	4 $\frac{3}{4}$ miles north-east	C. H. McDonald	1941	40	60	0.5
63	5 miles north-east	Western Oil Field Corp.	1922	3,652	--	--
64	6 $\frac{1}{2}$ miles north-east	Mrs. Norma Blalock	1915	12	36	2.5
65	8 miles north-east	M. W. Barrier	1936	37	6	0.5
66	7 miles east	Jess Brown	1905	23	48	3.0
67	5 $\frac{1}{2}$ miles east	Mrs. Lee Ray	old	27	24	---
68	8 miles south-east	Yancy School	--	21	36	2.5
69	9 miles south-east	G. C. Lunsford	Old	21	--	--
70	8 miles south-east	Earnest Traylor	1935	24	36	2.5
71	6 miles south-east	D. J. Harkrider	1941	12	36	3.0
72	5 $\frac{1}{2}$ miles south-east	Chapel Hill School	Old	20	36	--

Well	Water level Below measuring point (ft.) <u>a/</u>	Date of measurement	Method of lift <u>b/</u>	Use of water <u>c/</u>	Remarks
49	--	--	A,G 30	P	Reported yield 75 gallons a minute. Supplies swimming pool. Temperature 73° F.
50	d/ 88	Mar. 16, 1937	T,E, 25	Ind	Screen from 355 to 416 feet. Eight-stage, 8-inch pump set at 350 feet in 1941. Reported yield 220 gallons a minute with pumping level at 141 feet when drilled. Temperature 71½° F. See log.
51	d/185	June 27, 1941	T,E, 30	Ind.	Screen at 305-326 and 364-427 feet. Eleven-stage 6-inch pump set at 300 feet. Reported yield 205 gallons a minute with pumping level at 259 feet when drilled. Temperature 71½° F. See log.
52	--	--	C,E, 3	Ind	Casing perforated from 342 to 408 feet. Reported yield 9 gallons a minute. Temperature 67° F. See log.
53	--	--	None	N	Test well. Supply reported insufficient for city of Mt. Pleasant.
54	--	--	None	N	Abandoned.
55	--	--	None	N	Test well. Supply reported insufficient for city of Mt. Pleasant.
56	--	--	None	N	Do.
57	0.2	May 30, 1942	None	N	Dug. Formerly furnished part of supply for city of Mt. Pleasant.
58	--	--	None	N	Do.
59	--	--	--	--	Oil test. Reported to have had a flow until about 1939.
60	53.84	June 3, 1942	B,H	S	Temperature 69° F.
61	23.62	May 25, 1942	B,H	D,S	Dug. Temperature 66° F.
62	27.62	do.	J,E	D,S	Dug.
63	--	--	--	--	Oil test. See log.
64	5.03	May 25, 1942	J,E	P	Dug. Temperature 65° F.
65	15.35	do.	B,H	D,S	Dug. Temperature 66° F.
66	13.74	June 3, 1942	B,H	D,S	Dug. Temperature 65° F.
67	--	--	B,H	D	Do.
68	8.99	June 3, 1942	B,H	P	Dug. Temperature 66° F.
69	--	--	J,E	D,S	Dug.
70	17.79	May 14, 1942	B,H	D	Dug. Temperature 63° F.
71	6.43	do.	B,H	D	Dug. Temperature 66° F.
72	--	--	B,H	P	Dug.

Records of wells and springs in Titus County--Continued

Well	Distance from Mt. Pleasant	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
73	3 $\frac{1}{2}$ miles south-east	Union Hill School	Old	21	36	2.5
74	3 miles south	Concord School	Old	39	24	2.5
75	4 $\frac{1}{2}$ miles south-west	Panthers Chapel School	1941	30	6	--
76	do.	--Reynolds	Old	42	6	2.0
77	6 miles south-west	H. C. Harvey	Old	53	6	3.0
78	8 miles south-west	Monticello School	Old	20	24	3.5
79	9 miles south-west	Deep Rock Oil Corp.	1930	4,000	--	--
80	9 $\frac{1}{2}$ miles south-west	G. M. Black	Old	48	6	2.0
81	9 miles south-west	M. Benson	1938	17	6	0.0
82	6 miles south-west	J. B. McMahon et.al.	1937	5,074	--	--
83	5 miles south	Superior Oil Corp.	1939	5,925	--	--
84	4 $\frac{3}{4}$ miles south	Forest French	1910	14	24	3.0
85	4 $\frac{1}{4}$ miles south-east	J. A. Roach	Old	33	36	3.0
86	6 miles south-east	Cypress School	Old	21	36	3.0
87	8 miles south-east	Hickory Hill School	Old	16	--	2.5
88	9 miles south-east	Edwards Chapel School	Old	16	30	2.0
89	10 miles south-east	W. S. Russell	1932	28	24	2.5
90	12 miles south-east	Fletcher Walker	1937	15	36	3.0

a/ Plus (+) indicates water level is above ground.

b/ Pump or lift; A, air or natural gas; B, bucket and rope; C, cylinder; J, jet; T, turbine.

Power: E, electric; G, gasoline; H, hand. Numbers indicates horsepower.

Well	Water level		Method of lift	Use of water	Remarks
	Below measuring point (ft.) <u>a/</u>	Date of measurement			
73	17.61	May 14, 1942	B,H	P	Dug.
74	44.65	do.	J,E	P	Do.
75	--	--	B,H	P	Do.
76	37.15	May 15, 1942	B,H	D,S	Temperature 66° F.
77	35.4	do.	B,H	D	
78	10.90	do.	B,H	P	Dug. Temperature 63° F.
79	--	--	--	--	Oil test, F. M. Aubry lease. See log.
80	29.80	May 15, 1942	B,H	D,S	Temperature 65° F.
81	12.89	do.	B,H	D,S	Temperature 62° F.
82	--	--	--	--	Oil test, John B. Stephens, Jr., and Liliostern lease. See log.
83	--	--	--	--	Oil test, Mrs. John Hargrove lease. See log.
84	6.32	May 14, 1942	J,E	D,S	Dug.
85	23.0	June 3, 1942	B,H	D,S	Dug. Temperature 71° F.
86	17.11	May 13, 1942	B,H	P	Dug. Temperature 62° F.
87	8.00	do.	B,H	P	Do.
88	7.85	do.	B,H	P	Dug. Temperature 64° F.
89	27.45	May 14, 1942	B,H	D,S	Dug. Temperature 65° F.
90	8.99	do.	B,H	D	Dug. Temperature 64° F.

b/ D, domestic; Ind, industrial; N, not used; P, public supply; S, stock.  
d/ Water level reported by owner or driller.

Table of drillers' logs of wells in Titus County, Texas

	Thickness (feet)	Depth (feet)
<u>Well 2</u>		
City of Talco, $3\frac{1}{2}$ miles northwest of Talco in Red River County. Layne-Texas Co., driller.		
Yellow clay	10	10
White sand	5	15
Yellow clay	13	28
Rock	1	29
Sandy shale	85	114
Sand	22	136
Shale	148	284
Rock	2	286
Sand	100	386
Sandy shale	22	408

	Thickness (feet)	Depth (feet)
<u>Well 4, partial log</u>		
Adams and Lyles, $1\frac{5}{8}$ miles southeast of Talco.		
Surface clay and shale	110	110
Shale	250	360
Shale and sand	30	390
Shale	260	650
Sand	45	695
Shale	130	825
Sand	30	855
Shale and shells	845	1700
Chalk	50	1750
Broken chalk and shale	60	1810
Chalk	50	1860
Shale	210	2070
Shale and shells	157	2227
Sand rock	12	2239
Shale	191	2430
Sandy shale	25	2455
Shale	235	2690
TOTAL DEPTH		4337

	Thickness (feet)	Depth (feet)
<u>Well 5</u>		
Magnolia Petroleum Co. $2\frac{1}{2}$ miles east of Talco.		
Gummy shale	814	814
Sand	26	840

	Thickness (feet)	Depth (feet)
<u>Well 8</u>		
Magnolia Petroleum Co. $3\frac{3}{4}$ miles south-east of Talco.		
Surface clay	20	20
Gravel	10	30
Gumbo	535	565
Sand	28	593
Shale	187	780
Sand	120	900

	Thickness (feet)	Depth (feet)
<u>Well 8--Continued</u>		
Shale and gumbo	580	1480
Austin chalk, lime slate and shells	220	1700
Slate and shells	470	2170
Sandy lime	225	2395
Sand	75	2470
Slate and shells	215	2685
Sand	36	2721
Slate	4	2725
Sand	55	2780
Slate	15	2795
Sand	55	2850
Slate and shells	50	2900
Water sand	55	2955
Slate	25	2980
Slate and shells	15	2995
Sand	10	3005
Slate	45	3050
Slate and shells	90	3140
Sandy shale	30	3170
Sand	25	3195
Shale	26	3221
Red shale	3	3224
Black shale	4	3228

	Thickness (feet)	Depth (feet)
<u>Well 9</u>		
Rotondi and O'Neal, $3\frac{3}{4}$ miles southeast of Talco.		
Shale	720	720
Water sand and shale	300	1020
Chalk, shale, and shells	620	1650
Shale	510	2160

	Thickness (feet)	Depth (feet)
<u>Well 11</u>		
Cable Tool Drilling Co. $4\frac{1}{4}$ miles south-east of Talco. Altitude 309 feet.		
Shale and shells	629	629
Shale	231	860
Sand	16	876
Shale and boulders	56	932
Sand	20	952
Shale, shells and lime	1311	2263
Hard shale and lime	279	2542
Sticky shale and lime	8	2550
Shale and shells	160	2710
Hard sand	28	2738
Hard shale and sand	162	2900
Shale and sand	62	2962
Sand and shells	33	2995
Shale and shells	205	3200
(Continued on next page)		

Table of drillers' logs of wells in Titus County--Continued

		Thickness (feet)	Depth (feet)			Thickness (feet)	Depth (feet)
<u>Well 11--Continued</u>				<u>Well 50--Continued</u>			
Hard sand		10	3210	Dark gray fine-grained sand		45	70
Hard shale		93	3303	Soft shale and lignite		10	80
Shale and lime		93	3396	Gray fine-grained sand and lignite		25	105
Hard sand		60	3456	Gray soft shale		10	115
Sandy lime		44	3500	Lignite, sand and shale		21	136
Hard lime and shale		65	3565	Gray soft shale		25	161
Sand, shale and streaks of lime		82	3647	Soft rock		2	163
Shale and lime		206	3853	Soft shale		36	199
Lime		11	3864	Rock		1	200
Shale and shells		79	3943	Lignite		26	226
Hard shale		54	3997	Gray soft shale and lignite		80	306
Shale and lime		58	4055	Rock		1	307
Shale and shells		217	4272	Gray hard fine-grained sand		5	312
Sandy lime		2	4274	Soft shale		8	320
Sand		34	4308	Rock		1	321
<u>Well 20, partial log</u>				<u>Well 51</u>			
C. M. Joiner Drilling Corp.	15 miles east of Talco.			Talco Asphalt and Refining Co. 1 1/4 miles west of Mt. Pleasant. Layne-Texas Co., driller.			
Surface clay and shale		26	26	Red sandy clay		27	27
Pecksand		26	52	Sandy shale		38	65
Shale		15	67	Green sand		12	77
Sand		53	120	Fine-grained sand		8	85
Shale and shells		55	175	Sandy shale		7	92
Shale		120	295	Rock		1	93
Sand		25	320	Shale and lignite		14	107
Shale		10	330	Gray fine-grained sand		6	113
Sand		16	346	Shale and lignite		13	126
Shale		194	540	Gray fine-grained sand		10	136
Shale and shells		840	1380	Shale, sandy shale and lignite		65	201
Hard sand rock		3	1383	Rock		1	202
Broken sand and shale		67	1450	Shale and lignite		9	211
Shale and boulders		50	1500	(Continued on next page)			
Sandy shale		80	1580				
Shale		316	1896				
Chalk		180	2076				
Shale and chalk		10	2086				
Black shale		9	2095				
Broken chalk and shale		137	2232				
Shale		70	2302				
Sticky shale and chalky shells		58	2360				
Shale		40	2400				
TOTAL DEPTH			4644				
<u>Well 50</u>							
Talco Asphalt and Refining Co.	1 1/4 miles west of Mt. Pleasant. Layne-Texas Co., driller.						
Red clay		25	25				



Table of drillers' logs of wells in Titus County--Continued

	Thickness (feet)	Depth (feet)
<u>Well 51--Continued</u>		
Hard packsand	10	221
Lignite and shale	55	276
Rock	1	277
Shale and lignite	22	299
White fine-grained sand	25	324
Sandy shale and lignite	19	343
Shale and lignite	7	350
Rock	1	351
Sand	2	353
Rock	1	354
Sand	6	360
Rock	2	362
Gray fine-grained sand	20	382
Rock	1	383
Gray fine-grained sand	11	394
Rock	1	395
Sand and layers of shale	28	423
Shale and lignite	14	437
CASING RECORD: 297 feet of 20-inch, cemented, and 437 feet of 10 <sup>3</sup> / <sub>4</sub> -inch. Screen at 305-326 and 364-427 feet. Gravel-walled.		

Well 52

Humble Pipe Line Co. 2 miles southwest of Mt. Pleasant. Altitude reported 416 <sup>+</sup> feet.		
Surface sand and clay	53	53
Shale	72	125
Sandy shale	89	214
Shale	118	332
Sand and shale	8	340
Fine-grained sand	65	405
Sand and shale	25	430

Well 63, partial log

Western Oil Field Corp. 5 miles north-east of Mt. Pleasant.		
Clay	60	60
Sand and boulders	40	100
Gumbo	8	108
Lignite	20	128
Sand	110	238
Sand and boulders	116	354
Gumbo	15	369
Sandy shale	50	419
Sand and boulders	90	509
Sand rock	5	514
Sand and boulders	22	536
Sand rock	5	541
Sand and boulders	55	596
Sand rock	5	601

	Thickness (feet)	Depth (feet)
<u>Well 63, partial log--Continued</u>		
Sand and boulders	17	618
Sand rock	3	621
Gumbo and boulders	40	661
Sand and boulders	60	721
Shale	63	784
Sand rock	3	787
Gumbo	87	874
Shale and boulders	74	948
Gumbo	67	1015
Sand rock	3	1018
Gumbo, shale and boulders	532	1550
Packsand	21	1571
Sandy shale	14	1585
Hard sand	5	1590
Austin chalk	25	1615
TOTAL DEPTH		3652

Well 79, partial log

Deep Rock Oil Corp. 9 miles southwest of Mt. Pleasant. Altitude 550 feet.		
Hard sand	96	96
Sand and lignite	3	99
Shale	41	140
Sand	76	216
Rock	2	218
Shale	188	406
Rock	1	407
Shale and boulders	978	1385
Sand and sandy shale	76	1461
Rock	4	1465
Sand	13	1478
Rock	6	1484
Shale	250	1734
Sand	64	1798
Sandy shale	32	1830
Shale and gumbo	423	2253
Chalky lime	145	2398
Gumbo and shale	616	3014
Sand (salt water)	10	3024
Gummy shale	6	3030
Broken sand and shale	10	3040
Hard sand	17	3057
Gumbo	7	3064
Shale	94	3158
TOTAL DEPTH		4000

Well 82, partial log

J. V. McMahon et al. 6 miles southwest of Mt. Pleasant.		
Surface	12	12
Sand and gravel	8	20
(Continued on next page)		

Table of drillers' logs of wells in Titus County--Continued

<u>Well 82, partial log--Continued</u>			<u>Well 83, partial log</u>		
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Lignite	6	26	Superior Oil Corp. 5 miles south of Mt. Pleasant.		
Red beds and streaks of sand	40	66	Surface clay, gravel	31	31
Shale	10	76	Sand	19	50
Lignite	15	91	Shale streaks, sand	26	76
Sand	10	101	Shale	19	95
Shale and sand rock	149	250	Lignite	15	110
Blue shale	340	590	Shale, sand, lignitic streaks	211	321
Lime	6	596	Shale, sand, boulders	79	400
Shale	149	745	Sandy shale	129	529
Hard sand	23	768	Shale, shells	51	580
Shale	57	825	Sand	15	595
Lime	3	828	Shale, shells	435	1030
Shale	112	940	Sand, boulders	245	1275
Sand and shells	124	1064	Shale, sticky streaks	135	1410
Sticky shale	396	1460	Shale, shells	227	1637
Sand	20	1480	Rock	5	1642
Sticky shale	220	1700	Shale	35	1677
Broken chalk	60	1760	Shale streaks, hard sand	168	1845
Sticky shale	86	1846	Shale, shells	120	1965
Shale and hard breaks	78	1924	Shale	390	2355
Sandy lime and gravels	15	1939	Streaks of chalk, shale	80	2435
Hard sand	31	1970	Chalk	67	2502
Hard shale	180	2150	Chalk, shale	304	2806
Sticky shale	17	2167	TOTAL DEPTH		5925
Shale	123	2290			
Shale and broken chalk	25	2315			
Pecan chalk	300	2615			
Hard shale	23	2638			
Broken lime and chalk	130	2768			
Shale	287	3055			
TOTAL DEPTH		5074			

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

Analyzed at The University of Texas under the direction of W. W. Hastings, Chemist, U. S. Department of the Interior, Geological Survey, and Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry. 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	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
a/ 2	City of Talco	408	May 21, 1942	1,031	2.8	1.0	413	544	2	326	0.3	0.2	11
a/ 7	Felix Jones	24	May 22, 1942	80	0.8	1.0	25	18	5	16	-	23	6
10	Helton Estate	20	do.	356	11	1.0	104	12	30	34	-	130	31
12	A. C. Hoffman	21	do.	310	9.2	4.9	107	244	26	22	-	21	43
15	Tom Temples	43	May 26, 1942	692	53	4.9	185	37	39	260	-	82	153
16	L. H. Wilson	27	do.	5,460	338	336	1,175	13	2,347	1,355	0	-	1,816
a/17	Dean Brownlee	30	do.	127	12	1.2	32	55	15	24	-	15	36
18	Mrs. G. M. Scott	60	do.	1,580	179	126	126	12	1,025	115	0	3.0	968
19	Hugh Wilson	60	do.	955	134	39	152	116	211	361	-	1.0	494
21	Titus County	Spring	do.	93	4.3	3.6	23	12	7	32	0.1	16	27
a/22	J. Z. Bell	51	June 3, 1942	1,903	226	63	421	549	33	990	-	0	924
23	Henderson, Myers & Williams	57	do.	476	22	7.3	129	122	55	76	0.2	126	85
24	John Phillips	41	do.	287	47	12	38	49	2	125	-	39	163
25	Frank Walker	34	do.	533	79	35	44	110	11	141	-	169	342
26	M. N. Harvey	38	do.	197	13	2.4	46	49	12	14	-	86	42
27	Raymond Anderson	24	do.	208	12	5.8	53	55	18	77	-	10	54
a/28	Argo School	30	May 26, 1942	922	32	63	155	268	296	191	0	3.0	404
29	Mrs. J. F. Rogers	24	do.	36	2.4	1.2	28	31	7	22	-	10	11
30	Nevils Chapel School	30	do.	2,294	324	122	329	98	351	1,120	0.1	-	1,310
31	Oak Grove School	11	do.	40	4.4	1.2	9.0	13	5	11	0	-	16
a/32	Midway School	16	do.	1,000	114	73	98	12	577	132	0.2	0	585
33	Carl Bowen	25	do.	22	2.4	1.2	4.1	12	3	5.0	-	0	11
34	D. D. Lide	27	May 22, 1942	177	13	4.9	37	12	22	39	-	55	53
a/35	Bev. Gilpin	21	do.	38	0.8	1.0	12	18	11	3.0	-	1.5	6
36	T. M. Jones	26	do.	112	21	3.6	13	43	26	20	-	7.0	67

Analyses of water from selected wells and springs are given in milligram equivalents per liter on page 40.

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

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
37	Forest Grove School	30	May 20, 1942	690	38	55	67	171	185	199	0.1	1.5	469
38	Aldine Wilburn	23	do.	173	26	4.0	34	55	11	65	-	10	83
a/39	Texas Highway Dept.	20	do.	96	5.6	6.1	17	31	7	12	-	33	39
40	B. L. Hanks	13	May 22, 1942	155	11	4.9	37	43	12	40	-	29	48
41	Mrs. J. E. Broughton	27	do.	435	11	2.4	144	55	59	147	-	45	37
a/42	J. C. Blackburn	40	May 27, 1942	221	22	15	17	12	2	18	-	141	114
43	B. B. Hunnicutt	33	do.	69	4.8	2.4	17	37	4	12	-	11	22
44	Allen Tooke	13	do.	478	16	7.3	134	31	122	102	-	32	70
45	Winfield School	32	do.	74	4.4	1.2	19	13	30	4.0	0.2	6.0	16
46	Benton School	38	May 15, 1942	29	6.0	0	5.1	13	4	5.0	0	0	15
47	Progress School	14	do.	105	18	1.2	17	61	7	3.0	0.1	24	51
a/43	Mal Hargrove	Spring	do.	35	8.8	2.4	1.2	37	2	1.0	-	1.5	32
a/49	E. L. Roofe & S. T. McCaskill	502	May 29, 1942	764	5.2	4.9	297	323	2	238	0.2	7.0	33
a/50	Talco Asphalt & Refining Co. No. 1	597	May 27, 1942	567	3.8	1.0	224	380	2	132	0	0	14
a/51	Talco Asphalt & Refining Co. No. 2	437	do.	594	3.7	1.2	231	370	2	149	0.2	2.0	14
a/52	Humble Pipe Line Co.	430	May 14, 1942	176	14	6.6	30	126	2	15	0.1	0.5	62
a/57	Mrs. W. A. Ford	13	May 30, 1942	84	3.2	4.9	22	73	2	3.0	-	13	28
60	H. L. Hess	96	June 3, 1942	1,732	145	100	307	139	12	670	-	405	772
61	Mrs. Georgie Lee Keith	27	May 25, 1942	506	49	19	109	171	74	138	0.2	33	202
62	C. H. McDonald	40	do.	525	87	28	51	201	107	71	-	82	332
64	Mrs. Nora Blalock	12	do.	231	31	28	6.4	18	74	78	-	5.0	192
a/65	M. W. Barrier	37	do.	1,457	303	97	76	488	274	460	0	2.0	1,170

a/ Analyses of water from selected wells and springs are given in milligram equivalents per liter on page 40.

Partial analyses of water from wells and springs in Titus County -- Continued  
 Results are in parts per million

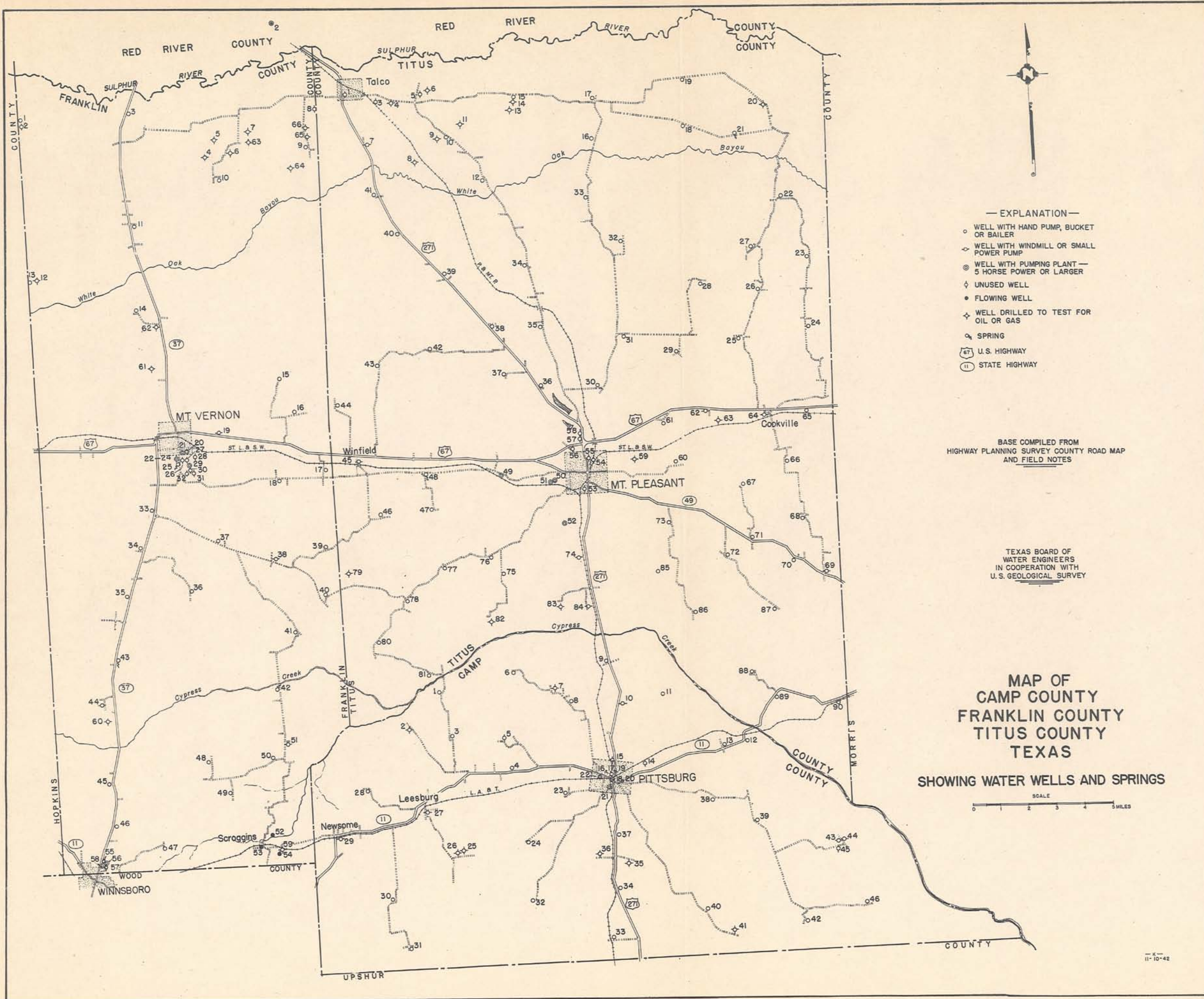
Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Cal- cium (Ca)	Magne- sium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Fluor- ide (F)	Ni- trate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
56	Jess Brown	23	June 3, 1942	226	13	21	25	0	33	82	-	52	118
67	Mrs. Lee Ray	27	do.	289	52	15	23	0	107	37	0.1	2.1	139
68	Yancy School	21	do.	23	1.6	3.2	2.3	12	4	4.0	0.3	2.0	17
a/69	G. C. Lunsford	21	May 14, 1942	119	13	2.4	29	61	5	28	-	12	42
70	Earnest Taylor	24	do.	35	3.8	3.6	13	6	12	20	-	25	37
71	D. J. Harkrider	12	do.	153	12	6.1	31	12	63	29	0.2	6.0	54
72	Chapel Hill School	20	May 13, 1942	60	4.8	3.6	10	12	26	7.0	0.2	2.0	27
73	Union Hill School	21	May 14, 1942	55	10	1.2	7.4	24	18	6.0	-	0	31
74	Concord School	49	do.	163	6.8	2.4	55	73	11	52	0.2	0	27
75	Panthers Chapel School	30	May 15, 1942	612	35	29	133	104	222	135	0.3	0	208
76	-- Reynolds	42	do.	1,732	205	126	239	580	418	450	0	9.0	1,033
77	H. C. Harvey	58	do.	565	48	22	124	43	30	254	-	66	203
78	Monticello School	20	do.	77	4.8	2.4	22	49	3	15	0.1	6.0	22
a/80	G. M. Black	48	do.	474	24	18	127	98	30	195	-	32	136
81	M. Benson	17	do.	535	55	21	107	73	96	196	-	24	223
84	Forest French	14	May 14, 1942	291	8.8	3.6	98	146	63	46	-	0	37
a/85	J. A. Roach	33	June 3, 1942	506	57	29	51	49	3	92	-	250	263
86	Cypress School	21	May 13, 1942	67	8.8	2.4	11	18	5	18	0.2	12	32
87	Hickory Hill School	16	do.	47	4.8	2.4	8.1	18	2	10	0.1	10	22
a/88	Edwards Chapel School	16	do.	60	8.4	1.2	12	43	2	5.0	0.2	10	26
89	W. S. Russell	28	May 14, 1942	236	13	12	38	12	2	35	-	130	83
90	Fletcher Walker	15	do.	123	6.4	1.2	37	12	11	52	-	9.6	21

a/ Analyses of water from selected wells and springs are given in milligram equivalents per liter on page 40.

Chemical analyses--Continued

Results are in milligram equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Total hardness as CaCO <sub>3</sub> (calc.)
2	City of Talco	408	May 21, 1942	0.14	0.03	17.95	0.00	0.04	9.19	0.02	0.00	0.22
7	Felix Jones	24	May 22, 1942	0.04	0.08	2.00	0.30	0.10	0.45	-	0.37	0.12
17	Dean Brownlee	30	May 26, 1942	0.62	0.10	1.95	0.90	0.31	0.68	0	0.24	0.72
22	J. Z. Bell	51	June 3, 1942	11.28	5.20	1.40	9.00	0.69	25.10	-	0	16.48
28	Argo School	30	May 26, 1942	4.08	5.20	3.40	4.40	6.16	5.39	0	0.05	9.28
32	Midway School	16	do.	5.70	6.00	3.00	0.20	12.012	3.72	0.1	0.01	11.70
35	Bev. Gilpin	21	May 22, 1942	0.40	0.08	2.00	0.30	0.23	0.03	-	0.02	0.12
39	Texas Highway Dept.	20	May 20, 1942	0.23	0.50	1.75	0.50	0.15	0.34	-	0.53	0.78
42	J. C. Blackburn	40	May 27, 1942	1.08	1.20	1.40	0.20	0.04	0.51	-	2.27	2.28
48	Mal Hargrove	Spring	May 15, 1942	0.44	0.20	1.90	0.60	0.04	0.03	-	0.02	0.64
49	J. E. Roofs & S. E. McCoskill	502	May 29, 1942	0.56	0.40	1.80	5.30	0.04	8.12	0.01	0.11	0.66
50	Talco Asphalt & Refining Co.	597	May 27, 1942	0.19	0.03	9.72	6.23	0.04	3.72	0.00	0.00	0.27
51	do.	427	do.	0.15	0.10	10.06	6.06	0.04	4.20	0.03	0.01	0.23
52	Humble Pipe Line Co.	430	May 14, 1942	0.70	0.54	1.30	2.06	0.04	0.42	0.01	0.01	1.24
57	Mrs. W. A. Ford	18	May 30, 1942	0.16	0.40	3.80	1.20	0.04	0.08	-	0.21	0.56
65	M. W. Barrier	37	May 25, 1942	15.40	8.00	4.00	3.00	5.693	12.97	0	0.03	23.40
69	G. C. Lunsford	21	May 14, 1942	0.64	0.20	1.90	1.00	0.10	0.79	-	0.19	0.34
80	G. M. Black	48	May 15, 1942	1.22	1.50	1.25	1.60	0.61	5.50	-	0.52	2.72
85	J. A. Roach	33	June 3, 1942	2.36	2.40	0.80	0.80	0.06	2.59	-	4.03	5.26
88	Edwards Chapel School	16	May 13, 1942	0.42	0.10	1.95	0.70	0.04	0.14	0.01	0.16	0.52



- 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
  - FLOWING WELL
  - ◇ WELL DRILLED TO TEST FOR OIL OR GAS
  - SPRING
  - 67 U.S. HIGHWAY
  - 11 STATE HIGHWAY

BASE COMPILED FROM  
HIGHWAY PLANNING SURVEY COUNTY ROAD MAP  
AND FIELD NOTES

TEXAS BOARD OF  
WATER ENGINEERS  
IN COOPERATION WITH  
U.S. GEOLOGICAL SURVEY

**MAP OF  
CAMP COUNTY  
FRANKLIN COUNTY  
TITUS COUNTY  
TEXAS**

**SHOWING WATER WELLS AND SPRINGS**

