

TEXAS

STATE BOARD OF WATER ENGINEERS

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WINKLER COUNTY, TEXAS

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

Work Projects Administration Project 14901

Analyses made and report mimeographed by
WORK PROJECTS ADMINISTRATION
Project 17276

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

Austin, Texas
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WINKLER COUNTY, TEXAS

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Introduction

by

William O. George

Assistant Geologist

United States Geological Survey

This publication is an assemblage of data obtained in the course of a survey in Winkler County, Texas, consisting of records of 191 wells, 59 drillers' logs, 20 test wells, and 85 chemical analyses of water from wells. These basic data contribute to the general fund of information needed in the study of ground-water in Texas now being carried on by the Texas State Board of Water Engineers in cooperation with the United States Department of the Interior, Geological Survey.

The survey was started on January 30, 1940, and completed on May 6, 1940, as Project No. 14901 of the Work Projects Administration, with Henry M. Forbes and John F. Lance as project supervisors, under the technical supervision of Joe W. Lang, ground-water hydrologist of the State Board of Water Engineers.

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

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

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

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, 300 State Highway Building, Austin, Texas.

Records of wells in Winkler County, Texas

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

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
2	15½ miles northwest	3, NE¼NE¼	C-74	C. C. Cowden	--	In draw	Old	220	--
3	13 miles northwest	13, NR¼SW¼	C-23	do.	--	Gentle slope	Old	140	--
4	do.	do.	C-23	do.	--	do.	Old	140	--
7	11¼ miles northwest	7, NE¼NW¼	74	W. L. Beckham	--	--	--	134	6
8	9½ miles northwest	13, SW¼SW¼	74	J. B. Walton	--	Gentle slope	1935	118+	6
9	9½ miles west	25 & 30, line of	74	--	--	--	--	530	--
10	9 miles west	30, NE¼NE¼	74	Mrs. E. Linebery	--	--	--	119	5
11	12 miles northwest	9, SE¼SE¼	74	C. C. Cowden	--	Gentle slope	Old	151	--
12	12 miles west	19, NE¼SW¼	75	Mrs. E. Linebery	--	Bottom of sink	--	211	6
13	do.	35, NW¼SE¼	75	do.	J. R. Marshall	do.	--	230	--
14	9¼ miles west	2, SE¼SW¼	27	do.	--	--	Old	230	6
17	6 miles west	17, NW¼	26	T. C. Thornton	--	Gentle slope	--	96	6
18	5½ miles west	9, cen.	26	J. B. Walton	J. R. Marshall	--	1939	155	7
19	3½ miles west	15, SE¼SE¼	26	do.	do.	--	1938	230	7
20	2½ miles north	14, SE¼SE¼	B- 3	do.	--	Gentle slope	Old	87	--
21	3 miles west	23, SE¼NW¼	26	Humble Oil & Refining Co.	Roy E. Griggs	--	1936	300	--
22	2½ miles west	23, SW¼SW¼	26	Illinois Oil Co.	--	--	--	--	--
23	1½ miles northwest	24, SE¼SE¼	26	Sinclair Prairie Oil Co.	J. R. Marshall	--	--	162	6
24	do.	do.	26	do.	do.	--	--	145	6
25	2¼ miles northwest	24, NW¼NE¼	26	J. B. Walton	--	Gentle slope	--	90	--
26	do.	24, NE¼NW¼	26	do.	--	do.	--	118	6
27	2¼ miles northwest	24, NW¼NE¼	26	Humble Oil & Refining Co.	R. E. Griggs	--	1936	300	8-5/8
28	do.	15, SE¼NW¼	B- 3	J. B. Walton	Magnolia Petroleum Co.	--	--	2,279	--
29	3¼ miles northwest	12, SW¼SE¼	26	Humble Oil & Refining Co.	F. C. Ingham	--	1936	186	8-5/8

3/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
 C, cylinder; A, air, steam or natural gas lift; T, turbine; W, windmill; E, electric; G, gasoline; O, by draw-rod from central power unit; number indicates horsepower.

See "Logs of W. P. A. test wells" for all records of test wells
(Chemical analyses of water from these wells are in the table of analyses)

No.	Height of measuring point above ground (ft.)	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
2	--	205	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute.
3	--	120	e/	C,W	D,S	Steel casing. Reported yield, 40 gallons a minute.
4	--	120	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute.
7	0.0	119	Apr. 1, 1940	C,W	S	Steel casing.
8	0.6	103	Jan. 30, 1940	C,W	S	Do.
9	--	--	--	--	--	Oil test. See log.
10	3.0	112	Apr. 20, 1940	C,W	S	Steel casing to bottom.
11	2.0	144	Mar. 16, 1940	C,W	S	Steel casing. Reported yield, 5 gallons a minute from sand.
12	--	211	e/	C,W	S	Steel casing.
13	--	--	--	C,W	S	Steel casing. Reported yield, 4 gallons a minute.
14	--	--	--	C,W	D,S	Steel casing to bottom.
17	--	60	Feb. 13, 1940	C,W	D,S	Steel casing to 64 feet.
18	--	--	--	C,W	S	See log.
19	--	--	--	None	N	Do.
20	--	72	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute from sand.
21	--	--	--	C,O	Ind	See log.
22	--	--	--	C,W	D	Steel casing. Reported yield, 5 gallons a minute. Formerly supplied water for drill-
23	--	--	--	C,O	D	Steel casing. Reported yield, 3 gallons a minute from sand and gravel. Formerly supplied water for drill-
24	--	--	--	A,-	Ind	Steel casing to bottom.
25	--	--	--	C,W	S	Steel casing. Reported yield, 5 gallons a minute from sand.
26	--	--	--	T,E, 5	D,S,I	Steel casing. Reported strong yield from sand and gravel.
27	--	--	--	A,-	Ind	Reported yield, 26,000 gallons a day. See log.
28	--	--	--	None	N	Oil test. See log.
29	--	--	--	A,-	Ind	Reported unfit for domestic use. See log.

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

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 30	3½ miles northwest	12, SW½	26	J. B. Walton	J. R. Marshall	--	--	185	--
d/ 31	3¾ miles northwest	12, SW¼NW¼	26	Humble Oil & Refining Co.	F. C. Ingham	--	--	173	8
32	4¾ miles northwest	10, NE¼NE¼	26	J. B. Walton	--	Sand dunes	Old	88	--
33	4¼ miles northwest	1, SW½SE½	26	Magnolia Petroleum Co.	--	--	--	138+	--
34	do.	1, SW¼SW¼	26	do.	--	--	Old	245	8
d/ 35	4½ miles northwest	do.	26	do.	--	--	Old	158	6
36	do.	1, NE¼SW¼	26	J. B. Walton	--	Sand dunes	Old	80	--
d/ 37	do.	1, SW¼NE¼	26	do.	Magnolia Petroleum Co.	--	--	2,547	--
38	do.	1, SE¼NW¼	26	do.	do.	--	--	1,145	--
39	4 miles north	5, SW½SE½	B- 3	Houston Oil Field Material Co.	--	--	Old	95+	--
d/ 40	do.	5, SE½	B- 3	Magnolia Petroleum Co.	J. R. Marshall	--	1937	260	15½
41	6 miles northwest	35, SW¼NW¼	74	J. B. Walton	--	Sand dunes	Old	95	--
d/ 42	do.	34, SW¼SW¼	74	Humble Oil & Refining Co.	R. E. Griggs	--	1936	300	8
d/ 43	7 miles northwest	33, NE¼NE¼	74	J. B. Walton	J. R. Marshall	--	1939	165	7
d/ 44	6¾ miles northwest	21, SW½SE½	74	Humble Oil & Refining Co.	G. W. Howard	--	1936	155	7
d/ 45	6½ miles northwest	20, SE½SE½	74	do.	--	--	--	440	5½
46	6 miles northwest	19, SE½SE½	74	J. B. Walton	--	Sand dunes	--	85	--
d/ 49	6½ miles north	16, SE¼NW¼	77	Magnolia Petroleum Co.	J. R. Marshall	--	1938	143	10¾
d/ 52	8 miles north	2, SE¼NW¼	77	Texas-New Mexico R.R.	--	--	1928	162	8
54	do.	4, SE½SW¼	C-22	do.	--	In draw	1928	120	6
55	8½ miles north	do.	C-22	Mrs. E. Linebery	C. F. Wheeler	--	1938	100+	--
d/ 56	7¾ miles north	1, NE¼NE¼	77	--	--	--	--	1,148	--
d/ 57	7¼ miles northwest	18, SW½SE½	74	Mrs. E. Linebery	J. R. Marshall	--	--	420	10
58	8¾ miles northwest	15, NE¼NE¼	74	C. C. Cowden	--	Gentle slope	Old	130	--
d/ 59	do.	3, SW½SE½	74	--	--	--	--	1,275	--

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
30	--	--	--	None	S	Steel casing. See log.
31	--	--	--	None	N	Reported yield, 33,000 gallons a day when used to supply oil test drilling. See log.
32	--	76	e/	C,W	S	Steel casing. Reported yield, 6 gallons a minute from sand.
33	2	114	Apr. 19, 1940	A,-	D,Ind.	Steel casing. Reported adequate supply. Depth to water measured while pumping.
34	--	--	--	A,-	D,Ind.	Reported adequate supply. See log.
35	2	110	Apr. 17, 1940	None	N	Steel casing.
36	--	--	--	C,W	S	Steel casing. Reported yield, 5 gallons a minute from sand.
37	--	--	--	--	--	Oil test. See log.
38	--	--	--	--	--	Do.
39	--	--	--	C,"	D	Steel casing.
40	--	70	e/	--	N	Reported 70 feet drawdown pumping 730 gallons a minute. See log.
41	--	--	--	C,W	S	Steel casing. Reported yield, 6 gallons a minute.
42	--	--	--	C,O	--	Reported yield, 12,000 gallons a day. See log.
43	--	--	--	C,W	N	See log.
44	--	--	--	None	N	Steel casing top 105 feet. Reported yield, 8,000 gallons a day from sand 127 to 155
45	--	--	--	A,-	Ind	Steel casing top 373 feet. Perforated from 273 to 373 feet. Reported yield, 34,000 gallons a day from sand 320 to 440 feet. Another water bearing bed 145
46	--	75	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute from sand. to 196 feet.
49	--	--	--	None	N	See log.
52	--	75	e/	C,W	S	Steel casing. Supplies water for stock pens.
54	--	77	e/	C,W	D	Steel casing. Water reported from quicksand.
55	--	--	--	C,W	D	Steel casing.
56	--	--	--	--	--	Oil test. See log.
57	--	--	--	A,-	Ind	Reported yield, 250,000 gallons per day. See log.
58	--	120	e/	C,W	S	Steel casing. Reported dependable supply.
59	--	--	--	--	--	Oil test. See log.

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
2/ 61	10 $\frac{1}{2}$ miles northwest	3, SW $\frac{1}{2}$ SW $\frac{1}{2}$	C-23	J. B. Walton	J. R. Marshall	--	--	407	6
o/ 65	8 $\frac{1}{2}$ miles north	1, cen.	C-22	--Scarborough	Llano Oil Co.	--	--	445	--
o/ 66	8 $\frac{1}{2}$ miles north	4, SW $\frac{1}{4}$	C-22	Mrs. E. Linebery	J. R. Marshall	--	1938	110	8 $\frac{1}{2}$
68	do.	4, SE $\frac{1}{4}$ SE $\frac{1}{4}$	C-22	do.	--	In draw	Old	80	6
d/ 69	7 $\frac{3}{4}$ miles north	do.	77	B. F. Jenkins	C. F. Wheeler	Sand dunes	--	165	6
70	5 $\frac{1}{4}$ miles north	19, SW $\frac{1}{4}$ SW $\frac{1}{4}$	77	J. B. Walton	--	Gentle slope	Old	80	--
71	4 $\frac{3}{4}$ miles north	2, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 3	do.	--	Sand dunes	Old	78	--
5/ 72	4 $\frac{1}{4}$ miles north	3, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 3	Cabot Carbon-Black Co.	J. R. Marshall	--	--	190	12 $\frac{1}{2}$
73	4 miles north	8, NW $\frac{1}{4}$ NW $\frac{1}{4}$	B- 3	J. B. Walton	--	Sand dunes	1937	155	6
74	3 miles north	13, NW $\frac{1}{4}$	B- 3	do.	--	do.	Old	87	--
5/ 75	1 $\frac{1}{2}$ miles north	17, NE $\frac{1}{4}$ SW $\frac{1}{4}$	B- 3	--	--	--	--	268	--
o/ 76	1 $\frac{1}{4}$ miles north	25, SW $\frac{1}{4}$ NW $\frac{1}{4}$	26	Humble Oil & Refining Co.	R. E. Griggs	--	1936	300	8-5/8
o/ 77	1 $\frac{1}{2}$ miles west	25, N $\frac{1}{2}$ SW $\frac{1}{4}$	26	do.	F. C. Ingham	--	1936	175	8-5/8
o/ 78	do.	do.	26	do.	do.	--	1936	175	8-5/8
o/ 79	2 $\frac{1}{2}$ miles west	26, SW $\frac{1}{4}$ SW $\frac{1}{4}$	26	J. B. Walton	J. R. Marshall	Flat	1939	150	7
81	1 $\frac{1}{4}$ miles west	36, NW $\frac{1}{4}$ NE $\frac{1}{4}$	26	Siosi Oil Co.	--Reynolds	do.	1936	160	--
5/ 82	1 mile southwest	36, SW $\frac{1}{4}$ NE $\frac{1}{4}$	26	J. B. Walton	J. R. Marshall	--	--	150	7
83	$\frac{3}{4}$ mile south	26, SW $\frac{1}{4}$ SE $\frac{1}{4}$	B- 3	City of Kermit	Kermit Oil & Development Co.	Gentle slope	1929	700	12 $\frac{1}{2}$
84	1 mile south	do.	B- 3	Kermit Cemetery	J. R. Marshall	--	1939	204	6
85	do.	5, NW $\frac{1}{4}$ NE $\frac{1}{4}$	B- 5	C. B. Parker	-- Redman	--	1938	200	5
86	1 $\frac{1}{4}$ miles southeast	4, NE $\frac{1}{4}$ NW $\frac{1}{4}$	B- 5	S. W. Altmon	--	--	Old	140	5
o/ 87	In Kermit	26, --	B- 5	Kermit High School	J. R. Marshall	--	1936	235	8 $\frac{1}{2}$

No.	Height of		Water level		Pump	Use	Remarks
	measuring point above ground (ft.) a/	Depth below measuring point (ft.)	Date of measurement				
61	--	--	--	--	--	Ind	Steel casing. Reported yield, 33,000 gallons per day; supplied water for drilling oil tests. See log.
65	--	--	--	--	--	--	Oil test. See log.
66	--	--	--	--	A,-	N	See log.
68	--	--	--	--	C,W	D,S	Steel casing.
69	--	--	--	--	C,W	S	Blank steel casing to 135 feet; perforated casing from 135 feet to bottom. Water re-
70	--	65	e/		C,W	S	ported from quicksand. Reported yield, 5 gallons a minute from
71	--	75	e/		C,W	S	Steel casing. Reported supply sand. fails after pumping 5 gallons a minute for
72	--	--	--	--	T,-	D,Ind	Pump set at 165 feet. A similar 3 hours. well is located 50 feet away. Reported yield, 100 gallons a minute from each well
73	--	120	e/		C,W	S	Steel casing to 125 feet. Re- See log
74	--	72	e/		C,W	S	ported yield, 5 gallons a minute. Steel casing. Reported yield, 5 gallons a minute.
75	--	--	--	--	--	--	Oil test. See log.
76	--	--	--	--	A,-	Ind	See log.
77	--	--	--	--	--	N	Reported yield, 19,000 gallons a day; supplied water for drilling oil test. See
78	1	72	May 2, 1940		--	N	Do. log.
79	--	--	--	--	--	S	See log.
81	--	90	e/		C,W	D	Steel casing. Reported adequate supply.
82	--	--	--	--	C,W	--	Steel casing. See log.
83	--	63	e/		T,E,	P	15 Steel casing to 240 feet. Reported 22 feet drawdown pumping 404 gallons a minute for 24 hours. Pump set at 100 feet. Used in conjunction with wells 90 and 91 to supply water for city of Kermit.
84	--	60	e/		C,W	--	Steel casing to 190 feet. Reported tested with bailer. Drawdown 15 feet. Reported yield, 40 gallons a minute. See log.
85	--	48	e/		C,E,	S	$\frac{1}{2}$ Steel casing to 86 feet. Reported strong supply.
86	--	--	--	--	C,W	D,S	Steel casing. Reported strong supply.
87	--	--	--	--	T,-	P	Steel casing to 218 feet. Reported yield, 80 gallons a minute from sand and gravel from 225 to 234 feet. Pump set at 190 feet

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 88	In Kermit	26,	B- 3	W. H. Wilson	W. H. Wilson	--	1935	230	7
		City lot 7, blk. 28							
d/ 89	do.	26, NE $\frac{1}{2}$ NE $\frac{1}{4}$	B- 3	J. R. Marshall	J. R. Marshall	--	1934	237	6
d/ 90	do.	26, --	B- 3	Community Public Service Co.	-- Wheeler	--	Old	265	--
d/ 91	do.	25, --	B- 3	do.	J. R. Marshall	--	1937	255	8 $\frac{1}{2}$
92	do.	25, NW $\frac{1}{4}$ SE $\frac{1}{4}$	B- 3	Illinois Oil Co.	--	Flat	--	200+	--
d/120	2 $\frac{1}{2}$ miles east	29, NW $\frac{1}{4}$	B- 3	Seth Campbell	--	--	1935	175	--
d/121	3 $\frac{1}{2}$ miles east	30, NW $\frac{1}{4}$	B- 3	do.	--	--	--	75	--
d/122	4 $\frac{1}{2}$ miles east	26, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 2	do.	--	Sand dunes	--	178	5
d/123	5 miles east	5, NE $\frac{1}{4}$ SW $\frac{1}{4}$	B- 6	do.	--	do.	--	160	--
124	7 $\frac{1}{2}$ miles east	2, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 6	James Waddell	--	do.	Old	70	--
d/125	6 $\frac{3}{4}$ miles east	28, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 2	do.	J. R. Marshall	do.	--	135	6
d/126	5 $\frac{1}{2}$ miles east	27, SW $\frac{1}{4}$ NW $\frac{1}{4}$	B- 2	Seth Campbell	--	do.	1935	158	--
d/127	6 $\frac{1}{2}$ miles northeast	18, SW $\frac{1}{4}$ NW $\frac{1}{4}$	B- 2	James Waddell	--	do.	--	140	--
d/128	4 $\frac{1}{2}$ miles northeast	20, NE $\frac{1}{4}$ NE $\frac{1}{4}$	B- 3	--	--	--	--	365	--
d/129	3 $\frac{1}{2}$ miles northeast	12, SW $\frac{1}{4}$ SE $\frac{1}{4}$	B- 3	J. B. Walton	J. R. Marshall	Sand hills	--	205	8
d/130	5 $\frac{1}{2}$ miles northeast	10, NE $\frac{1}{4}$ NE $\frac{1}{4}$	B- 3	--	--	--	--	382	--
d/132	7 $\frac{1}{2}$ miles northeast	4, NW $\frac{1}{4}$ SE $\frac{1}{4}$	B- 2	B. F. Jenkins	--	Sand dunes	--	107	6
d/133	8 miles north	11, SE $\frac{1}{4}$ SE $\frac{1}{4}$	77	do.	--	do.	--	170	6
d/134	9 miles northeast	10, NE $\frac{1}{4}$ NE $\frac{1}{4}$	77	do.	J. R. Marshall	--	--	185	6
135	9 $\frac{1}{2}$ miles north	7, SW $\frac{1}{4}$ NW $\frac{1}{4}$	77	do.	--	Sand dunes	--	225	8
d/136	10 $\frac{1}{2}$ miles north	25, SW $\frac{1}{4}$ NE $\frac{1}{4}$	A-56	Mrs. E. Linebery	--	In draw	Old	65	8
137	10 $\frac{1}{2}$ miles north	do.	A-56	do.	C. F. Wheeler	do.	1938	80	8
d/138	11 miles north	24, NE $\frac{1}{4}$	A-56	B. F. Jenkins	--	Sand dunes	--	69	6
d/139	12 $\frac{1}{2}$ miles northeast	20, SW $\frac{1}{4}$	A-56	do.	--	do.	--	80	6
d/140	11 miles northeast	7, NW $\frac{1}{4}$ NW $\frac{1}{4}$	C	--	--	--	--	1,076	--
d/141	17 miles northeast	7, SW $\frac{1}{4}$ NE $\frac{1}{4}$	A-57	--	--	--	--	120	--

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
88	--	50	e/	C,E, 3	D,S	See log.
89	--	70	e/	C,W, E,-	D,P	Steel casing to 227 feet. Reported yield, 60 gallons a minute from sand and gravel from 230 to 237 feet. Supplies water for
90	--	--	--	--	P	Steel casing to bottom. Kermit Royalty Addition.
91	--	--	--	--	P	See log.
92	--	--	--	C,E, 5	D,Ind	Steel casing. Pump set at 180 feet.
120	--	55	e/	C,W	S	Steel casing. Reported yield, 6 gallons a minute.
121	--	55	e/	C,W	S	Do.
122	--	55	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute.
123	--	55	e/	C,W	--	Do.
124	--	--	--	C,W	D,S	Steel casing to 54 feet. Reported yield, 5 gallons a minute.
125	--	60	e/	C,W	S	See log.
126	--	55	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute from gravel.
127	--	70	e/	C,W	S	Steel casing.
128	--	--	--	--	--	Oil test. See log.
129	--	--	--	A,-	Ind	See log.
130	--	--	--	--	--	Oil test. See log.
132	--	--	--	C,W	S	Steel casing to 100 feet. Water-bearing gravel reported from 100 to 107 feet.
133	--	--	--	C,W	S	Steel casing to 160 feet. Water-bearing sand reported from 160 to 170 feet.
134	--	--	--	C,W	N	See log.
135	--	40	e/	C,W	D,S	Steel casing to bottom. Reported yield, 5 gallons a minute from sand.
136	2	52	Apr. 6, 1940	None	N	Steel casing. Located 10 feet from well 137.
137	--	--	--	C,W	S	Steel casing to bottom.
138	--	--	--	C,W	S	Steel casing.
139	--	--	--	C,W	S	Do.
140	--	--	--	--	--	Oil test. See log.
141	--	--	--	--	--	Do.

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
142	21½ miles northeast	35, SE¼SE¼	73	Ratliff & Bedford	--	--	--	55	--
143	21¼ miles northeast	36, SW¼SW¼	73	do.	--	--	Old	57	8
144	18½ miles northeast	45, NE¼	73	Guy Cowden	--	--	Old	100	72
145	do.	do.	73	do.	--	--	Old	99	6
d/146	15½ miles northeast	26, SE¼	A-57	Joe Wallace	C. F. Wheeler	Flat	1940	1,025	8
d/147	11 miles northeast	13, NW¼NW¼	B- 1	James Waddell	J. R. Marshall	Sand dunes	--	75	6
148	12 miles northeast	18, NW¼SE¼	B- 1	do.	--	do.	--	80	6
d/149	13 miles northeast	15, SE¼SW¼	B- 1	do.	--	--	1939	115	--
d/150	13½ miles east	25, SW¼SW¼	B- 1	do.	--	Sand dunes	1907	96	--
151	do.	3, NW¼NW¼	7	do.	--	do.	1907	96	--
d/152	17½ miles east	35, SW¼SW¼	46	--	--	--	--	900	--
154	16 miles east	13, SW¼NW¼	B- 7	C. O. Wheeler	--	Sand dunes	--	115	--
d/155	13¾ miles east	17, SE¼NW¼	40	James Waddell	--	do.	--	60	--
d/156	9½ miles east	5, NW¼NW¼	40	do.	--	do.	--	80	--
d/157	9¼ miles east	21, SE¼NE¼	B- 2	do.	--	do.	--	60	--
d/181	12 miles southeast	11, SW¼NE¼	B-10	Geo. D. Hogg	--	--	--	70	4
d/182	12½ miles southeast	23, NW¼	B-10	G. P. Mitchell	Bill Batey	--	Old	97	6
d/183	10½ miles southeast	14, SW¼SE¼	B-10	Geo. D. Hogg	Geo. D. Hogg	--	1939	114	6
184	9¼ miles southeast	7, SE¼SE¼	B-10	do.	do.	--	1910	114	5
185	do.	do.	B-10	do.	F. C. Ingham	--	1932	130	6
186	10¼ miles southeast	20, SE¼	B-11	G. P. Mitchell	-- Perkins	--	1930	250	6
d/187	do.	do.	B-11	do.	Roy Griggs	--	1938	260	6
188	do.	23, NE¼	11	do.	Bill Batey	--	1939	101	6
189	9¾ miles southeast	19, NW¼	11	do.	Roy Griggs	Sand dunes	1934	85	6

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
 b/ C, cylinder; A, air, steam or natural gas lift; T, turbine; V, windmill; E, electric; G, gasoline; O, by draw-rod from central power unit; number indicates horsepower.

No.	Height of measuring point above ground (ft.)	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
142	--	--	--	C,W	D,S	No casing. Reported weak supply from gravel.
143	1	57	Apr. 26, 1940	C,W	S	Drilled well with steel casing to 10 feet connected at bottom by tunnel 15 feet long to dug well 72 inches in diameter. Dug
144	--	89	Apr. 27, 1940	C,W	S	Dug well. No well has concrete curb. casing. Reported weak supply.
145	2	97	do.	C,W	S	Steel casing. Reported weak supply. Pumping when water level was measured.
146	--	--	--	None	N	Steel casing. Reported strong supply at 1,025 feet; salt water at 828 feet cased
147	--	40	e/	C,W	S	Reported strong supply. See log. off.
148	--	50	e/	C,W	S	Steel casing.
149	--	10	c/	C,W	S	Do.
150	--	84	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute.
151	--	84	e/	C,W	S	Do.
152	--	--	--	--	--	Oil test. See log.
154	--	--	--	C,W	D	Steel casing.
155	--	50	e/	C,W	S	Steel casing. Reported yield, 5 gallons a minute.
156	--	55	e/	C,W	S	Steel casing.
157	--	30	e/	C,W	S	Do.
181	--	--	--	C,W	S	Steel casing to 50 feet. Will pump dry. A similar well 100 feet distant.
182	--	60+	e/	C,W	S	Steel casing to 75 feet.
183	--	--	--	C,W	--	Steel casing to 107 feet. Reported yield, 4 gallons a minute.
184	--	--	--	C,W	S	Steel casing. Reported yield, 4 gallons a minute.
185	--	60+	e/	C,W	D	Steel casing to 110 feet. Reported yield, 8 gallons a minute.
186	--	60	e/	C,W	D,S	Steel casing to 140 feet. Reported yield, 5 gallons a minute from sand.
187	--	60	e/	C,W	S	Steel casing to 115 feet.
188	3	55	Apr. 19, 1940	C,W	S	Steel casing. Reported strong supply.
189	2	51	do.	C,W	S	Steel casing to 83 feet. Reported yield, 5 gallons a minute from gravel.

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

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/190	8 $\frac{1}{4}$ miles southeast	9, SW $\frac{1}{2}$ SE $\frac{1}{4}$	B-11	--	--	--	--	145	--
191	7 $\frac{3}{4}$ miles southeast	10, NW $\frac{1}{2}$	B-11	G. P. Mitchell	Bill Batey	Sand dunes	--	286	6
d/192	6 miles southeast	23, SW $\frac{1}{2}$ SW $\frac{1}{2}$	B- 5	--	--	--	--	213	--
d/193	5 $\frac{3}{4}$ miles southeast	22, NW $\frac{1}{2}$	B- 5	Seth Campbell	--	Sand dunes	--	155	--
d/194	5 $\frac{1}{2}$ miles southeast	20, NW $\frac{1}{2}$ NW $\frac{1}{2}$	B- 5	do.	--	do.	1935	168	--
d/195	4 miles southeast	12, NE $\frac{1}{2}$ NW $\frac{1}{2}$	B- 5	do.	--	do.	1906	179	7
d/196	3 $\frac{3}{4}$ miles southeast	9, NE $\frac{1}{2}$ SW $\frac{1}{2}$	B- 5	do.	--	do.	1935	168	--
197	3 miles east	2, NW $\frac{1}{2}$	B- 5	do.	--	do.	--	158	--
198	do.	do.	B- 5	do.	--	do.	1935	75	--
d/199	5 $\frac{3}{4}$ miles southeast	13, NW $\frac{1}{2}$ SW $\frac{1}{2}$	B- 5	do.	--	do.	1935	155	--
d/200	5 miles southeast	24, NE $\frac{1}{2}$ NW $\frac{1}{2}$	B- 5	do.	--	do.	--	--	--
201	5 $\frac{1}{2}$ miles south	25, NW $\frac{1}{2}$ SE $\frac{1}{4}$	B- 5	S. W. Altmon	--	--	Old	130	--
202	5 $\frac{3}{4}$ miles south	26, SE $\frac{1}{2}$ SE $\frac{1}{4}$	B- 5	Bert Fields Oil Co.	--	--	1937	200	6
203	7 $\frac{1}{2}$ miles southeast	7, NE $\frac{1}{2}$ SW $\frac{1}{2}$	B-11	Earl Vest	--	--	1939	120 ⁺	6
204	7 $\frac{1}{2}$ miles south	6, NW $\frac{1}{2}$ NW $\frac{1}{2}$	B-11	Skelly Oil Co.	--	--	--	130 ⁺	7
205	7 $\frac{1}{2}$ miles south	6, SW $\frac{1}{2}$ NW $\frac{1}{2}$	B-11	Earl Vest	--	--	--	106	6
206	8 $\frac{1}{2}$ miles south	14, NW $\frac{1}{2}$	B-12	Sinclair-Prairie Oil Co.	Perkins & Perkins	--	--	151	6-5/8
d/207	do.	10, SW $\frac{1}{2}$	B-12	Humble Oil & Refining Co.	Earnest Oliver	--	1929	290	6-5/8
208	9 $\frac{1}{4}$ miles south	21, NE $\frac{1}{2}$	B-12	Tobe Morton	--	--	Old	89	6
209	10 $\frac{1}{4}$ miles south	26, NW $\frac{1}{2}$ NW $\frac{1}{2}$	B-12	do.	--	--	--	--	6
210	9 $\frac{1}{4}$ miles south	24, SW $\frac{1}{2}$	B-12	Texas-New Mexico R.R.	--	--	--	80	6
211	9 miles south	24, NW $\frac{1}{2}$ NE $\frac{1}{2}$	B-12	Tobe Morton	--	--	--	227	6
212	9 $\frac{1}{2}$ miles south	24, SE $\frac{1}{2}$	B-12	Sun Oil Co.	--	--	1936	205	7
213	10 miles south	25, NE $\frac{1}{2}$ NE $\frac{1}{2}$	B-12	Earl Vest	--	--	--	82	6

No.	Height of		Water level		Pump and power	Use of water	Remarks
	measuring point above ground (ft.)	a/	Depth below measuring point (ft.)	Date of measurement			
190	--		--	--	--	--	Oil test. See log.
191	--		79	Apr. 9, 1940	C,W	S	Steel casing to 284 feet. Reported weak supply.
192	--		--	--	--	--	Oil test. See log.
193	--		55	e/	C,W	S	Steel casing. Reported adequate supply from gravel.
194	--		55	e/	C,W	S	Do.
195	--		55	e/	C,W	S	Steel casing to 60 feet, 4 $\frac{1}{2}$ -inch inside 7-inch. Well deepened in 1935. Reported yield, 5 gallons a minute from quicksand at 60 feet and gravel at lower depth.
196	--		55	e/	C,W	S	Steel casing. Reported yield, 6 gallons a minute from gravel.
197	--		55	e/	C,W	S	Steel casing. Reported yield, 6 gallons a minute from gravel at about 150 feet.
198	--		55	e/	C,W	D	Steel casing. Reported yield, 6 gallons a minute from quicksand from 60 to 75 feet.
199	--		55	e/	C,W	S	Steel casing. Reported adequate supply from gravel.
200	--		55	e/	C,W	S	Do.
201	--		--	--	C,W	S	Steel casing. Reported strong supply.
202	--		150	e/	C,W	D	Steel casing. Reported never fails.
203	--		--	--	C,W	--	Steel casing. Reported strong supply.
204	--		--	--	C,G, 5	D,Ind	Do.
205	--		--	--	C,W	D,S	Do.
206	--		--	--	C,E, 7 $\frac{1}{2}$	D,Ind	Steel casing. Reported dependable supply from sand and gravel from 149 to 151 feet.
207	--		--	--	A,-	Ind	Steel casing; 180 feet of blank 6-5/8-inch at top; 122 feet of 5-3/16-inch at bottom, bottom 68 feet perforated. Reported water-bearing beds of sand and gravel 86 to 92 feet; 185 to 190 feet; 240 to 250 feet;
208	2		69	Apr. 9, 1940	C,W	S	Steel casing. 285 to 290 feet.
209	--		--	--	C,V	S	Do.
210	--		--	--	C,W	D	Steel casing. Reported adequate supply.
211	1		59	Apr. 9, 1940	C,W	--	Steel casing.
212	--		--	--	C,W	D	Steel casing, 7-inch at top; 5-inch at bottom. Reported yield, 4 gallons a minute
213	--		38	Apr. 9, 1940	C,W	S	Steel casing. Reported adequate from sand supply.

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/214	11 $\frac{1}{2}$ miles south	12, NE $\frac{1}{4}$ NW $\frac{1}{4}$	F	G. W. O'Brien	--	--	--	75	6
d/215	14 miles southeast	73, NE $\frac{1}{4}$ SW $\frac{1}{4}$	A	--	--	--	--	200	--
d/216	16 miles southeast	75, SW $\frac{1}{4}$	A	John Sealy Est.	--	Sand hills	Old	--	6
d/217	14 $\frac{1}{2}$ miles southeast	94, SW $\frac{1}{4}$ NW $\frac{1}{4}$	A	--	--	--	--	980	--
d/218	14 $\frac{1}{2}$ miles southeast	94, NW $\frac{1}{2}$ SW $\frac{1}{2}$	A	--	--	--	--	670	--
d/219	15 miles southeast	95, NW $\frac{1}{4}$ NW $\frac{1}{4}$	A	--	--	--	--	290	--
d/220	13 $\frac{1}{2}$ miles south	53, NE $\frac{1}{4}$ NE $\frac{1}{4}$	F	--	J. R. Marshall	--	1939	225	8 $\frac{1}{8}$
d/251	12 miles south	37, SW $\frac{1}{4}$ SE $\frac{1}{4}$	21	The University of Texas	--	Bottom of draw	Old	128	4 $\frac{1}{2}$
d/252	do.	do.	21	do.	--	do.	Old	130	5
253	8 $\frac{1}{2}$ miles southwest	6, SE $\frac{1}{4}$ NE $\frac{1}{4}$	B-12	Humble Oil & Refining Co.	N. B. Oliver	--	1928	230	--
254	do.	do.	B-12	do.	R. E. Griggs	--	1936	297	10 $\frac{3}{8}$
d/255	do.	do.	B-12	do.	--	--	1927	212	8 $\frac{1}{2}$
256	7 $\frac{3}{4}$ miles southwest	30, SE $\frac{1}{4}$	B- 5	W. H. Steen	Red Wright	Flat	1939	75	6-7/8
257	do.	do.	B- 5	B. W. Griffin	-- Rinker	--	1936	86	6
258	8 miles southwest	31, SE $\frac{1}{4}$ NE $\frac{1}{4}$	B- 5	Permian Ice Co.	--	--	--	180	6-5/3
259	do.	do.	B- 5	do.	--	--	--	219	6-5/8
d/262	9 $\frac{1}{2}$ miles southwest	14, SE $\frac{1}{4}$ SE $\frac{1}{4}$	21	Anderson Ranch	J. R. Marshall	--	1938	160	6 $\frac{1}{2}$
263	8 miles southwest	1, SW $\frac{1}{4}$ SE $\frac{1}{4}$	21	The University of Texas	--	--	1932	217	--
264	6 $\frac{1}{2}$ miles southwest	42, SW $\frac{1}{4}$ SE $\frac{1}{4}$	B- 5	Dr. C. E. Wilson	--	Flat	Old	96	5
d/265	6 miles southwest	34, SW $\frac{1}{4}$ NE $\frac{1}{4}$	B- 5	Humble Oil & Refining Co.	--	--	1925	150	8 $\frac{1}{2}$
d/266	5 $\frac{1}{2}$ miles southwest	41, NW $\frac{1}{4}$	B- 5	do.	--	--	1927	202	8 $\frac{1}{2}$
d/267	3 $\frac{1}{2}$ miles south	47, SE $\frac{1}{4}$ SE $\frac{1}{4}$	26	do.	--	--	1928	105	8-5/8
268	2 $\frac{3}{4}$ miles south	6, NW $\frac{1}{4}$ SW $\frac{1}{4}$	B- 5	S. W. Altmon	--	--	--	92	5
d/269	3 miles southwest	47, N $\frac{1}{2}$	26	Humble Oil & Refining Co.	N. B. Oliver	--	1928	540	8-5/8

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
214	3	36	Apr. 9, 1940	C,W	S	Steel casing.
215	--	40	e/	--	--	Oil test. See log.
216	1.5	35	May 16, 1940	C,W	S	Steel casing.
217	--	--	--	--	--	Oil test. See log.
218	--	--	--	--	--	Do.
219	--	--	--	--	--	Do.
220	--	--	--	C,G, 5	D,Ind	Reported yield, 3,000 barrels a day. See log.
251	1	122	Aug. 23, 1940	C,W	S	Steel casing to 4 feet. Pumping 3 gallons a minute when water level was measured. Well 253 on northeast side of reservoir.
252	--	120	e/	C,W	D,S	Steel casing. Known as "Badger" wells.
253	--	--	--	C,E, 5	D,Ind	See log.
254	--	--	--	C,E, 5	D,Ind	Casing record: 111 feet of blank 10 $\frac{3}{4}$ -inch at top; 208 feet of perforated 8-inch liner at top. Reported yield, 300 barrels a day from sand and clay 245 to 297 feet.
255	--	--	--	None	N	See log.
256	--	58	e/	C,G, 2	D	Steel casing to 54 feet. Reported drawdown 13 feet pumping 10 gallons a minute for 15 minutes; then no further drawdown pumping 3
257	1	46	Apr. 23, 1940	C,W	I	Steel casing. Reported adequate supply.
258	--	71	e/	C,E, 2 $\frac{1}{2}$	D,Ind	Steel casing. Supplies water for ice plant.
259	--	78	e/	A,-	D,Ind	Do.
262	--	--	--	C,W	S	See log.
263	--	--	--	C,E, 1	D,Ind	Steel casing. Well at emergency landing field.
264	2	63	Apr. 24, 1940	C,W	S	Steel casing. Reported adequate supply.
265	--	--	--	None	N	See log.
266	--	--	--	A,-	Ind	Do.
267	--	--	--	--	N	Do.
268	2	59	Apr. 22, 1940	C,W	S	Steel casing. Reported adequate supply.
269	--	--	--	None	N	See log. Reported yield, 60,000 gallons a day while used.

Records of wells in Winkler County--Continued

No.	Distance from Kermit	Section	Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/270	2½ miles southwest	26, SW¼NE¼	26	Humble Oil & Refining Co.	R. E. Griggs	--	1937	250	--
d/271	2½ miles southwest	38, SE¼NE¼	26	do.	do.	--	1937	300	10½
d/272	4 miles southwest	40, NE¼NE¼	26	Continental Oil Co.	--	--	--	180	6½
273	7 miles southwest	43, SW¼NW¼	26	Dr. C. E. Wilson	--	In draw	Old	100+	5
274	8½ miles southwest	38, SE¼NW¼	27	do.	O. C. Reynolds	--	--	290	5
d/275	9 miles southwest	2, NW¼	21	L. W. Anderson	--	--	--	176	6
d/276	11¾ miles southwest	21, NE¼NW¼	21	The University of Texas	--	Gentle slope	Old	136	6
d/277	15½ miles southwest	25, NW¼	20	do.	--	Flat	Old	123	--
i/278	14¾ miles southwest	11, NE¼SW¼	20	do.	Lang Buchanan	do.	1940	208	5
E/279	12½ miles west	43, NE¼SW¼	27	--	--	do.	Old	152	6
d/280	do.	do.	27	L. W. Anderson	--	do.	Old	150	6
281	10½ miles southwest	40, SW¼SW¼	27	Dr. C. E. Wilson	J. R. Marshall	--	1938	235	--
d/282	10½ miles southwest	40, SW¼	27	do.	O. C. Reynolds	--	1940	498	6-7/8
d/283	9 miles west	34, NW¼SE¼	27	L. W. Anderson	J. O. Jarman	--	1938	184	6
285	8½ miles west	26, NW¼SW¼	27	John Haley	--	--	--	297	5
286	11½ miles west	20, SW¼	27	do.	--	--	--	--	6
d/287	13½ miles west	25, NW¼SW¼	28	do.	--	Flat	Old	250	--
d/288	15 miles southwest	39, NE¼SW¼	28	E. E. Yantis	--	Ridge-top	Old	300	--
d/289	17 miles southwest	9, SE¼SW¼	20	The University of Texas	--	Flat	Old	127+	--
d/290	do.	do.	20	do.	--	do.	Old	145	6
d/291	18½ miles southwest	40, cen.	20	do.	Lang Buchanan	do.	1940	151	6
d/292	15¾ miles southwest	43, SW¼	21	do.	--	do.	1938	160	6

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
 b/ C, cylinder; A, air, steam or natural gas lift; T, turbine; W, windmill; E, electric; G, gasoline; O, by draw-rod from central power unit; number indicates horsepower.

No.	Height of measuring point above ground (ft.)	Water level		Pump and power b/	Use of water c/	Remarks
		Depth below measuring point (ft.)	Date of measurement			
270	--	--	--	None	N	Steel casing. Reported water-bearing bed from 214 to 250 feet.
271	--	--	--	C,O	Ind	See log.
272	--	--	--	C,C	D,Ind	Do.
273	--	--	--	C,W	S	Steel casing. Reported adequate supply.
274	--		127 Apr. 24, 1940	C,W	S	Do.
275	--		137 Apr. 10, 1940	C,W	S	Steel casing.
276	1		135 do.	C,W	S	Do.
277	1.0		116 Sept. 9, 1940	C,W	S	No casing.
278	0.8		124 do.	C,W	S	Reported yield, 4 gallons a minute. See log.
279	--		137 Aug. 23, 1940	C,W	S	Steel casing. Reported dependable supply. Well 280 is 110 feet east.
280	--		130 e/	C,W	S	Steel casing.
281	--	--	--	C,W, G,10	D,S	Steel casing. Reported adequate supply. See log.
282	1		131 Apr. 24, 1940	None	N	Steel casing to 395 feet. Water reported unfit for domestic use.
283	1		150 do.	C,W	S	Reported bailed 30 gallons a minute. See log.
285	2		165 Apr. 23, 1940	C,W	S	Steel casing.
286	--	--	--	C,W	D,S	Do.
287	--	--	--	C,W	S	Do.
288	--	--	--	C,W	D,S	
289	1.5		112 Sept. 9, 1940	C,W	S	Steel casing.
290	1		110 do.	C,W	S	Do.
291	0.8		110 Aug. 21, 1940	C,W	S	Steel casing to 3 feet. Reported yield, 15 gallons a minute. See log.
292	--		110 e/	C,W	S	Steel casing.

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

Table of Drillers' Logs, Winkler County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 9</u>		
On line of sec. 25 and 30, blk. 74, 9 $\frac{1}{4}$ miles west of Kermit. Altitude of land surface, 2830.		
Sand - - - - -	60	60
Quicksand - - - - -	155	215
Red rock - - - - -	85	300
Quicksand - - - - -	45	345
Red rock - - - - -	25	370
Sand - - - - -	10	380
Quicksand - - - - -	125	505
Sand - - - - -	25	530
TOTAL DEPTH		530

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 18</u>		
Center sec. 9, blk. 26, 5 $\frac{1}{2}$ miles west of Kermit.		
Surface sand - - - - -	4	4
Caliche - - - - -	16	20
Red sand - - - - -	50	70
Red clay - - - - -	40	110
Red sand - - - - -	25	135
Red clay - - - - -	15	150
Sand and gravel, water	5	155
TOTAL DEPTH		155
CASING RECORD: 149 feet of blank 7-inch at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 19</u>		
SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, blk. 26, 3 $\frac{1}{2}$ miles west of Kermit.		
Sandy surface material	8	8
Caliche - - - - -	15	23
Red sand - - - - -	52	75
Red clay - - - - -	12	87
Water sand - - - - -	8	95
Red sandstone - - - - -	65	160
Red clay - - - - -	15	175
Red rock - - - - -	35	210
Sand and gravel, water	10	220
Red sandstone - - - - -	10	230
TOTAL DEPTH		230
CASING RECORD: 227 feet of 7-inch at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 21</u>		
SE $\frac{1}{4}$ N $\frac{1}{4}$ sec. 23, blk. 26, 3 miles west of Kermit.		
Sandy surface material	5	5
Caliche - - - - -	9	14
Gray sand - - - - -	50	64

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 21-Continued</u>		
Brown sand - - - - -	11	75
Gravel - - - - -	2	77
Brown sand - - - - -	13	90
Gravel, water - - - - -	5	95
Sand and gravel - - - - -	26	121
Red clay - - - - -	6	127
Red sand - - - - -	31	158
Sand and gravel - - - - -	17	175
Brown sand - - - - -	20	195
Red clay - - - - -	3	198
Red sand - - - - -	7	205
Sand rock - - - - -	3	208
Red sand - - - - -	7	215
Red clay - - - - -	3	218
Red sand - - - - -	25	243
Gravel - - - - -	5	248
Sand and gravel - - - - -	17	265
Brown sand - - - - -	32	297
Red clay - - - - -	3	300
TOTAL DEPTH		300
CASING RECORD: 103 feet of blank 10 $\frac{3}{4}$ -inch at top, 98 feet of blank 6-inch at top and 202 feet of perforated 6-inch at bottom.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 27</u>		
NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, blk. 26, 2 $\frac{3}{4}$ miles north-west of Kermit.		
Sandy surface material	8	8
Caliche - - - - -	11	19
Gray sand - - - - -	39	58
Brown sand - - - - -	14	72
Gravel - - - - -	3	75
Brown sand - - - - -	4	79
Red sand - - - - -	8	87
Gravel - - - - -	3	90
Brown sand - - - - -	16	106
Gravel, water at 112 ft.	14	120
Brown sand - - - - -	7	127
Gravel, water - - - - -	3	130
Brown sand - - - - -	12	142
Red clay - - - - -	6	148
Gravel, water - - - - -	2	150
Sand, water - - - - -	8	158
Red clay - - - - -	2	160
Red sand - - - - -	7	167
Red clay - - - - -	3	170
Red sand - - - - -	12	182
Brown sand - - - - -	13	195
Red clay - - - - -	2	197
Red sand - - - - -	36	233
Red sand and gravel - - - - -	23	256

(Continued on next page)

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 27-Continued</u>		
Brown sand - - - -	8	264
Red clay - - - -	4	268
Quicksand - - - -	2	270
Sand - - - -	10	280
Red clay - - - -	4	284
Red sand - - - -	16	300
TOTAL DEPTH		300
CASING RECORD: 124 feet of blank 8-5/8-inch, 44 feet of blank 6-inch, 181 feet of perforated 6-inch, 269 feet of 4-inch pump pipe, 288 feet of 1/2-inch jet line.		

<u>Driller's log of well 28</u>		
SE 1/4 NW 1/4 sec. 15, blk. B-3, 2 3/4 miles northwest of Kermit. Altitude of land surface, 2895.		
Sand, caliche, gravel	200	200
Sand and shell - - -	35	235
Red rock - - - -	610	845
Anhydrite - - - -	120	965
Limestone - - - -	25	990
Salt and anhydrite -	1289	2279
TOTAL DEPTH		2279

<u>Driller's log of well 29</u>		
SW 1/4 SE 1/4 sec. 12, blk. 26, 3 1/4 miles northwest of Kermit.		
Sand - - - -	6	6
Caliche - - - -	12	18
Hard white sand - -	7	25
Brown sand - - - -	45	70
Hard red sand - - -	5	75
Red rock - - - -	35	110
Red sand - - - -	15	125
Red sand and clay -	10	135
Red sand and gravel -	20	155
Sand and gravel - -	5	160
Hard red rock - - -	26	186
TOTAL DEPTH		186
CASING RECORD: 80 feet of blank 8-5/8-inch, 49 feet of blank 6-inch, 65 feet of perforated 6-inch, 175 feet of 3-inch pump pipe, 168 feet of 1/2-inch jet line.		

<u>Driller's log of well 30</u>		
SW 1/4 sec. 12, blk. 26, 3 1/2 miles northwest of Kermit.		
Sand - - - -	5	5
Caliche - - - -	15	20
Red sand - - - -	70	90

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 30-Continued</u>		
Red clay - - - -	30	120
Red rock - - - -	60	180
Sand and gravel, water	5	185
TOTAL DEPTH		185

<u>Driller's log of well 31</u>		
NW 1/4 SW 1/4 sec. 12, blk. 26, 3 3/4 miles northwest of Kermit.		
Sand - - - -	4	4
Caliche - - - -	16	20
Pack sand - - - -	68	88
Hard red beds - - -	22	110
Sand, water - - - -	62	172
Red beds - - - -	1	173
TOTAL DEPTH		173
CASING RECORD: 88 feet of blank 8-inch, 121 feet of blank 6-inch, 45 feet of perforated 6-inch.		

<u>Driller's log of well 34</u>		
SW 1/4 SW 1/4 sec. 1, blk. 26, 4 1/4 miles northwest of Kermit.		
Sandy surface material	8	8
Caliche - - - -	12	20
Red sand - - - -	65	85
Sandy shale - - - -	25	110
Red clay - - - -	12	122
Sand, water - - - -	6	128
Hard red sand - - -	17	145
Red sand - - - -	20	165
Sand and gravel, water	10	175
Red sand - - - -	10	185
Sand and gravel, water	15	200
Red beds - - - -	10	210
Red rock - - - -	35	245
TOTAL DEPTH		245
CASING RECORD: 113 feet of 15 1/2-inch, 210 feet of 12 1/2-inch, 221 feet of 8 1/4-inch pump pipe, 213 feet of 2-inch jet line.		

<u>Driller's log of well 37</u>		
SW 1/4 NE 1/4 sec. 1, blk. 26, 4 1/2 miles northwest of Kermit. Altitude of land surface, 2901.		
Dug pit for cable tools	18	18
Caliche - - - -	7	25
Sand and gravel - - -	162	187
Red rock, red beds -	853	1040
Red rock, anhydrite -	110	1150

(Continued on next page)

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 37 - Continued</u>		
Limestone - - - -	35	1185
Salt, anhydrite - -	1362	2547
TOTAL DEPTH		2547

Driller's log of well 38

SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, blk. 26, 4 $\frac{1}{2}$ miles north-west of Kermit. Altitude of land surface 2901.

Dug pit for cable tools	18	18
Caliche - - - -	7	25
Sand and gravel - -	160	185
Red rock and hard sand	23	208
Red rock and red beds	606	814
Anhydrite, red rock, and limestone - - - -	316	1130
Anhydrite - - - -	15	1145
TOTAL DEPTH		1145

Driller's log of well 40

SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, blk. 74, 6 miles north-west of Kermit.

Sand - - - - -	10	10
Caliche - - - - -	15	25
Red sand - - - - -	55	80
White sand - - - - -	20	100
Red clay and sand- -	20	120
Sand and gravel, water	5	125
Red sand rock - - -	20	145
Coarse-grained brown sand, water - - - -	5	150
Red clay - - - - -	20	170
Sand and pea gravel, water - - - - -	8	178
Sandy red rock - - -	72	250
Coarse-grained red sand, water - - - - -	10	260
TOTAL DEPTH		260

CASING RECORD: 122 feet of 15 $\frac{1}{2}$ -inch, bottom 20 feet perforated, 180 feet of 12 $\frac{1}{2}$ -inch, bottom 40 feet perforated.

Driller's log of well 42

SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, blk. 74, 6 miles north-west of Kermit.

Gray sand - - - -	91	91
Sand and clay - - -	72	163
Quicksand - - - -	12	175
Sand and clay - - -	32	207
Quicksand - - - -	21	228
Sand and clay - - -	25	253

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 42 - Continued</u>		
Gravel, water - - -	5	258
Sand and clay - - -	42	300
TOTAL DEPTH - - -		300
CASING RECORD: 71 feet of blank 8-inch, 169 feet of blank 8-inch, 65 feet of perforated 6-inch.		

Driller's log of well 43

NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, blk. 74, 7 miles north-west of Kermit.

Sandy surface material	4	4
Caliche - - - - -	16	20
Red sand - - - - -	60	80
Red clay - - - - -	40	120
Red sand - - - - -	25	145
Red clay - - - - -	15	160
Sand and gravel, water	5	165
TOTAL DEPTH		165
CASING RECORD: 161 feet of blank 7-inch at top.		

Driller's log of well 49

SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, blk. 77, 6 $\frac{1}{2}$ miles north of Kermit.

Sandy surface material	10	10
Caliche - - - - -	10	20
Red sand - - - - -	105	125
Sand and clay- - -	5	130
Sand and gravel, water	11	141
Red beds - - - - -	2	143
TOTAL DEPTH		143
CASING RECORD: 127 feet of blank 10 $\frac{3}{4}$ -inch at top, 22 feet of perforated 6-inch at bottom.		

Driller's log of well 56

NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, blk. 77, 7 $\frac{3}{4}$ miles north of Kermit. Altitude of land surface, 2946.

Red mud - - - - -	260	260
Red shale - - - - -	30	290
Sand, water, 5 bailers per hour- - - - -	15	305
Red shale, sand, and mud, hole full of water from 1125 to 1140 feet	843	1148
TOTAL DEPTH		1148

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 57</u>		
SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, blk. 74, 7 $\frac{1}{2}$ miles north-west of Kermit.		
Sandy surface material	10	10
Red pack sand - - -	10	20
Sandy red clay - -	120	140
Sand and gravel, water	6	146
Red rock - - - -	44	190
Red shale - - - -	30	220
Sand, water - - -	5	225
Red sand - - - -	80	305
Red rock - - - -	5	310
Red shale- - - -	60	370
Red rock - - - -	10	380
Sand, water - - -	15	395
Red clay - - - -	5	400
Sand, water - - -	10	410
Red clay - - - -	10	420
TOTAL DEPTH		420
CASING RECORD: 148 feet of blank 10-inch, 173 feet of blank 8 $\frac{1}{4}$ -inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 59</u>		
SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, blk. 74, 8 $\frac{3}{4}$ miles north-west of Kermit. Altitude of land surface, 2900.		
Dug pit for cable tools	9	9
Sand - - - - -	16	25
Caliche - - - -	10	35
Sand - - - - -	95	130
Red shale - - - -	7	137
Sand - - - - -	58	195
Red shale - - - -	10	205
Red beds - - - -	90	295
Red shale- - - -	40	335
Sand, water- - - -	20	355
Shale - - - - -	25	380
Red beds, sand and shale, 6 bailers water per hour - - - -	205	585
TOTAL DEPTH		1275

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 61</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, blk. C-23, 10 $\frac{1}{2}$ miles northwest of Kermit.		
Sand - - - - -	10	10
Caliche - - - -	10	20
Red sand - - - -	20	40
Red rock- - - - -	90	130
Red clay- - - - -	50	180
Sand, water - - -	5	185
Red rock - - - -	215	400

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 61 - Continued</u>		
Sand, water - - - -	7	407
TOTAL DEPTH		407

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 65</u>		
Center sec. 1, blk. C-22, 8 $\frac{1}{2}$ miles north of Kermit. Altitude of land surface, 2941.		
Red sand - - - - -	130	130
Red beds - - - - -	40	170
Blue shale - - - -	20	190
Red shale - - - - -	128	318
Sand, 2 bailers water per hour - - - - -	2	320
Red beds - - - - -	115	435
Red sand, 25 bailers water per hour- - - -	10	445
TOTAL DEPTH		445

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 66</u>		
SW $\frac{1}{4}$ sec. 4, blk. C-22, 8 $\frac{1}{4}$ miles north of Kermit.		
Sand - - - - -	70	70
Sandy red clay- - -	10	80
Sand, water - - - -	15	95
Red rock - - - - -	5	100
Sand, water - - - -	10	110
TOTAL DEPTH		110
CASING RECORD: 74 feet of blank 8 $\frac{1}{4}$ -inch at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 72</u>		
SW $\frac{1}{4}$ S $\frac{1}{4}$ sec. 3, blk. B-3, 4 $\frac{1}{4}$ miles north of Kermit.		
Sandy surface material	8	8
Caliche - - - - -	12	20
Red sand - - - - -	45	65
Quicksand - - - -	75	140
Red clay - - - - -	15	155
Sand and gravel, water	10	165
Red clay - - - - -	10	175
Coarse-grained brown sand, water - - - -	5	180
TOTAL DEPTH		180
CASING RECORD: 148 feet of blank 12 $\frac{1}{2}$ -inch, 40 feet of perforated 10-inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 75</u>		
NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 17, blk. B-3, 1 $\frac{1}{2}$ miles north of Kermit. Altitude of land surface, 2883		
Surface material - - -	18	18
Sand - - - - -	42	60

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Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 75 - Continued</u>		
Quicksand - - - - -	25	85
Sand - - - - -	65	150
Broken limestone- - -	10	160
Red beds and sand - -	20	180
Sand and gravel, water-	20	200
Sand and limestone - -	68	268
Top of red beds - - -		268
TOTAL DEPTH		268

<u>Driller's log of well 76</u>		
SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, blk. 26, 1 $\frac{3}{4}$ miles west of Kermit.		
Sand - - - - -	5	5
Caliche - - - - -	13	18
Gray sand - - - - -	39	57
White sand - - - - -	6	63
Gray sand - - - - -	32	95
Sand, water- - - - -	5	100
Gray quicksand- - - -	22	122
Dark-colored quicksand-	3	125
Red clay - - - - -	7	132
Gray sand, water - - -	19	151
Red clay - - - - -	5	156
Gray sand, water- - -	6	162
Sand - - - - -	6	168
Red clay - - - - -	27	195
Red sand - - - - -	7	202
Red clay - - - - -	8	210
Red sand - - - - -	6	216
Red clay - - - - -	9	225
Brown sand - - - - -	7	232
Red clay - - - - -	5	237
Brown sand - - - - -	8	245
Red clay - - - - -	7	252
Brown sand - - - - -	25	277
Red clay - - - - -	8	285
Brown sand- - - - -	15	300
TOTAL DEPTH		300
CASING RECORD: 152 feet of blank 8-5/8-inch, 136 feet of perforated 6-inch, 22 feet of blank 6-inch.		

<u>Driller's log of well 77</u>		
N $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 25, blk. 26, 1 $\frac{1}{2}$ miles west of Kermit.		
Sand - - - - -	7	7
Caliche- - - - -	17	24
Red sand - - - - -	56	80
Quicksand, water- - -	47	127
Hard tight sand - - -	18	145
Red sand and gravel- -	19	164

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 77 - Continued</u>		
Red beds - - - - -	6	170
Sand rock - - - - -	5	175
TOTAL DEPTH		175
CASING RECORD: 131 feet of blank 8-5/8-inch, 44 feet of perforated 7-inch, 122 feet of perforated 7-inch; 160 feet of 3-inch pump pipe, 153 feet of $\frac{1}{2}$ -inch jet line.		

<u>Driller's log of well 78</u>		
N $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 25, blk. 26, 1 $\frac{1}{2}$ miles west of Kermit.		
Sand - - - - -	5	5
Caliche - - - - -	13	18
Red sand- - - - -	62	80
Quicksand - - - - -	10	90
Red sand - - - - -	33	123
Hard tight sand - - -	17	140
Red sand and gravel -	25	165
Red rock - - - - -	10	175
TOTAL DEPTH		175
CASING RECORD: 134 feet of blank 8-5/8-inch, 119 feet of blank 6-inch, 43 feet of perforated 6-inch.		

<u>Driller's log of well 79</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, blk. 26, 2 $\frac{1}{2}$ miles west of Kermit.		
Sandy surface material	6	6
Caliche - - - - -	14	20
Red sand- - - - -	25	45
Quicksand - - - - -	80	125
Red clay - - - - -	15	140
Sand and gravel, water	10	150
TOTAL DEPTH		150
CASING RECORD: 131 feet of blank 7-inch at top.		

<u>Driller's log of well 82</u>		
SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, blk. 26, 1 mile southwest of Kermit.		
Surface sand - - - - -	8	8
Caliche - - - - -	12	20
Red sand - - - - -	50	70
Quicksand - - - - -	55	125
Sand and clay- - - - -	5	130
Red clay - - - - -	8	138
Sand and gravel, water	12	150
TOTAL DEPTH		150

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 84</u>		
SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 26, blk. B-3, 1 mile south of Kermit.		
Sandy surface material	8	8
Caliche - - - - -	12	20
Red sand - - - - -	40	60
Quicksand- - - - -	125	185
Red beds - - - - -	7	192
Sand and gravel, water	12	204
TOTAL DEPTH		204

<u>Driller's log of well 88</u>		
In Kermit, City lot 7, blk. 28 in sec. 26, blk. B-3.		
Sandy surface material	6	6
Caliche - - - - -	14	20
No record - - - - -	40	60
Quicksand, water - -	30	90
No record - - - - -	115	205
Pea gravel, water - -	25	230
Red beds - - - - -		230
TOTAL DEPTH		230
CASING RECORD: 230 feet of 7-inch, bottom 20 feet perforated.		

<u>Driller's log of well 91</u>		
Sec. 25, blk. B-3, in Kermit.		
Sandy surface material	5	5
Caliche - - - - -	20	25
Red sand - - - - -	40	65
Quicksand- - - - -	152	217
Red beds - - - - -	13	230
Sand and gravel, water	10	240
Red beds - - - - -	12	252
Sand, water - - - - -	3	255
TOTAL DEPTH		255
CASING RECORD: 225 feet of 8 $\frac{1}{2}$ -inch, 46 feet of 6-inch.		

<u>Driller's log of well 125</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, blk. B-2, 6-3/4 miles east of Kermit.		
Sandy surface material	10	10
Caliche - - - - -	10	20
Red sand - - - - -	40	60
Quicksand- - - - -	60	120
Red clay - - - - -	10	130
Sand, water - - - - -	5	135
TOTAL DEPTH		135
CASING RECORD: 128 feet of blank 6-inch at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 128</u>		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, blk. B-3, 4 $\frac{1}{2}$ miles north-east of Kermit. Altitude of land surface, 2937.		
Sand - - - - -	30	30
Caliche - - - - -	7	37
Sand - - - - -	67	104
Red rock - - - - -	166	270
Sand and red rock- -	45	315
Red rock - - - - -	40	355
Sand, water - - - - -	10	365
TOTAL DEPTH		365

<u>Driller's log of well 129</u>		
SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, blk. B-3, 3 $\frac{1}{2}$ miles north-east of Kermit.		
Sandy surface material	10	10
Red sand - - - - -	110	120
Quicksand - - - - -	60	180
Red clay - - - - -	7	187
Sand and gravel, water	8	195
Red clay - - - - -	8	203
Sand and gravel, water	2	205
TOTAL DEPTH		205
CASING RECORD: 185 feet of 8 $\frac{1}{4}$ -inch, 30 feet of 7-inch.		

<u>Driller's log of well 130</u>		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, blk. B-3, 5 $\frac{1}{2}$ miles north-east of Kermit. Altitude of land surface, 2963.		
Sand - - - - -	65	65
Sand and caliche - -	180	245
Sand and broken limestone	62	307
Red rock - - - - -	43	350
Broken red rock - - -	15	365
Red rock - - - - -	13	378
Sand - - - - -	4	382
TOTAL DEPTH		382

<u>Driller's log of well 134</u>		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, blk. 77, 9 miles north-east of Kermit.		
Caliche - - - - -	20	20
White sand - - - - -	30	50
Quicksand - - - - -	115	165
Red clay - - - - -	10	175
Sand, water- - - - -	10	185
TOTAL DEPTH		185
CASING RECORD: 169 feet of blank 6-inch at top.		

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 140</u>		
NW $\frac{1}{4}$ N $\frac{1}{4}$ sec. 7, blk. C, 11 miles northeast of Kermit. Altitude of land surface, 3081.		
Dug pit for cable tools	10	10
Sand - - - - -	95	105
Red rock and gravel - -	20	125
Sand and gravel - - -	25	150
Red beds - - - - -	385	535
Sandy shale - - - - -	40	575
Blue shale - - - - -	10	585
Red beds - - - - -	25	610
Blue shale - - - - -	10	620
Red beds - - - - -	117	737
Sand, water - - - - -	13	750
Sandy shale - - - - -	5	755
Red beds - - - - -	50	805
Sand (water) - - - - -	271	1076
TOTAL DEPTH		1076

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 141</u>		
SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, blk. A-57, 17 miles northeast of Kermit. Altitude of land surface 3120.		
Soft white sand - - -	15	15
Sand - - - - -	45	60
Soft pink sand - - -	30	90
Sand, water- - - - -	10	100
Red shale - - - - -	20	120
Red beds - - - - -		120
TOTAL DEPTH		120

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 147</u>		
NW $\frac{1}{4}$ N $\frac{1}{4}$ sec. 13, blk. B-1, 11 miles northeast of Kermit.		
Sand - - - - -	68	68
Red clay - - - - -	4	72
Sand, water - - - - -	3	75
TOTAL DEPTH		75
CASING RECORD: 70 feet of blank 6-inch at top.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 152</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, blk. 46, 17 $\frac{3}{4}$ miles east of Kermit. Altitude of land surface, 3243.		
Clay - - - - -	15	15
Red rock - - - - -	575	590
Hard red rock - - - -	35	625
Red rock - - - - -	80	705
Sand, water - - - - -	5	710
Red rock - - - - -	180	890
Blue shale - - - - -	10	900

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 152 - Continued</u>		
TOTAL DEPTH		900

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 190</u>		
SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, blk. B-11, 8 $\frac{1}{4}$ miles southeast of Kermit. Altitude of land surface, 2809.		
Sand - - - - -	110	110
Red rock- - - - -	10	120
Sand, water- - - - -	25	145
TOTAL DEPTH		145

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 192</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, blk. B-5, 6 miles southeast of Kermit. Altitude of land surface, 2834.		
Sand - - - - -	20	20
Caliche - - - - -	7	27
Sand - - - - -	53	80
Sand and clay - - - -	30	110
Sand, water - - - - -	5	115
Red shale - - - - -	15	130
Sand - - - - -	33	163
Sand, broken shells and red beds - - - - -	50	213
TOTAL DEPTH		213

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 215</u>		
NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 73, blk. A, 14 miles southeast of Kermit. Altitude of land surface, 2809.		
Red rock - - - - -	40	40
Sand, water- - - - -	35	75
Red sand - - - - -	70	145
Red shale- - - - -	8	153
Red sand - - - - -	21	174
Gravel, water - - - -	16	190
Sand - - - - -	10	200
TOTAL DEPTH		200

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 217</u>		
SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 94, blk. A, 14 $\frac{1}{4}$ miles southeast of Kermit. Altitude of land surface, 2678.		
Caliche - - - - -	40	40
Sandy red rock - - - -	35	75
Red sand- - - - -	15	90
Sand, water- - - - -	20	110
Sandy red rock- - - -	140	250
Red beds - - - - -	730	980

(Continued on next page)

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 217 - Continued</u>		
Sand, water - - - -		980
TOTAL DEPTH		980

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 218</u>		
NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 94, blk. A, 14 $\frac{1}{2}$ miles southeast of Kermit. Altitude of land surface, 2680.		
Surface material - - -	100	100
Sand, water - - - -	6	106
Sandy red shale - - -	69	175
Sand - - - - - - -	10	185
Sandy red shale - - -	120	305
Red shale - - - - -	170	475
Sandy red shale - - -	100	575
Sand - - - - - - -	45	620
Sandy red shale - - -	50	670
TOTAL DEPTH		670

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 219</u>		
NW $\frac{1}{4}$ N $\frac{1}{2}$ sec. 95, blk. A, 15 miles southeast of Kermit. Altitude of land surface, 2674.		
Surface material and gypsum - - - - -	60	60
Sandy gypsum - - - -	10	70
Sand, water - - - - -	5	75
Red beds - - - - -	10	85
Gravel, hole full of water	30	115
Sandy gypsum - - - -	10	125
Red rock - - - - -	25	150
Sand - - - - - - -	30	180
Sandy red shale - - -	110	290
TOTAL DEPTH		290

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 220</u>		
NE $\frac{1}{4}$ NE $\frac{1}{2}$ sec. 53, blk. F, 13 $\frac{1}{2}$ miles south of Kermit.		
Sand - - - - - - -	10	10
Caliche - - - - - -	13	23
Red sand - - - - - -	62	85
Red clay - - - - - -	10	95
Red sand - - - - - -	65	160
Sand, water - - - - -	60	220
Red sandstone - - - -	5	225
TOTAL DEPTH		225
CASING RECORD: 168 feet of blank 8 $\frac{1}{2}$ -inch, 42 feet of 8 $\frac{1}{2}$ -inch perforated, 17 feet of perforated 6-inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 253</u>		
SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, blk. B-12, 8 $\frac{1}{2}$ miles southwest of Kermit.		
Sandy surface material	1	1
White gyp rock - - -	16	17
White sand - - - - -	27	44
Red sand - - - - - -	63	107
Sand and gravel - - -	22	129
Soft red sand - - - -	16	145
Red sand and gravel -	10	155
Red shale - - - - -	9	164
Gravel - - - - - - -	19	183
Red sand - - - - - -	47	230
TOTAL DEPTH		230
CASING RECORD: 110 feet of blank 8-5/8-inch, 34 feet of blank 6-5/8-inch, 95 feet of perforated 6-5/8-inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 255</u>		
SE $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 6, blk. B-12, 8 $\frac{1}{2}$ miles southwest of Kermit.		
Top soil - - - - - -	1	1
Caliche - - - - - -	8	9
Sandy caliche - - - -	33	42
Sandy red shale - - -	60	102
Gravel, water - - - -	5	107
Red sand - - - - - -	33	140
Gravel, water - - - -	9	149
Red beds - - - - - -	11	160
Red sand - - - - - -	4	164
Gravel - - - - - - -	18	182
Red sand - - - - - -	30	212
TOTAL DEPTH		212
CASING RECORD: 130 feet of blank 8 $\frac{1}{2}$ -inch, 23 feet of blank 6-5/8-inch, 21 feet of perforated 6-5/8-inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 262</u>		
SE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 14, blk. 21, 9 $\frac{1}{2}$ miles southwest of Kermit.		
Sandy surface material	8	8
Caliche - - - - - -	12	20
White sand - - - - -	15	35
Quicksand - - - - -	110	145
Red clay - - - - - -	8	153
Sand, water - - - - -	7	160
TOTAL DEPTH		160
CASING RECORD: 151 feet of 6 $\frac{1}{4}$ -inch at top.		

Table of Driller's Logs, Tinkler County, Texas

	Thickness (feet)	Depth (feet)
Driller's log of well 265		
SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, blk. 3-5, 6 miles southwest of Kermit.		
White rock - - - - -	12	12
Quicksand - - - - -	26	38
White sand - - - - -	12	50
Red sand - - - - -	57	107
White sand, water - - -	43	150
TOTAL DEPTH		150
CASING RECORD: 112 feet of 8 $\frac{1}{2}$ -inch at top.		

	Thickness (feet)	Depth (feet)
Driller's log of well 266		
NW $\frac{1}{4}$ sec. 41, blk. B-5, 5 $\frac{1}{2}$ miles southwest of Kermit.		
Sand - - - - -	4	4
White gyp rock - - - - -	14	18
White sand - - - - -	37	55
Red sand - - - - -	55	110
Sand and gravel - - - - -	12	122
Red sand - - - - -	37	159
Red beds - - - - -	6	165
Red sand - - - - -	24	189
Sand and gravel - - - - -	6	195
Red quicksand - - - - -	7	202
TOTAL DEPTH		202
CASING RECORD: 110 feet of blank 8 $\frac{1}{2}$ -inch, 103 feet of blank 6-5/8-inch, 48 feet of perforated 6-5/8-inch.		

	Thickness (feet)	Depth (feet)
Driller's log of well 267		
SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 47, blk. 26, 3 $\frac{1}{2}$ miles south of Kermit.		
Sandy surface material - -	6	6
White gyp rock - - - - -	15	21
Quicksand - - - - -	18	39
Red sand - - - - -	47	86
Sand and gravel, water - -	11	97
Red sand rock - - - - -	8	105
TOTAL DEPTH		105
CASING RECORD: 41 feet of blank 8-5/8-inch, 45 feet of blank 6-5/8-inch, 23 feet of perforated 6-5/8-inch.		

	Thickness (feet)	Depth (feet)
Driller's log of well 269		
N $\frac{1}{2}$ sec. 47, blk. 26, 3 miles southwest of Kermit.		
Sandy surface material - -	6	6
White gyp rock - - - - -	15	21
quicksand - - - - -	19	40
Red sand - - - - -	45	85

	Thickness (feet)	Depth (feet)
Driller's log of well 269-continued		
Sand and gravel, water - -	13	98
Hard red sand rock - - -	136	234
Sandy red shale - - - - -	70	304
Red sand rock - - - - -	37	341
Sandy red shale - - - - -	95	436
Hard red sand rock - - -	61	497
Red sand rock - - - - -	17	514
Hard red sand rock - - -	2	516
Sandy red shale - - - - -	24	540
TOTAL DEPTH		540
CASING RECORD: 46 feet of blank 8 $\frac{5}{8}$ -inch, 221 feet of blank 6 $\frac{5}{8}$ -inch, 80 feet of perforated 6 $\frac{5}{8}$ -inch.		

	Thickness (feet)	Depth (feet)
Driller's log of well 271		
SE $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 38, blk. 26, 2 $\frac{1}{2}$ miles southwest of Kermit.		
Sandy surface material - -	6	6
Caliche - - - - -	17	23
Gray sand - - - - -	17	40
Brown sand - - - - -	18	58
Sand and gravel - - - - -	12	70
Brown sand - - - - -	14	84
Red clay - - - - -	11	95
Red sand - - - - -	13	108
Red clay - - - - -	2	110
Red sand - - - - -	10	120
Brown sand - - - - -	40	160
Red clay - - - - -	4	164
Brown sand - - - - -	31	195
Yellow sand - - - - -	3	198
Brown sand - - - - -	11	209
Red clay - - - - -	3	212
Brown sand - - - - -	5	217
Red clay - - - - -	2	219
Red sand - - - - -	7	226
Red clay - - - - -	4	230
Brown sand - - - - -	20	250
Red rock - - - - -	50	300
TOTAL DEPTH		300
CASING RECORD: 93 feet of blank 10 $\frac{3}{4}$ -inch, 125 feet of blank 6-inch, 177 feet of perforated 6-inch.		

	Thickness (feet)	Depth (feet)
Driller's log of well 272		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 40, blk. 26, 4 miles southwest of Kermit.		

(Continued on next page)

Table of Drillers' Logs, Winkler County - Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 272 - Continued</u>		
Sandy surface material-	10	10
Caliche - - - - -	10	20
White sand - - - - -	25	45
Red sand - - - - -	40	85
Sand, water - - - - -	5	90
Sandy red clay - - - -	70	160
Sand and gravel, water-	10	170
Red clay - - - - -	10	180
TOTAL DEPTH		180
CASING RECORD: 178 feet of 6 $\frac{1}{2}$ -inch, perforated 160 to 170 feet.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 273</u>		
NE $\frac{1}{4}$ S $\frac{1}{4}$ sec. 11, blk. 20, 14 $\frac{3}{4}$ miles south- west of Kermit.		
Sandy surface material-	4	4
Caliche - - - - -	11	15
Reddish-brown sand - -	50	65
Fine-grained gray sand-	40	105
Sandy yellow shale, water, 1 $\frac{1}{2}$ gallons a minute -	40	145
Gray clay - - - - -	15	160
Brown sandstone, water, 2 $\frac{1}{2}$ gallons a minute -	17	177
Gray clay - - - - -	8	185
Red sand rock and red clay	23	208
TOTAL DEPTH		208
CASING RECORD: 164 feet of 5-inch, bottom 20 feet perforated.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 281</u>		
SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 40, blk. 27, 10 $\frac{1}{2}$ miles south- west of Kermit.		
Sandy surface material-	5	5
Caliche - - - - -	15	20
Sand - - - - -	155	175
Red rock- - - - -	15	190
Sand, water- - - - -	5	195
Red rock - - - - -	35	230

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 281 - Continued</u>		
Sand, water - - - - -	5	235
TOTAL DEPTH		235

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 283</u>		
NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, blk. 27, 9 miles west of Kermit.		
Surface material - - -	3	3
Lime rock - - - - -	4	7
Caliche - - - - -	12	19
Lime shell - - - - -	3	22
White sand - - - - -	48	70
Red sand - - - - -	19	89
Yellow sand - - - - -	38	127
White sand - - - - -	31	158
Red shale - - - - -	6	164
Sandy red shale - - -	10	174
White sand, water - - -	10	184
TOTAL DEPTH		184
CASING RECORD: 184 feet of 6-inch, perforated 165 to 175 feet.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 291</u>		
Center sec. 40, blk. 20, 18 $\frac{1}{2}$ miles southwest of Kermit.		
Top soil - - - - -	1	1
Lime rock - - - - -	20	21
White pack sand- - - -	34	55
Red sand rock - - - -	20	75
Yellow sand rock - - -	15	90
Hard red sandstone - -	30	120
Hard yellow sand rock, water from 133 to 140 feet - - - - -	21	141
Yellow sand rock, water	9	150
Red clay - - - - -	1	151
TOTAL DEPTH		151

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

	Thickness (feet)	Depth (feet)
<u>Well 1</u>		
In broad valley SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, Block C24.		
Top soil - - - - -	4	4
Caliche - - - - -	8	12
White marl - - - - -	18	30
April 10, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 5</u>		
Gentle slope. SW $\frac{1}{4}$ sec. 16, Blk. C23.		
Sand - - - - -	2	2
White clay - - - - -	3	5
White sand - - - - -	2	7
Red sand - - - - -	1	8
Red clay - - - - -	1	9
Caliche (soft) - - - - -	4	13
Caliche (hard) - - - - -	1	14
February 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 6</u>		
In sink. C. Condon tract. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, Blk. C23.		
Sand - - - - -	2	2
Caliche - - - - -	10	12
Red sand - - - - -	4	16
White sand - - - - -	2	18
Caliche (hard) - - - - -	3	21
Sand, tightly packed - - - - -	5	26
Caliche (soft) - - - - -	3	29
Sand (hard) - - - - -	3	32
Red clay (hard) - - - - -	17	49
Red sand (soft) - - - - -	8	57
Red clay (hard) - - - - -	12	69
Red clay, trace of sand - - - - -	2	71
Red sand (soft) - - - - -	28	99
April 6, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 15</u>		
In sink. Side of county road. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 18, Blk. 26.		
Surface soil - - - - -	4	4
Soft caliche - - - - -	13	17
Soft red sand - - - - -	9	26
Caliche - - - - -	14	40
Sand and gravel - - - - -	10	50
Hard caliche - - - - -	9	59
Hard sand - - - - -	6	65
Sandy caliche - - - - -	10	75
Red sand - - - - -	9	84
Water sand - - - - -	6	90
Hard rock - - - - -		90
Water level, 84 feet below ground level, 3 hours after hole completed. April 28, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 16</u>		
In sink, sec. 20, Blk. 26.		
Soil - - - - -	2	2
Soft caliche - - - - -	5	7
Sand - - - - -	2	9
Hard caliche - - - - -	3	12
Soft caliche, lime pebbles	11	23
February 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 47</u>		
SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, Blk. 77.		
Sand - - - - -	9	9
Caliche - - - - -	2	11
White sand - - - - -	2	13
Sand (red) - - - - -	1	14
Clayey yellow sand - - - - -	1	15
Caliche - - - - -	5	20
White sand - - - - -	4	24

	Thickness (feet)	Depth (feet)
<u>Well 48</u>		
In sand hills. SE cor. NW $\frac{1}{4}$ sec. 15, Blk. 77.		
Sand - - - - -	11	11
Sandy red clay - - - - -	2	13
Caliche - - - - -	9	22
Hard caliche - - - - -		22
February 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 50</u>		
In sand hills. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, Blk. 77.		
White sand - - - - -	10	10
Sandy caliche - - - - -	2	12
Red sand, some caliche - - - - -	3	15
Sandy caliche - - - - -	1	16
Caliche - - - - -		16
February 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 51</u>		
In sand hills near center of sec, 2, Blk. 77.		
Red sand - - - - -	17	17
White sand - - - - -	3	20
Sandy caliche - - - - -	2	22
Sand, caliche, yellow clay	3	25
January 31, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 53</u>		
In sand hills. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, Blk. 77.		
Sand - - - - -	13	13
Caliche - - - - -	4	17
Yellow sand - - - - -	7 $\frac{1}{2}$	24 $\frac{1}{2}$
(continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 53 - Continued</u>		
Hard caliche - - - -		24 $\frac{1}{2}$
January 31, 1940.		

<u>Well 60</u>		
NW cor. SE $\frac{1}{4}$ sec. 6, Blk. C23.		
Sand - - - - -	7	7
Sandy red clay - - - -	3	10
Sandy gypsum - - - - -	2	12
Sand - - - - -	5	17
Caliche - - - - -		17
February 6, 1940.		

<u>Well 62</u>		
In sand hills. NW $\frac{1}{4}$ sec. 3, Blk. C22.		
Sand - - - - -	6	6
Sandy red clay - - - -	4	10
Sandy caliche - - - - -	4	14
Fine-grained yellow sand and caliche - - - - -	6	20
January 31, 1940.		

<u>Well 63</u>		
In sand hills. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, Blk. C22.		
Red sand - - - - -	8	8
Sandy caliche - - - - -	9	17
Compact yellow sand - - -	10	27
January 31, 1940.		

<u>Well 64</u>		
In sand hills. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 4, Blk. C22.		
Loose sandy caliche - - -	5	5
Sand, with caliche - - -	10	15
Yellow sand - - - - -	6	21
January 31, 1940.		

<u>Well 67</u>		
In sand hills. NE $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 4, Blk. C22.		
White sand - - - - -	16	16
Red sand - - - - -	2	18
Sandy red clay - - - - -	3	21
January 31, 1940.		

<u>Well 131</u>		
In sand hills. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, Blk. B3.		
Sand - - - - -	11	11
Soft caliche - - - - -	8	19
Sand - - - - -	4	23
Gypsum - - - - -	4	27

	Thickness (feet)	Depth (feet)
<u>Well 131 - Continued</u>		
Sandy white gypsum - -	20	47
Yellow sand - - - - -	7	54
February 7, 1940.		

<u>Well 153</u>		
On flat land. James Waddel tract. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 135, Blk. 46, 1 N.		
Surface soil - - - - -	4	4
Sand with coarse gravel	4	8
Tightly packed sand -	8	16
Light-gray sandstone -	2	18
Limestone - - - - -	9	27
Hard brown sand - - -	3	30
Silica-cemented conglome- rate - - - - -	8	38
March 15, 1940.		

<u>Well 260</u>		
NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, Blk. B5.		
Surface soil - - - - -	3	3
Hard caliche - - - - -	15	18
Red sand - - - - -	9	27
Hard packed sand - - -	9	36
White sand - - - - -	9	45
Red clay - - - - -	10	55
White sand - - - - -	2	57
May 4, 1940.		

<u>Well 261</u>		
NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, Blk. B5.		
Top soil - - - - -	4	4
Sand - - - - -	3	7
Caliche - - - - -	4	11
Water level, 7 feet below ground level, 2 hours after hole completed.		May 1, 1940

<u>Well 284</u>		
In sink. At side of county road. SE $\frac{1}{2}$ sec. 26, Blk. 27.		
Red sand - - - - -	7	7
Soft caliche - - - - -	5	12
Gypsum - - - - -	5	17
Red sand - - - - -	3	20
Yellow sand - - - - -	33	53
White sand - - - - -	2	55
Caliche, sand, gypsum -	15	70
Sandy gypsum - - - - -	5	75
Limestone pebbles, sand, gyp	6	81
Water sand, fine quartz	3	84
Hard rock - - - - -	7	91
Water level, 84 feet below ground level, hours after hole completed.		Feb. 28, 1940.

Partial analyses of water from wells in Winkler County, Texas

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
c/ 2	C. C. Cowden	220	Mar. 16, 1940	719	48	28	156	165	354	48	2.8	1.5	238
3	do.	140	do.	493	64	40	50	207	189	48	b/	-	325
7	W. L. Beckham	134	Apr. 1, 1940	408	52	33	49	220	120	43	b/	2.9	265
8	J. B. Walton	118	Mar. 16, 1940	482	-	-	-	177	154	76	b/	-	-
10	Mrs. E. Linebery	119	Apr. 20, 1940	984	95	52	167	244	426	118	b/	-	452
11	C. C. Cowden	151	Mar. 16, 1940	645	-	-	-	220	220	98	b/	-	-
12	Mrs. E. Linebery	211	Apr. 20, 1940	747	82	40	121	220	290	106	b/	-	370
c/ 13	do.	230	do.	224	51	15	16	232	16	11	b/	0.8	189
14	do.	230	do.	2,414	163	90	538	268	1,029	460	b/	2.0	776
15	W. P. A. Test	85	May 1, 1940	473	70	19	69	201	173	32	b/	2.2	252
17	T. C. Thorton	96	Feb. 13, 1940	640	69	22	132	153	165	175	b/	2.5	264
c/ 18	J. B. Walton	155	Mar. 21, 1940	375	56	20	51	183	116	41	b/	1.2	222
20	do.	87	do.	125	-	-	-	104	14	13	b/	-	-
22	Illinois Oil Co.	-	Apr. 6, 1940	149	-	-	-	110	22	18	b/	-	-
23	Sinclair-Prairie Oil Co.	162	do.	166	45	7	7	85	16	48	b/	-	139
c/ 24	do.	145	do.	160	44	5	6	92	36	23	b/	0.8	133
25	J. B. Walton	90	Mar. 21, 1940	837	174	19	85	183	291	166	b/	-	512
26	do.	118	do.	208	51	8	15	122	30	44	b/	-	160
c/ 32	do.	88	do.	544	91	27	53	122	209	84	20	-	336
33	Magnolia Petroleum Co.	138	Apr. 18, 1940	328	-	-	-	146	109	34	b/	-	-
34	do.	245	do.	342	86	13	14	146	117	40	b/	-	268
36	J. B. Walton	80	Mar. 21, 1940	614	111	16	72	159	264	62	b/	-	345
39	Houston Oil Field Material Co.	95	Apr. 19, 1940	218	60	10	2	134	63	10	b/	-	191
41	J. B. Walton	95	Mar. 21, 1940	1,430	189	42	233	177	629	250	b/	-	646
c/ 45	do.	85	do.	1,229	193	32	173	214	559	160	b/	1.4	615
54	Texas-New Mexico R. R.	120	Apr. 13, 1940	1,050	124	47	164	220	477	130	b/	0.5	504

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 35.

Partial analyses of water from wells in Winkler County--Continued
Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
55	Mrs. E. Linebery	100+	Apr. 20, 1940	1,325	151	52	218	207	641	160	b/	0.7	592
58	C. C. Cowden	130	Mar. 16, 1940	1,392	102	50	313	268	561	230	b/	4.4	460
68	Mrs. E. Linebery	80	Apr. 6, 1940	1,358	157	52	223	250	640	147	b/	-	607
c/ 70	J. B. Walton	80	Mar. 21, 1940	377	86	9	31	177	122	20	22	-	251
71	do.	78	do.	190	52	5	13	159	20	22	b/	-	153
73	do.	155	do.	137	28	11	9	122	18	9	b/	2.2	117
74	do.	87	Apr. 21, 1940	152	-	-	-	122	16	19	b/	-	-
81	Siosi Oil Co.	160	Mar. 15, 1940	132	28	3	20	122	14	7	b/	-	82
c/ 83	City of Kermit	700	Feb. 17, 1940	165	32	9	19	146	26	5	b/	1.6	116
84	Kermit Cemetery	204	Apr. 18, 1940	226	50	9	21	159	41	21	b/	-	161
85	C. B. Parker	200	do.	240	-	-	-	171	45	23	b/	-	-
86	S. W. Altmon	140	Apr. 22, 1940	239	41	8	35	122	66	29	b/	-	135
92	Illinois Oil Co.	200+	Apr. 6, 1940	117	-	-	-	98	15	10	b/	-	-
c/124	James Waddell	70	Mar. 12, 1940	263	42	11	38	177	45	12	26	1.6	152
c/135	B. F. Jenkins	225	-	460	92	20	42	220	161	34	b/	2.8	312
137	Mrs. E. Linebery	80	Apr. 8, 1940	1,093	-	-	-	256	502	110	b/	-	-
142	Ratliff and Bedford	55	Apr. 26, 1940	437	50	13	98	232	84	76	b/	2.1	178
143	do.	57	do.	913	112	16	191	238	255	200	22	-	345
144	Guy Cowden	100	do.	2,194	318	36	342	153	1,163	230	30	-	942
c/145	do.	99	do.	3,337	593	62	402	104	1,856	410	b/	2.4	1,738
148	James Waddell	80	Mar. 7, 1940	604	-	-	-	195	276	34	b/	-	-
151	do.	96	Mar. 14, 1940	3,396	581	103	319	104	2,066	180	96	-	1,875
154	C. O. Wheeler	115	Mar. 12, 1940	1,162	210	40	101	153	691	45	b/	-	690
184	Geo. D. Hogg	114	Apr. 9, 1940	709	-	-	-	244	262	88	b/	-	-
c/185	do.	130	do.	631	106	20	86	195	226	96	b/	0.9	347
186	G. P. Mitchell	250	do.	456	77	14	64	195	165	40	b/	-	249
188	do.	104	do.	469	80	13	72	226	133	60	b/	-	253
189	do.	87	do.	256	33	12	42	104	71	47	b/	-	133
c/191	do.	286	do.	433	57	22	64	183	165	34	b/	1.0	234
197	Seth Campbell	158	Mar. 12, 1940	174	28	5	30	122	37	14	b/	-	93
198	do.	75	do.	113	19	7	12	49	30	21	b/	-	74
201	S. W. Altmon	130	Apr. 25, 1940	334	73	8	38	183	80	44	b/	1.0	215

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 25.

Partial analyses of water from wells in Winkler County--Continued
Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.) ³
c/ 202	Bert Fields Oil Co.	200	Apr. 25, 1940	296	45	14	48	220	61	19	b/	1.1	169
203	Earl Vest	120+	Apr. 19, 1940	427	78	16	55	214	104	69	b/	-	260
204	Skelly Oil Co.	130+	Apr. 9, 1940	328	-	-	-	177	84	41	b/	-	-
205	Earl Vest	106	do.	981	168	27	129	244	395	142	b/	-	532
206	Sinclair Prairie Oil Co.	151	do.	450	84	19	47	207	157	38	b/	-	287
208	Tobe Horton	91	do.	412	90	20	22	183	134	32	24	-	307
209	do.	-	do.	359	-	-	-	207	77	51	b/	-	-
210	Texas-New Mexico R. R.	80	do.	301	58	13	37	183	47	55	b/	-	198
c/ 211	Tobe Horton	227	do.	317	55	14	43	201	72	30	b/	1.8	194
212	Sun Oil Co.	205	do.	262	46	10	39	189	53	20	b/	1.2	156
c/ 213	Earl Vest	92	do.	611	133	24	33	177	121	98	115	-	430
253	Humble Oil and Refining Co.	230	May 2, 1940	223	62	10	6	159	43	24	b/	-	196
254	do.	297	do.	208	-	-	-	146	37	23	b/	-	-
256	H. H. Steen	75	Apr. 23, 1940	1,142	160	27	180	159	567	130	b/	-	512
257	B. W. Griffin	86	Apr. 27, 1940	3,980	674	153	461	133	1,358	1,240	b/	-	2,314
c/ 253	Permian Ice Co.	180	May 1, 1940	297	43	16	45	189	70	25	b/	2.4	175
259	do.	219	do.	675	97	25	114	201	139	195	b/	2.3	345
261	F. P. A. Test	11	Apr. 30, 1940	7,419	874	283	1,274	354	2,603	2,210	b/	0.7	3,350
c/ 263	University of Texas	217	Apr. 10, 1940	2,872	245	128	521	195	1,471	410	b/	1.1	1,140
264	Dr. C. E. Wilson	96	Apr. 23, 1940	753	137	39	69	140	219	220	b/	-	504
268	S. W. Altmon	92	Apr. 22, 1940	232	53	8	19	128	70	19	b/	-	165
273	Dr. C. E. Wilson	100#	Apr. 23, 1940	1,537	193	43	257	159	696	265	b/	-	671
274	do.	290	do.	8,461	373	288	2,085	281	3,927	1,650	b/	-	2,115
c/ 281	do.	235	Apr. 10, 1940	3,617	235	96	916	220	1,030	1,180	b/	2.0	984

a/ Sulfate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 35.

Partial analyses of water from wells in Winkler County--Continued
 Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
284	I. P. A. Test	84	Feb. 27, 1940	6,203	345	136	1,585	137	2,676	1,390	b/	3.3	1,422
285	John Haley	297	Apr. 23, 1940	6,990	290	247	1,766	793	3,067	1,230	b/	-	1,740
c/ 286	do.	-	Apr. 27, 1940	491	84	40	30	268	135	40	30	-	375

a/ Sulphate less than 10 parts per million.
 b/ Nitrate less than 20 parts per million.
 c/ Analyses of selected wells are given in milligram equivalents per liter on page 35.

Chemical Analyses--Continued

Results are in milligram equivalents per liter.

Well	Owner	Depth of well (ft.)	Date of collection	Total hardness as CaCO ₃ (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Total dissolved solids (calc.)
2	C. C. Cowden	220	Mar. 16, 1940	4.76	2.42	2.34	6.80	2.7	7.38	1.35	0.08	0.05	23.12
13	Mrs. E. Linebery	230	Apr. 20, 1940	3.78	2.56	1.22	0.70	3.8	0.33	0.31	0.04	-	8.96
18	J. B. Walton	155	Mar. 21, 1940	4.44	2.80	1.64	2.20	3.0	2.42	1.16	0.06	-	13.28
24	Sinclair-Prairie Oil Co.	145	Apr. 6, 1940	2.66	2.22	0.44	0.27	1.5	0.74	0.65	0.04	-	5.36
32	J. B. Walton	88	Mar. 21, 1940	6.72	4.54	2.18	2.32	2.0	4.35	2.37	-	0.32	14.08
46	do.	85	do.	12.30	9.66	2.64	7.51	3.5	11.64	4.51	0.07	0.09	39.52
70	do.	30	do.	5.02	4.23	0.74	1.33	2.9	2.54	0.56	-	0.35	12.70
53	City of Permut	700	Feb. 17, 1940	2.22	1.53	0.74	0.83	2.4	0.53	0.14	0.03	-	6.30
124	James Faddell	70	Mar. 12, 1940	3.04	2.10	0.94	1.64	2.9	0.94	0.34	0.03	0.42	9.36
135	B. F. Jenkins	225	-	6.24	4.60	1.64	1.33	3.6	3.36	0.96	0.15	-	16.14
145	Guy Cowden	99	Apr. 23, 1940	34.75	29.65	5.10	17.49	1.7	38.67	11.56	0.13	0.18	104.48
135	Geo. D. Hogg	130	Apr. 9, 1940	6.94	5.30	1.64	3.72	3.2	4.70	2.71	0.05	-	21.32
191	C. P. Mitchell	236	do.	4.68	2.84	1.84	2.77	3.0	3.44	0.96	0.05	-	14.90
202	Bert Field's Oil Co.	200	Apr. 25, 1940	3.37	2.24	1.14	2.08	3.6	1.26	0.54	0.06	-	10.92
211	Toke Norton	227	Apr. 9, 1940	3.80	2.74	1.14	1.88	3.3	1.51	0.35	0.10	0.03	11.52
213	Earl West	32	do.	8.60	6.66	1.94	1.43	2.9	2.52	2.76	-	1.35	20.06
253	Permian Ice Co.	180	May 1, 1940	3.50	2.16	1.34	1.96	3.1	1.47	0.71	0.13	0.05	10.92
263	University of Texas	217	Apr. 10, 1940	22.80	12.24	10.56	22.67	3.2	30.55	11.56	0.06	-	90.94
231	Dr. C. E. Wilson	235	do.	19.68	11.76	7.92	39.31	3.6	22.50	33.28	0.11	-	118.98
286	John Haley	-	Apr. 27, 1940	7.50	4.22	3.28	1.32	4.4	2.31	1.13	-	0.48	17.64

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MAP OF WINKLER COUNTY, TEXAS.

SHOWING WATER WELLS

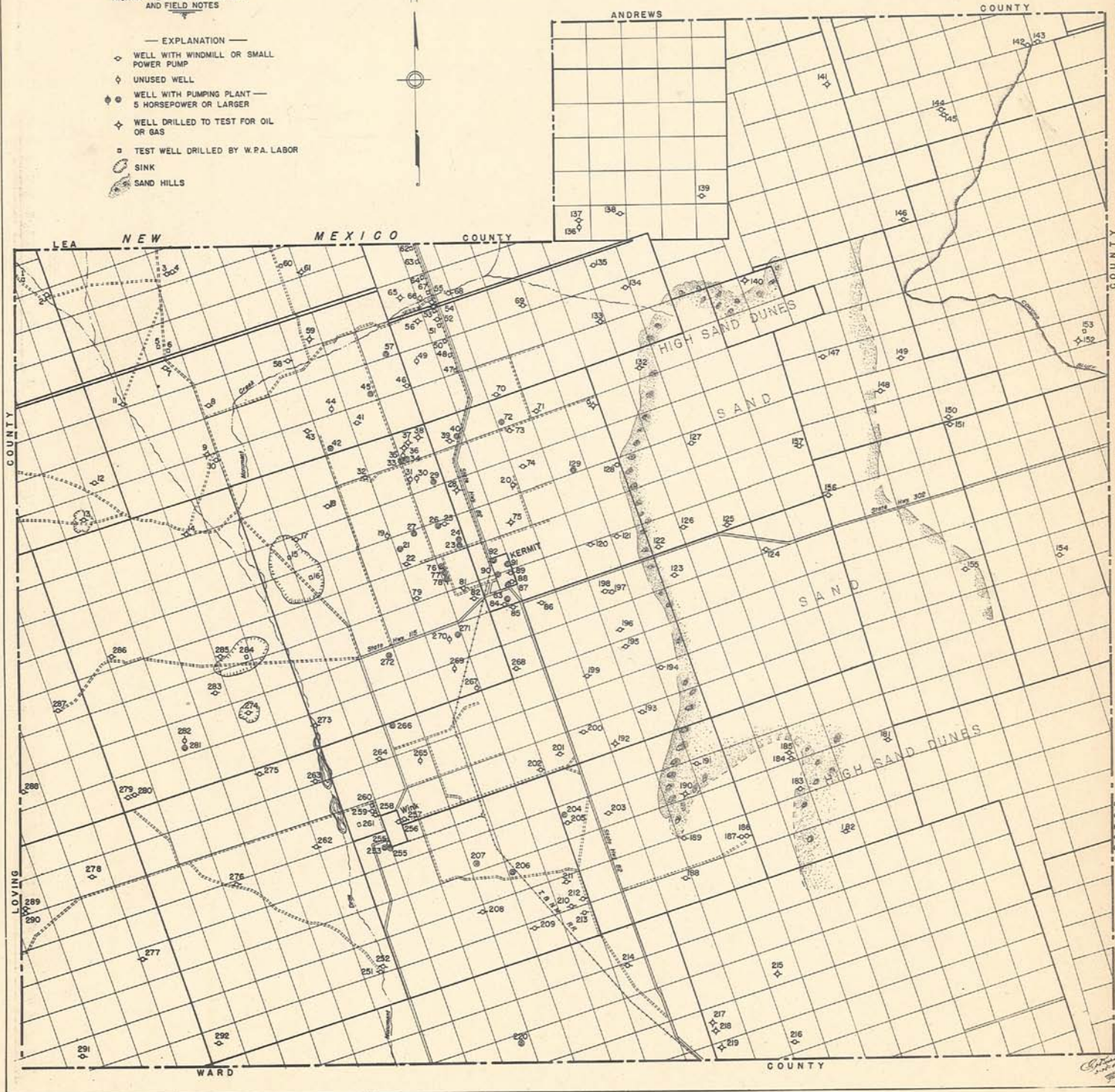
FIELD WORK BY
HENRY M. FORBES - JOHN F. LANCE
PROJECT SUPERINTENDENTS
W.P.A. PROJECT 14901



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

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

- EXPLANATION —
- ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ◇ UNUSED WELL
 - ⊕ WELL WITH PUMPING PLANT — 5 HORSEPOWER OR LARGER
 - ⋄ WELL DRILLED TO TEST FOR OIL OR GAS
 - TEST WELL DRILLED BY W.P.A. LABOR
 - SINK
 - ⊞ SAND HILLS



Handwritten signature and date