

# LIVE OAK COUNTY, TEXAS

Records of wells, driller's logs,  
water analyses, and map  
showing location of wells.

## TEXAS STATE BOARD OF WATER ENGINEERS

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Prepared in cooperation with the United States  
Department of the Interior, Geological Survey

LIVE OAK COUNTY, TEXAS

Introduction

By

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This release contains records of wells in Live Oak County, and is illustrated by a map on which the wells listed are shown, each well being given a number on the map corresponding to the number assigned to it in the well tables. The records were obtained during the summer of 1934 by Walter A. Lynch, under an allocation of funds by the Federal Emergency Administration of Public Works, as a part of a state-wide program of ground-water investigations by the Texas Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey.

Altogether 69 wells are described in the tables. The records include the following: name of well owner and driller; size and depth of well; character of pumping equipment; depth to water in a part of the wells; use made of the water; and the mineral character of the water as shown by laboratory tests for chloride, hardness and bicarbonate. More complete laboratory analyses of water from selected wells are found in tables of chemical analyses.

Most of the wells recorded in the county are used for domestic purposes or stock, or both. A few wells at George West and Three Rivers are used for municipal supply.

The records given in this release serve as a guide to land owners and others who need information regarding wells in different parts of the area, and the quantity and quality of water yielded by the wells.

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Records of wells in Live Oak County, Texas

Well No.	Distance from Whitsett	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
1	6 miles northeast	Humble Pipe Line Co.	--	--	400+	6	--
2	2 miles southwest	B. E. Herring	--	Old	50	48	--
3	4 miles southwest	O. M. Withers	Cheatham Holmes	1927	160	4½	--
4	4½ miles southeast, (Fant City)	U. S. I. Realty Co.	--	--	3,557	--	--

Well No.	Distance from Three Rivers	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
10	8 miles northeast	E. J. Albright	Texas Well and Prospecting Co.	1915	3,558	8	--
11	¾ mile west	City of Three Rivers	--	1927	50	86	--
12	5½ miles south	George West Estate	--	--	100	6	0

Well No.	Distance from Oakville	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
20	1 mile north	J. M. Dullahan	P. Watson	1900	82	6	1.1
21	Oakville	-- Wilson Estate	--	1857	83	48	0
22	1 mile south southeast	Eason Oil Co.	--	--	60	6	.2
23	1½ miles east southeast	I. Hinton	-- Morris	1911	121	--	1.5
24	3½ miles east northeast	C. A. Goebel	Edwards & Moore	1929	112	4¼	1.0
25	6½ miles east northeast	C. O. Lippard	W. Randolph	1925	151	4¼	1.5

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

b/ H, hand pump; W, windmill; A, air lift; E, electric motor; G, gasoline engine.

All wells are drilled unless otherwise stated in remarks

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests <u>d/</u> Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
1	--	--	F	Ind, D	1,080	150	560	
2	--	--	W	D,S	227	200	256	Casing: 40 feet of corrugated galvanized iron pipe.
3	--	--	W	D,S	139	500	450	Estimated yield, [ Dug well. 20 gallons a minute.
4	--	--	--	--	--	--	--	Reported salty water at 1,000 to 1,140, 1,559 to 1,583, 2,261 to 2,287, 3,262 to 3,279, and 3,492 to 3,517 feet.

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests <u>d/</u> Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
10	--	--	Flow	S	3,160	25	1,558	
11	--	--	E	P	122	420	468	Yield from two wells about 100,000 gallons a day. Temperature 73° F. Dug well.
12	80	-- 1928	W	D,S	89	290	304	Temperature 76° F.

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests <u>d/</u> Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
20	63.40	Aug. --, 1934	W	D,S	165	450	232	Casing: 82 feet.
21	65.1 61.95	-- 1928 Aug. --, 1934	W	P	52	260	270	
22	50.3 51.0	Feb. --, 1928 Aug. --, 1934	H	D,S	245	250	220	
23	83.50	Aug. --, 1934	W	D,S	580	140	464	Sulphur odor.
24	97.90	do.	W	D,S	870	950	212	
25	106.30	do.	W	P	378	460	256	Casing: 151 feet of 4 $\frac{1}{4}$ -inch.

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

d/ Made by Margaret D. Foster, Water Resource laboratory.

e/ Hardness as calcium carbonate by the soap method.

## Records of wells in Live Oak County --Continued.

Well No.	Distance from Oakville	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
26	5 miles east southeast	J. C. Dunn	E. L. Hemph, II	1907	176	4 $\frac{1}{4}$	0
27	5 miles south-east	J. M. Tansy	--	Old	82	3 $\frac{1}{4}$	2.0
28	3 $\frac{1}{2}$ miles south	I. Hinton	--	--	128	6	1.2
29	do.	J. A. Hines	-- Hoskins	1928	131	6	1.2
30	5 $\frac{1}{2}$ miles south	Mrs. N. B. Smith	--	--	56	4	1.0
31	6 miles south southeast	C. E. Key	--	Old	65	4 $\frac{1}{4}$	2.0
32	8 miles southeast	Dr. D. E. Hawk	-- Hoskins	1926	190	4 $\frac{1}{4}$	--
33	10 $\frac{1}{2}$ miles south	E. Harrison	F. Weed	1929	60	3 $\frac{1}{2}$	1.2
34	10 $\frac{1}{2}$ miles southeast	Mrs. M. A. Goodwin	--	--	150	6	.3
35	do.	A. M. Robinson	A. W. Toomey	1904	85	5- 3/16	.7
36	8 $\frac{1}{2}$ miles southeast	Dan Gaynes	J. S. Lewis	1916	88	5- 3/16	0
Well No.	Distance from George West	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
50	4 miles east southeast	S. W. Lewis	Homer Walton	1927	51	6	0
51	2 $\frac{1}{2}$ miles east	W. E. Chandler	--	1926	67	6	0
52	3 miles south southeast	Mrs. B. Katzfev	-- Gawlik	1925	80	--	2.0
53	$\frac{1}{2}$ mile southwest	George West Utilities	--	--	500	10	.3
54	do.	do.	--	--	300+	8	0
55	do.	do.	--	--	89	--	0
56	3 miles southwest	S. E. Norris	--	Old	180	4 $\frac{1}{2}$	--
57	5 miles west southwest	H. J. Hadamek	--	Old	240	--	--

All wells are drilled unless otherwise stated in remarks

Well	Water level		Method of lift	Use of water	Chemical tests d/			Remarks
	Depth below measuring point (ft.)	Date of measurement			Parts per million			
					Chloride	Hardness	Bicarbonate	
26	139.40	Aug. --, 1934	W	D,S	535	480	280	Reported as good well.
27	71.50	do.	W	D,S	730	1,350	286	Casing: 82 feet of 3 1/4-inch. Yield reported poor.
28	23.7	Feb. --, 1928	W	D,S	--	--	--	
	24.85	July --, 1934						
29	39.85	Aug. --, 1934	W	D,S	1,100	160	544	
30	37.5	Feb. --, 1928	W	D,S	100	280	316	
	40.00	Aug. --, 1934						
31	55.60	Aug. --, 1934	W	S	835	1,000	246	Original depth 600 feet.
32	--	--	W	D,S	350	280	322	Reported as good well.
33	50.10	Aug. --, 1934	W	D,S	--	--	--	Casing: 58 feet of 3 1/2-inch stove pipe.
34	107.10	do.	W	D,S	438	600	324	
35	62.50	do.	W	D,S	1,120	900	272	Original depth 400 feet. Plugged below 85 feet on account of bad water.
36	43.40	do.	W	D,S	385	480	272	

Well No.	Water level		Method of lift	Use of water	Chemical tests d/			Remarks
	Depth below measuring point (ft.)	Date of measurement			Parts per million			
					Chloride	Hardness	Bicarbonate	
50	32.10	Aug. --, 1934	W	D,S	700	95	452	
51	43.55	do.	W	S	1,950	1,000	316	Reported as good well.
52	58.40	do.	W	D,S	222	170	358	
53	38.70	do.	E	P	258	230	362	Temperature 81° F.
54	42.8	Feb. --, 1928	--	N	--	--	--	Not used on account of poor quality.
	37.90	Aug. --, 1934						
55	56.9	Feb. --, 1928	E	Ind.	206	300	340	Temperature 77° F.
	59.75	Aug. --, 1934						
56	--	--	W	D,S	158	150	352	
57	--	--	W	D,S	505	470	246	Temperature 78° F.

## Records of wells in Live Oak County --Continued

Well No.	Distance from George West	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
58	6 miles southwest	S. Breiten	--	1919	80	4 $\frac{1}{4}$	.5
59	10 miles southwest	W. R. Lyne	--	1904	140	4	.3
60	12 miles southwest	R. C. Lyne	--	--	240	4	.2
61	15 miles southwest	J. O. Hendrick	-- Bradshaw	1921	162	6	1.3
62	17 miles southwest	H. Hyman	Ed Lindbloom	1925	300	6	--
63	do.	John Dunn	--	1913	254	--	1.0
64	19 miles southwest	Lee Moore	Ed Lindbloom	1927	144	3 $\frac{1}{4}$	--
65	16 miles southwest	M. L. Kendall	--	1895	193	5- 3/16	1.0
66	17 miles south southwest	G. T. Roberts	--	Old	188	4 $\frac{1}{4}$	0
67	13 $\frac{1}{2}$ miles south	T. J. Goodwin	Jim Goodwin	1913	110	6	1.2
68	16 miles south	Charles McCaslin	--	Old	200	--	1.5
69	13 $\frac{1}{2}$ miles south southeast	Mrs. M. A. Hinnant	--	Old	104	4 $\frac{1}{4}$	0
70	9 miles south southwest	C. T. Holland	--	Old	235	5- 3/16	0
71	8 miles south	Hall Brothers	--	--	250	5- 3/16	.2
72	5 $\frac{1}{2}$ miles south	A. Kubala	--	--	155	6	1.0

Well No.	Distance from Mikeska	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
80	2 $\frac{1}{2}$ miles southwest	Jim Pugh	--	Old	240	4 $\frac{1}{4}$	0
81	Mikeska	F. B. Frerich	John Trumbula	1928	54	5 $\frac{1}{2}$	.5
82	do.	Albert Huegler	A. P. Gaynes	1922	60	6	1.7
83	do.	Mikeska Estate	--	1922	832	6- 5/8	--
84	3 miles southeast	Mrs. P. O. Watson	--	Old	150	4 $\frac{1}{4}$	--

All wells are drilled unless otherwise stated in remarks

Well	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests d/ Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
58	71.80	Aug. --, 1934	W	S	860	1,200	358	
59	125.10	do.	W	D,S	145	100	418	Reported as good well.
60	--	--	G	D,S	--	--	--	
61	132.2 147.00	Feb. --, 1928 Aug. --, 1934	W	D,S	930	700	192	Reported salty water at 40 feet.
62	179.70	Aug. --, 1934	W	D,S	230	150	324	
63	57.40	do.	W	D,S	560	170	202	
64	--	--	W	D,S	600	800	244	
65	137.10	Aug. --, 1934	W	D S	252	160	336	
66	128.95	do.	W	D,S	1,075	1,100	232	Temperature 77° F.
67	117.10	do.	W	D S	418	550	226	
68	135.80	do.	W	S	1,330	1,100	330	
69	84.05	do.	G	D,S	61	250	374	
70	--	--	W	S	990	750	258	
71	217.90	Aug. --, 1934	W	S	312	270	336	
72	128.85	do.	W	S	815	1,000	222	

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests d/ Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
80	188.80	Aug. --, 1934	W	D,S	295	220	272	
81	44.15	do.	G	D,S	740	700	328	
82	50.85	do.	W	D,S	610	650	312	
83	--	--	Flow	N	2,100	400	236	
84	--	--	W	S	250	330	334	Reported as good well.



## Records of wells in Live Oak County --Continued

Well No.	Distance from Dinero	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
90	4 miles north	Tom Poyner	Walton Brothers	1929	73	4 $\frac{1}{4}$	--
91	5 miles east northeast	C. W. Dykes	--	Old	180	5	2.0
92	3 miles east northeast	S. J. Swinney	R. W. Lawson	1929	170	5	1.0
93	3 $\frac{1}{2}$ miles east	Hall Brothers	Tom Ramage	1931	121	--	--
94	Dinero	J. R. McGuffin	--	--	75	6	1.0
95	3 $\frac{1}{2}$ miles southwest	Trinity Drillers, Inc.	A. C. White	1934	250	4 $\frac{1}{4}$	--
96	8 miles southwest	Mrs. M. A. Hinnant	--	Old	100	5- 3/16	--
97	11 miles south southwest	do.	--	1893	202	5	--
Well No.	Distance from Lagarto	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
100	Lagarto	Jack Goodwin	A. L. Gooley	1908	106	4	1.4
101	4 miles north	Houston Pipe Line Co.	E. M. Jenkins	1927	251	9	0
102	do.	do.	-- Quinn	1934	561	6- 5/8	--
103	5 $\frac{1}{2}$ miles northeast	Mrs. Tom Webb	--	Old	124	4	0
104	8 miles northeast	Bob Elam	--	1931	265	4 $\frac{1}{4}$	1.3
105	7 $\frac{1}{2}$ miles east northeast	J. E. Curlee	--	Old	150	4 $\frac{1}{4}$	0
106	2 $\frac{1}{2}$ miles east	D. B. Miller	--	1890	490	5	--
107	3 miles southeast	H. D. Miller	--	1932	200	4 $\frac{1}{4}$	0
108	do.	do.	--	1932	405	10	--

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

b/ H, hand pump; W, windmill; A, air lift; E, electric motor; G, gasoline engine.

All wells are drilled unless otherwise stated in remarks

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests <u>d/</u> Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
90	--	--	W	D,S	270	750	324	
91	124.75	Aug. --, 1934	W	D,S	270	390	312	Reported as good well.
92	148.15	do.	W	P	780	1,200	198	
93	--	--	W	Ind, D	440	600	262	Casing: 114 feet of 4 $\frac{1}{4}$ -inch.
94	37.4 33.20	Feb. --, 1928 Aug. -- 1934	W	D,S	375	500	258	
95	--	--	A	--	535	650	234	Temperature 78° F. Used for drilling rig.
96	--	--	W	D,S	520	280	308	
97	--	--	W	S	470	700	380	

Well No.	Water level		Method of lift <u>b/</u>	Use of water <u>c/</u>	Chemical tests <u>d/</u> Parts per million			Remarks
	Depth below measuring point (ft.)	Date of measurement			Chloride	Hardness <u>e/</u>	Bicarbonate	
100	--	--	A	D,S	--	--	--	Casing: 106 feet of 3-inch.
101	--	--	--	Ind, D	218	210	328	Yields gas.
102	--	--	--	Ind, D	155	170	358	Yields some gas. Screens set at 186 to 210, 361 to 382, 428 to 468, 542 to 562 feet. Yields 40 gallons a minute.
103	35.80	Aug. --, 1934	W	D,S	210	150	352	
104	91.50	do.	W	S	--	--	--	
105	128.20	do.	W	D,S	134	220	328	
106	--	--	Flow	--	178	110	434	Casing: 460 feet of 5-inch. Estimated flow, 10 gallons a minute.
107	1.3	Aug. --, 1934	--	N	--	--	--	
108	--	--	Flow	S	238	210	406	Casing: 245 feet of 10-inch. Temperature 76° F. Estimated flow, 75 gallons a minute.

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

d/ Made by Margaret D. Foster, Water Resource laboratory.

e/ Hardness as calcium carbonate by the soap method.

Log of well in Live Oak County, Texas

Log of well 4		Log of well 4 --Continued	
Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)
Gray, slightly calcareous gritty plastic clay-	65	65	
Fragments of pinkish- gray limestone, 1/8- inch in diameter; sub- angular, little clay in this sample - -	35	100	
Green, slightly calcareous, slightly sandy clay- - -	40	140	
Green, gritty, slightly calcareous clay, not very plastic- - - -	15	155	
Green gritty, slightly plastic calcareous clay with small segregations of lime- - - -	205	360	
Green sandy clay; one fragment of fairly hard lime -	21	381	
Green, slightly sandy marl with lime nodules - -	39	420	
Fragments of hard green argilla- ceous limestone; also fragments of hard green brittle clay - - - -	44	464	
Fragments of green sandy argillaceous limestone - - -	26	490	
Fragments of green sandy limestone mixed with green sandy clay. One piece of lignite (?)- - - -	55	545	
Fragments of medium- hard light greenish- gray compact argillaceous lime- stone; also frag- ments of green gritty clay- - -	75	620	
			Fragments of greenish- gray compact hard limestone; with thin streaks of calcite; also fragments of dark-green coarse- grained calcareous sandstone (?) - -
		40	660
			Green sandy calcareous clay - - - -
		115	775
			Blue calcareous plastic clay- - -
		145	920
			Green gritty calcareous clay- -
		50	970
			Light-gray calcareous sand, chiefly quartz; fragments angular to subangular - -
		30	1000
			Gray calcareous quartzitic sand; composed chiefly of subrounded quartz grains - - - -
		140	1140
			Dark grayish-green compact nongritty noncalcareous shale-
		133	1273
			Noncalcareous green sandy clay (sand?)- -
		17	1290
			Dark-green compact shale noncalcareous; very little sand - - -
		21	1311
			Light-green sandy clay, noncalcareous -
		2	1313
			Dark-green non- calcareous shale; very little grit - - - -
		14	1327
			Fossiliferous marl -
		5	1332
			Green noncalcareous brittle clay - -
		21	1353
			Calcareous greenish- gray sand with fragments of fossils; sand consists of fairly well rounded quartz grains and other mineral fragments - - -
		2	1355

(Continued on next page.)

Log of well in Live Oak County --Continued

Log of well 4 --Continued		Log of well 4 --Continued			
Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Green noncalcareous clay with fragments of blue argillaceous limestone; latter probably concretions - - - -	14	1369			
Greenish-gray fossiliferous non-calcareous clay-	2	1371			
Green, slightly calcareous clay-	13	1384			
Fossiliferous marl; some quartz present- - - -	5	1389			
Noncalcareous green clay - - - -	14	1403			
Greenish-gray non-calcareous clay; one fragment of light-gray non-calcareous sandstone - - - -	3	1406			
Brown lignitic sandy noncalcareous clay; grains of quartz visible- - - -	34	1440			
Fossiliferous marl with fragments of black magnetite, probably foreign-	31	1471			
Green noncalcareous clay (?); one fragment of lignitized wood (?) - - - -	57	1528			
Fossiliferous sand and fragments of magnetite and limonite - - - -	26	1554			
Noncalcareous green sandy clay - - - -	5	1559			
Gray sand; gas - - - -	24	1583			
Fragments of green clay and sand; sand may come from stratum above - - - -	77	1660			
Slightly calcareous green sandy clay-	67	1727			
Green noncalcareous sandy clay with small nodules of lime or fossil remains- - - -	11	1738			
			Green calcareous clay stained with limonite; also some quartz sand and magnetite - - - -	29	1767
			Green shale and green, slightly calcareous clay, with fragments of magnetite and sand; sand probably derived from the clay - - - -	13	1780
			Dark-green non-calcareous clay-	17	1797
			Fragments of greenish-white compact clay and dark-green clay, noncalcareous; fragments of fossils; some flakes of magnetite probably derived from casing; noted that these fragments of magnetite are always associated with fossil beds- - - -	31	1828
			Green, slightly calcareous plastic clay - - - -	13	1841
			Green, slightly calcareous and slightly sandy clay-	26	1867
			Green, slightly sandy and slightly calcareous clay with fragments of fossils and magnetite (foreign?) - - - -	26	1893
			Bluish-gray calcareous sandy clay- - - - -	19	1912
			Green calcareous sandy clay - - - -	15	1927
			Green, slightly calcareous sandy clay with a small fragment of limestone; probably concretionary - - - -	13	1940
			Dark-green compact non-calcareous clay - - - -	44	1984

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Log of well in Live Oak County --Continued

Log of well 4 --continued		Log of well 4 --Continued			
Thickness (feet)	Depth (feet)	Thickness (feet)	Depth (feet)		
Greenish-gray non-calcareous sandy clay; sand fine-grained - -	29	2013	Slightly calcareous dark-green sandy clay - - - -	29	2506
Dark-green non-calcareous hard clay - - - -	15	2028	Green noncalcareous sandy clay with probably a little glauconite - - -	35	2541
Green calcareous; slightly sandy clay, specks of limonite and magnetite; fragments of fossils- -	42	2070	Noncalcareous green glauconitic, very sandy clay - - -	29	2570
Hard green non-calcareous clay - -	56	2126	Green compact non-calcareous clay- -	27	2597
Dark-green non-calcareous clay with some glauconite (?)-	87	2213	Dark-green non-calcareous, slightly sandy clay- - -	6	2603
Green calcareous friable fossiliferous clay- - -	48	2261	Green noncalcareous glauconitic sandy clay - - - -	25	2628
Gray calcareous fossiliferous sand, fragments of limonite, probably foreign - -	26	2287	Compact green non-calcareous clay - -	25	2653
Green plastic non-calcareous clay, fossiliferous - -	34	2321	Green glauconitic sandy clay with fragments of lignite (?) - -	31	2684
Light-green sandy calcareous clay- -	36	2357	Green noncalcareous slightly sandy plastic clay - -	10	2694
Dark-green non-calcareous compact clay; breaks with hackly fracture- -	32	2389	Green sandy clay flecked with lime -	15	2709
Dark-green non-calcareous clay; breaks with sub-conchoidal fracture - - -	22	2411	Green compact non-calcareous clay with one nodule of pyrite-	8	2717
Green fossiliferous calcareous sand and sandy clay- - -	38	2449	Green glauconitic fossiliferous slightly calcareous clay - - - -	167	2884
Green noncalcareous sandy clay with some glauconite - - -	28	2477	Green, slightly calcareous glauconitic fossiliferous clay -	9	2893
			Green noncalcareous sandy clay - - -	87	2980
			Green, slightly calcareous, slightly sandy clay- - -	127	3107

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Log of well in Live Oak County --Continued

Log of well 4 --Continued			Log of well 4 --Continued		
	Thickness (feet)	Depth (feet)		Thickness (feet)	Depth (feet)
Green sandy clay, calcareous in spots -	12	3119	Fossiliferous dark- green clay; con- tains Foraminifera, Turbinolia pharetra, Marginella some- noides, Neverita arata, Corbula gregorioi, Venericardia sp., (typical lower Claiborne fauna)-	181	3460
Green sandy clay; some fragments are highly calcareous -	13	3132	Dark slate-colored clay with pieces of dark-green clay; brittle and breaks into small fragments-	32	3492
Dark-green, flaky noncalcareous clay -	35	3167	Noncalcareous gray quartzitic sand -	25	3517
Dark-green non- calcareous tough, plastic clay - - -	48	3215	Slightly calcareous dark-green clay -	40	3557
Fossiliferous dark- green clay; breaks into small fragments-	47	3262	TOTAL DEPTH - - -	-	3557
Gray, very slightly calcareous sand, con- sisting chiefly of subangular quartz grains; some pieces of magnetite- - -	17	3279			

Analyses of water from wells in Live Oak County, Texas

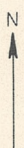
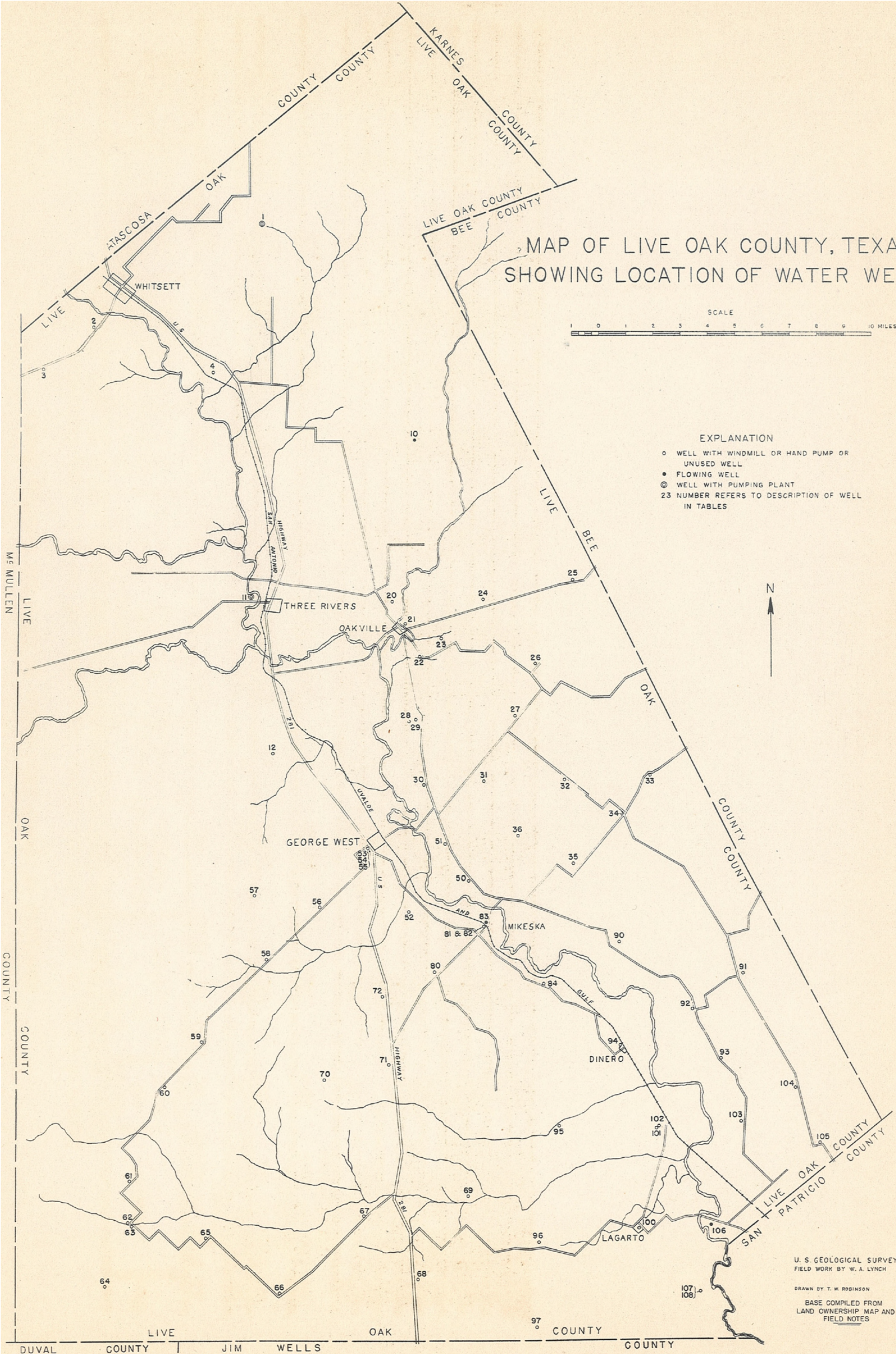
Analyzed by E. W. Lohr, United States Department of the Interior, Geological Survey.  
(Parts per million. Well numbers correspond to numbers in tables of well records.)

No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids	Iron (ppt.)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na) (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.)
11	City of Three Rivers	50	Aug. 16, 1940	714	-	154	12	86	480	47	127	.2	.0	434
21	Wilson Estate	83	do.	435	-	82	8.6	57	206	105	59	.5	.0	340
34	Mrs. M. A. Goodwin	150	do.	1,261	-	172	47	180	336	115	435	.4	6.0	623
53	George West Utilities	500	do.	1,219	-	69	20	349	356	326	268	.9	.0	254
55	do.	89	do.	908	-	72	26	209	320	86	270	.3	9.0	287
56	S. E. Norris	185	do.	701	-	46	11	201	340	75	168	.5	2.0	160
59	W. R. Lyne	140	do.	690	.34	31	11	218	396	64	145	.3	.0	123
61	J. O. Hendrick	162	do.	1,980	6.5	194	50	404	188	97	930	.6	-	690
63	John Dunn	254	do.	1,342	-	50	14	426	192	154	560	.4	-	182
65	M. L. Kendall	193	do.	777	2.5	46	13	241	326	48	260	.8	8.4	168
71	Hall Brothers	250	do.	912	1.1	69	23	231	322	50	320	1.0	-	267
94	J. R. McGuffin	75	do.	1,052	.73	148	40	150	276	86	385	.7	-	534
105	J. E. Curlee	150	do.	596	-	73	16	113	330	31	130	1.2	6.2	248

# MAP OF LIVE OAK COUNTY, TEXAS SHOWING LOCATION OF WATER WELLS



- EXPLANATION
- WELL WITH WINDMILL OR HAND PUMP OR UNUSED WELL
  - FLOWING WELL
  - ⊙ WELL WITH PUMPING PLANT
  - 23 NUMBER REFERS TO DESCRIPTION OF WELL IN TABLES



U. S. GEOLOGICAL SURVEY  
FIELD WORK BY W. A. LYNCH  
DRAWN BY T. W. ROBINSON  
BASE COMPILED FROM  
LAND OWNERSHIP MAP AND  
FIELD NOTES