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KARNES COUNTY, TEXAS

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

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WORKS PROGRESS ADMINISTRATION

GROUND-WATER SURVEY

PROJECT 2083

G. H. Shafer

Project Superintendent

* * *

Analyses made, map prepared, data
assembled and report mimeographed by,

WORKS PROGRESS ADMINISTRATION
PROJECT 6507-5112

* * *

Sponsored by the State Board of Water Engineers with
the Bureau of Industrial Chemistry of The University
of Texas and the U. S. Geological Survey cooperating.

* * *

Austin, Texas
Oct. 20, 1937

KARNES COUNTY, TEXAS

* * *

Introduction

by

Samuel F. Turner
Associate Hydraulic Engineer
U. S. Geological Survey

The purpose of this survey was to obtain information concerning existing wells and springs and the quantity and quality of water they yield, and to put down test holes where additional information was needed.

This project was part of a statewide Works Progress Administration project known as a "Statewide Inventory of Water Wells," sponsored by the State Board of Water Engineers. The Division of Ground Water of the U. S. Geological Survey cooperated in the technical direction of the project and the Bureau of Industrial Chemistry of The University of Texas furnished laboratory space and equipment and supervised the chemical analyses.

The analyses were made by chemists employed on Works Progress Administration Project 6507-5112 at Austin, Texas, sponsored by the State Board of Water Engineers. This release was typed and assembled by typists and draftsmen employed on this project.

The field work in Karnes County was started on October 2, 1936, and completed April 10, 1937. This work was done as Project 2033 of District 10 of the Works Progress Administration, San Antonio, Texas. E. L. Marek, an engineer, was project superintendent when operations were started, but he soon resigned to accept other employment. Davis Crow, an engineer, succeeded Mr. Marek and he also resigned for the same reason. G. H. Shafer, a geologist, was then appointed superintendent and he completed the work. Mr. Shafer should be given credit for his great interest in the work and for the many extra hours he spent on the project. The office of the Works Progress Administration in the San Antonio district made this work possible by their constant help and cooperation.

This release contains the well and spring records and well logs obtained by the project superintendent, logs of the test holes drilled by the W. P. A. labor, and the chemical analyses of water from privately owned wells and springs. Locations of all wells and springs listed are shown on the map in the back of the release.

The test wells were drilled by W. P. A. labor using a soil auger, drop auger, churn drill, and a sand bucket. Samples were collected at one foot intervals by the well driller in charge of the party. The project superintendent studied these samples and compiled the logs.

Records of wells and springs in Karnes County, Texas
 (All wells are drilled unless otherwise noted in "Remarks" column.)
 (See "Logs of W. P. A. test wells" for all records of test wells.)

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
2	13½ miles west	Fleming T. Wells	San Antonio Joint Stock and Land Bank	1925	100	5	0
3	13 miles west	Sam A. J. Mays	Willie Jandt	1923	200	6	--
4	do.	do.	Walter Goetz	1924	140	5	--
8	11 miles west	George Elliot	Joe Sprencel	1920	--	4	--
10	9½ miles west	W. Lockhart	Grady Holcomb	1934	263	4	2
11	9 miles west	Don Erasmo Seguin	W. Green	--	115	4	--
13	do.	do.	W. N. Butler	1923	213	4	--
14	10½ miles west	Don Gaspar Flores	Sons of Herman Lodge	--	--	5½	--
15	11 miles west	do.	Alex Pollock	--	--	--	--
17	10½ miles northwest	Luis Manchaca	L. K. Szczepanik	1926	185	4	--
19	10 miles northwest	do.	Leon Pawełek	1912	310	4	--
21	9 miles northwest	Don Erasmo Seguin	Ed. Jendrusch	1905	135	--	--
23	8½ miles west	do.	H. Jandt	1907	151	6	--
24	do.	do.	A. H. Mueller	1918	123	6	--
25	8 miles west	do.	Eugene Barth	1928	137	5	--
28	7½ miles west	do.	Paul Kekie	--	85	--	--
29	6½ miles west	do.	Charlie Swizi	1910	300	5	--
30	5½ miles west	do.	O. J. Bludais	1894	190	5	--
32	6½ miles west	do.	Mrs. A. R. Mueller	1915	165	5	--
34	7 miles northwest	do.	Mat Labus	1910	270	5½	--
35	6½ miles northwest	do.	H. L. Kunkel	1894	150	--	--
36	do.	do.	John Drees	1921	87	6	1
39	8 miles northwest	do.	J. J. Mutchler Est.	1894	140	4½	--
e/42	8½ miles northwest	do.	D. W. Maurer	1927	2,525	10	--

^{a/} Measuring point was usually top of casing, top of pump base, or top of well curb.
^{b/} C, cylinder; B, bucket; E, electric; G, gasoline engine; W, windmill; H, hand; T, turbine; S, steam; number indicates horsepower.

Records obtained by E. L. Marek, Davis Crow, and G. H. Shafer, Project Superintendents. Chemical analyses of water from these wells and springs are in the table of analyses.

No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
2	62.2	Nov. 6, 1936	C, W	S	In valley	Wrought iron casing. Strong supply.
3	100	<u>d/</u>	C, I	S	Hillside	Steel casing. Strong supply.
4	125	<u>d/</u>	C, V	D, S	Ridgetop	Wrought iron casing. Strong supply.
8	--	--	C, W	D, S	do.	Steel casing. Strong supply.
10	69.1	Oct. 19, 1936	C, W, & G, 2	--	Hilltop	Do.
11	90	<u>d/</u>	C, G, 2	D, S	Hillside	Do.
13	115	<u>d/</u>	D, G, 2	D, S	Ridgetop	Steel casing.
14	--	--	C, W	S	do.	Do.
15	--	--	C, V	S	Hillside	
17	60	<u>d/</u>	C, G, 3	D, S	Level land	Steel casing. Owner reports water in blue sand. Strong supply.
19	70	<u>d/</u>	C, W	S	Ridgetop	Steel casing. Strong supply. Drilled by Pete Dugi.
21	--	--	C, W	D, S	do.	Strong supply.
23	100	<u>d/</u>	C, V	D, S	Hillside	Steel casing. Strong supply.
24	100	<u>d/</u>	C, V	D, S	do.	Do.
25	114	<u>d/</u>	C, H	D, S	Ridgetop	Steel casing. Weak supply.
28	70	<u>d/</u>	C, V	D, S	do.	Strong supply.
29	--	--	C, V	D, S	do.	
30	50	<u>d/</u>	C, W	D, S	do.	Wrought iron casing. Strong supply.
32	80	<u>d/</u>	C, W	D, S	do.	Steel casing. Strong supply.
34	80	<u>d/</u>	C, V	D, S	do.	Do.
35	--	--	C, V	D, S	do.	Strong supply.
36	36.3	Oct. 8, 1936	C, V	D, S	In valley	Steel casing.
39	120	<u>d/</u>	C, V	D, S	Ridgetop	Do.
42	--	--	None	N	--	Oil test. Drilled by H. A. Ellis. See log.

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

d/ Water level reported.

e/ No water sample collected for analysis.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measurement point above ground (ft.) ±
44	9½ miles northwest	Luis Manchaca	L. T. Urbanczyk	1923	140	4	---
45	do.	do.	J. W. Mzyk	1914	160	4	---
47	10 miles northwest	do.	J. W. Culpepper	1903	230	5	---
48	do.	do.	V. T. Moczygemba	1908	266	5	---
49	9 miles northwest	do.	E. B. Chandler	1913	150	6	---
52	6½ miles northwest	do.	L. T. Moczygemba	1894	100	6	0.6
53	do.	Don Erasmo Seguin	R. J. Palasek	1907	80	6	---
54	6 miles northwest	do.	do.	1907	75	6	---
55a	do.	Luis Manchaca	Vincent Labus	1915	132	5	0.5
59	5 miles northwest	do.	A. W. Dziuk	1906	135	6	---
62	5½ miles northwest	Andres Hernandez	Peter Manka	--	100	5	2
64	6 miles northwest	do.	Louis Moczygemba	--	--	--	--
65	6½ miles northwest	do.	Louis Pawelek	1921	170	5	---
66	7½ miles northwest	do.	Ed Kyrish	1929	106	--	1
67	8 miles northwest	do.	Joe Zarzambek	1913	169	6	---
68	9½ miles northwest	do.	A. Zarzambek	1926	270	6	1
73	12 miles north	do.	Ed Olynick	--	--	6	0.7
74	10 miles north	do.	Richard Krawietz	1910	200	6	0.5
75	9½ miles north	do.	W. H. Winkler	1917	240	4¼	---
77	8 miles north	do.	Jno. Mzyk	--	80	4	1.5
78	do.	do.	John Camber	1894	65	36	2.3
79	do.	do.	Pete Pilarczyk	--	110	5	1.5
80	7 miles north	do.	do.	1924	110	6	1
82	6 miles north	do.	Jno. T. Brysch	1908	91	6	1
84	6½ miles north	do.	David Banduch	1913	111	6	0.5
85	8 miles north	Alex F. Mitchell	Frank Pawelek	1926	150	6	---
86	do.	do.	do.	1916	--	6	0

E. L. Marek, Davis Drow, and G. H. Shafer, Project Superintendents

No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
44	60	d/	C,W	--	Hillside	Steel casing.
45	60	d/	C,V	--	Ridgetop	Do.
47	80	d/	C,W	S	do.	Steel casing. Strong supply.
48	120	d/	C,W	S	do.	Steel casing.
49	110	d/	C,V	S	do.	Do.
52	88.6	Nov. 13, 1936	C,W	D,S	do.	Do.
53	50	d/	C,V	D,S	Valley flat	Do.
54	50	d/	C,G,4	Ind	do.	Do.
55a	71.8	Nov. 13, 1936	C,V	D,S	Ridgetop	Steel casing. Strong supply.
59	45	d/	C,W	D,S,I	do.	10-inch steel casing, 0-40 feet, 6-inch steel casing, 40-155 feet.
62	83.7	Nov. 13, 1936	C,V	D,S	Head of draw	Trough iron casing.
64	--	--	C,V	D,S	Ridgetop	
65	120	d/	C,W	D,S	Hilltop	Steel casing.
66	72.1	Nov. 14, 1936	C,W	D,S	Creek valley	Strong supply.
67	110	d/	C,V	S	Hilltop	Steel casing. Strong supply.
68	64.8	Nov. 16, 1936	C,V	S	Hillside	Do.
73	53.2	Nov. 14, 1936	C,V	S	do.	Do.
74	54.5	do.	C,W	D,S	do.	Do.
75	45	d/	C,W	D,S	Ridgetop	Owner reports first water at 150 feet.
77	58.2	Nov. 14, 1936	C,V	S	do.	Steel casing.
78	32.3	do.	C,H	D,S	Hillside	Dug well, 0-55 feet; rock curb and casing. Bored well, 55-65 feet. Strong supply.
79	37.4	do.	C,V	D,S	Ridgetop	Steel casing. Owner reports fails in drought.
80	44	Nov. 13, 1936	C,H	D,S	do.	Steel casing.
82	75.3	do.	C,V	D,S	Head of valley	Do.
84	38	Nov. 18, 1936	C,W	D,S	Ridgetop	Steel casing. Strong supply.
85	30	d/	C,W	S	do.	Do.
86	61.3	Nov. 17, 1936	None	N	do.	

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measurement point above ground (ft.)
87	8 $\frac{1}{2}$ miles north	N. Navarro	San Antonio Joint Stock and Land Bank	1926	274	4	---
88	9 $\frac{1}{2}$ miles north	Pedro Herrera	Henry Broll	1927	181	4	---
89	9 miles north	J. Baker	Alex Gawlik	--	100	5	0.9
90	10 $\frac{1}{2}$ miles north	Fernando Carrillo	Frank Felux	1924	120	6	---
92	do.	do.	John A. Pawelek	1870	63	40	0.3
94	11 miles north	Maria Ignacio Leal	J. M. Lyssey	1928	200	4	---
95	do.	do.	Mrs. Henry Kotara	1906	125	4	1
98	12 miles north	do.	Ben A. Moczygerba	1915	--	4	--
99	11 miles north	Fernando Carrillo	Jerome Pawelck	--	150	4	--
100	10 $\frac{1}{2}$ miles north	Joseph Curtis	M. Wishert	--	150	4	1
101	10 miles north	Francisco Mondiola	Alex Kotara	1928	212	4 $\frac{1}{2}$	1.2
103	9 miles north	Jesus Hernandez	J. W. Bauer	--	--	4	0
104	10 miles north	do.	C. D. Gilley	1916	117	5	1
105	11 miles north	Wm. Twomey	Robert Harper	--	100	6	0.2
106	12 miles north	Geo. W. Rounds	J. W. Rzappa	--	100	6	1.8
e/107	13 miles north	do.	Edna Hyatt	--	80	--	---
108	14 miles north	D. W. Isbell	L. S. Hyatt	1901	65	4	0.3
e/109	13 $\frac{1}{2}$ miles north	Geo. W. Rounds	A. W. Hyatt	1924	1,150	10	--
110	do.	do.	do.	1890	200	4	---
114	14 $\frac{1}{2}$ miles north	A. D. Orr	Hyatt School	1934	240	4 $\frac{1}{2}$	0.5
115	do.	W. Boatwright	H. May	1924	138	4	--
116	18 miles north	C. Denmar	Mrs. J. M. Golson	--	270	4	---
119	18 $\frac{1}{2}$ miles north	T. K. Wheeler	Martindale Loan Co.	--	153	4	0.3
120	17 miles north	do.	E. J. Schneider	--	200	4	---
121	17 miles northeast	Jno. Nesbit	Modern Garage	1927	165	4	--
122	do.	do.	J. A. Nelson	--	180	4	1.5
125	16 miles northeast	V. M. Hunter	A. N. Marrou	1931	325	4 $\frac{1}{2}$	0.7

E. L. Marek, Davis Brown, and G. H. Shafer, Project Superintendents

No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
87	40	<u>d/</u>	C,W	S	Ridgetop	Wrought iron casing. Strong supply.
88	30	<u>d/</u>	C,W	D,S	Hillside	Steel casing.
89	71.3	Nov. 19, 1936	C,T	S	River flat	Steel curb and casing.
90	30	<u>d/</u>	C,T	S	Hillside	Steel casing.
92	36.8	Nov. 19, 1936	C,W	D,S	Ridgetop	Dug well. Rock curb and casing. Strong supply.
94	30	<u>d/</u>	C,W	S	do.	Wrought iron casing.
95	47.2	Nov. 19, 1936	C,W	S	do.	Do.
98	110	<u>d/</u>	C,W	S	Hillside	Do.
99	--	--	C,H	S	Ridgetop	Do.
100	72.6	Dec. 15, 1936	C,W	S	Hillside	Wrought iron casing. Strong supply.
101	88.2	Nov. 17, 1936	C,W	S	Ridgetop	Steel casing. Strong supply.
103	90	do.	C,W	S	do.	Wrought iron casing.
104	31.9	Dec. 16, 1936	C,G,2	S	do.	Steel casing. Strong supply.
105	44.5	do.	C,W	S	do.	Steel casing.
106	29	Dec. 15, 1936	C,W	S	Valley flat	Do.
107	5	<u>d/</u>	None	S	do.	
108	27.9	Dec. 15, 1936	C,W	D,S	do.	Wrought iron casing. Strong supply.
109	--	--	None	--	do.	Oil test. Steel casing. Owner reports flowing water was found at 400-600 feet.
110	140	<u>d/</u>	C,W	D,S	Ridgetop	Wrought iron casing. Strong supply. See log.
114	94.5	Dec. 14, 1936	C,W	D	do.	Wrought iron casing.
115	100	<u>d/</u>	C,T	S	do.	Wrought iron casing. Owner reports water in blue sand.
116	65	<u>d/</u>	C,W	D,S	Level land	Wrought iron casing.
119	116	Mar. 17, 1937	C,W	S	Hillside	Wrought iron curb and casing.
120	55	<u>d/</u>	C,W	D,S	--	Wrought iron casing.
121	100	<u>d/</u>	C,W	D,S,P	Level land	Owner reports 6 joints 4-inch wrought iron casing in hole. Drilled by J. M. McCuller
122	34.3	Mar. 17, 1937	C,W	Ind	Near Creek bed	Wrought iron casing. Strong supply.
123	24	Jan. 6, 1937	C,H	--	Level land	Wrought iron casing.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
126	15 miles northeast	Jno. F. Miller	W. D. Wiley	1910	190	4 $\frac{1}{2}$	0.5
128	14 $\frac{1}{2}$ miles northeast	do.	Walter Riedel	--	--	4 $\frac{1}{2}$	0.5
130	14 miles northeast	do.	R. F. Rehmet	--	--	4	--
131	15 miles northeast	do.	Mrs. Otto Mischer	1901	180	4	1.5
133	14 $\frac{1}{2}$ miles northeast	do.	W. G. Riedel	--	--	--	--
134	15 $\frac{1}{2}$ miles northeast	do.	Albert Triebig	--	--	4 $\frac{1}{2}$	1.8
135	16 $\frac{1}{2}$ miles northeast	do.	R. Manthrey	--	--	5	2
136	17 miles northeast	W. M. Huber	S. F. Austin	1911	140	4	0
137	do.	do.	R. H. Metz	--	176	4	0
138	do.	do.	M. A. Zint	--	200	6	1.1
139	18 miles northeast	do.	Henry Parke	1920	280	--	0
140	do.	do.	M. A. Caraway	1928	160	4	--
141	18 $\frac{1}{2}$ miles northeast	W. W. Gant	Emil Meyer	--	104	5	0.3
143	20 miles northeast	J. H. Brown	Martina Pena	1928	120	--	--
144	do.	Lewis Lindsey	A. Hilscher	1933	127	4	1
146	20 $\frac{1}{2}$ miles north	M. F. Roberts	T. Russell	--	97	4 $\frac{1}{2}$	0.3
148	21 $\frac{1}{2}$ miles northeast	James W. Fannin	W. F. Hall	1909	265	4	1.8
149	19 $\frac{1}{2}$ miles northeast	J. Du Pong	Steve Ploch	--	135	4	0
150	20 miles northeast	E. K. Neyland	C. G. Duke	1915	165	4	1.5
152	21 miles northeast	James W. Fannin	Jim Holstein	1910	--	3	0.5
153	22 miles northeast	do.	Dr. W. A. Elder	1902	140	4	1
154	do.	Thomas P. Crosby	Horner Dennings	--	225	4	--
155	21 $\frac{1}{2}$ miles northeast	do.	C. L. Lambert	1900	212	4	--
156	21 miles northeast	David Taylor	T. J. Asher	1915	93	4	1
157	20 $\frac{1}{2}$ miles northeast	do.	F. P. Cobb	1920	105	4	1.5

c/ Measuring point was usually top of casing, top of pump base, or top of well curb.
 u/ J, cylinder; B, bucket; E, electric; G, gasoline engine; W, windmill; H, hand; T, turbine; S, steam; number indicates horsepower.

E. L. Marek, Davis Crow, and G. H. Shafer, Project Superintendents

No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
126	39.7	Jan. 6, 1937	C,7	S	Hillside	Wood clamp curb; wrought iron casing. Strong supply.
128	61.1	do.	C,7	S	Ridgetop	Concrete base curb; wrought iron casing. Strong supply.
130	--	--	C,7	S	do.	Wrought iron casing.
131	68.5	Jan. 7, 1937	C,7	S	Edge of flat	Brick curb; wrought iron casing. Strong supply.
133	--	--	C,7	S	Slope	
134	83.2	Jan. 7, 1937	C,7	S	do.	Wrought iron casing.
135	82.2	Jan. 6, 1937	C,7	S	Slope to valley	Wrought iron casing. Strong supply.
136	92	Mar. 19, 1937	C,7	S	--	140 feet 4-inch wrought iron casing. Strong supply.
137	70.9	do.	C,7	S	--	Do.
138	61.6	do.	C,7	D,S	--	Wrought iron casing. Strong supply.
139	103.5	do.	C,7	D,S	--	Strong supply.
140	120	d/	J,C, 1½	S	Hillside	140 feet 4-inch wrought iron casing. Strong supply. Drilled by J. McCuller.
141	83	Mar. 19, 1937	J,W	S	--	Wrought iron casing. Strong supply.
143	--	--	C,7	S	--	Steel casing. Strong supply.
144	99.7	Mar. 22, 1937	C,H	D,S	--	Wrought iron casing. Strong supply. Drilled by J. McCuller.
146	74.7	do.	C,W	S	Slope	
148	60.9	do.	C,7	D,S	--	100 feet 4-inch wrought iron casing. Strong supply. Drilled by Ed. Boone.
149	59.8	Mar. 19, 1937	C,7	D,S	Hillside	Wrought iron casing. Strong supply.
150	58	Mar. 12, 1937	C,7	D,S	Gentle slope	Do.
152	50	do.	C,W	D,S	Low flat ridge	81 feet 3-inch wrought iron casing.
153	83.9	Mar. 22, 1937	C,7	D,S	Near top of hill	Wrought iron casing. Strong supply.
154	125	Mar. 1, 1937	C,W	D,S	Gentle slope	Do.
155	60	d/	J,7	D,S	Hilltop	Do.
156	36	d/	J,7	D,S	Gentle slope	10 feet 4-inch wrought iron casing. Owner reports water in fine gray sand, 92-93
157	65	Mar. 12, 1937	J,7	D,S	do.	80 feet 4-inch wrought iron casing. feet.

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

c/ Water level reported.

c/ No water sample collected for analysis.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) $\frac{a}{b}$
158	20 miles northeast	I. Armstrong	C. H. F. Metting	1912	273	6	--
159	19 miles northeast	do.	D. R. Cross	--	226	6	--
160	18 $\frac{1}{2}$ miles northeast	N. Reed	Minnie H. Bryan	--	220	4	0
162	17 miles northeast	R. Ripley	Fritz Haase	1927	225	4	--
163	do.	do.	Jean Marrou	--	162	4	0.7
164	15 $\frac{1}{2}$ miles northeast	David Austin	Wm. Menn	--	--	5	--
165	17 miles northeast	John Adriance	Evelyn Rudd	1933	2,026	--	--
166	14 $\frac{1}{2}$ miles northeast	Hugh P. Hammond	F. H. Korth	--	220	4	--
167	13 $\frac{1}{2}$ miles northeast	do.	R. M. Korth	1906	250	5	--
168	13 miles northeast	do.	do.	1906	210	4	0.7
169	13 $\frac{1}{2}$ miles northeast	Wm. G. Evans	Fritz Korth	--	150	5	2.3
170	13 miles northeast	do.	Crews-Korth Merc. Co.	1924	60	4	1
171	13 $\frac{1}{2}$ miles northeast	do.	Ecleto School	1926	50	4	0.5
173	14 miles northeast	do.	S. E. Crews	--	--	--	--
174	13 miles northeast	do.	Mrs. Mary Kerlick	1936	100	4	0.7
175	do.	do.	W. J. Crews	--	200	4	--
177	12 $\frac{1}{2}$ miles northeast	Geo. Voss	B. Garcia	1894	150	--	0.9
179	10 $\frac{1}{2}$ miles northeast	Ramon Musquiz	Mrs. Joseph Yanta	1908	75	4	0.3
180	do.	do.	do.	1936	69	3	0.3
181	11 miles northeast	Jno. McCouilly	Mrs. Sallie Elliott	1923	3,020	10	1
182	do.	Isaac Glover	J. H. Ford	1903	131	4 $\frac{1}{2}$	1
184	12 miles northeast	Wm. G. Evans	S. B. Copeland	1906	123	5	0.6
186	11 miles northeast	J. J. Pickett	Thomas J. Brown	--	--	--	0
188	do.	do.	Ed Jannyseck	1921	233	4 $\frac{1}{2}$	0.5
190	10 $\frac{1}{2}$ miles northeast	do.	J. W. Morawietz	1903	246	--	1.3
191	10 miles northeast	do.	Mike Jannyseck	1906	250	4 $\frac{1}{2}$	1
192	do.	do.	John Jannyseck	1910	219	3	0.3

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No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
158	250	<u>d/</u>	C,W	D,S	Gentle slope	250 feet 6-inch wrought iron casing.
159	120	<u>d/</u>	C,T	D,S	--	Wrought iron casing. Strong supply.
160	130	Mar. 18, 1937	C,T	D,S	--	Do.
162	125	<u>d/</u>	C,T	S	Ridgetop	20 feet 4-inch wrought iron casing. Strong supply.
163	135	Mar. 18, 1937	C,T	S	--	Cement base curb; 180 feet 4-inch wrought iron casing. Strong supply.
164	--	--	C,T	S	Valley flat	Wrought iron casing. Strong supply.
165	--	--	None	N	--	Oil test. Reported altitude, 524.7 feet. See log.
166	213	<u>d/</u>	C,T	D,S	Upland valley	Wrought iron casing. Weak supply.
167	230	<u>d/</u>	C,T	D,S	Ridgetop	Wrought iron casing. Strong supply.
168	33.6	Jan. 5, 1937	C,T	D,S	Wide valley flat	Do.
169	32.8	do.	C,T	D,S	Slope	Wrought iron casing.
170	39.9	do.	C,G, 1 1/2	D	Creek bank	Do.
171	35.9	do.	C,T	D	do.	Wrought iron casing. Strong supply.
173	--	--	C,T, G,2	S	Ridgetop	
174	47.8	Jan. 5, 1937	C,T	D,S	Hillside	Wrought iron casing.
175	--	--	C,T	D,S	Ridgetop	do.
177	66	Jan. 8, 1937	C,T	S	do.	Weak supply.
179	68.9	Dec. 16, 1936	C,W	S	Low ridgetop	Wrought iron casing.
180	59.5	do.	C,W	D,S	Hillside	Wrought iron casing. Owner reports water in white sand.
181	39.1	Dec. 18, 1936	None	N	Creek bottoms	Oil test. 250 feet 10-inch steel casing. See log.
182	75.1	Dec. 17, 1936	C,T	D,S	Ridgetop	Concrete curb; wrought iron casing. Weak supply.
184	99.8	Dec. 18, 1936	C,T	D,S	do.	Wrought iron casing. Weak supply.
186	65.5	Dec. 17, 1936	C,H	D,S	Slope to valley	
188	78.3	Jan. 4, 1937	C,T	D,S	Ridgetop	110 feet 4 1/2-inch wrought iron casing. 3 1/2-inch wrought iron casing, 110-233 feet
190	63.3	do.	C,W	D,S	Valley	
191	68	Dec. 18, 1936	C,W	D,S	Ridgetop	Concrete curb; wrought iron casing. Strong supply. Owner reports water at 67, 93,
192	71.3	Jan. 4, 1937	C,W	D,S	do.	Wrought iron casing. 150 and 250 feet Strong supply.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
194	10 miles northeast	J. J. Pickett	Joe L. Dupnick	1929	84	6	1.5
195	9½ miles northeast	do.	C. I. Sickenies	1929	109	4	0.5
197	8 miles northeast	Ramon Musquiz	Martin Browne	--	--	6	0
198	7½ miles northeast	do.	Jessie Mika	1929	231	4	1.2
200	6 miles northeast	do.	J. E. Motheral	--	100	5	1.5
203	do.	do.	Anton Kruciak	1920	--	4	--
204	5¼ miles north	do.	Paul Mika	1894	204	6	--
206	4½ miles north	Andres Hernandez	Albert Pawelek	--	250	6	2.5
207	4½ miles north	do.	Frank Snoga	1916	250	--	--
209	5 miles north	do.	Ben Pawelek	--	100	5	0.5
212	4¼ miles northwest	do.	Mike Bednorz	--	240	6	--
213	2¾ miles north	Jose Maria Rodriguez	Dr. S. A. King	--	100	5	1.5
214	2¼ miles north	Francisco Ruiz	do.	--	100	--	1
215	2½ miles west	do.	Dallas Joint Stock and Land Bank	--	100	4	2.6
217	4¾ miles northwest	Don Erasmo Seguin	J. H. R. Trial	1903	225	6	--
218	3⅞ miles west	do.	Ed Bueche	1910	200	5	--
219	5 miles west	do.	C. S. E. Henke	1900	300	4	--
221	6½ miles west	do.	Joe Bludau	1914	250	4	--
223	5½ miles west	do.	Anton Hons	1928	206	5½	--
224	do.	R. C. Brushar	Dallas Joint Stock and Land Bank	--	--	4	--
226	5 miles southwest	do.	J. O. Faith	--	200	6	0.5
227	6 miles southwest	do.	John Linhart	1928	315	--	--
228	7 miles southwest	do.	Ed Moeller	1920	156	--	0
229	8 miles southwest	do.	H. L. Smith	--	145	5	--
230	3½ miles west	Willis Ortor	J. H. Davidson	1934	200	6	--
231	3 miles west	do.	Tom Gedion	--	180	6	--
233	9 miles west	do.	E. P. Ruhmann	--	150	5	--

No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
194	26.1	Dec. 17, 1936	C, W	D, S	Creek bottoms	Wrought iron casing. Strong supply.
195	49	Jan. 4, 1937	C, W	D, S	Hillside	Wrought iron casing. Owner reports water at 24, 60, and 109 feet.
197	68.4	Dec. 18, 1936	C, W	D, S	Creek bottoms	Wrought iron casing. Strong supply.
198	86.6	Dec. 16, 1936	C, W	D, S	Hillside	Wrought iron casing. Owner reports water in white sand. Reported water at 85 and
200	37.7	Nov. 18, 1936	C, W	D, S	In valley	Wrought iron casing. 150 feet. Strong supply.
203	80	do.	C, W	D, S	Ridgetop	Wrought iron casing. Strong supply.
204	40	<u>d/</u>	C, W	D, S	do.	Do.
206	47	Nov. 12, 1936	C, W	D, S	do.	Dug well, 0-54 feet; bored well 54-250 feet.
207	--	--	C, G, 4	D, S	do.	Strong supply.
209	30.4	Nov. 13, 1936	C, H	--	Hillside	Wrought iron casing.
212	60	<u>d/</u>	C, W	D, S	Ridgetop	Wrought iron casing. Strong supply.
213	67.8	Feb. 3, 1937	C, W	S	Ridgetop near river	Concrete base curb; 5-inch wrought iron casing.
214	71	do.	C, W	D, S	River bottoms	Strong supply.
215	76.6	Dec. 8, 1936	C, W	D, S	Hillside	Wrought iron casing.
217	40	<u>d/</u>	C, W	D, S	do.	Strong supply.
218	110	<u>d/</u>	C, W	D, S	Ridgetop	Wrought iron casing. Strong supply.
219	100	<u>d/</u>	C, W	D, S	do.	Wrought iron casing. Weak supply.
221	80	<u>d/</u>	C, W	D, S	do.	Do.
223	--	--	C, W	D, S	do.	
224	--	--	C, W	D, S	do.	Wrought iron casing.
226	94.1	Feb. 6, 1937	C, W	D, S	do.	Strong supply.
227	--	--	C, W	D, S	do.	Do.
228	100	Feb. 5, 1937	C, W	D, S	Hillside	Do.
229	110	<u>d/</u>	C, W	S	do.	Wrought iron casing.
230	--	--	C, W	D, S	Ridgetop	Do.
231	130	<u>d/</u>	C, W, & G, -	D, S	do.	Do.
233	110	<u>d/</u>	C, W	D, S	Hillside	Do.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) ^{a/}
e/234	10 miles west	Willis Orton	Martindale Motor Co.	1914	98	12	--
235	9 $\frac{1}{2}$ miles west	do.	F. J. Scholz	1921	380	6	--
237	9 miles southwest	Nick Griffith	R. J. Polasek	1926	150	6	--
238	10 miles southwest	Nat Allen	W. C. Ryan	1906	160	4 $\frac{1}{2}$	--
239	11 $\frac{1}{2}$ miles west	Bartlett Hickman	Pete Danysh	1935	146	3	--
240	11 $\frac{1}{2}$ miles southwest	Jas. H. Cox	Oscar Killiner	--	100	5	2
241	13 $\frac{1}{2}$ miles southwest	John Glover	Frank Jonas	1917	172	6	--
242	11 $\frac{1}{2}$ miles southwest	Jas. H. Cox	N. H. Goodman	--	--	6	0
243	12 miles southwest	Karnes Co. School Land	T. G. Butler	1922	210	6	--
244	9 miles southwest	Henry S. Brown	Herbert Wiegand	1933	116	5	0.2
245	8 $\frac{1}{2}$ miles southwest	do.	C. T. Roberts	1926	335	6	--
247	9 $\frac{1}{2}$ miles southwest	do.	W. E. Lamb	1936	206	6	--
248	8 miles southwest	James Bradberry	Mrs. Minna Best	1926	446	5 $\frac{3}{4}$	--
250	7 miles southwest	do.	-- Daugherty	--	--	4	--
251	do.	do.	Adolph Haner	1907	265	6	--
252	7 $\frac{1}{2}$ miles southwest	do.	F. Klingemann	--	365	6	0
253	8 $\frac{1}{2}$ miles southwest	do.	Fritz Farre	1911	193	6	0.2
254	9 $\frac{1}{2}$ miles southwest	Henry S. Brown	Valentine Pavelek	--	100	5	--
256	9 miles southwest	James Prest	H. E. Ladewig	--	--	4 $\frac{1}{2}$	--
257	9 $\frac{1}{2}$ miles southwest	do.	R. Hoffmann	1926	356	6	--
258	9 miles southwest	do.	E. W. Rudolph	1926	150	42	--
e/259	do.	do.	J. H. Thiel	1908	345	5	--
260	10 $\frac{1}{2}$ miles southwest	do.	Wm. Esse	1920	300	5	--
261	do.	J. D. Barnes	A. S. Conrad	1929	165	6	--
262	11 miles southwest	M. Grace	Wm. Esse	1931	58	5	1.5

a/ Measuring point was usually top of casing, top of pump base, or top of well curb.
b/ C, cylinder; B, bucket; E, electric; G, gasoline engine; W, windmill; H, hand; T, turbine; S, steam; number indicates horsepower.

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No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
234	--	--	C, 7	--	In valley	Steel casing. Owner reports original depth 2,000 feet as oil test, later filled to 98 feet. Reported flowing water at
235	200	<u>d/</u>	C, 7	D, S	Flat ridgetop	Strong supply. 700 feet when drilled.
237	--	--	C, S	D, Ind	In valley	Owner reports first water at 100 feet.
238	120	<u>d/</u>	C, 7	D, S	Ridgetop	Wrought iron casing. Strong supply.
239	95	<u>d/</u>	C, 7	D, S	do.	Wrought iron casing.
240	49.5	Feb. 11, 1937	C, 7	D, S	In valley	Do.
241	130	<u>d/</u>	C, 7	S	Hillside	Wrought iron casing. Strong supply. Located in Atascosa County.
242	63.2	Feb. 11, 1937	C, 7	S	Low ridgetop	Wrought iron casing.
243	160	<u>d/</u>	C, 7	D, S	do.	Do.
244	85.4	Feb. 5, 1937	C, 7	S	In valley	20 feet 5-inch wrought iron casing. Owner reports seep water at 100 feet.
245	35	<u>d/</u>	C, 7	D, S	Ridgetop	70 feet 6-inch wrought iron casing. Owner reports water in clear white sand. Report
247	135	<u>d/</u>	C, 7	D, S	Ridgetop	Wrought iron casing, <u>ed</u> clay at 80 feet. 0-4 feet. Weak supply.
248	140	<u>d/</u>	C, 7	D, S	do.	Wrought iron casing. Strong supply.
250	--	--	C, 7	D, S	Slope	Wrought iron casing.
251	--	--	C, 7	D, S	Ridgetop	Strong supply.
252	96.5	Feb. 9, 1937	C, 7	D, S	do.	Wrought iron casing.
253	96.5	do.	C, 7	D, S	do.	
254	--	--	C, 7	D, S	do.	Wrought iron casing.
256	--	--	C, 7, & G, 2	--	do.	Do.
257	--	--	C, 7	D, S	Hilltop	Strong supply.
258	22.6	Feb. 9, 1937	C, 7	S	In valley	Dug well, 0-75 feet, concrete casing; bored well, 75-150 feet, with 4-inch
259	245	<u>d/</u>	C, 7	N	Hillside	Wrought iron casing, wrought iron casing. Owner reports bitter taste.
260	--	--	C, 7	S	Ridgetop	Wrought iron casing.
261	135	<u>d/</u>	C, 7	S	do.	Wrought iron casing. Strong supply.
262	57.2	Feb. 10, 1937	C, 7	S	In valley	Wrought iron casing.

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

d/ Water level reported.

e/ No water sample collected for analysis.

Records of wells and springs in Karnes County--Continued

o.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.)
263	12 $\frac{1}{2}$ miles southwest	Elijah H. Garrett	Harry Youngquist	--	390	--	--
264	11 miles southwest	M. Grace	Alfred Anderson	1925	400	6	--
265	7 miles south	Britton Odum	Philip Buegeler	1930	318	4	--
266	6 $\frac{1}{2}$ miles south	do.	J. W. Ruckmann	--	--	4	--
267	6 miles south	do.	Sons of Herman Lodge	1901	200	5	--
268	8 miles southwest	do.	S. E. Crews, Sr.	1929	92	30	2.3
270	5 $\frac{1}{2}$ miles south	Jackson Davis	L. Stieren	--	--	4	--
272	5 $\frac{1}{2}$ miles southwest	Jacob Oberly	Mrs. B. E. Peach	1915	105	5	0.5
273	6 miles southwest	do.	do.	1916	275	--	--
274	6 $\frac{1}{2}$ miles southwest	James Bradberry	A. J. Rippstein	1911	375	3	--
275	5 miles southwest	A. D. Combs	Henry Lieke	--	--	6	--
276	4 $\frac{3}{4}$ miles southwest	do.	Louis Grimm	1906	355	4	--
277	4 $\frac{1}{4}$ miles southwest	A. Arocha	Tito Guerrero	1890	155	6	--
279	5 miles southwest	Wm. Dixon	G. M. Jauer	1906	481	5 $\frac{1}{2}$	--
281	3 $\frac{1}{2}$ miles southwest	Francisco Ruiz	Max Otto	1912	185	5	--
282	do.	Daniel Buckley	Aug. Zaeske	1901	383	4 $\frac{1}{2}$	--
283	3 $\frac{1}{4}$ miles southwest	do.	Max Otto	1890	130	6	--
285	2 $\frac{1}{2}$ miles south	J. Smith	F. Bruns	1894	160	4	--
287	3 $\frac{1}{4}$ miles south	Daniel Buckley	E. F. Wellhoefer	--	200	6	2
289	4 $\frac{1}{2}$ miles southwest	Jackson Davis	C. W. Moody	--	--	--	--
290	5 miles south	B. H. Duval	J. A. Smith	--	265	4 $\frac{1}{2}$	--
291	do.	do.	J. T. Hailey	--	Spring	--	--
292	6 $\frac{1}{2}$ miles south	do.	O. J. Mudd	--	--	4	0.2
293	5 $\frac{1}{2}$ miles south	do.	G. C. Ruhman	--	100	4	0
295	4 $\frac{1}{2}$ miles south	Isaac Ticknor	W. T. Courson	--	400	5	--
297	4 miles southeast	Jas. W. Looney	Mrs. Ethyl Hysaw	1920	365	--	--
299	3 $\frac{1}{2}$ miles southeast	Hugh M. Swift	Aug. Kaiser	--	--	--	--

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c.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
263	--	--	C,W	S	Upland	Weak supply.
264	250	<u>d/</u>	C,W	S	Hillside	Wrought iron casing. Strong supply. Owner reports weak supply at 200 feet.
265	160	<u>d/</u>	C,W	D,S	do.	Wrought iron casing. Strong supply. Owner reports first water at 150 feet.
266	--	--	--	--	In valley	
267	--	--	C,W	S	--	Wrought iron casing. Strong supply.
268	93.8	Feb. 6, 1937	C,W	D,S	In valley	Dug well. Tile curb and casing. Owner reports water in packed sand.
270	--	--	C,W	D,S	Ridgetop	Wrought iron casing.
272	94.9	Feb. 8, 1937	C,W	D,S	Hillside	Do.
273	100	<u>d/</u>	C,W	D,S	Ridgetop	Strong supply.
274	100	<u>d/</u>	C,W	D,S	do.	Wrought iron casing. Owner reports first water at 228 feet.
275	--	--	C,W	D,S	--	Wrought iron casing.
276	255	<u>d/</u>	C,W	D,S	Hillside	Wrought iron casing. Weak supply.
277	120	<u>d/</u>	C,W	S	Valley flat	Wrought iron casing.
279	99	<u>d/</u>	C,W	D,S	Hillside	176 feet 5 $\frac{1}{2}$ -inch wrought iron casing.
281	135	<u>d/</u>	C,W	D,S	Ridgetop	Wrought iron casing. Strong supply.
282	283	<u>d/</u>	C,W	D,S	Hillside	Wrought iron casing. Weak supply.
283	115	<u>d/</u>	C,W	S	Ridgetop	Weak supply.
285	152	<u>d/</u>	C,W	D,S	Hillside	Wrought iron casing. Strong supply.
287	85.6	Feb. 8, 1937	C,W	S	Ridgetop	Wrought iron curb and casing. Strong supply.
289	--	--	C,W	--	In valley	
290	125	<u>d/</u>	C,W	D,S	Hillside	Wrought iron casing.
291	Flows	Feb. 25, 1937	None	D,S	do.	Estimated flow, 1 gallon a minute.
292	88.2	do.	C,W	S	Low ridgetop	Wrought iron casing. Strong supply.
293	80	do.	C,W	D,S	Ridgetop	Wrought iron casing.
295	200	<u>d/</u>	C,W	D,S	Low ridgetop	Wrought iron casing. Strong supply.
297	215	<u>d/</u>	C,W	D,S	Hillside	Strong supply.
299	--	--	C,W	D,S	do.	Weak supply.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) and
300	2 $\frac{3}{4}$ miles south	J. Poitevent	Fritz Seeger	1920	100	5	2.5
301	2 $\frac{1}{2}$ miles south	do.	do.	1906	140	5	--
302	3 miles south	Isaac Ticknor	John Jones	--	--	6	2.6
303	2 $\frac{1}{4}$ miles south	J. Poitevent	Fritz Seeger	1934	3,000	10	0
304	1 $\frac{3}{4}$ miles south	Jose Antonio Leal	R. J. Ahrens	1911	265	5	--
306	1 $\frac{1}{2}$ miles south	do.	L. F. Jauer	1910	244	5	--
307	1 mile south	do.	J. T. Mitchell	1914	265	6	--
309	1 $\frac{1}{4}$ miles southwest	Francisco Ruiz	L. W. Stieren	1900	--	--	--
310	In Karnes City	--	City of Karnes City	1922	860	10	--
311	do.	--	do.	1922	860	12	--
313	$\frac{1}{4}$ mile north	Jose Antonio Leal	Mrs. G. F. Rzeppa	--	--	3	--
315	1 $\frac{3}{4}$ miles north	do.	Mrs. E. Sahm	1934	124	5	2
316	3 miles northeast	Antonio Lombardo	J. B. Cannon	1934	1,768	10	--
317	4 $\frac{1}{4}$ miles northeast	Alex Hunter	R. L. Barnett	1936	2,250	8	0
319	4 $\frac{3}{4}$ miles northeast	Peter S. Elliot	H. B. Armstrong	1910	--	--	--
321	1 mile southeast	Isaac Clover	B. Huckle	1911	200	4	--
322	1 $\frac{1}{2}$ miles southeast	do.	L. A. Blackwell	1905	175	4	--
324	1 $\frac{3}{4}$ miles southeast	Andres Soto	Annie Bailey	--	150	4	0.8
327	2 miles southeast	J. Poitevent	B. J. Brown	--	100	6	2.7
328	2 $\frac{1}{2}$ miles southeast	do.	Nicholes National Bank	--	150	4	--
329	3 $\frac{1}{2}$ miles southeast	Louis Marcy	E. E. Haverlah	--	100	4	1
330	4 $\frac{1}{4}$ miles southeast	Wm. M. Lewis	J. Hoffman	--	100	4 $\frac{3}{4}$	0.6
331	4 $\frac{1}{2}$ miles east	John B. Dupree	Mrs. R. E. Holmes	1915	--	3	--
332	5 miles east	do.	C. H. Merritt	1936	100	6	0.9
334	3 $\frac{3}{4}$ miles east	Louis Marcy	Drought & Co.	1925	105	4	1.5
335	3 $\frac{1}{2}$ miles east	do.	Mrs. Edna Wicks	1915	150	4	--
337	3 $\frac{1}{2}$ miles east	Andres Soto	J. M. Elder	--	150	6	0.4

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o.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
300	70.8	Feb. 12, 1937	C,W	D,S	Ridgetop	Wrought iron casing. Owner reports gravel and quicksand at 25 feet.
301	130	<u>d/</u>	C,W	D,S	Low ridgetop	Wrought iron casing.
302	77.4	Feb. 12, 1937	C,W	D,S	Creek valley	Do.
303	14.7	Feb. 15, 1937	None	N	Hillside	Oil test. 10-inch steel casing.
304	150	<u>d/</u>	C,W	D,S	Ridgetop	Wrought iron casing. Strong supply.
306	144	<u>d/</u>	C,W	D,S	do.	Do.
307	--	--	C,W	D,S	do.	Do.
309	--	--	C,W	S	Ridgetop	Strong supply.
310	195	<u>d/</u>	C,E, 20	P	--	Steel casing. Estimated yield, 55 gallons a minute.
311	135	<u>d/</u>	C,E, 20	P	--	Do.
313	--	--	C,W	S	Ridgetop	Wrought iron casing.
315	95.5	Feb. 3, 1937	C,W	D,S	Near top of ridge	Wrought iron casing. Strong supply.
316	--	--	None	N	--	Oil test. Drilled by Webster Oil and Gas Co. See log.
317	1.2	Nov. 18, 1936	None	N	River bottoms	Oil test. Steel casing. Owner reports well formerly flowed.
319	--	--	--	--	Valley flat	Strong supply.
321	150	<u>d/</u>	C,W	S	Hillside	Wrought iron casing. Strong supply.
322	130	<u>d/</u>	C,W	D,S	do.	Do.
324	97.3	Feb. 17, 1937	C,W	D,S	Ridgetop	Do.
327	73.7	Feb. 12, 1937	C,W	D,S	do.	Do.
328	125	Feb. 23, 1937	C,W	D,S	do.	Wrought iron casing.
329	71.2	do.	C,W	D,S	In valley	Do.
330	67.2	do.	C,W	D,S	Hillside	Do.
331	--	--	C,W	D,S	Ridgetop	Do.
333	83.9	Feb. 23, 1937	C,W	D,S	Low ridgetop	Do.
334	86.6	Feb. 17, 1937	C,W	D,S	Ridgetop	Do.
335	120	<u>d/</u>	C,W	D,S	do.	Do.
337	97.6	Feb. 19, 1937	C,W	D,S	do.	Wrought iron casing. Strong supply.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Weight of measuring point above ground (ft.) $\frac{g}{l}$
338	4 miles east	L. E. Stickney	E. Dittferth	1900	190	4	1.5
339	4 $\frac{1}{2}$ miles east	Thos. C. DeLano	Drought & Co.	--	45	3 $\frac{1}{2}$	1.5
341	5 miles east	do.	W. T. Rhode	--	140	6	--
342	5 miles northeast	Andres Soto	Mrs. John Elder	1910	134	5	0
344	6 miles northeast	Ramon Musquiz	H. A. Neal	1911	80	5	1.2
346	do.	do.	R. E. Nickell	1890	77	5	0.8
347	do.	do.	Frank Winerich	--	83	40	0.7
348	6 $\frac{1}{2}$ miles northeast	do.	L. H. Brown	1894	155	5	--
349	7 $\frac{1}{2}$ miles northeast	do.	T. O. Neal	--	100	5 $\frac{1}{2}$	--
352	9 $\frac{1}{2}$ miles northeast	J. J. Pickett	Leo Kruciak	1936	199	5	0.6
355	10 miles northeast	W. C. Bullock	Mrs. J. W. Ruckman	--	250	5	--
358	10 $\frac{1}{2}$ miles northeast	Ramon Musquiz	T. R. Jannyseck	1906	85	4 $\frac{1}{2}$	1.5
359	11 miles northeast	Neil McLane	C. S. Smith	1900	143	5	--
360	do.	do.	do.	1926	180	4 $\frac{1}{2}$	--
361	10 miles northeast	Ramon Musquiz	L. W. Stieren	--	100	5	0.5
362	9 miles northeast	do.	D. B. Bowden	--	100	5	2.5
363	6 miles northeast	do.	R. E. Nickell	1884	80	8	0
365	7 miles northeast	do.	Margaret Ruckman	1880	200	6	--
366	10 $\frac{1}{2}$ miles northeast	Neil McLane	D. B. Bowden	1911	126	4	--
367	10 $\frac{1}{8}$ miles east	do.	J. W. Zezula	1901	158	5	--
369	7 miles east	Ramon Musquiz	Hester Ruckman	--	100	4	--
371	7 $\frac{1}{2}$ miles east	do.	San Antonio Joint Stock and Land Bank	1906	75	4	1.7
374	10 miles east	John M. White	E. F. Friedle	1906	125	5	1.5
376	12 miles east	Francisco Leal	C. F. Steves	--	200	6	--
377	11 miles east	Robert Kleberg	D. W. Tofford	1895	124	4	--
379	10 $\frac{1}{2}$ miles east	John M. White	Joe Liska	1906	110	4	0.5
381	9 $\frac{1}{2}$ miles east	do.	Grover Keepers	1905	100	5	1.5

E. L. Marek, Davis Crow, and G. H. Shafer, Project Superintendents

o.	Water Level		Pump and power b/ c/	Use of water c/	Topographic situation	Remarks
	Depth below measur- ing point (feet)	Date of measure- ment				
338	92	Feb. 19, 1937	C,7	D,S	Hillside	Wrought iron casing. Strong supply.
339	10.2	Do.	C,H	--	Head of draw	Do.
341	--	--	C,7	D,S	do.	
342	26.1	Feb. 19, 1937	C,7	D,S	Low ridge near river	Wrought iron casing. Strong supply.
344	63.4	Dec. 17, 1936	C,W	D,S	Hillside	Wrought iron casing.
346	65.8	Nov. 18, 1936	C,7	D,S	do.	Wrought iron casing. Strong supply.
347	72.4	do.	C,W	D,S	Near top of ridge	Dug well. Rock curb and casing.
348	12.3	d/	C,7	D,S	Hillside	Wrought iron casing. Strong supply.
349	--	--	C,7	--	do.	Wrought iron casing.
352	47.8	Jan. 2, 1937	C,W	D,S	Slope to valley	Do.
355	--	--	C,W	D,S	Ridgetop	Wrought iron casing. Strong supply.
353	56.4	Jan. 2, 1937	C,W	D,S	Creek valley	Wrought iron casing.
359	80	d/	C,W	D,S	Ridgetop	Do.
360	120	d/	C,W	D,S	Ridge in valley	Wrought iron casing. Strong supply.
361	52.5	Jan. 2, 1937	C,7	D,S	Low ridgetop	Do.
362	45.5	do.	C,7	D,S	In valley	Wrought iron casing.
363	53.2	Nov. 18, 1936	C,7, G,2	D,S	Hillside	Steel casing. Strong supply.
365	160	d/	C,7	D,S	Ridgetop	Wrought iron casing.
366	120	d/	C,7	D,S	Near top of ridge	Wrought iron casing. Strong supply.
367	133	d/	C,7	D,S	Ridgetop	Do.
369	30	d/	C,7	D,S	River bottoms	Wrought iron casing.
371	47.8	Dec. 21, 1936	C,7	D,S	Creek bottoms	Wrought iron casing. Water level measured after pumping 4 hours.
374	74	Dec. 22, 1936	C,W	D,S	Ridgetop	Wood box curb; wrought iron casing.
376	140	d/	C,G, 10	D,S	Hilltop	Wrought iron casing. Strong supply.
377	--	--	C,7	S	do.	Do.
379	36	Dec. 22, 1936	C,W	D,S	Ridgetop	Wrought iron casing.
381	59	do.	C,W	D,S	do.	Wrought iron casing. Strong supply.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <small>±</small>
382	8 miles east	Victoriana Zepeca	T. E. Scoggins	--	51	4	0
383	10 miles east	John H. White	John A. Yanta	--	--	5	0.5
385	9 $\frac{1}{2}$ miles east	Victoriana Zepeca	J. F. Ryan	Old	100	2 $\frac{1}{2}$	--
g/327	10 miles east	do.	P. W. Tom	1930	3,255	--	--
388	11 miles east	--	Central Power & Light Co.	1935	212	10	--
391	12 miles east	Victoriana Zepeca	J. Sullivan	1917	35	4	1
394	14 miles east	I. & G. N. Ry. Co.	H. Sonneborn	1924	150	4	--
395	12 miles east	M. Guthrie	T. H. Young	--	40	40	3.5
396	11 $\frac{1}{2}$ miles east	Victoriana Zepeca	Paul Natho	Old	57	6	--
398	10 $\frac{1}{2}$ miles southeast	Carlos Martinez	A. B. Russel	1927	70	5	1.5
399	9 $\frac{1}{2}$ miles southeast	do.	Geo. Tips	--	70	5	1.2
400	do.	do.	G. D. Boultinghouse	1906	160	4	--
401	8 $\frac{1}{2}$ miles southeast	do.	Geo. Tips	1924	160	5	0
402	7 $\frac{1}{2}$ miles southeast	do.	Mrs. Ruth Ingram	--	100	6	0.6
403	7 $\frac{1}{2}$ miles east	do.	Mrs. B. E. Ruhman	--	--	6	1
404	6 miles southeast	do.	N. R. McClaire	1936	130	--	1.5
405	5 $\frac{1}{2}$ miles southeast	do.	L. W. Lawrence	1918	53	4	0.5
406	do.	do.	W. C. Ryan	--	30	4	2
408	6 miles east	do.	C. J. Strawn	--	75	4	0.5
409	5 $\frac{1}{2}$ miles east	L. W. Burris	W. T. Scarbrough	1916	60	4 $\frac{1}{2}$	2.5
411	4 $\frac{3}{4}$ miles southeast	Carlos Martinez	S. C. Butler	1895	133	4	--
413	5 $\frac{1}{2}$ miles southeast	do.	S. P. R. R. Co.	1915	3,000	10	--

Measuring point was usually top of casing, top of pump base, or top of well curb.
 C, cylinder; B, bucket; E, electric; G, gasoline engine; W, windmill; H, hand; T, turbine; S, steam; number indicates horsepower.

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No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measur- measur- ing point (feet)	Date of measure- ment				
382	24.2	Mar. 7, 1937	C,W	D,S	--	Wrought iron casing. Strong supply.
383	63	Dec. 22, 1936	C,W	S	Ridgetop	Do.
385	80	d/	C,W	D,S	--	Do.
387	--	--	None	N	--	Oil Test. Drilled by Morgan and Ruby. See log.
388	95	d/	T,E, 10	P	--	Reported 12 feet drawdown after pumping 132 gallons a minute for 14 hours. Re- ported pumping level, 121 feet. Supplied City of Runge. Drilled by Layne-Texas Co.
391	21.3	Apr. 5, 1937	C,H	D,S	Slope	Wrought iron casing. See log. Strong supply.
394	70	d/	C,W	D,S	Near top of hill	Do.
395	39	Apr. 5, 1937	C,W	D,S	--	Dug well. Brick curb and casing. Strong supply.
396	--	--	C,W	D,S	Hilltop	Wrought iron casing. Strong supply.
398	51.6	Mar. 2, 1937	C,W	D,S	Low ridge	Wrought iron casing.
399	31.4	do.	C,W	D,S	Level land	Wrought iron casing. Strong supply.
400	143	d/	C,W	D,S	Ridgetop	Do.
401	99	Mar. 2, 1937	C,W	D,S	Near top of ridge	Do.
402	74.6	Feb. 24, 1937	C,W	D,S	Slope	Galvanized tin casing. Strong supply.
403	87.8	do.	C,W	D,S	Ridgetop	Wrought iron casing. Strong supply.
404	34.9	Feb. 24, 1937	C,W	D,S	Hillside	
405	35	Feb. 23, 1937	C,W	D,S	Slope to valley	Wrought iron casing. Strong supply.
406	28.2	do.	C,W	D,S	In valley	Do.
408	26.6	Feb. 17, 1937	C,W	D,S	River bottoms	Do.
409	54.8	do.	C,W	D,S	Bottom land	Do.
411	--	--	C,W	D,S	Ridgetop	Do.
413	Flows	Mar. 30, 1937	None	--	--	10-inch steel casing. 6-inch steel cas- ing set at 2,700 feet. 60 feet brass screen. Estimated flow, 40 gallons a minute. Temperature 128°F. Used locally as mineral water. See log.

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

d/ Water level reported.

e/ No water sample collected for analysis.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) $\frac{a}{b}$
414	6 miles southeast	Carlos Martinez	City of Kenedy	1926	402	16	--
415	do.	do.	do.	1929	419	16	--
416	6 $\frac{1}{2}$ miles southeast	do.	Bill Nickels	--	--	4	1
418	7 miles southeast	do.	Martindale Mortgage Co.	--	--	4	2
419	7 $\frac{1}{2}$ miles southeast	do.	D. E. Cox	--	85	5 $\frac{1}{2}$	0.5
420	8 miles southeast	do.	C. H. Kreneck	1896	110	5	--
421	do.	do.	A. Schroeder	1907	148	4	3
422	9 $\frac{1}{2}$ miles southeast	do.	Union Leader School	1920	120	4	0
424	9 miles southeast	do.	Tom Gates	--	--	4	--
427	10 miles south	do.	Ford F. Gauntt	Old	175	4	0.2
428	8 $\frac{1}{2}$ miles south	do.	Mary Stovall	--	71	--	0.2
429	7 miles southeast	do.	D. L. Schrock	1934	107	4	1
430	6 miles south	do.	Mrs. A. J. Dunn	1923	220	--	0
431	5 miles southeast	do.	W. T. Courson	--	150	--	--
433	5 miles south	do.	--	--	210	4	1.5
435	6 $\frac{1}{2}$ miles south	do.	J. E. McAda	1900	176	4 $\frac{1}{2}$	0.7
436	7 $\frac{1}{2}$ miles south	do.	Otto Boehm	1911	200	6	--
437	8 $\frac{1}{2}$ miles south	do.	Aug. Jackson	--	--	6	--
e/440	do.	do.	E. G. Gillett	1933	2,418	--	--
441	9 miles south	do.	Mrs. H. Johnson	1924	40	4	1.5
442	10 miles south	do.	Martindale Loan Co.	1920	1,100	8	--
443	do.	do.	Mrs. Theo. Johnson	1917	300	5	--
444	11 $\frac{1}{2}$ miles south	do.	J. J. Ponish	1930	270	4	--
445	10 miles south	do.	Carl Fransen	1922	45	4	0.7
446	9 $\frac{1}{2}$ miles south	do.	W. T. Vaughn Est.	1911	140	5	0.2

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No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
414	38	d/	T, E, 20	P	Hilltop	340 feet 16-inch casing. 60 feet screen at bottom. Reported 57 feet drawdown after pumping 400 gallons a minute for 24 hours. Drilled by Layne-Texas Co. See
415	38	d/	T, E, 20	P	do.	340 feet 16-inch casing. Reported Log. 57 feet drawdown after pumping 400 gallons a minute for 24 hours. Drilled by
416	83.7	Mar. 1, 1937	C, W	D, S	Edge of valley	Wrought iron casing. Layne-Texas Co.
418	41.6	Feb. 24, 1937	C, W	D, S	In valley	Do.
419	71.1	Mar. 1, 1937	C, W	D, S	In draw	Wrought iron casing. Strong supply.
420	95	d/	C, W	D, S	Hillside	Wrought iron casing. Owner reports water in quicksand. Strong supply.
421	118.6	Apr. 9, 1937	C, W	D, S	Near top of hill	Strong supply.
422	74.3	Mar. 1, 1937	C, W	D	Slope to creek	
424	---	---	C, W	D, S	Ridgetop	Wrought iron casing.
427	105.7	Apr. 9, 1937	C, W	D, S	--	Strong supply.
428	59.8	do.	C, W	D, S	In draw	Do.
429	61.5	do.	C, W	D, S	Hillside	Wrought iron casing. Strong supply.
430	91.3	Feb. 15, 1937	C, W	S	do.	Strong supply.
431	--	--	C, W	D, S	Creek bank	Weak supply.
433	46.5	Feb. 25, 1937	C, W	S	Creek bottoms	Wrought iron casing.
435	73.1	Feb. 15, 1937	C, W	S	Low ridge	Wrought iron casing. Strong supply.
436	120	d/	C, W	S	Hillside	Wrought iron casing.
437	125	d/	C, W	D, S	Ridgetop	Do.
440	--	--	None	N	--	Oil test. Drilled by W. R. Campbell. Reported altitude, 490 feet. See log.
441	31.1	Feb. 15, 1937	C, W	D, S	Low ridge	Wrought iron casing. Weak supply.
442	340	d/	C, G, 2	D, S	Valley flat	Steel casing. Strong supply.
443	240	d/	C, W	S	Ridgetop	Wrought iron casing.
444	195	d/	C, W	D, S	do.	Wrought iron casing. Strong supply. Located in Bee County.
445	25.7	Feb. 16, 1937	C, W	D, S	do.	Wrought iron casing. Strong supply.
446	33.5	do	C, W	D, S	do.	Do.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a.</u>
447	9 miles south	Carlos Martinez	J. A. Munson	--	--	6	--
448	11 miles south	do.	J. R. Murphy	1935	180	4	1
451	11 miles southeast	do.	J. W. Thames	--	--	4	2
452	11 $\frac{1}{2}$ miles south	do.	W. T. Courson	--	160	4	--
453	12 miles south	do.	F. E. Juchelka	--	210	5	2.8
454	12 $\frac{1}{2}$ miles south	do.	Levin Johnson	1925	106	3 $\frac{3}{4}$	--
455	14 miles south	James Johnson	Ida Herder	--	126	4	0.4
457	15 miles south	do.	D. W. Vickers	1927	49	4 $\frac{3}{4}$	1.9
458	15 miles southeast	B. & B.	J. E. Steed	1914	210	4	2
459	16 miles southeast	L. Navarrete	R. L. Hodges	old	120	6	2
460	do.	B. A. Barroum	Peter Cook	1910	72	4	1.5
462	do.	J. S. Meniffee	N. B. Boultinghouse	1937	80	4	--
463	15 miles southeast	L. Navarrete	Mac Powell	--	82	4	0.5
464	do.	do.	Hayes Roberson	1900	67	5	0.5
465	14 miles southeast	Thomas Harmon	C. J. Overby	1928	158	4	0.5
e/467	13 miles southeast	Chas. Haynes	Ray Bellknap	1935	3,436	7	--
468	12 $\frac{1}{2}$ miles southeast	H. C. Levenhagen	A. M. Korback	--	--	6	1
469	12 miles southeast	do.	Mrs. R. F. Hunt	--	160	4	--
470	10 miles southeast	Carlos Martinez	L. B. Kirkpatrick	1925	125	5 $\frac{1}{2}$	0.2
471	10 $\frac{1}{2}$ miles southeast	do.	T. H. Mienke	--	--	--	0.6
472	do.	do.	C. H. Kroneck	1908	160	4	--
476	11 miles southeast	do.	C. W. Boyce	1900	80	4	0.3
477	do.	do.	Marg. Roeben	--	--	--	1.6
480	11 $\frac{1}{2}$ miles southeast	do.	M. I. Seitze	1906	27	4	0
481	12 miles southeast	do.	Mrs. C. A. Braun	1900	36	6	0
482	12 $\frac{1}{2}$ miles southeast	J. B. Murphy	Miss Myra Hargraves and Mrs. W. E. Braun	1884	38	6 $\frac{1}{2}$	1.5

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No.	Water Level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
447	--	--	C,W	D,S	Near top of ridge	Wrought iron casing.
448	149.1	Apr. 12, 1937	C,W	D,S	--	Wrought iron curb and casing. Strong supply.
451	60	Apr. 9, 1937	C,W, G,-	D,S	--	Strong supply
452	--	--	C,W	D,S	Near hilltop	Wrought iron casing. Strong supply.
453	155.3	Apr. 12, 1937	C,W	D,S	Hillside	200 feet 5-inch wrought iron casing. Strong supply. Drilled by -- Brooms. Owner reports weak supply at 150 feet.
454	96	<u>d/</u>	C,W	D,S	Hilltop	Wrought iron casing. Strong supply.
455	103.4	Apr. 12, 1937	C,W	D,S	Slope	Wrought iron casing. Weak supply.
457	42	do.	C,W	D,S	--	Wrought iron casing. Strong supply.
458	157.7	do.	C,W	D,S	Near top of hill	Wrought iron casing. Strong supply. Drilled by -- Bundrick. Owner reports weak supply at 150 feet.
459	79.5	Apr. 10, 1937	C,W	D,S	Hillside	Wrought iron casing. Strong supply.
460	56	Mar. 10, 1937	C,W	D,S	Low hilltop	Wrought iron casing.
462	60	<u>d/</u>	C,W	D,S	do.	Wrought iron casing. Neighbor reports water in fine gray sand.
463	63.5	Mar. 10, 1937	C,W	D,S	Valley flat	Wrought iron casing.
464	38.5	do.	C,W	D,S	do.	Do.
465	134.8	Apr. 10, 1937	C,W	D,S	Slope	Wrought iron casing. Strong supply.
467	--	--	None	N	--	Oil test. Drilled by Pacific Gas & Fuel Co. Reported altitude, 378.1 feet. See log.
468	97	Mar. 10, 1937	C,W	D,S	Flat hilltop	Wrought iron casing.
469	140	<u>d/</u>	C,W	D,S	Upland	Wrought iron casing. Strong supply.
470	91.2	Mar. 1, 1937	C,W	D,S	Ridgetop	Wrought iron casing.
471	77.9	do.	C,W	D,S	do.	Strong supply.
472	128	do.	C,W	D,S	do.	Wrought iron casing.
476	37	Mar. 2, 1937	C,W	D,S	In valley	Do.
477	88.6	do.	C,W	D,S	Ridgetop	
480	16	Mar. 9, 1937	None	N	In valley	Wrought iron casing.
481	24.5	Mar. 2, 1937	C,W	D,S	Level land	Wrought iron casing. Strong supply.
482	33.1	do.	C,W	D,S	Knoll top	Do.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a.</u>
483	13 miles southeast	Chas. C. Marsh	C. Baker	--	100	5	5
484	12½ miles southeast	H. C. Levenhagen	J. A. Sawey	--	--	8	3
484a	do.	Philip Shekeller	C. Baker	1905	70	4½	3
485	13 miles southeast	Incarnacion Vasquez	D. B. Hunt	1921	101	5	1.5
486	14 miles southeast	do.	Collie Baker	1900	63	--	2
487	do.	do.	R. J. Ahrens	--	63	6	1.5
489	15 miles southeast	L. Navarrete	Jesse McKinney	1930	60	4	0
490	14½ miles southeast	Victor Blanco	Mrs. D. Pargman	--	114	5	1.3
491	17 miles southeast	do.	Frank Davenport	1925	54	4	1
493	17½ miles southeast	Ramon Musquiz	W. J. Porter	--	111	5	2
494	18½ miles east	Maria De Jesus Ybarba	J. F. Taylor	1908	240	5	2
495	18 miles east	Ramon Musquiz	W. E. Porter	--	146	5	0.3
496	do.	Maria De Jesus Ybarba	J. J. Tom Jr.	1934	4,705	13	--
498	do.	do.	O. P. Talk	--	150	4	--
499	17½ miles east	G. Hinds	M. E. Walters	--	93	--	1
500	16 miles east	Victor Blanco	San Antonio Joint Stock and Land Bank	--	90	4	0.3
501	15½ miles southeast	do.	Jeff Porter	--	60	6	1
502	do.	do.	Robt. Sucher	1900	51	3¾	0.8
503	13½ miles southeast	do.	R. A. Boyce	--	86	4	1
506	12 miles southeast	do.	A. W. Mixon	1936	83	4	2
508	13 miles east	do.	George Moore	--	39	5	2
509	13½ miles east	do.	W. J. Schorre	1902	155	3	--
510	14 miles east	do.	P. Dittferth	--	--	--	--
512	do.	do.	School land	--	120	--	--
513	15 miles east	Victor Blanco	J. R. F. Kruse	--	60	--	0.2
514	do.	do.	Steinert Est.	--	--	4	1.3
515	14½ miles east	R. Stitts	Fritz Berkenhoff	Old	65	5	0.5

E. L. Marek, Davis Crow, and G. H. Shafer, Project Superintendents

No.	Water Level		Pump and power	Use of water	Topographic situation	Remarks
	Depth below measuring point (feet)	Date of measurement				
483	81.7	Mar. 2, 1937	C,W	D,S	Ridgetop	Wrought iron casing.
484	64	Mar. 9, 1937	C,W	D,S	Upland	Strong supply.
484a	71	do.	C,G,5	D,S	--	Do.
485	12	Mar. 10, 1937	C,W	D,S	In valley	Wrought iron casing.
486	40	Mar. 11, 1937	C,W,&G, $1\frac{1}{2}$	D,S	River terrace	
487	58	Mar. 10, 1937	C,W	D,S	Flat hilltop	Wrought iron casing.
489	42	Mar. 11, 1937	C,H	D,S	River terrace	Do.
490	12.7	Apr. 7, 1937	C,W	D,S	River bottoms	Wrought iron casing. Strong supply.
491	35.7	Mar. 24, 1937	C,W	D,S	--	Wrought iron casing. Drilled by H. K. Stockton.
493	92.4	Mar. 23, 1937	C,W	D,S	--	Wrought iron casing. Strong supply.
494	128	Mar. 25, 1937	C,W	D,S	Hilltop	Do.
495	142	do.	C,W	D,S	do.	Do.
496	--	--	None	N	--	Oil test. Drilled by California Co. See log.
498	--	--	C,W	D,S	--	Strong supply.
499	63.9	Mar. 25, 1937	C,W	D,S	--	Do.
500	67	Mar. 23, 1937	C,W	D,S	--	Wrought iron casing. Strong supply.
501	32.5	Mar. 24, 1937	C,W	D,S	--	Do.
502	31.7	Apr. 7, 1937	C,W	D,S	Hilltop	Do.
503	38.7	Mar. 26, 1937	C,W	D,S	--	Tile curb; 4-inch wrought iron casing. Strong supply.
506	79.2	do.	C,W	D,S	--	Wrought iron casing. Strong supply.
508	30.6	Apr. 6, 1937	C,W	D,S	--	Do.
509	65	d/	C,W	D,S	--	Drilled by -- Long. Strong supply.
510	--	--	C,W	D,S	--	
512	--	--	C,W	P	--	Strong supply.
513	44.8	Mar. 24, 1937	C,W	S	--	Do.
514	69.7	Mar. 23, 1937	C,W	D,S	Near top of hill	Wrought iron casing. Strong supply.
515	37	do.	C,W	D,S	--	Tile curb; 5-inch wrought iron casing. Strong supply.

Records of wells and springs in Karnes County--Continued

No.	Distance from Karnes City	Survey	Owner	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) <u>a</u>
516	14 $\frac{1}{2}$ miles east	C. J. Rogers	H. A. Schlennstedt	1911	100	4	0.2
518	15 $\frac{1}{2}$ miles east	R. Tumlinson	R. Ammermann	--	89	4	1.5
519	15 miles east	William Oldham	F. Reibschlaeger	1908	112	4	1
520	14 $\frac{1}{2}$ miles east	do.	B. Mueller	1900	100	4	0.5
521	12 $\frac{1}{2}$ miles east	Thomas Uzzell	F. J. Matula	Old	55	4	2
522	12 miles east	Wm. Guthrie	Mrs. Katie Lyons	1900	85	4	--

a/ Measuring point was usually top of casing, top of pump base, or top of well curb.

b/ C, cylinder; B, bucket; E, electric; G, gasoline engine; W, windmill; H, hand; T, turbine; S, steam; number indicates horsepower.

E. L. Marek, Davis Drov, and G. H. Shafer, Project Superintendents

No.	Water Level		Pump and power b/	Use of water c/	Topographic situation	Remarks
	Depth below measur- ing point (feet)	Date of measure- ment				
516	80.8	Mar. 23, 1937	C,7	C,S	Near top of hill	Wrought iron casing. Strong supply. Owner reports hard rock at 100 feet.
518	40	Apr. 5, 1937	C,7	D,S	--	Wrought iron casing. Strong supply.
519	66.6	Mar. 23, 1937	C,W	D,S	Near top of hill	Do.
520	70.7	Apr. 5, 1937	C,7	D,S	--	Do.
521	39.8	Apr. 6, 1937	C,7	D,S	--	Do.
522	--	--	C,W	D,S	Hilltop	Do.

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

c/ Water level reported.

e/ No water sample collected for analysis.

Table of Drillers' Logs, Karnes County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 42</u>		
D. W. Maurer lease. $8\frac{2}{3}$ miles northwest of Karnes City.		
Surface soil - - - - -	15	15
Sand and gravel - - - - -	5	20
Rock - - - - -	4	24
Sand - - - - -	12	36
Rock - - - - -	3	39
Hard sand - - - - -	21	60
Rock - - - - -	2	62
Sand - - - - -	14	76
Rock - - - - -	2	78
Sand and shale - - - - -	25	103
Rock - - - - -	1	104
Lignite - - - - -	3	107
Shale and rock - - - - -	23	130
Rock - - - - -	1	131
Shale and rock - - - - -	31	162
Rock - - - - -	2	164
Water sand - - - - -	6	170
Shale - - - - -	404	574
Sand - - - - -	4	578
Shale - - - - -	7	585
Gumbo - - - - -	63	648
Shale - - - - -	56	704
Sand - - - - -	92	796
Shale - - - - -	214	1010
Gumbo - - - - -	25	1035
Shale - - - - -	15	1050
Boulders - - - - -	2	1052
Shale and boulders - - -	73	1125
Tough gumbo - - - - -	25	1150
Shale and boulders - - -	248	1398
Lime rock - - - - -	1	1399
Hard shale and boulders -	53	1452
Gumbo - - - - -	12	1464
Shale and boulders - - -	37	1501
Lime rock - - - - -	1	1502
Gumbo - - - - -	28	1530
Shale and boulders - - -	202	1732
Gumbo - - - - -	8	1740
Shale - - - - -	13	1753
Gumbo - - - - -	3	1756
Shale and boulders - - -	84	1840
Brown shale and boulders	17	1857
Gumbo - - - - -	33	1890
Rock - - - - -	1	1891
Shale and boulders - - -	54	1945
Hard shale and lime rock	81	2026
Shale and boulders - - -	98	2124
Gumbo - - - - -	6	2130
Limy shale and rock - - -	35	2165
Hard shale rock - - - - -	300	2465
Hard shale - - - - -	40	2505
TOTAL DEPTH - - - - -		2525

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 109</u>		
A. W. Hyatt farm. $13\frac{1}{2}$ miles north of Karnes City.		
Sand and clay - - - - -	20	20
Fine packed sand - - - - -	45	65
Shells, sand and water - -	10	75
Gummy black clay - - - - -	55	120
Hard packed sand - - - - -	50	180
Sand, water - - - - -	40	220
Sand and shells - - - - -	20	240
Sandy shale - - - - -	20	260
Sand and rock - - - - -	55	315
Black shale - - - - -	15	330
Rock - - - - -	1	331
Sand - - - - -	62	393
Rock - - - - -	2	395
Sand and boulders - - - - -	91	486
Sand rock - - - - -	1	487
Sand and black shale - - -	25	512
Hard sand rock - - - - -	2	514
Black sand and shale boulders - - - - -	11	525
Sandy shale and lime - - -	21	546
Gray sand and blue shale -	116	662
Blue-gray sand, shale, and thin layer of hard white lime, some thin beds of yellow clay and red sand- stone - - - - -	26	688
Blue-gray sand, fine streaks of shale and shells - - - - -	122	810
Blue sandy shale - - - - -	44	854
Hard lime shells - - - - -	8	862
Blue shale, sand and shells - - - - -	20	882
Blue gumbo and shale - - -	26	908
Blue gumbo, boulders and shale - - - - -	92	1000
Hard gray lime shells - - -	84	1084
Hard lime and broken shale	6	1090
Sand - - - - -	4	1094
Sand and shale - - - - -	6	1100
Shale and hard shell - - -	50	1150
TOTAL DEPTH - - - - -		1150

<u>Driller's log of well 165</u>		
Evelyn Rudd farm. 17 miles northeast of Karnes City.		
Surface soil - - - - -	4	4
Yellow clay - - - - -	8	12
Sand and sand rock - - - -	53	65
Sand and shale - - - - -	65	130
Sand and rock - - - - -	7	137
(Continued on next page)		

Table of Drillers' Logs, Karnes County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 165--Continued</u>		
Water sand - - - - -	34	171
Sand and sand rock - - - -	36	207
Shale and sand - - - - -	20	227
Shale and lime - - - - -	298	525
Lime rock - - - - -	12	537
Shale and lime - - - - -	44	581
Lime rock - - - - -	3	584
Shale and lime - - - - -	51	635
Sticky shale - - - - -	6	641
Sandy shale - - - - -	99	740
Sticky shale - - - - -	10	750
Sandy shale and lignite- -	75	825
Lime rock - - - - -	4	829
Sandy shale- - - - -	7	836
Lime rock- - - - -	1	837
Shale and lime - - - - -	13	850
Sticky shale - - - - -	70	920
Lime - - - - -	10	930
Shale and lime - - - - -	37	967
Sticky shale - - - - -	55	1022
Sandy shale - - - - -	18	1040
Hard lime rock - - - - -	8	1048
Sandy shale - - - - -	5	1053
Lime rock- - - - -	13	1066
Hard shale and lime- - - -	24	1090
Sticky shale - - - - -	72	1162
Sand and shale, cored - - -	8	1170
Shale and lime - - - - -	20	1190
Sandy shale - - - - -	20	1210
Lime rock - - - - -	3	1215
Shale and lime - - - - -	20	1235
Rock - - - - -	2	1237
Hard shale - - - - -	23	1260
Lime rock - - - - -	3	1263
Hard shale and lime- - - -	17	1280
Lime rock - - - - -	8	1288
Shale and lime - - - - -	98	1386
Sticky shale and lime- - -	44	1430
Sandy shale- - - - -	68	1498
Sticky shale and shells- -	119	1617
Sand and shale - - - - -	2	1619
Sticky shale - - - - -	15	1634
Greensand - - - - -	2	1636
Hard shale - - - - -	2	1638
Sticky shale - - - - -	8	1646
Sand and shale - - - - -	10	1656
Sticky shale - - - - -	74	1730
Shale and shell- - - - -	15	1745
Greensand, water - - - - -	2	1747
Sandy shale - - - - -	11	1758
Sand - - - - -	2	1760
Sandy shale and shell- - -	139	1899
Greensand- - - - -	3	1902
Sand and sandy shale - - -	7	1909

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 165--Continued</u>		
Sand - - - - -	7	1916
Sand and sandy shale - - -	21	1937
Shale- - - - -	89	2026
TOTAL DEPTH- - - - -		2026

<u>Driller's log of well 181</u>		
Sallie Elliott farm. 11 miles northeast of Karnes City.		
Surface soil - - - - -	3	3
Sand - - - - -	49	52
Green marl - - - - -	10	62
Sand rock- - - - -	1	63
Gray sand- - - - -	22	85
Hard sand- - - - -	24	109
Lignite- - - - -	4	113
Gray sand- - - - -	37	150
Lignite- - - - -	8	158
Gray sand- - - - -	6	164
Sandy shale- - - - -	36	200
Gray sand- - - - -	24	224
Sandy shale- - - - -	24	248
Hard lime rock - - - - -	4	252
Sand - - - - -	4	256
Lime rock- - - - -	4	260
Hard shale- - - - -	72	332
Lignite- - - - -	5	337
Hard shale - - - - -	125	462
Gumbo- - - - -	8	470
Shale- - - - -	130	600
Lime rock- - - - -	3	603
Hard sand- - - - -	13	616
Lime rock- - - - -	6	622
Sand - - - - -	10	632
Shale- - - - -	8	640
Broken lime- - - - -	10	650
Sandy lime - - - - -	15	665
Hard packed sand - - - - -	10	675
Gumbo- - - - -	4	679
Shale- - - - -	50	729
Hard sand- - - - -	21	750
Gumbo- - - - -	10	760
Hard shale - - - - -	50	810
Hard sand- - - - -	35	845
Gumbo- - - - -	5	850
Sticky shale - - - - -	110	960
Shale- - - - -	65	1025
Sand rock- - - - -	3	1028
Sandy shale and shells - -	49	1077
Sandy shale- - - - -	8	1085
Rock - - - - -	2	1087
Sandy shale- - - - -	23	1110
Gray sand- - - - -	33	1143
Lime rock- - - - -	4	1147

(Continued on next page)

Table of Driller's Log, Karnes County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 181--Continued</u>		
Sand - - - - -	7	1154
Sandy shale- - - - -	81	1235
Shale, lime and shells - - -	28	1263
Sandy shale- - - - -	49	1312
Lime rock- - - - -	4	1316
Sticky shale - - - - -	12	1328
Lime rock- - - - -	2	1330
Gumbo- - - - -	10	1340
Hard shale - - - - -	40	1380
Sandy shale- - - - -	120	1500
Hard rock- - - - -	4	1504
Tough gumbo- - - - -	4	1508
Lime rock- - - - -	2	1510
Sandy shale- - - - -	25	1535
Lime rock- - - - -	1	1536
Hard sand- - - - -	30	1566
Sandy shale- - - - -	9	1575
Lime rock- - - - -	2	1577
Sticky shale - - - - -	15	1592
Hard shale - - - - -	26	1618
Hard lime- - - - -	4	1622
Hard packed sand - - - - -	48	1670
Hard lime- - - - -	4	1674
Sandy shale and shells - - -	86	1760
Sticky shale - - - - -	18	1778
Hard lime rock - - - - -	1	1779
Sandy shale- - - - -	51	1830
Brown shale and gray sand- -	15	1845
Blue sticky shale- - - - -	27	1872
Hard lime rock - - - - -	1	1873
Brown and gray shale and sand- - - - -	27	1900
Volcanic ash, lime and sand	45	1945
Hard lime- - - - -	2	1947
Brown and gray shale and fossils - - - - -	53	2000
Shale and fossils- - - - -	40	2040
Sand rock- - - - -	3	2043
Hard sand, shale and shells- -	154	2197
Hard lime- - - - -	3	2200
Brown shale- - - - -	20	2220
Green shale- - - - -	4	2224
Brown sticky shale - - - - -	24	2248
Hard lime- - - - -	3	2251
Brown sticky shale - - - - -	3	2254
Lime rock- - - - -	3	2257
Hard lime and brown shale- -	33	2290
Brown shale- - - - -	60	2350
Gumbo- - - - -	10	2360
Brown sticky shale - - - - -	40	2400
Hard lime- - - - -	3	2403
Brown sticky shale - - - - -	87	2490
Lime rock- - - - -	3	2493
Brown shale- - - - -	27	2520
TOTAL DEPTH- - - - -		3020

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 316</u>		
Webster Oil & Gas Co., J. B. Cannon farm, 3 miles northeast of Karnes City.		
Surface clay- - - - -	3	3
Sandy clay- - - - -	42	45
Sand and sand rock- - - - -	55	100
Water sand- - - - -	6	106
Gray sticky shale - - - - -	8	114
Rock - - - - -	3	117
Sticky shale- - - - -	13	130
Rock - - - - -	3	133
Yellow shale and sand - - -	27	160
Shale and lime- - - - -	203	363
Water sand- - - - -	12	375
Shale and lime- - - - -	129	504
Water sand- - - - -	3	507
Shale and hard lime - - - -	106	613
Hard lime rock- - - - -	29	642
Shells and lignite- - - - -	3	645
Shells, shale and sand rock	71	716
Sand and hard sand rock -	16	732
Shale and hard rock - - -	56	788
Shale, aragonite, lignite and sandy shale- - - - -	232	1020
Water sand- - - - -	19	1039
Shale and sandy shale - - -	59	1098
Sand- - - - -	14	1112
Shale, lignite and sandy shale- - - - -	89	1201
Sandy shale and sand- - - -	29	1230
Sandy shale, shale and lignite- - - - -	234	1464
Sand with few shale breaks	20	1484
Sandy shale - - - - -	30	1514
Sticky shale- - - - -	121	1635
Sand- - - - -	20	1655
Sticky shale- - - - -	83	1738
Sand- - - - -	30	1768
TOTAL DEPTH - - - - -		1768
CASING RECORD: 20 feet of 10-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 387</u>		
P. W. Tom farm. 10 miles east of Karnes City.		
Surface soil - - - - -	105	105
Sand and gravel and sticky shale- - - - -	55	160
Sandy shale - - - - -	15	175
Shale and gumbo - - - - -	275	450
Sticky shale- - - - -	80	530
Yellow shale- - - - -	30	560
Sand and shale- - - - -	30	590
Shale and gumbo - - - - -	99	689
Sticky shale- - - - -	11	700
Shale and boulders- - - - -	160	860
(Continued on next page)		

Table of Drillers' Logs, Karnes County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 337--Continued		
Shale - - - - -	30	890
Green shale - - - - -	90	980
Shale, gumbo and boulders	35	1015
Hard sandy shale- - - - -	10	1025
Blue shale and boulders -	65	1090
Soft blue shale - - - - -	38	1128
Gumbo- - - - -	7	1135
Broken lime - - - - -	10	1145
Gumbo - - - - -	5	1150
Sticky shale- - - - -	25	1175
Sand- - - - -	15	1190
Gumbo - - - - -	8	1198
Sand- - - - -	17	1215
Shale - - - - -	15	1230
Sand- - - - -	45	1275
Shale - - - - -	25	1300
Lime and shale- - - - -	10	1310
Shale - - - - -	15	1325
Sandy lime- - - - -	15	1340
Shale - - - - -	5	1345
Gumbo - - - - -	3	1348
Shale and boulders- - - -	34	1382
Sandy shale and lime- - -	15	1397
Gumbo and shale - - - - -	13	1410
Sand- - - - -	10	1420
Broken lime - - - - -	5	1425
Shale - - - - -	5	1430
Shale and boulders- - - -	60	1490
Shale - - - - -	115	1605
Shale and boulders- - - -	15	1620
Shale - - - - -	15	1635
Shale and boulders- - - -	35	1670
Broken lime - - - - -	10	1680
Shale - - - - -	25	1705
Gumbo - - - - -	10	1715
Shale - - - - -	25	1740
Sandy lime- - - - -	10	1750
Shale and gumbo - - - - -	5	1755
Sand- - - - -	5	1760
Shale and gumbo - - - - -	36	1796
Gumbo - - - - -	45	1841
Shale - - - - -	9	1850
Shale and lime- - - - -	6	1856
Shale - - - - -	4	1860
Hard lime - - - - -	8	1868
Shale - - - - -	7	1875
Sand- - - - -	22	1897
Shale - - - - -	30	1927
Limy shale- - - - -	48	1975
Gumbo - - - - -	55	2030
Shale - - - - -	15	2045
Gumbo - - - - -	5	2050
Sticky shale- - - - -	70	2120
Limy shale- - - - -	9	2129

	Thickness (feet)	Depth (feet)
Driller's log of well 337--Continued		
Sand- - - - -	2	2131
Gumbo - - - - -	22	2153
Sand- - - - -	12	2165
Gumbo - - - - -	55	2220
Sand- - - - -	4	2224
Sandy lime- - - - -	8	2232
Gumbo - - - - -	88	2320
Sandy lime- - - - -	15	2335
Lime and shale- - - - -	48	2383
Shale - - - - -	8	2391
Gumbo - - - - -	26	2427
Shale - - - - -	14	2441
Hard sand - - - - -	1	2442
Gumbo - - - - -	118	2560
Water sand- - - - -	10	2570
Shale - - - - -	8	2578
Lime- - - - -	2	2580
Water sand- - - - -	14	2594
Shale - - - - -	16	2610
Sand- - - - -	32	2642
Gumbo - - - - -	14	2656
Shale - - - - -	5	2661
Gumbo - - - - -	24	2685
Shale - - - - -	44	2729
Sand- - - - -	11	2740
TOTAL DEPTH - - - - -		3255

Driller's log of well 338		
Central Power & Light Co., City of Runge 11 miles east of Karnes City.		
Surface soil- - - - -	4	4
Hard yellow clay- - - - -	62	66
Rock- - - - -	1	67
Hard clay - - - - -	29	96
Clay and boulders - - - -	20	116
Clay- - - - -	20	136
Hard clay and boulders- -	18	154
Sand- - - - -	34	188
Clay- - - - -	24	212
TOTAL DEPTH - - - - -		212
CASING RECORD: 156 feet of 10-inch casing. 34 feet of 10-inch screen set, 156-190 feet. 22 feet blank 10-inch casing, 190-212 feet.		

Drillers' log of well 413		
S. P. R. R. Co. 5 1/2 miles southeast of Karnes City.		
Clay- - - - -	20	20
Yellow clay - - - - -	50	70
Sand and shell rock - - -	70	140
Brown gumbo - - - - -	130	270
Yellow sand - - - - -	15	285
(Continued on next page)		

Table of Drillers' Logs, Karnes County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 413--Continued</u>		
Brown gumbo	50	335
Gray sand	60	395
Brown gumbo	62	457
Yellow sand	105	562
Soft red sand rock	60	622
Yellow sand and shell rock	81	703
Gumbo	39	742
Blue shale	39	781
Gumbo	12	793
Blue shale	30	823
Gumbo	40	863
Rock	3	866
Sand and water	72	938
Rock	1	939
Blue shale and shell rock	74	1013
Gumbo	56	1069
Blue shale and shell rock	120	1189
Gumbo and shell rock	59	1248
Rock	2	1250
Gumbo and shell rock	37	1287
Gumbo	67	1354
Shale and shell rock	57	1411
Rock	4	1415
Shale and gumbo	51	1466
Soft rock	7	1473
Shale	20	1493
Gumbo	17	1510
Shale	60	1570
Gumbo	10	1580
Rock	6	1586
Gumbo	62	1648
Hard blue shale	40	1688
Gumbo	87	1775
Shale and gumbo	50	1825
Hard blue shale	50	1875
Soft rock	5	1880
Hard sandy shale and sand rock	101	1981
Soft rock	5	1986
Gumbo	5	1991
Hard sandy shale and sand rock	36	2027
Shale	20	2047
Hard sandy shale	60	2107
Rock	3	2110
Hard shale	20	2130
Hard sandy shale with streaks	81	2211
Hard sandy shale	55	2266
Gumbo	6	2272
Hard shale	5	2277
Gumbo	35	2312
Hard sandy shale	61	2373
Rock	2	2375

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 413--Continued</u>		
Sand and water	15	2390
Gumbo	125	2515
Blue shale	55	2570
Rock	3	2573
Blue shale	22	2595
Gumbo	5	2600
Blue shale	100	2700
Shale	5	2705
Rock	5	2710
Shale and rock shells	32	2742
Blue shale	15	2757
Blue sand	40	2797
Hard shale	23	2820
Hard blue shale	10	2830
Hard shale	35	2865
Gumbo	5	2370
Slate	10	2880
Sandy slate	20	2900
Gumbo	100	3000
TOTAL DEPTH		3000

Driller's log of well 414
City of Kenedy well #1. 6 miles south-east of Karnes City.

Surface soil	5	5
Hard sandy clay	10	15
Sand	20	35
Clay	40	75
Sand	20	95
Clay	40	135
Gumbo	35	170
Clay	30	200
Sand	15	215
Hard dry gumbo	125	340
Sand	60	400
Gumbo	2	402
TOTAL DEPTH		402

CASING RECORD: 347 feet of 8-inch casing. 60 feet of 8-inch screen.

Driller's log of well 440
E. G. Gillett farm. 8½ miles south of Karnes City.

Surface sand	12	12
Hard sandy lime	11	23
Soft sandy clay	47	70
Broken lime	4	74
Sandy shale	196	270
Sticky shale	30	300
Sandy shale	132	432
Soft gravel	18	450
Sticky shale	14	464
Shale and lime shells	86	550

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Table of Drillers' Logs, Karnes County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 440--Continued		
Sandy shale - - - - -	48	598
Sand- - - - -	14	612
Soft shale- - - - -	60	672
Hard sandy lime - - - - -	10	682
Green sandy shale - - - - -	68	750
Green sticky shale- - - - -	30	780
Shale and lime shells - - - - -	62	842
Lime rock - - - - -	3	845
Hard sand - - - - -	9	854
Sandy shale - - - - -	26	880
Broken lime - - - - -	47	927
Sticky shale- - - - -	13	940
Broken lime and shale - - - - -	28	968
Shale and lime shells - - - - -	52	1020
Sand- - - - -	7	1027
Sandy shale - - - - -	33	1060
Lime rock - - - - -	7	1067
Sandy shale - - - - -	28	1095
Gumbo - - - - -	30	1125
Broken lime - - - - -	3	1128
Lignite, sandy shale and lime - - - - -	17	1145
Gumbo - - - - -	4	1149
Sticky shale- - - - -	36	1185
Hard sandy lime - - - - -	1	1186
Shale and lime- - - - -	3	1189
Shale and lime shells - - - - -	41	1230
Gumbo - - - - -	17	1247
Hard sand - - - - -	5	1252
Soft sand - - - - -	13	1265
Dry sticky shale- - - - -	11	1276
Hard sand - - - - -	4	1280
Sand and shells - - - - -	4	1284
Sand and lime shells- - - - -	42	1326
Hard sandy lime - - - - -	4	1330
Corrected measurement - - - - -	--	1310
Sticky shale- - - - -	--	1330
Sand and shells - - - - -	7	1337
Shale and lime shells - - - - -	20	1357
Hard sand - - - - -	5	1362
Sand- - - - -	6	1368
Sticky shale- - - - -	5	1373
Sandy lime rock - - - - -	2	1375
Sticky shale- - - - -	31	1406
Hard sandy lime - - - - -	5	1411
Sandy shale and shells- - - - -	13	1424
Sticky shale and lime - - - - -	28	1452
Hard sandy lime - - - - -	5	1457
Sand- - - - -	9	1466
Water sand- - - - -	43	1509
Sticky shale- - - - -	13	1522
Hard lime- - - - -	1	1523
Sticky shale with hard streaks- - - - -	142	1665

	Thickness (feet)	Depth (feet)
Driller's log of well 440--Continued		
Sandy shale - - - - -	51	1716
Sand with shale streaks - - - - -	9	1725
Shale with streaks of hard sand - - - - -	70	1795
Shale and sand- - - - -	29	1824
Sticky shale- - - - -	15	1839
Shale and sand- - - - -	22	1861
Sand and shale- - - - -	73	1934
Sand, dry - - - - -	20	1954
Sandy shale - - - - -	5	1959
Sticky shale- - - - -	5	1964
Gumbo - - - - -	15	1979
Sticky shale- - - - -	22	2001
Hard lime - - - - -	2	2003
Hard sand and lime- - - - -	4	2007
Sandy lime- - - - -	2	2009
Sticky shale- - - - -	7	2016
Sand- - - - -	13	2029
Sandy shale and lime- - - - -	28	2057
Sticky shale- - - - -	11	2068
Sandy shale and shells- - - - -	12	2080
Sandy lime - - - - -	2	2082
Sticky shale and shells - - - - -	18	2100
Gumbo - - - - -	30	2130
Sandy shale - - - - -	70	2200
Sticky shale- - - - -	103	2303
Sand- - - - -	7	2310
Sticky shale- - - - -	28	2338
Shale and shells- - - - -	62	2400
Soft green sand - - - - -	4	2404
Shale and shells- - - - -	6	2410
Hard sand - - - - -	2	2412
Sand- - - - -	6	2418
TOTAL DEPTH - - - - -		2418

Driller's log of well 467		
Pacific Gas & Fuel Co., Ray Bellknap farm. 13 miles southeast of Karnes City.		
Sand and shale- - - - -	120	120
Broken sand and shale - - - - -	116	236
Sand and shale- - - - -	37	273
Shale - - - - -	247	520
Water sand- - - - -	21	541
Shale - - - - -	1178	1719
Shale with streaks of lime - - - - -	458	2177
Shale and lime- - - - -	88	2265
Shale - - - - -	15	2280
Lignite - - - - -	3	2283
Shale - - - - -	2	2285
Shale and lime- - - - -	115	2400
Shale - - - - -	240	2640
Broken sand and shale - - - - -	20	2660

(Continued on next page)

Table of Drillers' Logs, Karnes County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 467--Continued</u>		
Black shale - - - - -	16	2876
Shale - - - - -	419	3095
Sticky shale- - - - -	162	3257
Gummy shale - - - - -	104	3361
Shale - - - - -	24	3385
Shale and shells- - - - -	44	3429
Sand and broken shale - -	2	3431
Shale - - - - -	1	3432
Sand- - - - -	4	3436
TOTAL DEPTH - - - - -		3436
CASING RECORD: 236 feet of 10-inch casing. 3,424 feet of 7-inch casing. 3,324 feet of 2-inch tubing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 496</u>		
California Co., J, C, Tom, Jr. farm. 18 miles east of Karnes City.		
Sand and gravel - - - - -	20	20
Clay and boulders - - - -	169	189
Shale and boulders- - - -	28	217
Sand- - - - -	35	252
Sticky shale- - - - -	35	287
Sand, shale and boulders-	40	327
Sticky shale- - - - -	15	342
Shale - - - - -	26	368
Shale with streaks of hard sand - - - - -	33	401
Clay and boulders - - - -	25	426
Clay and streaks of sand-	14	440
Shale and sand- - - - -	60	500
Sticky shale- - - - -	35	535
Shale and boulders- - - -	150	685
Sticky shale- - - - -	15	700
Shale and sand- - - - -	60	760
Sticky shale- - - - -	21	781
Shale - - - - -	102	883
Shale and boulders- - - -	60	943
Shale and sticky shale- -	80	1023
Sticky shale- - - - -	93	1116
Boulders- - - - -	40	1156
Shale with streaks of sand	20	1176
Sticky shale- - - - -	73	1249
Shale and boulders- - - -	90	1339
Sand and shale- - - - -	33	1372
Hard shale- - - - -	24	1396
Shale and boulders- - - -	112	1508
Sticky shale- - - - -	22	1530
Shale - - - - -	70	1600
Sandy shale - - - - -	40	1640
Sand- - - - -	16	1656
Shale - - - - -	54	1710
Sticky shale- - - - -	10	1720
Shale and boulders- - - -	20	1740
Sand with streaks of shale	20	1760

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 496--Continued</u>		
Sticky shale- - - - -	15	1775
Shale with streaks of sand	40	1815
Shale and lime shells - -	13	1828
Shale - - - - -	92	1920
Sandy shale - - - - -	26	1946
Shale and lime shells - -	69	2015
Sticky shale- - - - -	50	2065
Shale and lime shells - -	80	2145
Sandy shale - - - - -	19	2164
Shale and lime shells - -	66	2230
Sandy shale - - - - -	28	2258
Shale and lime shells - -	32	2290
Hard shale and lime - - -	12	2302
Shale - - - - -	42	2344
Hard shale and lime - - -	21	2365
Hard, broken lime and shale- - - - -	15	2380
Sticky shale and lime - -	20	2400
Sandy shale - - - - -	16	2416
Hard, broken lime and sand	10	2426
Hard shale and lime - - -	67	2493
Sandy shale - - - - -	15	2508
Broken lime and shale - -	113	2621
Shale and lime- - - - -	82	2703
Hard shale - - - - -	34	2737
Sand- - - - -	4	2741
Shale - - - - -	16	2757
Sandy shale - - - - -	16	2773
Hard sand - - - - -	8	2781
Sand and shale- - - - -	13	2794
Shale and sandy shale - -	18	2812
Shale - - - - -	3	2815
Sandy shale - - - - -	12	2827
Brittle shale - - - - -	15	2842
Shale - - - - -	6	2848
Sandy shale - - - - -	16	2864
Sticky shale- - - - -	2	2866
Hard sandy shale- - - - -	6	2872
Hard blue shale - - - - -	11	2883
Shale - - - - -	18	2901
TOTAL DEPTH - - - - -		4705

Logs of test wells drilled by W. P. A. labor in Karnes County, Texas
(Samples examined and classified by E. L. Marek, Project Superintendent.)

	Thickness (feet)	Depth (feet)
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Well 1

Gentle slope, north side county road near northwest corner of M. A. Glass tract, Fleming T. Wells survey, 13 1/2 miles west of Karnes City.

Black waxy soil - - - - -	2	2
White sand rock - - - - -	1	3
Brown sandy caliche - - - -	2	5
White caliche - - - - -	16	21
Brown soapstone - - - - -	2	23
No water sample collected. Nov. 6, 1936.		

Well 5

Gentle slope, south side county road, under mesquite tree, G. Doehne tract, George C. Arnest survey, 12 1/2 miles west of Karnes City.

Black waxy soil - - - - -	3	3
White waxy clay - - - - -	1	4
Yellow waxy clay - - - - -	1	5
Red waxy clay - - - - -	1	6
White waxy clay - - - - -	2	8
Yellow caliche - - - - -	3	11
White soapstone clay - - - -	6	17
White soapstone rock - - - -	1	18
Yellow soapstone clay - - - -	10	28
No water sample collected. Nov. 6, 1936.		

Well 6

Gentle slope, west side county road in north corner Lola Canfield tract, Wm. G. Preusch survey, 12 miles west of Karnes City.

Surface soil - - - - -	5	5
Yellow clay - - - - -	1	6
Yellow caliche - - - - -	13	19
No water sample collected. Nov. 5, 1936.		

Well 7

Gentle slope, west side county road, Lola Canfield tract, George Elliott survey, 11 1/2 miles west of Karnes City.

Black waxy clay - - - - -	3	3
Yellow caliche - - - - -	2	5
Flint rock - - - - -	1	6
No water sample collected. Nov. 5, 1936.		

Well 9

In valley west side county road, Lola Canfield tract, Thomas Hinds heirs survey, 10 1/2 miles west of Karnes City.

Black waxy soil - - - - -	5	5
Soapstone clay - - - - -	1	6
Yellow caliche - - - - -	6	12
Struck water at 8 feet.		
No water sample collected. Nov. 5, 1936.		

	Thickness (feet)	Depth (feet)
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Well 12

Gentle slope, east side county road, under live oak tree near southwest corner H. Tyson tract, Don Erasmo Sequin survey, 9 miles west of Karnes City.

Black waxy soil and caliche - - - - -	1	1
White caliche - - - - -	20	21
Gray caliche - - - - -	3	27
No water sample collected. Nov. 5, 1936.		

Well 16

River bottoms, south side Campbelton-Falls City road near northeast corner Stanik Moye tract, Don Gasper Flores survey, 10 1/2 miles west of Karnes City.

Black loam - - - - -	1	1
Black gumbo - - - - -	4	5
Brown clay - - - - -	5	10
Yellow clay - - - - -	2	12
Yellow sandy clay - - - - -	3	15
Caliche and yellow clay - - -	5	20
Fine yellow sand - - - - -	8	28
Gray quicksand - - - - -	4	32
Struck water at 28 feet.		
Water level, 27 feet below top of ground, 1/4 hour after hole completed.		
Water sample collected. Sept. 29, 1936.		

Well 18

Gentle slope, east side county road, 0.6 mile south of Wilson-Karnes County line, Frank Kawlik tract, Luis Manchaca survey, 10 1/2 miles northwest of Karnes City.

Dark loam - - - - -	1	1
Red sandy clay - - - - -	1	2
Red gravel and sand - - - - -	3	5
Hard white rock - - - - -		5
No water sample collected. Sept. 23, 1936.		

Well 20

Gentle slope, south side Falls City-Campbelton road, south end L. W. Swierce tract, Luis Manchaca survey, 10 miles northwest of Karnes County.

Dark sandy loam - - - - -	2	2
Yellow sandy loam - - - - -	1	3
Brown sandy clay - - - - -	1	4
Yellow sandy clay - - - - -	1	5
Yellow sandy caliche - - - - -	8	13
Yellow sand - - - - -	14	27
Gray quicksand - - - - -	3	30
Struck water at 27 feet.		
No water sample collected. Sept. 23, 1936.		

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

	Thickness (feet)	Depth (feet)
<u>Well 22</u>		
Creek bottoms, south side county road near center north line Susie Youngblood tract, Don Erasmo Sequin survey, 8 $\frac{1}{2}$ miles northwest of Karnes City.		
Black loam- - - - -	1	1
Dark sandy loam - - - - -	1	2
Yellow and white caliche- - -	3	5
Fine gray sand and gravel - -	5	10
No water sample collected. Oct. 1, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 26</u>		
Gentle slope, east side county road near southwest corner E. Barth lower 75 acre tract, Don Erasmo Sequin survey, 8 miles west of Karnes City.		
Surface soil- - - - -	1	1
Black waxy soil - - - - -	2	3
Hard white caliche- - - - -	15	18
Hard white rock- - - - -	2	20
No water sample collected. Oct. 16, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 27</u>		
Gentle slope, north side county road, under twin oak tree, Kasper Tudyk tract, Don Erasmo Sequin survey, 7 $\frac{1}{2}$ miles west of Karnes City.		
White caliche- - - - -	8	8
Light red caliche - - - - -	32	40
No water sample collected. Oct. 16, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 31</u>		
Valley flat, south side county road near northeast corner Eugene Gully tract, Don Erasmo Sequin survey, 5 $\frac{1}{2}$ miles northwest of Karnes City.		
Black waxy soil- - - - -	5	5
Brown sandy clay- - - - -	4	9
White caliche- - - - -	20	29
Brown caliche- - - - -	3	32
No water sample collected. Dec. 8, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 33</u>		
Valley flat, west side county road, under live oak tree, Ed. Stoetlze tract, Don Erasmo Sequin survey, 7 miles west of Karnes City.		
Black waxy soil- - - - -	3	3
Gray sandy clay - - - - -	12	15
Red sandy clay- - - - -	4	19
Hard gray caliche - - - - -	13	32
Hard white sand rock- - - - -	3	35
No water sample collected. Oct. 6, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 37</u>		
Gentle slope, west side county road, under mesquite tree near southeast corner Joe Nitsche tract, Don Erasmo Sequin survey, 7 miles northwest of Karnes City.		
Surface soil- - - - -	3	3
Black gumbo- - - - -	3	6
Light brown clay and caliche	8	14
Flint gravel- - - - -		14
No water sample collected. Oct. 8, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 38</u>		
Gentle slope, west side county road near northeast corner Phillip Rohan 314 acre tract, Don Erasmo Sequin survey, 7 $\frac{1}{2}$ miles northwest of Karnes City.		
Black loam- - - - -	2	2
Yellow caliche- - - - -	5	7
White caliche- - - - -	1	8
Yellow caliche- - - - -	4	12
White caliche- - - - -	2	14
Yellow caliche- - - - -	8	22
Fine white caliche- - - - -	15	37
Fine gray caliche- - - - -	8	45
Hard gray caliche- - - - -	5	50
No water sample collected. Oct. 1, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 40</u>		
Gentle slope, east side county road near center west line Theo. Henke tract, Don Erasmo Sequin survey, 8 miles northwest of Karnes City.		
Black loam- - - - -	1	1
Black gumbo - - - - -	2	3
White caliche - - - - -	1	4
Yellow sand- - - - -	1	5
Gray sand and gravel- - - -	3	8
No water sample collected. Oct. 2, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 41</u>		
Valley flat, east side county road near southeast corner Mrs. L. G. Spencel tract, Don Erasmo Sequin survey, 8 $\frac{1}{2}$ miles northwest of Karnes City.		
Black gumbo- - - - -	7	7
Brown sandy clay- - - - -	1	8
Yellow sandy clay- - - - -	5	13
Brown sandy clay- - - - -	2	15
Yellow clay and chalk - - -	2	17
Gravel- - - - -		17
No water sample collected. Oct. 2, 1936.		

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

	Thickness (feet)	Depth (feet)
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Well 43

Foot of slope, south side Campbelton-Falls City road, $\frac{1}{2}$ mile northwest of Falls City, city limits Luis Manchaca survey, 9 miles northwest of Karnes City.

Black waxy soil-	2	2
Brown sandy clay	2	4
Caliche clay-	2	6
Yellow clay-	2	8
Red clay-	2	10
Caliche clay-	1	11
Yellow sand-	3	14
Caliche clay-	4	18
Blue clay and gravel-	6	24
Caliche clay and gravel-	3	27
Purple loam-	1	28
Brown loam-	1	29
Lignite-	4	33
Hard rock-		33

Struck water at $27\frac{1}{2}$ feet.
Water level, $27\frac{1}{2}$ feet below top of ground $\frac{1}{4}$ hour after hole completed.
Water sample collected. Sept. 29, 1936.

Well 46

In valley, east side State Highway 16, 300 feet south of Wilson-Karnes County line, Luis Manchaca survey, $10\frac{1}{2}$ miles northwest of Karnes City.

Black sandy loam-	3	3
Brown clay-	2	5
Yellow sandy clay-	4	9
Gray packed sand-	8	17
Blue flint rock-		17

No water sample collected. Sept. 23, 1936.

Well 50

Gentle slope, west side county road, Regina tract, Luis Manchaca survey, $8\frac{1}{2}$ miles northwest of Karnes City.

Surface soil-	1	1
black wazy soil-	3	4
White chalky clay-	2	6
Yellow clay-	4	10
Red sandy clay-	3	13
Fine white sand-	5	18
Yellow soapstone clay-	10	28
Red clay-	3	31
Gray soapstone-	8	39

No water sample collected. Nov. 10, 1936.

	Thickness (feet)	Depth (feet)
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Well 51

In valley, west side county road near northeast corner M. Dzuik tract, Luis Manchaca survey, 8 miles northwest of Karnes City.

Black waxy soil-	2	2
Dark sandy loam-	2	4
Brown sand and gravel-	1	5
Light yellow sand-	1	6
Dark loam-	1	7
Purple sandy loam-	1	8
Boulder and gravel	1	9

No water sample collected. Nov. 9, 1936.

Well 55

Foot of hill, northeast part of Hobson, Don Erasmo Sequin survey, 6 miles northwest of Karnes City.

Sandy loam-	3	3
Dark sandy clay-	2	5
Caliche clay-	1	6
Fine yellow sand-	1	7
Yellow caliche sand-	3	10
Fine yellow sand-	1	11
White caliche-	2	13
Dark sandy loam-	2	15
Fine white sand-	6	21
Gray medium sand	2	23
Blue medium sand	$4\frac{1}{2}$	$27\frac{1}{2}$
Hard white sand rock	$\frac{1}{3}$	28

Water level, 25.8 feet below top of ground 1 hour after hole completed.
No water sample collected. Oct. 8, 1936.

Well 56

Sloping hill, south side county road near center north line Chas. Pollock 109 acre tract, Luis Manchaca survey, 6 miles northwest of Karnes City.

Surface soil-	2	2
Black sandy loam-	1	3
Red sandy clay-	9	12
White caliche-	1	13
Red sandy clay-	3	16
White chalky rock-	3	19
White caliche-	2	21
White chalky rock-	3	24
White caliche-	4	28
White chalky rock-	2	30
White caliche-	2	32
White rock-	1	33

No water sample collected. Nov. 12, 1936.

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

	Thickness (feet)	Depth (feet)
<u>Well 57</u>		
Gentle slope, south side county road, east center of north line Chas. Pollock 109 acre tract, Andres Hernandez survey, 6 miles northwest of Karnes City.		
Surface soil- - - - -	1	1
Brown waxy clay - - - - -	3	4
White caliche- - - - -	4	8
Yellow caliche- - - - -	3	11
White caliche- - - - -	4	15
White chalky rock- - - - -	1	16
Fine white sand- - - - -	20	36
Gravel and boulders - - - - -		36
No water sample collected. Nov. 13, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 58</u>		
Gentle slope, east side county road near north end Jack Pollock 103 acre tract, Andres Hernandez survey, 5 miles northwest of Karnes City.		
Black sandy loam- - - - -	2	2
Yellow sandy clay - - - - -	1	3
Yellow sandy loam - - - - -	1	4
Fine white sand- - - - -	4	8
Yellow medium sand- - - - -	3	11
Coarse yellow sand- - - - -	2	13
Yellow medium sand- - - - -	2	15
Coarse gravel- - - - -	2	17
No water sample collected. Nov. 12, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 60</u>		
Valley flat, west side county road near southeast corner S. Moczygemba tract, Luis Manchaca survey, 4-3/4 miles northwest of Karnes City.		
Black sandy loam- - - - -	3	3
Brown sandy loam- - - - -	3	6
Blue clay- - - - -	3	9
Yellow sandy clay- - - - -	3	12
Yellow sandy loam- - - - -	3	15
Brown caliche clay, hard- - -	8	23
No water sample collected. Nov. 13, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 61</u>		
In valley, south side county road, under mesquite tree near center north line Chas. Pollock 124 acre tract, Andres Hernandez survey, 6 miles northwest of Karnes City.		
Black sandy loam- - - - -	4	4
Brown sandy loam - - - - -	4	8
Gray calicho- - - - -	5	13
White caliche - - - - -	2	15
Brown caliche- - - - -	9	24
No water sample collected. Nov. 10, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 63</u>		
Creek valley, south side county road, under live oak tree near northwest corner Peter Manka 192 acre tract, Andres Hernandez survey, 6 miles northwest of Karnes City.		
Surface soil- - - - -	1	1
Black waxy soil- - - - -	2	3
White caliche- - - - -	4	7
Flint gravel- - - - -	1	8
White caliche- - - - -	2	10
Flint rock and gravel- - -	1	11
Yellow caliche- - - - -	2	13
Flint rock and gravel- - -	1	14
No water sample collected. Nov. 16, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 69</u>		
Creek valley, north side county road, under mesquite tree near center south line Peter Moczygemba 129 acre tract, Andres Hernandez survey, 9 1/2 miles northwest of Karnes City.		
Black waxy soil- - - - -	3	3
Yellow caliche- - - - -	8	11
Flint rock and gravel- - -	1	12
No water sample collected. Nov. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 70</u>		
Creek valley, north side county road, under mesquite tree near center south line Peter Moczygemba 129 acre tract, Andres Hernandez survey, 9 1/2 miles northwest of Karnes City.		
Surface soil- - - - -	1	1
Black waxy soil - - - - -	4	5
Red sandy clay- - - - -	7	12
Soapstone clay- - - - -	4	16
Sand- - - - -	1	17
Soapstone clay- - - - -	9	26
No water sample collected. Nov. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 71</u>		
Creek valley, south side county road, under mesquite tree near center north line A. Olynick tract, Andres Hernandez survey, 10 1/2 miles northwest of Karnes City.		
Black waxy soil- - - - -	2	2
Black sandy loam - - - - -	2	4
White caliche clay - - - - -	19	23
Brown clay- - - - -	2	25
Yellow clay- - - - -	1	26
White clay and caliche - - -	1	27
Yellow clay- - - - -	1	28
White caliche- - - - -	6	34
Blue clay- - - - -	6	40
No water sample collected. Dec. 7, 1936.		

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

	Thickness (feet)	Depth (feet)
<u>Well 72</u>		
Valley flat, north side county road, under live oak tree east center south line A. D. Krawietz tract, Andres Hernandez survey, 12 miles north of Karnes City.		
Yellow sandy loam-	2	2
Brown sandy clay-	2	4
Dark stiff clay and gravel -	2	6
Yellow packed sand-	2	8
Yellow clay and caliche-	4	12
Hard white caliche-	3	15
Dark caliche clay-	5	20
No water sample collected. Dec. 7, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 76</u>		
River bottoms, west side county road, under hackberry tree near southeast corner J. W. and John Mzyk 22 acre tract, Andres Hernandez survey, 9 miles north of Karnes City.		
Surface soil-	2	2
Black waxy soil -	6	8
Yellow sandy clay-	2	10
Fine yellow sand-	3	13
Gray quicksand-	4	17
Gravel and gray sand-	2	19
Gray quicksand-	7	26
Struck water at 14 feet.		
Water level, 14.3 feet below top of ground, $\frac{1}{4}$ hour after hole completed.		
Water sample collected. Nov. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 81</u>		
Hill slope, east side county road near northwest corner tract joining P. Bandurch on north, Andres Hernandez survey, 6 miles north of Karnes City.		
Black waxy soil-	3	3
Hard sandy clay-	2	5
Brown sandy clay -	3	8
White caliche-	4	12
Yellow clay and caliche-	6	18
White caliche-	4	22
Caliche gravel-	2	24
White caliche-	6	30
No water sample collected. Nov. 19, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 83</u>		
In valley, east side county road near extreme west end Felix Pawelik 130 acre tract, Andres Hernandez survey, 6 miles north of Karnes City.		
Black sandy loam-	3	3
Red clay-	2	5
Caliche, sand and gravel -	1	6
No water sample collected. Nov. 16, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 91</u>		
Foot of hill, west side county road, under live oak tree west of center south line Theo. Pawelek 200 acre tract, Fernando Carrillo survey, 10 miles north of Karnes City.		
Black waxy soil-	3	3
Brown clay-	1	4
Yellow clay and gravel -	1	5
Yellow sandy loam-	3	8
Fine yellow sand -	3	11
Hard limestone-		11
No water sample collected. Nov. 19, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 93</u>		
Gentle slope, south side county road near center north line John Pawelek 180 acre tract, Fernandez Carrillo survey, 11 mile north of Karnes City.		
Dark sandy loam-	3	3
Yellow clay-	2	5
Hard sand rock -	1	6
No water sample collected. Nov. 19, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 96</u>		
River bottoms located in Wilson County, east side county road approximately $\frac{3}{4}$ mile north of Wilson-Karnes County line, $12\frac{1}{2}$ miles north of Karnes City.		
Yellow sandy loam-	3	3
Red sandy clay-	2	5
Yellow clay-	8	13
Fine yellow sand-	3	16
Yellow sandy clay and caliche	5	21
Fine yellow sand-	6	27
Yellow sandy clay-	4	31
Brown sandy clay-	6	37
Fine gray sand-	5	42
No water sample collected. Nov. 19, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 97</u>		
In valley, south side county road, under dead live oak tree, west of center north line Adam Jendrusch tract, Fernando Carrillo survey, $11\frac{1}{2}$ miles north of Karnes City.		
Black sandy loam-	3	3
Black waxy soil-	1	4
Dark sandy loam-	2	6
Gray sandy clay-	3	9
Yellow sandy clay-	2	11
Hard white sand rock-		11
No water sample collected. Dec. 14, 1936.		

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

	Thickness (feet)	Depth (feet)
<u>Well 102</u>		
In valley, north side county road, under mesquite tree near center south line William Bayer tract, Jesus Hernandez survey, 9 miles north of Karnes City.		
Black sandy loam-	1	1
Black gumbo-	2	3
Brown caliche and sand-	6	9
White caliche-	14	23
Yellow medium sand-	1	24
White caliche-	4	28
Flint gravel-		28
No water sample collected. Dec. 16, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 111</u>		
Ridgetop, south side county road, under dead live oak tree near northwest corner J. Florence tract, J. G. Dunn survey, 13 miles north of Karnes City.		
Red sandy clay-	1	1
Brown sandy loam-	3	4
Fine yellow sand-	1	5
Fine white sand-	4 $\frac{1}{2}$	9 $\frac{1}{2}$
Hard red sand rock-	$\frac{1}{2}$	10
White sand-	7	17
Hard brown sand-	5	22
White sand-	3	25
Gray sandy loam-	3	28
Yellow sand and silt-	4	32
Fine white sand-	3	35
Red and yellow sandy clay-	2	37
Blue shale-	2	39
Sandy clay-	7	46
No water sample collected. Dec. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 112</u>		
Ridgetop, south side county road, under mesquite tree near northeast corner S. W. Simpson tract, J. C. Dunn survey, 13 $\frac{1}{2}$ miles north of Karnes City.		
Black sandy loam-	2	2
Red sandy clay-	1	3
Brown sandy clay-	4	7
Fine white sand-	3	10
Red sand rock-	$\frac{1}{4}$	10 $\frac{1}{4}$
Fine white sand-	9 $\frac{3}{4}$	20
Red and brown sand rock-	$\frac{1}{2}$	20 $\frac{1}{2}$
White sand-	6 $\frac{1}{2}$	27
Brown sand-	1	28
Red and white sand-	2	30
Gray sandy clay-	4	34
White sand-	12	46
Fine white rock-	2	48
No water sample collected. Dec. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 113</u>		
Creek valley, south side county road, under live oak tree near northwest corner Alger Hyatt tract, A. D. Orr survey, 14 $\frac{1}{2}$ miles north of Karnes City.		
Black sandy loam-	1	1
Fine gray sand-	1	2
Dark sandy loam-	1	3
Black gumbo-	1 $\frac{1}{2}$	4 $\frac{1}{2}$
Red sandy clay-	1 $\frac{1}{2}$	6
Yellow sandy clay-	2	8
Fine white sand-	9	17
Orange sand and silt-	1	18
Fine white sand-	1	19
Orange silt-	5	24
Fine white sand-	2	26
Blue shale-	4	30
Red and blue shale-	4	34
Gray sand-	6	40
Reddish sandy clay-	3	43
No water sample collected. Dec. 15, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 117</u>		
Level land, east side county road, under mesquite tree near center line R. F. Rehmet 441 acre tract, T. K. Wheeler survey, 17 $\frac{1}{2}$ miles north of Karnes City.		
Dark brown surface soil-	3	3
Fine brown sand-	1	4
Fine cream-colored calcareous sand-	2	6
Bentonitic sand, calcareous	9	15
Brownish-gray bentonitic sandy clay-	1	16
Gray bentonitic sandy clay, calcareous, slightly carbonaceous-	1	17
Rock-		17
Struck rock at 17 feet.		
No water sample collected. Mar. 17, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 118</u>		
Foot of hill, west side county road, under post oak tree near southeast corner W. M. Patton 153 acre tract, C. Denman survey, 17 $\frac{1}{2}$ miles north of Karnes City.		
Light brown sand-	1	1
Dark brown sand-	2	3
Yellow sand-	1	4
Light brown sand and gravel	2	6
Yellow sand and gravel-	4	10
White soapstone-	2	12
Fine white sand-	6	18
Yellow sand-	3	21

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 118--Continued</u>		
Chocolate-colored sandy clay, slightly ferruginous- - - -	1	22
Greenish-gray bentonitic sand	3	25
Drab ashy sand- - - - - - -	6	31
Gray sand with ferruginous stains- - - - - - - - - -	1	32
Yellow and gray sand and choc- olate-colored clay, micaceous	1	33
Olive drab sand- - - - - - -	2	35
Olive-green sand- - - - - - -	5	40
Water level, 34.46 feet below top of ground 1 hour after hole completed.		
Water sample collected. Mar. 17, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 124</u>		
Hilltop, east side county road, under live oak tree near northeast corner W. B. McKay 150 acre tract, John F. Miller sur- vey, 15 $\frac{1}{2}$ miles northeast of Karnes City.		
Hard sand- - - - - - - - - -	2	2
Red sand and gravel- - - - - -	2	4
Yellow sandy clay- - - - - - -	1	5
Fine red sand and gravel- - - -	2	7
Red sand rock- - - - - - - - -	1	8
No water sample collected. Jan. 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 125</u>		
Hilltop, east side county road, under live oak tree near southeast corner W. B. McKay 150 acre tract, Jno. F. Miller survey, 15 $\frac{1}{2}$ miles northeast of Karnes City.		
Hard sand- - - - - - - - - -	2	2
Red clay- - - - - - - - - - -	1	3
Yellow clay- - - - - - - - - -	3	6
Red sandy clay and gravel- - - -	2	8
Red sand rock- - - - - - - - -	1	9
Blue shale- - - - - - - - - -	10	19
Blue sandy clay- - - - - - - -	2	21
No water sample collected. Jan. 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 127</u>		
Valley flat, south side county lane near northeast corner T. Clemmons 116 acre tract, J. Clark survey, 14 $\frac{1}{5}$ miles north- east of Karnes City.		
Dark sandy loam- - - - - - - -	1	1
Dark sandy clay- - - - - - - -	2	3
Brown sandy clay- - - - - - - -	1	4
Sandy clay- - - - - - - - - -	1	5
Yellow sandy clay- - - - - - -	2	7
Gravel- - - - - - - - - - - -		7
Struck gravel at 7 feet.		
No water sample collected. Jan. 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 129</u>		
Gentle slope, east side State Highway 112, under mesquite tree near southwest corner Otto Mischer 200 acre tract, Jno. F. Miller survey, 14 miles northeast of Karnes City.		
Sandy clay- - - - - - - - - -	1	1
Red mixed clay- - - - - - - -	2	3
Red coarse sand - - - - - - - -	9	12
Soapstone clay- - - - - - - - -	13	25
Black clay- - - - - - - - - - -	2	27
Lignite- - - - - - - - - - - -		27
Struck lignite at 27 feet.		
No water sample collected. Jan. 6, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 132</u>		
In valley, west side county road, under mesquite tree near southeast corner Otto Mischer 100 acre tract, Jno. F. Miller survey, 15 miles northeast of Karnes City.		
Black waxy soil- - - - - - - -	8	8
Yellow clay and caliche- - - - -	7	15
White caliche- - - - - - - - -	3	18
Yellow clay- - - - - - - - - -	5	23
Red sand rock- - - - - - - - -	1	24
Caliche clay- - - - - - - - - -	1	25
Brown clay- - - - - - - - - - -	1	26
Blue sandy shale - - - - - - - -	2	28
Blue shale- - - - - - - - - - -	1	29
Stiff yellow clay - - - - - - -	3	32
No water sample collected. Jan. 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 142</u>		
Gentle slope, west side State Highway 112, under mesquite tree near east corner Emil Myer 113 acre tract, W. W. Gant survey, 19 miles northeast of Karnes City.		
Red and brown clay- - - - - - -	2	2
Yellow clay- - - - - - - - - -	2	4
Yellow sand- - - - - - - - - -	4	8
Buff gypsiferous sand- - - - -	2	10
Fine white sand- - - - - - - -	2	12
Gray bentonitic sandstone - - -	6	18
Gray ashy sandstone- - - - - -	2	20
Yellowish-gray ashy sandstone	4	24
Fine gray sand, ashy micaceous	17	41
Reddish-brown ferruginous sandstone- - - - - - - - - -	1	42
Yellow and gray sand, gyp- siferous- - - - - - - - - - -	4	46
Drab ashy clay- - - - - - - - -	2	48
Greenish-gray ashy sandstone, slightly calcareous, weathers gray- - - - - - - - -	10	58
Hard caliche- - - - - - - - - -		58
No water sample collected. Mar. 19, 1937		

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

	Thickness (feet)	Depth (feet)
<u>Well 145</u>		
Gentle slope, south side county road, under oak tree near center north line Adolph Hilscher tract, Lewis Lindsey survey, 20 $\frac{1}{2}$ miles northeast of Karnes City.		
Brown surface soil- - - - -	2	2
Creamy gray bentonitic clay	2	4
Light gray ashy clay- - - - -	1	5
Yellowish-gray bentonitic clay- - - - - - - - - - -	1	6
Gray ashy clay- - - - - - -	2	8
Gray ashy sand- - - - - - -	2	10
Puff bentonitic sand- - - - -	1	11
Creamy gray ashy sand with lumps of bentonite- - - - -	7	18
Gray calcareous ashy clay- - -	2	20
Gray and brown sandy clay with limonite stains- - - - -	1	21
Creamy gray ashy sandstone with fragments of limonite and thin seam of bentonite	9	30
No water sample collected. Mar. 22, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 147</u>		
Near creek bottoms, west side State Highway 112, under mesquite tree near northeast corner W. F. Hall 139 acre tract, Jas. W. Fannin survey, 22 miles northeast of Karnes City.		
Black waxy soil- - - - - - -	4	4
Yellow sandy clay- - - - - -	5	9
Fine yellow sand and clay- - -	2	11
Bright yellow sand- - - - - -	1	12
Fine light yellow sand - - - -	3	15
Fine gray sand- - - - - - - -	4	19
Fine gray and yellow sand- - -	10	29
Fine bright yellow sand- - - -	1	30
Fine gray and yellow sand- - -	4	34
No water sample collected. Mar. 12, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 151</u>		
Valley flat, south side county road, under post oak tree near southwest corner J. K. Holstein 189 acre tract, David B. McConnel survey, 20 miles northeast of Karnes City.		
Sandy clay- - - - - - - - - -	1	1
Red sandy clay- - - - - - - -	1	2
Light yellow sandy clay- - - -	3	5
Hard dark and sandy clay - - -	1	6
Yellow sandy clay- - - - - - -	3	9
Fine gray sand- - - - - - - -	3	12
Fine yellow sand- - - - - - - -	1	13
Fine gray sand, clay and gypsum fragments- - - - - - -	7	20

	Thickness (feet)	Depth (feet)
<u>Well 151--Continued</u>		
Fine gray sand- - - - - - - -	3	23
Fine yellow sand- - - - - - - -	1	24
Fine gray sand- - - - - - - -	4	28
Fine yellow sand- - - - - - - -	1	29
Fine gray sand- - - - - - - -	1	30
Fine light yellow sand- - - - -	3	33
Fine gray sand- - - - - - - -	9	42
Fine yellow sand- - - - - - - -	2	44
Struck water at 42 feet.		
Water level, 41 feet below top of ground $\frac{1}{2}$ hour after hole completed.		
Water sample collected. Mar. 12, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 161</u>		
North side county road, under mesquite tree near southeast corner Geo. Slacker 894 acre tract, R. Ripley survey, 17 $\frac{1}{2}$ miles northeast of Karnes City.		
Black sandy loam- - - - - - -	4	4
Dirty gray ashy sand- - - - -	1	5
Creamy gray bentonitic sandstone with lumps of caliche	13	18
Creamy gray ashy sandstone and hard caliche- - - - - - - -	10	28
No water sample collected. Mar. 18, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 172</u>		
Ridgetop, west side county road, under mesquite tree near center east line of S. E. Crews 990 acre tract, Wm. G. Evans survey, 14 miles northeast of Karnes City.		
Black waxy soil- - - - - - - -	3	3
Brown clay and sand- - - - - -	2	5
White caliche- - - - - - - - -	3	8
White chalk- - - - - - - - - -	1	9
Caliche and yellow clay- - - -	22	31
No water sample collected. Jan. 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 176</u>		
Gentle slope, north side of county road, under live oak tree east of center W. C. Crews 990 acre tract, Wm. G. Evans survey, 12 $\frac{1}{2}$ miles northeast of Karnes City.		
Black waxy soil- - - - - - - -	3	3
Dark sandy caliche- - - - - - -	2	5
Hard white caliche- - - - - - -	14	19
Soft limestone- - - - - - - -	1	20
Brown caliche clay- - - - - - -	8	28
No water sample collected. Jan. 5, 1937		

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

	Thickness (feet)	Depth (feet)
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Well 178

Valley flat, west side county road, under live oak tree near south corner T. H. Maysdale 159 acre tract, Sampson Hendricks survey, 11 $\frac{1}{2}$ miles northeast of Karnes City.

Dark sandy loam-	2	2
Brown sandy clay - - - - -	8	10
Yellow sandy clay- - - - -	4	14
Yellow sand- - - - -	2	16
Brown sand rock- - - - -	1	17
Yellow sand- - - - -	1	18
Red sand rock- - - - -	2	20
Dark blue sandy shale- - - -	9	29
No water sample collected. Dec. 18, 1936.		

Well 183

Gentle slope, north side county road, under live oak tree near southeast corner V. Quintanillo 178 acre tract, Geo. Voss survey, 12 $\frac{1}{2}$ miles northeast of Karnes City.

Black waxy soil- - - - -	4	4
Gray clay- - - - -	6	10
Yellow caliche - - - - -	8	18
Soapstone- - - - -	6	24
Yellow caliche - - - - -	4	28
White sand- - - - -	8	36
Rock- - - - -		36
Struck rock at 36 feet.		
No water sample collected. Jan. 5, 1937.		

Well 185

Near ridgetop, west side county road, under live oak tree near center east line R. C. Sutton 263 acre tract, Wm. G. Evans survey, 12 miles northeast of Karnes City.

Black waxy soil- - - - -	3	3
Hard white caliche - - - - -	7	10
Hard lime rock- - - - -		10
No water sample collected. Dec. 18, 1936.		

Well 187

Creek valley, east side county road, under live oak tree near northwest corner Kate Pocoldo 142 acre tract, J. J. Pickett survey, 11 $\frac{1}{2}$ miles northeast of Karnes City.

Hard sandy loam- - - - -	3	3
Gravel and sand- - - - -	3	6
Gravel boulders- - - - -		6
No water sample collected. Dec. 18, 1936.		

	Thickness (feet)	Depth (feet)
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Well 189

In valley, south side county road, under mesquite tree near center north line of tract joining Mrs. Mary Miko farm on north, J. J. Pickett survey, 10 $\frac{1}{2}$ miles northeast of Karnes City.

Black waxy soil- - - - -	5	5
Dark sandy loam- - - - -	1	6
Brown sandy clay - - - - -	2	8
Cream-colored caliche- - -	20	28
No water sample collected. Jan. 4, 1937.		

Well 193

In valley, east side county road, under live oak tree near southwest corner S. E. Crews 616 acre tract, J. J. Pickett survey, 10 miles northeast of Karnes City.

Black sandy loam- - - - -	2	2
Brown sandy clay- - - - -	4	6
Soft yellow sandy rock- -	4	10
Gray medium sand- - - - -	2	12
Coarse yellow sand and gravel- - - - -	5	17
Struck water at 13 feet.		
No water sample collected. Dec. 17, 1936.		

Well 196

Valley flat, east side county road, under live oak tree near southwest corner Geo. Sichenius 60 acre tract, J. J. Pickett survey, 9 $\frac{1}{2}$ miles northeast of Karnes City

Dark sandy loam- - - - -	2	2
Red clay- - - - -	1	3
Yellow sandy clay- - - - -	1	4
Light yellow sandy clay- -	1	5
Coarse light yellow sand -	3	8
Gravel and sand- - - - -		8
No water sample collected. Dec. 17, 1936.		

Well 199

Gentle slope, west side county road, under live oak tree near northeast corner Anton Krociak 77 acre tract, Ramon Musquiz survey, 7 miles northeast of Karnes City.

Black waxy soil- - - - -	3	3
Brown clay- - - - -	3	6
Brown caliche- - - - -	4	10
White caliche- - - - -	24	34
White sand- - - - -	1	35
Gray medium sand- - - - -	5	40
Coarse gray sand- - - - -	5	45
Struck water at 38 feet.		

Water level, 37 feet below top of ground $\frac{1}{4}$ hour after hole completed.
No water sample collected. Dec. 16, 1936.

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

	Thickness (feet)	Depth (feet)
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Well 201

Valley flat, south side county road, under live oak tree near northwest corner Jno. Kolodzie 98 acre tract, Ramon Musquiz survey, 6 miles northeast of Karnes City.

Black waxy soil- - - - -	2	2
Brown sandy clay - - - - -	1	3
Brown clay and caliche - - -	2	5
Gray clay and caliche - - -	3	8
Fine yellow sandy loam- - -	6	14
Blue clay and gravel- - - -	2	16
<u>No water sample collected. Nov. 18, 1936.</u>		

Well 202

Creek valley, south side county road, under mesquite tree near east corner Frank Yosko 177 acre tract, Ramon Musquiz survey, 5 $\frac{1}{2}$ miles northeast of Karnes City.

Black waxy soil- - - - -	3	3
Brown loam- - - - -	1	4
Brown sandy clay- - - - -	3	7
Yellow sandy clay and gravel- - - - -	2	9
<u>No water sample collected. Nov. 18, 1936.</u>		

Well 205

River bottoms, south side county road near north corner A. F. Pawelek 649 acre tract, Andres Hernandez survey, 5 miles north of Karnes City.

Dark sandy loam - - - - -	3	3
Fine yellow sand- - - - -	2	5
Yellow sandy clay - - - - -	1	6
Blue soapstone- - - - -	10	16
Yellow clay- - - - -	3	19
Brown sandy clay- - - - -	3	22
Yellow clay- - - - -	10	32
Blue shale- - - - -	1	33
Fine gray sand- - - - -	2	35
Struck water at 30 feet.		
Water level, 24 feet below top of ground $\frac{1}{2}$ hour after hole completed.		
<u>Water sample collected. Nov. 18, 1936.</u>		

Well 208

Gentle slope, east side county road near west corner Geo. Pollock 79 acre tract, Andres Hernandez survey, 4 $\frac{3}{4}$ miles north of Karnes City.

Caliche- - - - -	28	28
<u>No water sample collected. Nov. 28, 1936.</u>		

	Thickness (feet)	Depth (feet)
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Well 210

Gentle slope, south side county road near north end L. Manka 72 acre tract, Andres Hernandez survey, 4 miles north of Karnes City.

Caliche- - - - -	30	30
<u>No water sample collected. Nov. 20, 1936.</u>		

Well 211

Creek valley, north side county road north center of east line A. Urbanczyk 256 acre tract, Andres Hernandez survey, 4 $\frac{1}{4}$ miles north of Karnes City.

Dark sandy loam- - - - -	3	3
Black gumbo- - - - -	3	6
Brown sandy loam- - - - -	1	7
White caliche- - - - -	16	23
Yellow caliche clay- - - - -	7	30
Brown sandy clay- - - - -	3	33
Brown sandy loam- - - - -	3	36
Blue and green soapstone - -	2	38
<u>No water sample collected. Nov. 17, 1936.</u>		

Well 216

In valley, north side county road near southeast corner P. J. Trial 283 acre tract, Don Erasmo Seguin survey, 4 $\frac{1}{4}$ miles northwest of Karnes City.

Black waxy soil- - - - -	5	5
Light brown caliche- - - - -	10	15
White sandy caliche- - - - -	6	21
Black gumbo- - - - -	2	23
<u>No water sample collected. Dec. 8, 1936.</u>		

Well 220

Gentle slope, west side county road, under live oak tree near center east line Anna Foreida 128 acre tract, 6 miles west of Karnes City.

Surface soil- - - - -	2	2
Black clay- - - - -	1	3
Light brown clay- - - - -	3	6
Coarse white sand - - - - -	9	15
Flint rock- - - - -		15
Struck rock at 15 feet.		
<u>No water sample collected. Oct 6, 1936.</u>		

Well 222

Gentle slope, east side county road, under live oak tree near southwest corner Wm. Jalutka 129 acre tract, Don Erasmo Seguin survey, 6 miles west of Karnes City.

Surface soil- - - - -	3	3
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(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 222--Continued</u>		
Black waxy soil- - - - -	2	5
Gray caliche- - - - -	6	11
Water level, 6 feet below top of ground $\frac{1}{4}$ hour after hole completed.		
Water sample collected. Oct. 12, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 225</u>		
Gentle slope, south side county road, near northeast corner Helen Nichols 84 acre tract, R. C. Brasher survey, 5 miles west of Karnes City.		
Surface soil- - - - -	2	2
Black gumbo- - - - -	4	6
Gray caliche- - - - -	2	8
Red caliche- - - - -	23	31
White caliche- - - - -	17	48
Gray caliche- - - - -	3	51
No water sample collected. Oct. 15, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 232</u>		
Gentle slope, south side county road, under live oak tree near west corner Robert G. Roebuck 600 acre tract, Willis Orton survey, 8 miles west of Karnes City.		
Surface soil- - - - -	$1\frac{1}{2}$	$1\frac{1}{2}$
Black waxy soil- - - - -	$1\frac{1}{2}$	3
Dark sandy loam- - - - -	2	5
White caliche rock- - - - -	11	16
Light brown caliche- - - - -	20	36
Hard lime rock- - - - -		36
No water sample collected. Oct. 14, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 236</u>		
In valley, east side county road, under mesquite tree near northeast corner G. A. Roberts tract, Nick Griffith survey, 9 miles southwest of Karnes City.		
Black sandy loam- - - - -	5	5
Hard white caliche- - - - -	15	20
No water sample collected. Feb. 11, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 246</u>		
Hillside, east side county road near center west line A. F. Kaufman 239 acre tract, Henry S. Brown survey, 8 miles southwest of Karnes City.		
Black waxy soil- - - - -	2	2
Yellow caliche- - - - -	28	30
No water sample collected. Feb. 11, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 249</u>		
In valley, west side county road, under mesquite tree near center east line Green and Welhausen 209 acre tract, James Bradberry survey, $6\frac{1}{2}$ miles southwest of Karnes City.		
Black loam- - - - -	3	3
White caliche and gravel- - - - -	4	7
White caliche- - - - -	8	15
Caliche gravel- - - - -	1	16
Caliche- - - - -	4	20
Pink caliche- - - - -	5	25
No water sample collected. Feb. 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 255</u>		
In valley, west side county road, under live oak tree near southeast corner Mary and Hy. Struckman 200 acre tract, James Prest survey, 9 miles southwest of Karnes City.		
Black waxy soil- - - - -	2	2
Yellow caliche- - - - -	11	13
Soapstone clay- - - - -	18	31
No water sample collected. Feb. 10, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 269</u>		
Ridgetop, east side county road, under mesquite tree near northwest corner S. E. Crews 2,643 acre tract, Britton Odom survey, 8 miles southwest of Karnes City.		
Dark sandy loam- - - - -	3	3
Brown sandy clay- - - - -	2	5
Brown caliche- - - - -	1	6
Yellow sandy clay- - - - -	1	7
White sandy shale- - - - -	1	8
Yellow sandy clay- - - - -	2	10
Fine white sandstone- - - - -	18	28
No water sample collected. Feb. 10, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 271</u>		
Creek valley, west side county road, under mesquite tree near northeast corner Miguel Urrutia 199 acre tract, 5 miles southwest of Karnes City.		
Dark sandy loam- - - - -	7	7
Chocolate-colored caliche chalk- - - - -	9	16
Fine white sand- - - - -	3	19
Caliche and blue clay - - - - -	4	23
Brown shale- - - - -	9	32
Blue shale- - - - -	8	40
No water sample collected. Feb. 9, 1937.		

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

	Thickness (feet)	Depth (feet)
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Well 278

In valley, south side county road, under mesquite tree near northwest corner H. Roberts 100 acre tract, James Bradberry survey, $5\frac{1}{2}$ miles southwest of Karnes City.
 Black waxy soil- - - - - 2 2
 Yellow caliche- - - - - 32 34
 No water sample collected. Feb. 7, 1937.

Well 280

Gentle slope, west side county road, under mesquite tree near southeast corner G. M. Javer tract, Andrew Borsheimer survey, $3\frac{3}{4}$ miles southwest of Karnes City.
 Black waxy soil- - - - - 3 3
 Gray clay- - - - - 1 4
 Yellow caliche - - - - - 26 30
 No water sample collected. Feb. 5, 1937.

Well 284

In valley, south side county road, under mesquite tree near north corner Otto Buch 199 acre tract, Daniel Buckley survey, $2\frac{3}{4}$ miles southwest of Karnes City.
 Black waxy soil- - - - - 4 4
 Brown clay with streaks of
 chalk- - - - - 18 22
 Brown clay and gravel- - - - 1 23
 Brown clay with streaks of
 chalk- - - - - 14 37
 White caliche- - - - - 12 49
 Brown clay and sand- - - - - 3 52
 No water sample collected. Feb. 4, 1937.

Well 286

In valley, south side county road, F. Bruns tract, C. Smith survey, $2\frac{3}{4}$ miles south of Karnes City.
 Black waxy soil- - - - - 4 4
 Brown sandy clay- - - - - 4 8
 Pink caliche clay- - - - - 5 13
 Fine gray sand- - - - - 1 14
 Reddish clay- - - - - 12 26
 Water level, 13 feet below top of ground $\frac{1}{2}$ hour after hole completed.
 Water sample collected. Feb. 8, 1937.

Well 288

Creek valley, east side county road, under mesquite tree near southwest corner Wm. Timan 151 acre tract, Jackson Davis survey, 4 miles south of Karnes City.
 Black waxy soil- - - - - 7 7
 Yellow caliche- - - - - 9 16

	Thickness (feet)	Depth (feet)
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Well 288--Continued

Small gravel- - - - - 1 17
 Coarse sand- - - - - 3 20
 Soapstone clay - - - - - 18 38
 No water sample collected. Feb. 9, 1937.

Well 294

Creek valley, north side county road 25 feet west of concrete bridge, T. G. Butler tract, Isaac Ticknor survey, $4\frac{3}{4}$ miles south of Karnes City.
 Black waxy soil- - - - - 2 2
 Brown clay and chalk- - - 4 6
 Black sand and gumbo- - - 7 13
 Gray clay and chalk- - - 7 20
 Gray sandy clay- - - - - 2 22
 Stiff pink clay- - - - - 2 24
 Water level, 20.5 feet below top of ground $\frac{1}{4}$ hour after hole completed.
 Water sample collected. Feb. 25, 1937.

Well 296

Gentle slope, west side county road, under mesquite tree near northwest corner Jas. W. Looney survey, 4 miles southeast of Karnes City.
 Black sandy loam- - - - - 2 2
 Dark loam- - - - - 1 3
 Brown sandy clay- - - - - 4 7
 Yellow sandy clay- - - - - 4 11
 Caliche gravel- - - - - 1 12
 Fine yellow sand- - - - - 1 13
 Fine white sand- - - - - 1 14
 Chalk and caliche- - - - - 3 17
 Gray sandstone- - - - - 2 19
 Chalk, sand, and caliche 2 21
 Gray and brown soapstone 6 27
 Hard blue soapstone- - - 10 37
 No water sample collected. Feb. 15, 1937.

Well 298

In valley, north side county road, under mesquite tree near south corner Aug. Kaiser 112 acre tract, $3\frac{1}{2}$ miles southeast of Karnes City.
 Black waxy soil- - - - - 4 4
 Gray clay- - - - - 7 11
 Gray soapstone clay- - - 10 21
 Red sandy clay- - - - - 11 32
 No water sample collected. Feb. 15, 1937.

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

	Thickness (feet)	Depth (feet)
<u>Well 305</u>		
Gentle slope, west side county road near northeast corner V. Person 75 acre tract, Jose Antonio Leal survey, 1 1/2 miles south of Karnes City.		
Black waxy soil-	2	2
Black clay-	1	3
Gray soil-	7	10
Coarse red sand-	2	12
Yellow caliche-	6	18
Fine white sand-	3	21
Water level, 20.5 feet below top of ground 1/4 hour after hole completed.		
Water sample collected. Feb. 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 308</u>		
In valley, north side county road near southeast corner L. W. Stieren 95 acre tract, Francisco Ruiz survey, 1 mile southwest of Karnes City.		
Black waxy soil-	3	3
Yellow clay-	7	10
Yellow clay and gravel-	2	12
Yellow shale-	18	30
Struck water at 8 feet.		
Water level, 12 feet below top of ground 1/2 hour after hole completed.		
Water sample collected. Feb. 4, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 312</u>		
In valley, east side Karnes City-Panna Maria road, under mesquite tree, Jose Antonio Leal survey, 1/2 mile north of Karnes City.		
Black waxy soil-	3	3
Brown clay-	1	4
Caliche clay-	3	7
Gray sand, medium-grained-	14	21
Blue sandy clay-	1	22
Brown clay-	1	23
Purple shale-	1	24
Gray shale-	4	28
Brown shale-	8	36
No water sample collected. Feb. 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 314</u>		
Ridgetop, west side Karnes City-Panna Maria road, under live oak tree near northeast corner J. D. Person 251 acre tract, Jose Antonio Leal survey, 1 3/4 miles north of Karnes City.		
Dark sandy loam-	3	3
Blue clay-	1	4
Red clay-	1	5
Red sandy clay-	4	9
Brown sandy clay-	1	10

	Thickness (feet)	Depth (feet)
<u>Well 314--Continued</u>		
Gray sand rock-	3	13
Fine gray sand-	4	17
Chalky sand-	1	18
Fine gray sand-	2	20
No water sample collected. Feb. 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 318</u>		
River flat, east side State Highway 112, under mesquite tree near north corner W. Lockhart 172 acre tract, Peter S. Elliott survey, 5 miles northeast of Karnes City.		
Dark sandy loam-	3	3
Red clay-	1	4
Yellow sandy clay-	7	11
White sand-	10	21
No water sample collected. Jan. 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 320</u>		
In valley, north side county road, under live oak tree near center south line Mrs J. G. Mayfield 227 acre tract, John T. Dillon survey, 3 1/2 miles northeast of Karnes City.		
Dark sandy loam-	4	4
Coarse yellow sand-	3	7
Red sand-	1	8
Yellow sandy clay-	5	13
White soapstone-	8	21
Struck water at 18 feet.		
No water sample collected. Jan. 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 323</u>		
In valley, south side county road, under hackberry tree near northwest corner Annie Bailey 215 acre tract, Andres Soto survey 1-3/4 miles southeast of Karnes City.		
Black waxy soil-	7	7
Gray soil-	2	9
Red sandy clay-	7	16
Struck rock at 16 feet.		
Water sample collected. Feb. 17, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 325</u>		
In valley, south side county road, under mesquite tree near center west line Annie Bailey 215 acre tract, Andres Soto survey 1-3/4 miles southeast of Karnes City.		
Yellow sand-	3	3
Clay-	2	5
Yellow caliche-	3	8
Fine white sand-	16	24
White caliche-	3	27
Coarse yellow sand-	5	32
Struck gravel at 32 feet.		
No water sample collected. Feb. 17, 1937.		

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

	Thickness (feet)	Depth (feet)
<u>Well 326</u>		
Creek valley, east side county road, under mesquite tree near east corner B. J. Brown 300 acre tract, J. Poitevent survey, 2 miles southeast of Karnes City.		
Black sandy loam-	3	3
Red clay-	2	5
Brown sandy clay	3	8
Red sandy clay-	1	9
Brown sandy clay-	2	11
Gray shale-	6	17
Red sand and gravel	1	18
White medium sand-	1	19
Gray clay-	1	20
White sandy chalk-	1	21
White caliche clay-	5	26
Fine white sand-	8	34
Gray sandy clay-	2	36
Fine white sand-	4	40
Struck water at 35 feet.		
Water level, 35 feet below top of ground 1/2 hour after hole completed.		
<u>Water sample collected. Feb. 12, 1937.</u>		

<u>Well 333</u>		
In valley, north side county road, under mesquite tree near south corner of Dick Smith 54 acre tract, Louis Marcy survey, 4 miles east of Karnes City.		
Black waxy soil-	3	3
Yellow clay-	2	5
Yellow caliche-	2	7
Fine white sand-	16	23
Fine gravel and small boulders-	1	24
Coarse sand	2	26
Yellow clay-	1	27
Fine white sand-	3	30
Struck water at 27 feet.		
<u>No water sample collected, Feb. 18, 1937.</u>		

<u>Well 336</u>		
In valley, north side county road, under mesquite tree near east corner Joe W. Derum 216 acre tract, Andres Soto survey, 2-3/4 miles east of Karnes City.		
Dark sandy loam-	4	4
Black and brown gumbo-	3	7
Brown sandy clay-	3	10
Fine yellow sand-	3	13
Yellow sandy clay-	1	14
Yellow sand and gravel-	1	15
Yellow medium sand-	2	17
Red sandy clay-	3	20

	Thickness (feet)	Depth (feet)
<u>Well 336--Continued</u>		
Brown sandy clay-	1	21
Blue clay and chalk	3	24
Cream-colored sandy clay-	2	26
White clay and chalk-	1	27
Fine gray quicksand-	3	30
Struck water at 27 feet.		
Water level, 23 feet below top of ground 0 hours after hole completed.		
<u>No water sample collected. Feb. 17, 1937.</u>		

<u>Well 340</u>		
Ridgetop, west side county road, under live oak tree near south corner Irene Rhode 165 acre tract, Thomas C. Delano survey, 5 miles east of Karnes City.		
Dark sandy loam-	2	2
Yellow clay-	2	4
Caliche clay-	5	9
Red sandy clay-	3	12
Caliche and gravel-	3	15
Yellow caliche clay	12	27
Fine white packed sand-	18	45
Caliche and sandy clay	4	49
White medium sand-	3	52
Gray quicksand-	4	56
Struck water at 52 feet.		
Water level, 52 feet below top of ground 1/4 hour after hole completed.		
<u>No water sample collected. Feb. 23, 1937.</u>		

<u>Well 343</u>		
River bottoms, east side county road, under mesquite tree near center west line H. B. Ruckman 254 acre tract, Peter S. Elliott survey, 5 miles northeast of Karnes City.		
Dark sandy loam-	3	3
Brown sandy clay-	1	4
Yellow sandy caliche-	5	9
Fine yellow sand-	13	22
Medium-sized sand and gravel	2	24
<u>No water sample collected. Feb. 23, 1937.</u>		

<u>Well 345</u>		
Flat ridge, north side county road, under mesquite tree in north part Helena. 6 miles northeast of Karnes City.		
Dark sandy loam-	2	2
Red sandy clay-	3	5
Brown sandy clay-	1	6
Brown sandy lime-	2	8
White caliche-	11	19
Blue and purple shale-	10	29
<u>No water sample collected. Dec. 17, 1936.</u>		

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

	Thickness (feet)	Depth (feet)
<u>Well 350</u>		
Foot of slope to creek bottoms, east side county road, under mesquite tree near center Mrs. Alice V. Brown tract, Ramon Musquiz survey, 8 $\frac{1}{2}$ miles northeast of Karnes City.		
Dark sandy loam- - - - -	3	3
Black gumbo- - - - -	1	4
Brown sandy clay - - - - -	2	6
Brown sandy lime - - - - -	1	7
Yellow sand- - - - -	3	10
White caliche and sand - - -	3	13
Fine white sand- - - - -	8	21
Gray medium sand - - - - -	2	23
White lime rock- - - - -	1	24
Light green shale- - - - -	4	28
Brown shale- - - - -	1	29
Purple shale- - - - -	3	32
No water sample collected. Dec. 18, 1936.		

<u>Well 351</u>		
In valley, south side county road, under live oak tree near center south line Alice V. Brown 140 acre tract, Frances J. Haskins survey, 9 miles northeast of Karnes City.		
Sandy clay- - - - -	4	4
Soapstone- - - - -	10	14
Rock- - - - -	6	20
Water level, 15 feet below top of ground $\frac{1}{2}$ hour after hole completed.		
No water sample collected. Jan. 2, 1937.		

<u>Well 353</u>		
In valley, north side county road, under oak tree near southeast corner Alice V. Brown 140 acre tract, J. J. Pickett survey, 9 $\frac{1}{2}$ miles northeast of Karnes City.		
Surface soil- - - - -	1	1
Black waxy soil- - - - -	1	2
Gray clay- - - - -	4	6
Fine sand- - - - -	8	14
Coarse gravel and boulders -	1	15
No water sample collected. Jan. 2, 1937.		

<u>Well 354</u>		
Ridgetop, east side county road, under live oak tree near center west line Mrs. J.W. Ruckman 990 acre tract, W. C. Bullock survey, 10 miles northeast of Karnes City.		
Surface soil- - - - -	2	2
Black waxy soil- - - - -	2	4
Gray clay and rock- - - - -	6	10
Sandy clay- - - - -	6	16
Soapstone- - - - -	10	26
Red sandy clay- - - - -	4	30
No water sample collected. Jan. 3, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 356</u>		
In valley, north side county road, near center south line Mrs. J. W. Ruckman 990 acre tract, W. C. Bullock survey, 10 miles northeast of Karnes City.		
Black waxy soil- - - - -	2	2
Red clay- - - - -	1	3
Brown clay- - - - -	1	4
Caliche and gravel- - - - -	2	6
No water sample collected. Jan. 2, 1937.		

<u>Well 357</u>		
Ridgetop, north side county road near center south line Mrs. J. W. Ruckman 990 acre tract, W. C. Bullock survey, 10 $\frac{1}{2}$ miles northeast of Karnes City.		
Black waxy soil- - - - -	2	2
Brown and red clay- - - - -	3	5
White caliche- - - - -	7	12
Caliche and chalk- - - - -	1	13
White caliche- - - - -	11	24
No water sample collected. Jan. 2, 1937.		

<u>Well 364</u>		
In valley, west side county road under mesquite tree near south corner L. Applying tract, Ramon Musquiz survey, 6 $\frac{1}{2}$ miles northeast of Karnes City.		
Surface clay- - - - -	4	4
Clay- - - - -	3	7
Yellow caliche- - - - -	5	12
Coarse yellow sand- - - - -	5	17
Coarse white sand- - - - -	9	26
Quicksand- - - - -	3	29
No water sample collected. Dec. 21, 1936.		

<u>Well 368</u>		
River bottoms, south side county road, under live oak tree near east corner W. D. and N. P. Bennett 194 acre tract, Ramon Musquiz survey, 7 miles east of Karnes City.		
Black sandy loam- - - - -	1	1
Black waxy soil- - - - -	2	3
Brown sandy clay- - - - -	2	5
Brown clay and lime- - - - -	4	9
Stiff yellow clay- - - - -	5	14
Soft gray sand rock- - - - -	1	15
Brown and gray shale - - - - -	7	22
Gray caliche clay- - - - -	2	24
No water sample collected. Dec. 21, 1936.		

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

	Thickness (feet)	Depth (feet)
<u>Well 370</u>		
Ridgetop, north side county road, under small mesquite tree near north corner R. Buschnick 93 acre tract, Ramon Musquiz survey, 7 miles east of Karnes City.		
Black waxy soil- - - - -	1	1
Yellow clay- - - - -	3	4
White caliche- - - - -	5	9
Yellow caliche- - - - -	3	12
Gravel and boulders- - - - -	2	14
No water sample collected. Dec. 21, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 372</u>		
Ridgetop, south side county road, under mesquite tree near east corner T. Scott tract, Ramon Musquiz survey, 7½ miles east of Karnes City.		
Surface soil- - - - -	2	2
Gravel and boulders- - - - -	2	4
Struck water at 4 feet.		
No water sample collected. Dec. 21, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 373</u>		
Ridgetop, north side county road, under mesquite tree near southeast corner C. O'Hare survey, 8 miles east of Karnes City.		
Black waxy clay- - - - -	4	4
Red sandy clay- - - - -	6	10
Coarse yellow sand- - - - -	8	18
Coarse white sand- - - - -	4	22
Coarse yellow sand- - - - -	2	24
White soapstone clay- - - - -	2	26
Coarse gravel and quicksand- - - - -	2	28
No water sample collected. Dec. 22, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 375</u>		
Near hilltop, west side county road, under mesquite tree near north corner C. F. Steves 72 acre tract, Francisco Leal survey, 12½ miles east of Karnes City.		
Reddish-brown sandy soil- - - - -	2	2
Yellowish-gray sand, coarse, gritty, friable- - - - -	8	10
Brown sand, coarse, loose, caving sand- - - - -	4	14
Struck water at 11 feet.		
Water level, 10.7 feet below top of ground ½ hour after hole completed.		
Water sample collected. April 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 378</u>		
Near hilltop, east side county road, under mesquite tree near southwest corner D. W. Wofford 100 acre tract, Robert Kleberg survey, 11 miles east of Karnes City.		
Dark brown surface soil- - - - -	2	2
Yellowish-gray calcareous sand- - - - -	5	7
Yellowish-gray sand, coarse, gritty, calcareous- - - - -	4	11
Creamy gray sand, gritty, coarse, slightly calcareous	3	14
No water sample collected. April 8, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 380</u>		
Creek valley, east side county road, under mesquite tree near northwest corner O. M. Lewis 106 acre tract, John M. White survey, 10 miles east of Karnes City.		
Black waxy soil- - - - -	3	3
Brown sandy loam- - - - -	1	4
Yellow sandy clay- - - - -	4	8
Hard white caliche- - - - -	4	12
Fine creamy sand- - - - -	1	13
White sand rock- - - - -	2	15
Stiff yellow clay- - - - -	2	17
Hard sand rock- - - - -	1	18
No water sample collected. Dec. 22, 1936.		

	Thickness (feet)	Depth (feet)
<u>Well 384</u>		
Near hilltop, south side county road, under mesquite tree near center north line J. F. Ryan 120 acre tract, Victoriana Zepeda survey, 9½ miles east of Karnes City.		
Yellowish-gray ashy sand, calcareous few caliche pebbles- - - - -	3	3
Buff sand, slightly calcareous	1	4
Creamy gray sand, fine, calcareous- - - - -	3	7
White quicksand, coarse, quartzitic, "salt and pepper" appearance, opalized gravel- - - - -	4	11
No water sample collected. April 7, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 386</u>		
Level land, north side county road, under mesquite tree 50 yards east from southwest corner S. F. Zowark 65 acre tract, Victoriana Zepeda survey, 10 miles east of Karnes City.		
Brown sandy marl, calcareous	2	2
Buff calcareous sandy marl- - - - -	2	4
Creamy gray sandy marl with caliche pebbles- - - - -	4	8

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 386--Continued</u>		
White sand, coarse, quartzitic, with polished chalcedony pebbles at intervals- - - -	7	15
Rock- - - - -		15
No water sample collected. April 17, 1937.		

<u>Well 389</u>		
Gentle slope, west side county road, under mesquite tree near center east line Gus Tipps 75 acre tract, Victoriana Zepeda survey, 12 miles east of Karnes City.		
Brown surface sand- - - - -	1	1
Red and gray sandy clay - - -	1	2
Buff clay and sand- - - - -	7	9
Pinkish-gray calcareous sand- 8		17
Yellowish-gray sand, friable, calcareous- - - - -	5	22
Light gray sand, friable- - -	5	27
Light brown sand- - - - -	6	33
Water sample collected. April 5, 1937.		

<u>Well 390</u>		
In draw, east side county road, under hackberry tree near northwest corner J. W. Hardin 42 acre tract, John T. Price survey, 12½ miles east of Karnes City.		
Gray sandy topsoil- - - - -	1	1
Gray calcareous sand- - - - -	6	7
Gray sand, sticky, slightly calcareous- - - - -	3	10
Pinkish-gray "salt and pepper" sand- - - - -	3	13
Orange sand, coarse, gritty - 5		18
Struck water at 9 feet.		
Water level, 8.67 feet below top of ground ½ hour after hole completed.		
Water sample collected. April 5, 1937.		

<u>Well 392</u>		
Hillside, south side State Highway 72, under live oak tree near center west line W. S. Cox 86 acre tract, Victoriana Zepeda survey, 12½ miles east of Karnes City.		
Mottled red and brown top sand- - - - -	1	1
Drab bentonitic sandy clay- - 2		3
Yellow and gray gritty clay and sand with caliche pebbles 3		6
Buff, calcareous, sticky clay and sand with calcareous pebbles- - - - -	4	10
Pinkish-gray gritty clay and sand- - - - -	3	13
Orange gritty quicksand - - -	6	19

	Thickness (feet)	Depth (feet)
<u>Well 392--Continued</u>		
Struck water at 11 feet.		
Water level, 7.9 feet below top of ground ½ hour after hole completed.		
Water sample collected. April 6, 1937.		

<u>Well 393</u>		
Foot of gentle slope, south side State Highway 72, under mesquite tree 350 yards west of Karnes-DeWitt County line W. L. Moore survey, 13½ miles east of Karnes City.		
Black sandy topsoil- - - - -	2	2
Gray calcareous sand - - - - -	2	4
Buff sandy marl- - - - -	2	6
Orange calcareous sandy clay - 2		8
Soft silty sand- - - - -	7	15
Red clay, sticky, calcareous	4	19
Buff, silty, soft sand with caliche pebbles- - - - -	4	23
Struck water at 21 feet.		
Water level, 19.7 feet below top of ground ½ hour after hole completed.		
Water sample collected. April 6, 1937.		

<u>Well 397</u>		
Hillside, west side county road near northeast corner Rich Ricks 136 acre tract, Victoriana Zepeda survey, 11½ miles east of Karnes City.		
Red sand and sandy clay- - - -	4	4
Buff calcareous sand- - - - -	1	5
Pinkish-gray, ashy, limy, sand- - 2		7
Buff mealy sandstone, calcareous 2		9
Coarse light brown sand, quart- zitic, friable, calcareous	4	13
Yellow sand, soft, silty, with caliche pebbles- - - - -	6	19
Light brown sand, coarse, friable- - - - -	4	23
Coarse brown sand- - - - -	5	28
Struck water at 23 feet.		
Water level, 23.0 feet below top of ground ½ hour after hole completed.		
Water sample collected. April 7, 1937.		

<u>Well 407</u>		
Near river bottoms, south side county road, under mesquite tree near south corner P. R. Goff 108 acre tract, Carlos Martinez survey, 6 miles east of Karnes City.		
Sandy loam- - - - -	2	2

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 407--Continued</u>		
Clay- - - - -	2	4
Yellow sandy clay - - - - -	2	6
Yellow sand and silt- - - - -	4	10
Gray and yellow sandy loam- -	6	16
White medium sand- - - - -	8	24
Coarse sand and gravel - - -	1	25
Sandy chalk- - - - -	1	26
Soapstone- - - - -	4	30
No water sample collected. Feb. 24, 1937.		

<u>Well 410</u>		
Creek valley, north side county road, under live oak tree near center south line W. R. Reagin 282 acre tract, Carlos Martinez survey, 5 $\frac{1}{2}$ miles southeast of Karnes City.		
Dark sandy loam- - - - -	3	3
Black gumbo- - - - -	1	4
Brown sandy clay- - - - -	3	7
Coarse yellow sand - - - - -	1	8
Yellow sandy clay - - - - -	2	10
Coarse yellow sand- - - - -	2	12
White clay, sand and gravel-	2	14
Fine white sand- - - - -	3	17
Soapstone- - - - -	3	20
Water level, 14 feet below top of ground 0 hours after hole completed.		
Water sample collected. Feb. 24, 1937.		

<u>Well 412</u>		
Creek valley, west side county road, under mesquite tree near southeast corner W.C. and Cora Butler 167 acre tract, Carlos Martinez survey, 5 $\frac{1}{2}$ miles southeast of Karnes City.		
Dark sandy loam- - - - -	5	5
Sand and silt- - - - -	2	7
Gravel and sand- - - - -	1	8
Blue shale- - - - -	4	12
Caliche and clay- - - - -	3	15
Sandy clay- - - - -	1	16
Soapstone- - - - -	3	19
Clay- - - - -	5	24
Struck water at 16 feet.		
Water level, 16 feet below top of ground 0 hours after hole completed.		
Water sample collected. Feb. 24, 1937.		

<u>Well 417</u>		
In valley, north side county road, under mesquite tree near southeast corner P. B. Butler 87 acre tract, Carlos Martinez survey, 7 miles southeast of Karnes City.		

	Thickness (feet)	Depth (feet)
<u>Well 417--Continued</u>		
Gray-surface soil- - - - -	3	3
White waxy clay- - - - -	3	6
Fine white sand- - - - -	3	9
Soapstone and coarse sand-	6	15
Fine yellow sand- - - - -	2	17
Fine white sand- - - - -	6	23
White lime rock- - - - -	1	24
No water sample collected. Mar. 1, 1937.		

<u>Well 423</u>		
Creek valley, west side county road, under mesquite tree 100 yards southeast Union Leader School, near east corner of W. H. Radford 114 acre tract, Carlos Martinez survey, 9 $\frac{1}{2}$ miles southeast of Karnes City.		
Brown sandy clay- - - - -	1	1
White sandy clay- - - - -	3	4
White and yellow clay- - -	4	8
Brown sandy clay- - - - -	6	14
Brown sand- - - - -	2	16
Brown sand and white clay-	2	18
Brown sandy clay- - - - -	2	20
Light brown sand- - - - -	4	24
Red clay- - - - -	4	28
Brown sandy clay- - - - -	12	40
Struck water at 19 feet.		
Water level, 18.1 feet below top of ground 0 hours after hole completed.		
Water sample collected. Mar. 1, 1937.		

<u>Well 425</u>		
Hillside, west side county road, under mesquite tree near east corner - Reasoner lower 86 acre tract, Carlos Martinez survey, 9 miles southeast of Karnes City.		
Brown sandy soil- - - - -	2	2
Pinkish-gray silty sand with caliche pebbles- - - - -	4	6
Gray silty sand and caliche pebbles- - - - -	2	8
Pinkish-gray silty, calcareous sand- - - - -	6	14
Brown calcareous clay - -	4	18
No water sample collected. April 10, 1937.		

<u>Well 426</u>		
Near foot of hill, east side county road, under mesquite tree near center west line R. Burns 247 acre tract, Carlos Martinez survey, 9 miles south of Karnes City.		
Dark brown surface sand-	1	1
Light brown marly sand, slightly calcareous- - -	1	2

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 426--Continued</u>		
Medium gray calcareous, silty sand and caliche pebbles- -	2	4
Buff sand, soft, silty- - -	1	5
Yellow sandstone, calcareous, indurated- - - - -	2	7
No water sample collected. April 9, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 432</u>		
Creek bottoms, south side county road, under mesquite tree near north corner J. D. Pace 145 acre tract, Carlos Martinez survey, 5 miles south of Karnes City.		
Dark sandy loam- - - - -	2	2
Gumbo- - - - -	3	5
Brown shale- - - - -	7	12
Yellow sand and silt- - - -	2	14
Fine sand- - - - -	8	22
Gravel and sand- - - - -	1	23
No water sample collected. Feb. 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 434</u>		
Creek bottoms, south side county road near northwest corner Kate Pace 102 acre tract, Carlos Martinez survey, 5 miles south of Karnes City.		
Dark sandy loam- - - - -	3	3
Black waxy soil- - - - -	2	5
Stiff brown clay- - - - -	9	14
Gray sandy clay- - - - -	5	19
No water sample collected. Feb. 25, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 438</u>		
Creek valley, south side county road near center north line J. Thomas 182 acre tract, Carlos Martinez survey, 8½ miles south of Karnes City.		
Black sandy loam- - - - -	3	3
Yellow clay- - - - -	4	7
Brown clay and chalk - - - -	4	11
Caliche gravel- - - - -	4	15
Gray sandy clay- - - - -	10	25
White sand and silt- - - - -	8	33
Gray sand, clay and chalk- -	1	34
Gray sandy clay- - - - -	2	36
Gray sandy clay and gravel-	1	37
Gray sand- - - - -	3	40
Struck water at 35 feet.		
Water level, 35 feet below top of ground 0 hours after hole completed.		
Water sample collected. Feb. 16, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 439</u>		
In valley, west side county road, under mesquite tree near east corner T. A. Wilburn 282 acre tract, Carlos Martinez survey, 7½ miles south of Karnes City.		
Surface soil- - - - -	2	2
Gray soil- - - - -	6	8
Black waxy soil- - - - -	1	9
Soapstone and sandy clay- -	19	28
Struck water at 9 feet.		
Water level, 9 feet below top of ground 0 hours after hole completed.		
Water sample collected. Feb. 16, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 449</u>		
Hillside, south side county road 300 yards east of State Highway 16, under mesquite tree near northwest corner Mrs. A. E. Ingram 275 acre tract, Carlos Martinez survey, 11½ miles south of Karnes City.		
Black surface soil- - - - -	4	4
Pinkish-gray ashy sand with streaks of bentonitic clay- - - - -		
	2	6
Light reddish-brown bentonitic sandy clay- - - - -		
	3	9
Mottled red and olive drab clay- - - - -		
	5	14
Buff clay- - - - -	4	18
Buff sand, fine, silty- - -	2	20
Light buff sand with chert pebbles and caliche- - -		
	3	23
No water sample collected. April 12, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 450</u>		
Gentle slope, east side county road, under mesquite tree near northwest corner 185 acre tract, Carlos Martinez survey, 10 miles southeast of Karnes City.		
Brown sandy surface soil few caliche nodules- - - - -		
	3	3
Yellow and gray calcareous sandstone and caliche pebbles- - - - -		
	4	7
Buff calcareous indurated sandstone and caliche nodules- - - - -		
	3	10
Yellow and gray sandstone, gritty, calcareous, friable		
	3	13
Creamy-gray sand, silty, with chert pebbles and caliche nodules- - - - -		
	2	15
Struck rock at 15 feet.		
No water sample collected. April 9, 1937.		

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

	Thickness (feet)	Depth (feet)
<u>Well 456</u>		
Hillside, west side State Highway 16, 50 feet north of Bee-Karnes County line, J. W. Barnes 126 acre tract, Jas. Richardson survey, 15 miles south of Karnes City.		
Black sandy surface soil,		
slightly calcareous- - - -	3	3
Medium gray sand- - - - -	2	5
Salmon-pink sand- - - - -	3	8
Light brown sand- - - - -	4	12
Pinkish-gray calcareous sand	1	13
Mottled red and white, ashy		
calcareous clay- - - - -	1	14
Sticky red clay- - - - -	2	16
Greenish-gray bentonitic clay	6	22
Sticky orange clay- - - - -	6	28
Sticky red clay- - - - -	3	31
Fine buff sand- - - - -	2	33
No water sample collected. April 12, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 461</u>		
Ridgetop, south side county road, under live oak tree 300 feet east of gin, N. B. Boultinghouse tract, J. S. Menifee survey, 16 miles southeast of Karnes City.		
Clay- - - - -	2	2
Red sandy clay- - - - -	2	4
Light brown fine sand and clay	1	5
Light brown fine sand and		
caliche pebbles- - - - -	11	16
Light brown fine sand- - -	9	25
Light yellow sand- - - - -	1	26
Red clay- - - - -	6	32
Yellow mottled clay- - - -	6	38
Struck water at 26 feet.		
Water sample collected. March 11, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 466</u>		
Gentle slope, east side county road, under mesquite bush near northwest corner R. Parsons 100 acre tract, Incarnacion Vasquez survey, 13 $\frac{1}{2}$ miles southeast of Karnes City.		
Brown sandy surface soil, cal-		
careous- - - - -	1	1
Grayish-white calcareous		
silty sand and caliche-	5	6
Orange, sandstone, calcareous	2	8
Pinkish-gray sand, silty, cal-		
careous with caliche nodules	8	16
No water sample collected. April 9, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 473</u>		
In valley, north side county road, under mesquite tree near southeast corner C. H. Kroneck tract, Carlos Martinez survey, 10 $\frac{1}{2}$ miles southeast of Karnes City.		
Black loamy clay- - - - -	2	2
Brown clay- - - - -	2	4
Red clay- - - - -	3	7
Sandy chalk clay- - - - -	4	11
Light brown clay- - - - -	3	14
Gray mottled clay - - - - -	4	18
Brown clay, caliche pebbles -	3	21
Fine yellow sand- - - - -	3	24
Fine gray sand - - - - -	4	28
Fine yellow sand - - - - -	11	39
Dark red clay- - - - -	8	47
Quartz, sandstone and gravel-		47
No water sample collected. Mar. 9, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 474</u>		
In valley, north side county road, under mesquite tree 324 feet northeast of southeast corner C. H. Kroneck 100 acre tract, Carlos Martinez survey, 10 $\frac{1}{2}$ miles southeast of Karnes City.		
Waxy surface soil- - - - -	2	2
Black waxy soil- - - - -	1	3
Red clay- - - - -	4	7
Soapstone clay- - - - -	9	16
Yellow clay, soapstone and small		
white rock- - - - -	9	25
Fine yellow sand- - - - -	17	42
No water sample collected. Mar. 2, 1937.		

	Thickness (feet)	Depth (feet)
<u>Well 475</u>		
Gentle slope, north side county road, under mesquite tree near northwest corner C. J. Boyce 160 acre tract, Carlos Martinez survey. 11 miles southeast of Karnes City.		
Black clay- - - - -	3	3
Yellow clay- - - - -	3	6
Light yellow sand and clay- -	2	8
White chalk- - - - -	1	9
Brown soapstone- - - - -	2	11
White chalk and soapstone- -	1	12
Brown soapstone- - - - -	2	14
Light yellow sand rock- - - -	2	16
Dark yellow sand- - - - -	3	19
Orange sand- - - - -	2	21
Coarse light yellow sand- - -	2	23
Fine white sand- - - - -	1	24
Light brownish sand- - - - -	6	30
Yellow sand rock- - - - -	2	32
No water sample collected. Mar. 2, 1937.		

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

	Thickness (feet)	Depth (feet)
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Well 478

Valley flat, west side county road 160 feet southwest Hondo Creek bridge, M. I. Seitze tract, Carlos Martinez survey, 11 $\frac{1}{2}$ miles southeast of Karnes City.

Dark brown surface soil- - - - -	1	1
Coarse sand- - - - -	3	4
Light brown clay and chalk - - -	3	7
Light brown chalky clay- - - - -	4	11
Yellow sandy clay- - - - -	2	13
Brown clay with chalk streaks	11	24
Yellow clay and sand- - - - -	6	30
Yellow sand and clay- - - - -	2	32
Light brown sand and clay- - -	4	36

Struck water at 32 feet.

Water level, 25 feet below top of ground 12 hours after hole completed.

Water sample collected. Mar. 9, 1937.

Well 479

Gentle slope, west side county road, under mesquite tree near northwest entrance Choate Cemetery, Carlos Martinez survey, 12 miles southeast of Karnes City.

Black surface soil- - - - -	2	2
Black clay- - - - -	2	4
Red clay- - - - -	3	7
Light brown sand- - - - -	5	12
Red clay- - - - -	1	13
Fine yellow sand- - - - -	1	14
Red clay- - - - -	7	21
Brown sand- - - - -	3	24
Sand rock- - - - -		24

No water sample collected. Mar. 9, 1937.

Well 488

Head of valley, west side county road, under mesquite tree near southeast corner J. F. Zierze 60 acre tract, Incarnacion Vasquez survey, 14 $\frac{1}{2}$ miles southeast of Karnes City.

Black waxy soil- - - - -	4	4
Brown sandy clay- - - - -	4	8
Friable caliche- - - - -	5	13
Brown chalky clay- - - - -	2	15
Red clay- - - - -	2	17
Light brown clay- - - - -	2	19

No water sample collected. Mar. 10, 1937.

Well 492

Creek bank, east side county road under live oak tree 50 yards south of bridge, southwest corner W. S. Brown 163 acre tract, Victor Blanco survey, 17 miles southeast of Karnes City.

	Thickness (feet)	Depth (feet)
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Well 492--Continued

Brown gritty sand- - - - -	1	1
Whitish-gray limy sandstone with marl quartz pebbles- - -	4	5
Gray calcareous clay and sand and caliche nodules with some chert pebbles- - - - -	5	10
Fine pink sand with caliche nodules- - - - -	3	13
Sandy lime and caliche pebbles	2	15
Light brown calcareous sand -	1	16
Coarse brown quartz sand- - -	3	19

No water sample collected. Mar. 24, 1937.

Well 497

Hillside, west side county road, under mesquite tree near center west line O. P. Talk 166 acre tract, Maria De Jesus Ybarba survey, 18 miles east of Karnes City.

Brown sandy topsoil- - - - -	3	3
Gray calcareous, gritty sand, with chert pebbles- - - - -	1	4
Sandy lime with calcium car- bonate coated chert pebbles	4	8
Gray bentonitic gritty sand	3	11
Pink sand, fine, calcareous, with lumps of caliche and feldspar gravel and rock -	13	24
Rock - - - - -		24

No water sample collected. Mar. 25, 1937.

Well 504

Hilltop, north side county road, under mesquite near northwest corner R. A. Boyce 100 acre tract, Victor Blanco survey, 13 $\frac{1}{2}$ miles southeast of Karnes City.

Reddish-brown sand and polished gravel- - - - -	3	3
Pinkish-gray ashy sand, calcar- eous, some opalized rock frag- ments- - - - -	4	7

No water sample collected. Mar. 26, 1937.

Well 505

Near river bottoms, east side county road, under mesquite tree near northwest corner M. P. Schorre 700 acre tract, 12 miles southeast of Karnes City.

Black sandy loam- - - - -	4	4
Dark brown clay and sand, tough, slightly calcareous- - - - -	4	8
Brown clay and sand, compact, calcareous, few chert pebbles	6	14

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
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Well 505--Continued

Yellowish-gray silty clay, slightly calcareous- - - -	2	16
Gray silty, sticky clay- - -	3	19
Struck water at 18 feet.		

Water level, 17.6 feet below top of ground $\frac{1}{2}$ hour after hole completed.

Water sample collected. Mar. 26, 1937.

Well 507

In draw, west side county road near center east line Ed. Woods 641 acre tract, Victor Blanco survey, 12 miles east of Karnes City.

Brown sandy chalky marl- - -	2	2
Light gray, fine soft, silty sand and caliche pebbles -	6	8
White sand, quartzitic, coarse, with few caliche pebbles -	3	11
Yellow and gray sand and caliche- - - - - - - - -	4	15
Yellow sand, coarse, loose	3	18
Struck water at 16 $\frac{1}{2}$ feet.		

No water sample collected. April 7, 1937.

Well 511

In draw, west side county road, under mesquite tree near center east line P. Dittferth 136 acre tract, Victor Blanco survey, 14 $\frac{1}{2}$ miles east of Karnes City.

Black sandy loam- - - - -	4	4
Gray and brown sand - - - -	1	5
Creamy-gray sand, chalcedony and caliche- - - - - - -	2	7
Pinkish-gray limy ash- - - -	3	10
Olive-drab bentonitic clay, slightly calcareous- - - -	9	19
Pinkish-gray calcareous, clay and sand, carbonaceous- -	7	26
Fine orange sand- - - - -	2	28

No water sample collected. Mar. 23, 1937.

	Thickness (feet)	Depth (feet)
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Well 517

Gentle slope, on west side of county road, under mesquite tree near northeast corner of H. Schlenstadt 54 acre tract, Willis A. Moore survey, 16 $\frac{1}{2}$ miles east of Karnes City.

Black sandy surface soil- -	4	4
Brownish-gray gritty sand and caliche pebbles- - -	2	6
Medium gray sand and gravel-	1	7
Mottled buff and white cal- careous clay and sand- - -	3	10
Red bentonitic calcareous clay and sand- - - - - -	8	18
Mottled red and gray clay and sand- - - - - - - - - -	4	22

Struck water at 15 feet.

Water level, 8.80 feet below top of ground 12 hours after hole completed.

Water sample collected. April 5, 1937.

Well 523

In draw, east side county road, under hackberry tree near southeast corner J. B. Taylor 97 acre tract, Wm. Guthrie survey, 12 $\frac{1}{2}$ miles east of Karnes City.

Brown calcareous sand- - - -	1	1
Gray calcareous sand and rock	2	3
Orange and brown sand- - - -	8	11
Brown bentonitic, chalky, clay- - - - - - - - - -	2	13
Red clay- - - - - - - - - -	7	20
Yellow and gray sand- - - -	1	21
Tan sandy clay- - - - - - - -	1	22
Tan sand- - - - - - - - - -	2	24
Fine tan sand and caliche- -	1	25
Red clay and caliche- - - -	2	27

No water sample collected. Mar. 23, 1937.

Partial analyses of water from wells in Karnes County, Texas

(Analyzed at The University of Texas under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, by J. E. Stullken, C. R. Stewart, D. F. Riddell, and Alfred J. Kelly, Chemists, and J. A. Harmaza, Martin Wieland and Jack Ramsey, Assistant Chemists. Results are in parts per million. Well numbers correspond to numbers in table of well records.)

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
2	San Antonio Joint Stock and Land Bank	100	Nov. 6, 1936	1,700	88	10	504	323	644	295	261
3	Willie Jandt	200	do.	2,461	-	-	-	342	668	790	-
4	Walter Goetz	140	do.	1,708	110	9	475	289	711	260	314
8	Joe Sprencel	-	Oct. 19, 1936	2,039	136	31	548	79	585	700	469
10	Grady Holcomb	263	do.	1,765	-	-	-	61	140	970	-
11	W. Green	115	Oct. 15, 1936	1,511	222	40	278	178	183	700	719
13	N.N. Butler	213	do.	1,097	42	10	357	202	183	405	152
14	Sons of Herman Lodge	-	Sept. 30, 1936	3,520	484	34	648	356	1,644	535	1,350
15	Alex Pollock	-	do.	4,534	802	102	566	250	1,910	1,030	2,423
16	W.P.A. test well	32	Sept. 29, 1936	4,609	-	-	-	250	1,559	1,260	-
17	L.K. Sezepanik	185	Sept. 23, 1936	2,011	-	-	-	275	604	595	-
19	Leon Pawelek	310	Oct. 1, 1936	2,594	5	3	970	738	643	610	25
21	Ed. Jendrusch	135	do.	1,258	207	34	199	348	292	355	657
23	H. Jandt	151	Oct. 16, 1936	2,196	-	-	-	61	974	490	-
24	A.H. Mueller	123	do.	577	-	-	-	110	62	255	-
25	Eugene Barth	137	do.	1,110	-	-	-	61	86	600	-
28	Paul Kokie	85	do.	1,473	-	-	-	61	a/	910	-
29	Charlie Swizi	300	Oct. 5, 1936	1,105	-	-	-	116	222	445	-
30	O.J. Bludais	190	do.	1,006	-	-	-	268	218	305	-
32	Mrs. A.R. Muller	165	do.	1,461	158	34	349	104	39	830	536
34	Mat Labus	270	Oct. 2, 1936	867	-	-	-	122	133	370	-
35	H.L. Kunkel	150	Oct. 14, 1936	924	-	-	-	177	97	410	-
36	John Drees	87	Oct. 8, 1936	1,165	-	-	-	92	74	630	-
39	J.J. Mutchler Est.	140	Oct. 1, 1936	1,919	-	-	-	98	818	435	-
43	W.P.A. test well	33	Sept. 29, 1936	3,641	-	-	-	104	1,793	650	-
44	L.T. Urbanczyk	140	Oct. 1, 1936	1,929	-	-	-	561	546	445	-
45	J.W. Mzyk	160	do.	1,561	-	-	-	415	476	350	-
47	J.W. Culpepper	230	Nov. 11, 1936	3,815	312	49	958	367	1,355	960	980

a/ Sulphate less than 10 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
48	V.T. Moczygemba	266	Nov. 10, 1936	3,501	22	7	1,235	244	1,127	990	84
49	E.B. Chandler	150	Nov. 9, 1936	5,238	192	23	1,609	496	2,150	1,020	575
52	L.T. Moczygemba	100	Nov. 13, 1936	614	-	-	-	256	59	205	-
53	R.J. Palasek	80	Oct. 8, 1936	433	-	-	-	85	47	190	-
54	do.	75	do.	994	-	-	-	116	160	430	-
55a	Vincent Labus	132	Nov. 13, 1936	1,009	80	16	282	314	137	340	265
59	A.W. Dziuk	155	Nov. 12, 1936	1,136	-	-	-	128	110	560	-
62	Peter Manka	100	Nov. 13, 1936	1,233	-	-	-	140	204	530	-
64	Louis Moczygemba	-	do.	1,588	211	25	299	110	589	410	631
65	Louis Pawelek	170	Nov. 9, 1936	1,610	-	-	-	85	618	425	-
66	Ed. Kyrish	106	Nov. 14, 1936	3,029	-	-	-	85	919	1,060	-
67	Joe Zarzambek	169	Nov. 9, 1936	3,597	-	-	-	244	1,559	760	-
68	A. Zarzambek	270	Nov. 16, 1936	6,751	588	97	1,566	216	2,984	1,410	1,871
73	Ed. Olynick	-	Nov. 14, 1936	3,316	128	22	1,029	490	1,166	730	409
74	Richard Krawietz	200	do.	3,983	162	41	1,163	368	1,716	720	571
75	W.H. Winkler	240	Nov. 16, 1936	3,515	-	-	-	268	1,421	820	-
76	W.P.A. test well	26	Nov. 14, 1936	2,526	-	-	-	98	1,147	525	-
77	John Mzyk	80	do.	5,000	293	58	1,398	547	1,732	1,250	972
78	John Camber	65	do.	3,147	-	-	-	12	1,398	740	-
79	Pete Pilarczyk	110	do.	2,277	-	-	-	476	648	620	-
80	do.	110	Nov. 13, 1936	1,694	-	-	-	299	664	325	-
82	Jno. T. Brysch	91	do.	350	-	-	-	159	67	80	-
84	David Banduch	111	Nov. 18, 1936	941	21	5	344	403	98	275	73
85	Frank Pawelek	150	Nov. 17, 1936	4,268	-	-	-	37	1,524	1,330	-
86	do.	-	do.	3,605	-	-	-	134	1,198	1,150	-
87	San Antonio Joint Stock and Land Bank	274	do.	4,527	44	7	1,602	634	1,382	1,180	140
88	Henry Broll	181	Nov. 19, 1936	2,200	-	-	-	372	852	440	-
89	Alex Gawlik	100	do.	3,320	36	6	1,168	647	1,092	700	113
90	Frank Felux	120	Nov. 19, 1936	1,947	89	10	580	207	781	385	266
92	John A. Pawelek	63	do.	523	-	-	-	232	149	78	-
94	J.M. Lyssey	200	do.	2,342	-	-	-	226	1,048	430	-
95	Mrs. Henry Kotara	125	do.	3,679	-	-	-	122	1,202	1,200	-
98	Ben A. Moczygemba	-	Dec. 7, 1936	3,926	-	-	-	207	2,144	460	-
99	Jerome Pawelek	150	Dec. 15, 1936	4,446	-	-	-	336	2,000	850	-

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

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₄)	Sulphate (SO ₃)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
100	M. Wishert	150	Dec.15,1936	5,733	-	-	-	214	2,533	1,260	-
101	Alex Kotara	212	Nov.17,1936	5,266	-	-	-	98	2,226	1,300	-
103	J.W. Bauer	-	do.	2,201	266	41	448	226	695	640	836
104	C.D. Gilley	117	Dec.16,1936	4,438	-	-	-	104	2,046	930	-
105	Robert Harper	100	do.	3,971	217	45	1,099	268	1,618	860	728
106	C.W. Rzappa	100	Dec.15,1936	4,642	-	-	-	268	2,018	1,000	-
108	L.S. Hyatt	65	do.	836	-	-	-	336	214	165	-
110	A.W. Hyatt	200	do.	824	-	-	-	183	200	250	-
114	Hyatt School	240	Dec.14,1936	1,886	254	33	331	220	880	280	770
115	H. May	138	do.	3,644	-	-	-	49	1,716	750	-
116	Mrs. J.M. Golson	270	Mar.17,1936	1,879	194	71	340	250	851	300	774
118	W.P.A. test well	40	do.	3,963	-	-	-	665	1,033	1,250	-
119	Martindale Loan Co.	153	do.	2,451	221	101	437	31	1,277	400	967
120	E.J. Schneider	200	do.	536	-	-	-	262	81	132	-
121	Modern Garage	165	do.	2,039	-	-	-	268	754	480	-
122	J.A. Nelson	180	do.	1,749	-	-	-	329	619	385	-
123	A.N. Marrou	325	Jan. 6,1937	5,444	-	-	-	85	1,818	1,790	-
126	J.D. Wiley	100	do.	2,169	-	-	-	317	735	555	-
128	Walter Riedel	-	do.	3,979	173	35	1,182	281	1,451	1,000	577
130	R.F. Rehmet	-	do.	2,553	-	-	-	73	1,335	385	-
131	Mrs. Otto Mischer	180	Jan. 7,1937	2,653	259	52	570	79	1,103	630	862
133	W.G. Riedel	-	do.	2,370	-	-	-	183	298	1,150	-
134	Albert Triebig	-	do.	2,364	-	-	-	256	1,238	256	-
135	R. Manthrey	-	Jan. 6,1937	2,868	-	-	-	43	1,354	585	-
136	S.F. Austin	140	Mar.19,1937	5,089	336	66	1,280	232	2,553	740	1,111
137	R.H. Metz	176	do.	4,409	157	19	1,360	354	1,799	900	472
138	M.A. Zint	200	do.	2,246	-	-	-	238	929	470	-
139	Henry Parke	280	do.	3,554	-	-	-	268	1,548	730	-
140	M.A. Caraway	160	do.	4,530	-	-	-	220	1,470	1,450	-
141	Emil Meyers	104	do.	2,070	-	-	-	220	871	420	-
143	Martina Pena	120	Mar.22,1937	3,803	552	116	500	73	2,109	490	1,856
144	A. Hilscher	127	do.	3,768	-	-	-	305	1,838	585	-
146	T. Russell	97	do.	2,775	402	128	365	262	971	780	1,529
148	W.F. Hall	265	do.	723	-	-	-	323	259	58	-
149	Steve Ploch	135	Mar.19,1937	1,893	198	58	362	195	809	370	736

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

Results are in parts per million.

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
150	C.G. Duke	165	Mar.12,1937	2,263	-	-	-	293	843	530	-
151	W.P.A. test well	44	do.	4,281	-	-	-	409	1,384	1,270	-
152	Jim Holstein	-	do.	2,159	246	71	426	323	557	700	904
153	Dr. N.A. Elder	140	Mar.22,1937	2,140	181	51	520	727	685	345	662
154	Homer Dennings	225	Mar.12,1937	3,720	165	35	1,057	384	1,799	475	557
155	C.L. Lambert	212	do.	4,265	171	27	1,300	159	1,509	1,180	537
156	T.J. Asher	93	do.	457	34	7	139	317	35	86	115
157	F.P. Cobb	105	do.	546	118	9	77	348	58	108	330
158	C.H.F. Melting	273	do.	651	90	7	132	201	213	110	255
159	D.R. Cross	226	Mar.18,1937	572	-	-	-	171	190	104	-
160	Minnie H. Bryan	220	do.	678	-	-	-	262	93	212	-
162	Fritz Haase	225	Jan. 7,1937	1,661	-	-	-	43	232	830	-
163	Jean Marrou	162	Mar.18,1937	3,035	-	-	-	384	1,335	530	-
164	Wm. Menn	-	Jan. 7,1937	595	-	-	-	85	205	150	-
166	F.H. Korth	220	Jan. 5,1937	563	97	14	71	136	279	35	298
167	R.M. Korth	250	do.	251	-	-	-	159	47	35	-
168	do.	210	do.	1,133	-	-	-	55	139	570	-
169	Fritz Korth	150	do.	824	-	-	-	244	244	178	-
170	Crews-Korth Merc.Co.	60	do.	223	-	-	-	128	50	30	-
171	Ecleto School	50	do.	1,415	227	21	263	336	248	490	653
173	S.E. Crews	-	Jan. 7,1937	511	-	-	-	73	58	236	-
174	Mrs. Mary Kerlick	100	Jan. 5,1937	1,258	-	-	-	159	186	553	-
175	W.C. Crews	200	do.	813	-	-	-	110	294	196	-
177	B. Garcia	150	Jan. 8,1937	2,715	179	20	734	306	1,161	470	528
179	Mrs. Joseph Yanta	75	Dec.16,1936	2,437	-	-	-	122	877	700	-
180	do.	69	do.	545	-	-	-	299	74	125	-
181	Mrs. Sallie Elliott	3,020	Dec.18,1936	3,615	-	-	-	378	1,130	1,090	-
182	C.H. Ford	131	Dec.17,1936	613	-	-	-	250	117	155	-
184	S.B. Copeland	123	Dec.18,1936	1,706	174	29	396	344	518	420	553
186	Thomas J. Browne	-	Dec.17,1936	847	-	-	-	390	206	150	-
188	Ed. Jannyseck	233	Jan. 4,1937	1,125	-	-	-	360	183	365	-
190	J.W. Morawietz	246	do.	1,194	-	-	-	134	125	580	-
191	Mike Jannyseck	250	Dec.18,1936	1,302	-	-	-	110	171	620	-
192	John Jannyseck	291	Jan. 4,1937	1,292	-	-	-	55	86	720	-

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
194	Joel Dupinck	84	Dec.17,1936	845	-	-	-	366	175	190	-
195	G.W. Sickenies	109	Jan. 4,1937	1,173	-	-	-	464	273	260	-
197	Martin Browne	-	Dec.18,1936	1,203	-	-	-	409	265	315	-
198	Jessie Mika	231	Dec.16,1936	1,128	-	-	-	360	312	250	-
200	J.E. Motheral	100	Nov.18,1936	2,667	-	-	-	287	448	1,150	-
203	Anton Kruciak	-	do.	1,818	-	-	-	415	326	650	-
204	Paul Mika	204	Nov.12,1936	2,183	148	25	646	498	279	840	476
205	W.P.A. test well	35	Nov.18,1936	7,210	518	107	1,870	415	2,431	2,080	1,736
206	Albert Pawelek	250	Nov.12,1936	862	-	-	-	384	94	265	-
207	Frank Snoga	250	do.	729	-	-	-	329	32	265	-
209	Ben Pawelek	100	Nov.13,1936	1,833	-	-	-	85	141	1,000	-
212	Mike Bednorz	240	Nov.12,1936	1,566	-	-	-	250	122	760	-
213	Dr. S.A. King	100	Feb. 3,1937	1,998	-	-	-	171	197	1,010	-
214	do.	100	do.	1,255	-	-	-	43	155	640	-
215	Dallas Joint Stock & Land Bank	100	Dec. 8,1936	1,398	58	9	469	381	165	510	183
217	J.H.R. Trial	225	do.	813	-	-	-	336	126	230	-
218	Ed. Bueche	200	do.	1,447	-	-	-	226	63	750	-
219	C.S.E. Henke	300	Oct.14,1936	1,174	-	-	-	55	74	655	-
221	Joe Bludau	250	Oct. 6,1936	669	63	13	183	386	48	172	210
222	W.P.A. test well	11	Oct.12,1936	1,728	-	-	-	79	203	880	-
223	Anton Hons	206	Oct.14,1936	1,400	-	-	-	79	148	720	-
224	Dallas Joint Stock & Land Bank	-	do.	1,172	98	17	324	362	160	395	316
226	J.O. Faith	200	Feb. 6,1937	1,184	-	-	-	250	51	580	-
227	John Linhart	315	do.	1,158	91	26	312	284	129	460	337
228	E.D. Moeller	156	Feb. 6,1937	1,444	-	-	-	293	78	700	-
229	H.L. Smith	145	do.	1,546	-	-	-	226	a/	870	-
230	J.H. Davidson	200	Oct.12,1936	784	-	-	-	201	51	350	-
231	Tom Gedion	180	do.	1,048	-	-	-	201	121	455	-
233	E.P. Ruhmann	150	Oct.13,1936	1,237	99	22	335	209	168	510	338
235	F.J. Scholz	380	Feb. 5,1937	950	148	30	168	234	59	430	494
237	R.J. Polasek	150	do.	1,412	-	-	-	98	113	730	-

a/ Sulphate less than 10 parts per million.

100

Partial analyses of water from wells in Karnes County--Continued
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Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
238	W.C. Ryan	160	Feb.11,1937	636	-	-	-	232	a/	285	-
239	Pete Danysh	146	Oct.19,1936	1,098	214	28	150	277	145	425	652
240	Oscar Killiner	100	Feb.11,1937	3,077	-	-	-	232	206	1,660	-
241	Frank Jonas	172	do.	2,889	-	-	-	317	487	1,240	-
242	N.H. Goodman	-	do.	-	-	-	-	-	70	740	-
243	T.G. Butler	210	do.	1,005	71	18	295	298	55	420	252
244	Herbert Wiegang	116	Feb. 5,1937	1,518	-	-	-	43	55	900	-
245	C.T. Roberts	335	do.	403	-	-	-	159	55	125	-
247	W.E. Lamb	206	Feb.10,1937	1,055	-	-	-	238	160	405	-
248	Mrs. Minna Best	446	Feb.11,1937	665	7	4	250	220	66	230	32
250	-- Daugherty	-	Feb. 6,1937	1,508	-	-	-	287	82	740	-
251	Adolph Haner	265	do.	830	-	-	-	348	70	285	-
252	F. Klingemann	365	Feb. 9,1937	587	12	6	214	268	43	180	54
253	Fritz Farre	193	do.	1,320	219	28	246	258	a/	700	663
254	Valentine Pawelek	100	Feb.10,1937	927	64	17	280	317	a/	410	231
256	H.H. Ladewig	-	Feb. 9,1937	942	5	3	370	494	86	235	22
257	R. Hoffman	356	Feb.10,1937	2,304	-	-	-	305	468	890	-
258	E.W. Rudolph	150	Feb. 9,1937	2,653	-	-	-	110	518	1,170	-
260	Wm. Esse	300	Feb.10,1937	2,981	66	6	1,028	281	713	1,030	189
261	A.S. Conrad	165	do.	3,108	-	-	-	250	857	1,080	-
262	Wm. Esse	58	do.	3,396	-	-	-	220	1,520	680	-
263	Harry Youngquist	390	Feb.16,1937	5,174	-	-	-	226	851	2,420	-
264	Alfred Anderson	400	do.	2,246	64	7	809	232	12	1,240	190
265	Philip Buegeler	318	Feb.25,1937	2,253	194	22	552	336	300	1,020	574
266	J.W. Ruckman	-	Feb. 9,1937	2,228	-	-	-	354	253	1,010	-
267	Sons of Herman Lodge	200	do.	4,609	-	-	-	232	515	2,360	-
268	S.E. Crews Sr.	92	Feb. 6,1937	1,383	149	27	339	306	117	600	482
270	L. Stieren	-	Feb. 9,1937	2,429	-	-	-	281	327	1,110	-
272	Mrs. B.E. Peach	105	Feb. 8,1937	1,502	-	-	-	232	43	800	-
273	do.	275	do.	1,667	111	18	489	454	331	495	351
274	A.J. Rippstein	375	do.	999	34	10	339	329	129	325	126
275	Hy. Lieke	-	do.	913	-	-	-	329	62	355	-

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Partial analyses of water from wells in Karnes County--Continued
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Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
276	Louis Grimm	355	Feb. 8, 1937	1,188	-	-	-	214	218	450	-
277	Tito Guerrero	155	Feb. 4, 1937	2,113	122	27	643	178	193	1,040	416
279	J.M. Jauer	481	Feb. 5, 1937	1,030	-	-	-	329	117	380	-
281	Max Otto	185	Feb. 4, 1937	1,503	84	17	454	398	327	425	281
282	Aug. Zaeske	383	do.	1,300	10	3	488	268	167	500	37
283	Max Otto	130	do.	983	-	-	-	311	128	350	-
285	F. Bruns	160	Feb. 8, 1937	1,708	-	-	-	372	218	700	-
286	W.P.A. test well	26	do.	8,413	-	-	-	110	2,011	3,500	-
287	E.F. Wellhoefer	200	do.	2,026	-	-	-	165	187	1,040	-
289	C.W. Moody	-	do.	1,628	168	33	413	332	51	800	555
290	J.A. Smith	265	Feb. 25, 1937	1,488	92	17	461	238	51	750	301
291	J.T. Hailey	Spring	do.	619	73	27	126	311	74	166	292
292	O.J. Mudd	-	do.	4,438	-	-	-	220	721	2,070	-
293	G.C. Ruhman	100	do.	1,021	92	22	276	411	59	370	319
294	W.P.A. test well	24	do.	1,838	-	-	-	403	347	650	-
295	V.T. Courson	400	do.	2,134	-	-	-	177	179	1,110	-
297	Mrs. Ethel Hysaw	365	Feb. 15, 1937	2,182	148	22	662	423	290	890	459
299	Aug. Kaiser	-	do.	1,725	-	-	-	336	240	710	-
300	Fritz Seeger	100	Feb. 12, 1937	460	-	-	-	275	a/	150	-
301	do.	140	do.	1,526	-	-	-	61	159	800	-
302	John Jones	-	do.	2,219	-	-	-	98	351	1,050	-
303	Fritz Seeger	3,000	Feb. 15, 1937	129	53	36	-	31	a/	18	283
304	R.J. Ahrens	265	Feb. 12, 1937	805	-	-	-	207	62	350	-
305	W.P.A. test well	21	Feb. 8, 1937	850	-	-	-	445	a/	310	-
306	L.F. Jauer	244	Feb. 12, 1937	1,360	-	-	-	189	78	700	-
307	J.T. Mitchell	265	do.	1,485	102	17	452	390	82	640	326
308	W.P.A. test well	30	Feb. 4, 1937	2,030	2,324	567	4,423	641	1,719	10,960	8,139
309	L.W. Stieren	-	do.	1,901	-	-	-	323	117	940	-
310 & 311	City of Karnes City	860	Mar. 31, 1937	1,140	2	-	432	354	122	410	5
313	Mrs. G.F. Rzeppa	-	Feb. 3, 1937	1,150	-	-	-	287	116	480	-
315	Mrs. E. Sahn	124	do.	723	-	-	-	110	74	338	-
317	R.L. Barnett	2,250	Nov. 18, 1936	1,729	9	4	675	598	102	645	37

a/ Sulphate less than 10 parts per million.

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
319	H.B. Armstrong	-	Jan. 8, 1937	1,079	-	-	-	238	89	485	-
321	B. Huckle	200	Feb. 12, 1937	3,736	-	-	-	232	417	1,890	-
322	L.A. Blackwell	175	do.	1,609	-	-	-	470	246	560	-
323	V.P.A. test well	16	Feb. 17, 1937	2,838	-	-	-	415	97	1,510	-
324	Annie Bailey	150	do.	1,041	-	-	-	98	132	495	-
326	V.P.A. test well	40	Feb. 12, 1937	1,419	-	-	-	573	273	360	-
327	B.J. Brown	100	do.	490	-	-	-	140	a/	240	-
328	Nicholes National Bank	150	Feb. 23, 1937	701	-	-	-	85	43	365	-
329	E.E. Haverlah	100	do.	900	-	-	-	342	46	355	-
330	J. Hoffmann	100	do.	513	-	-	-	287	43	139	-
331	Mrs. R.E. Holmes	-	Feb. 17, 1937	286	-	-	-	250	a/	52	-
332	C.H. Merritt	100	Feb. 23, 1937	316	-	-	-	256	a/	68	-
334	Drought & Co.	105	Feb. 17, 1937	311	60	15	42	281	23	33	209
335	Mrs. Edna Wicks	150	do.	192	-	-	-	92	a/	75	-
337	J.M. Elder	150	Feb. 19, 1937	492	-	-	-	366	33	93	-
338	E. Dittferth	190	do.	221	-	-	-	116	27	56	-
339	Drought & Co.	45	do.	486	72	17	101	317	39	121	251
341	J.T. Rhode	140	Feb. 18, 1937	1,423	158	24	342	506	250	400	495
342	Mrs. John Elder	134	Feb. 19, 1937	1,302	110	16	374	460	101	475	340
344	H.A. Neal	80	Dec. 17, 1936	851	-	-	-	116	70	420	-
346	R.E. Nickell	77	Nov. 18, 1936	507	-	-	-	73	67	225	-
347	Frank Winerich	83	do.	1,761	-	-	-	140	279	800	-
348	L.H. Brown	155	do.	2,038	-	-	-	287	291	890	-
349	T.O. Neal	100	Dec. 18, 1936	1,153	-	-	-	457	257	265	-
352	Leo Kruciak	199	Jan. 2, 1937	1,290	96	12	388	374	90	520	289
355	Mrs. J.W. Ruckman	250	Jan. 4, 1937	2,179	-	-	-	159	464	890	-
358	T.R. Jannyseck	85	Jan. 2, 1937	1,225	-	-	-	226	199	485	-
359	C.S. Smith	143	do.	1,233	-	-	-	110	156	590	-
360	do.	180	do.	617	-	-	-	311	90	150	-
361	L.W. Stieren	100	do.	1,285	165	32	281	318	55	595	546
362	D.B. Bowden	100	do.	733	-	-	-	323	121	190	-
363	R.E. Nickell	80	Nov. 18, 1936	1,709	-	-	-	403	322	590	-

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
365	Margaret Ruckman	200	Dec. 21, 1936	591	52	10	170	411	43	114	173
366	D.B. Bowden	126	Dec. 22, 1936	261	-	-	-	165	16	66	-
367	J.W. Zezula	158	do.	475	-	-	-	73	39	230	-
369	Hester Ruckman	100	Dec. 21, 1936	956	-	-	-	140	180	375	-
371	San Antonio Joint Stock and Land Bank	75	do.	388	-	-	-	110	27	166	-
374	E.F. Friedle	125	Dec. 22, 1936	474	-	-	-	92	39	220	-
375	W.P.A. test well	14	Apr. 8, 1937	140	-	-	-	140	a/	16	-
376	C.F. Steves	200	do.	986	190	32	130	207	87	445	605
377	D.V. Woffard	124	do.	4,047	-	-	-	153	120	2,400	-
379	Joe Liska	110	Dec. 22, 1936	558	-	-	-	92	43	270	-
381	Grover Keepers	100	do.	1,178	-	-	-	49	31	700	-
382	W.E. Scoggins	51	Apr. 7, 1937	634	-	-	-	183	27	285	-
383	John A. Yanta	-	Dec. 22, 1936	717	-	-	-	61	35	395	-
385	J.F. Ryan	100	Apr. 7, 1937	877	147	37	135	342	50	340	518
388	Central Power & Light Co.	212	Mar. 31, 1937	601	54	32	129	104	23	312	265
389	W.P.A. test well	33	Apr. 5, 1937	336	-	-	-	299	a/	58	-
390	do.	18	do.	481	-	-	-	165	39	186	-
391	J. Sullivan	35	do.	174	-	-	-	128	a/	44	-
392	W.P.A. test well	19	Apr. 6, 1937	3,667	-	-	-	555	413	1,680	-
393	do.	23	do.	7,727	376	234	2,165	329	1,130	3,660	1,899
394	H. Sonneborn	150	Apr. 5, 1937	577	80	10	132	329	39	154	241
395	W.H. Young	40	do.	1,860	-	-	-	49	93	1,080	-
396	Paul Natho	57	Apr. 6, 1937	774	121	19	150	366	54	250	382
397	W.P.A. test well	28	Apr. 7, 1937	1,196	98	33	312	293	109	500	380
398	A.B. Russell	70	Mar. 2, 1937	838	-	-	-	336	94	275	-
399	Geo. Tips	70	do.	783	134	18	139	348	66	255	411
400	G.D. Boultinghouse	160	Mar. 1, 1937	1,018	-	-	-	305	90	410	-
401	Geo. Tips	160	Mar. 2, 1937	1,282	-	-	-	226	129	585	-
402	Mrs. Ruth Ingram	100	Feb. 24, 1937	836	-	-	-	232	31	385	-
403	Mrs. B.E. Ruhman	-	do.	637	143	19	75	329	16	222	437
404	N.R. McClaire	130	do.	309	-	-	-	232	a/	76	-
405	L.W. Lawrence	53	Feb. 23, 1937	426	-	-	-	348	a/	90	-

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
406	W.C. Ryan	30	Feb. 23, 1937	412	-	-	-	317	a/	97	-
408	C.C. Strawn	75	Feb. 17, 1937	343	32	14	81	187	39	84	139
409	T.T. Scarbrough	60	do.	279	-	-	-	153	27	74	-
410	W.P.A. test well	20	Feb. 24, 1937	3,091	-	-	-	891	331	1,210	-
411	S.C. Butler	133	Feb. 23, 1937	687	74	15	170	293	74	210	244
412	W.P.A. test well	24	Feb. 24, 1937	511	94	17	91	550	a/	38	306
413	S. P. R.R. Co.	3,000	Mar. 30, 1937	7,840	6	-	2,990	1,513	a/	4,100	15
414 & 415	City of Kenedy	402	do.	1,287	38	9	455	451	125	438	130
416	Bill Nickels	-	Mar. 1, 1937	1,316	-	-	-	348	121	550	-
418	Martindale Mortg. Co.-	-	Feb. 24, 1937	1,289	218	39	214	311	55	610	704
419	D.E. Cox	85	Mar. 1, 1937	1,355	-	-	-	299	105	615	-
420	C.H. Kreneck	110	do.	428	110	10	42	256	a/	140	316
421	A. Schroeder	148	Apr. 9, 1937	819	103	19	182	281	77	300	337
422	Union Leader School	120	Mar. 1, 1937	1,238	134	37	288	391	86	500	488
423	W.P.A. test well	40	do.	1,421	-	-	-	464	78	595	-
424	Tom Gates	-	do.	611	-	-	-	305	51	185	-
427	Ford F. Gauntt	175	Apr. 9, 1937	2,043	227	28	505	348	192	920	682
428	Mary Stovall	71	do.	1,460	-	-	-	226	138	690	-
429	D.L. Schrock	107	do.	1,539	189	28	358	344	65	720	588
430	Mrs. A. J. Dunn	220	Feb. 15, 1937	3,572	386	63	843	207	488	1,690	1,224
431	W.T. Courson	150	Feb. 25, 1937	1,288	164	24	286	244	129	565	510
433	--	210	do.	3,224	308	46	826	226	413	1,520	959
435	C.E. McAda	176	Feb. 15, 1937	5,596	611	68	1,357	299	803	2,610	1,807
436	Otto Boehm	200	do.	3,596	377	51	880	250	515	1,650	1,152
437	Aug. Jackson	-	Feb. 16, 1937	984	-	-	-	73	128	475	-
438	W.P.A. test well	40	do.	3,615	-	-	-	98	741	1,590	-
439	do.	28	do.	3,356	-	-	-	360	218	1,760	-
441	Mrs. H. Johnson	40	Feb. 15, 1937	1,406	-	-	-	305	132	620	-
442	Martindale Loan Co.	1,100	do.	2,206	23	2	855	460	a/	1,100	67
443	Mrs. Theo. Johnson	300	do.	6,348	464	102	1,820	381	1,025	2,750	1,579
444	J.J. Ponish	270	Feb. 16, 1937	2,455	-	-	-	122	294	1,240	-
445	Carl Fransen	45	do.	1,255	-	-	-	159	77	650	-

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	sodium and Potassium (Na / K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₄ (calculated)
446	W.T. Vaughan Est.	140	Feb.16,1937	656	-	-	-	67	27	360	-
447	C.A. Munson	-	do.	582	-	-	-	262	54	186	-
448	C.R. Murphy	180	Apr.12,1937	1,133	191	29	189	244	119	485	598
451	J.V. Thames	-	Apr. 9,1937	854	-	-	-	61	93	430	-
452	W.T. Courson	160	do.	1,127	168	30	218	342	73	470	544
453	F.E. Juchelka	210	Apr.12,1937	1,277	202	39	222	323	115	540	664
454	Levin Johnson	106	do.	626	69	17	161	533	29	88	242
455	Ida Herder	126	do.	1,127	144	32	234	195	96	525	490
457	D.W. Vickers	49	do.	492	74	17	99	421	27	68	255
458	J.E. Steed	210	do.	700	97	19	144	317	69	215	322
459	R.L. Hodges	120	Apr.10,1937	946	-	-	-	238	111	380	-
460	Peter Cook	72	Mar.10,1937	320	-	-	-	256	27	46	-
461	W.P.A. test well	38	Mar.11,1937	364	-	-	-	390	a/	28	-
462	N.B. Boultinghouse	80	Mar.10,1937	317	-	-	-	299	a/	46	-
463	Mac. Powell	82	do.	367	43	13	80	183	31	110	163
464	Hayes Robertson	67	do.	386	-	-	-	336	12	60	-
465	C.J. Overby	158	Apr.10,1937	571	42	23	139	92	77	245	199
468	A.M. Korback	-	Mar.10,1937	1,159	96	49	285	482	77	415	440
469	Mrs. R.F. Hunt	160	Mar. 9,1937	1,199	-	-	-	146	66	630	-
470	L.B. Kirkpatrick	125	Mar. 1,1937	1,118	-	-	-	213	125	490	-
471	T.H. Mienke	-	do.	927	-	-	-	397	105	290	-
472	C.H. Kreneck	160	do.	1,285	-	-	-	268	90	600	-
476	C.W. Boyce	80	Mar. 2,1937	591	-	-	-	329	39	170	-
477	Marg. Roeben	-	do.	1,010	-	-	-	268	105	410	-
478	W.P.A. test well	36	Mar. 9,1937	637	-	-	-	403	78	126	-
480	M.I. Seitze	27	do.	7,833	785	254	1,666	337	1,754	3,210	3,007
481	Mrs. C.A. Braun	36	Mar. 2,1937	747	-	-	-	311	55	265	-
482	Miss Myra Hargrave & Mrs. W.E. Braun	38	do.	1,171	-	-	-	281	74	535	-
483	C. Baker	100	do.	884	112	18	202	342	74	310	356
484	J.A. Sawey	-	Mar. 9,1937	854	-	-	-	390	62	285	-
484a	C. Baker	70	do.	837	-	-	-	427	101	220	-
485	D.B. Hunt	101	Mar.10,1937	1,012	143	29	199	293	82	415	478

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

Well No.	Owner	Depth of well (feet)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calculated)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Total hardness as CaCO ₃ (calculated)
486	Collie Baker	63	Mar.11,1937	1,616	-	-	-	293	77	810	-
487	R.J. Ahrens	63	Mar.10,1937	658	-	-	-	311	47	215	-
489	Jesse McKinney	60	Mar.11,1937	1,320	-	-	-	323	77	605	-
490	Mrs. D. Pargman	114	Apr. 7,1937	690	-	-	-	403	50	185	-
491	Frank Davenport	54	Mar.24,1937	391	-	-	-	226	35	100	-
493	J. Porter	111	Mar.23,1937	552	-	-	-	93	77	235	-
494	J.F. Taylor	240	Mar.25,1937	667	-	-	-	92	70	315	-
495	W.E. Porter	146	do.	519	84	15	100	343	23	128	269
498	O.P. Talk	150	Apr. 5,1937	1,205	197	29	220	337	58	535	613
499	M.E. Walters	93	Mar.23,1937	363	-	-	-	336	a/	56	-
500	San Antonio Joint Stock and Land Bank	90	do.	757	-	-	-	262	35	315	-
501	Jeff Porter	60	Mar.24,1937	345	72	7	53	208	a/	110	210
502	Robt. Sucher	51	Apr. 7,1937	397	-	-	-	293	27	76	-
503	R.A. Boyce	86	Mar.26,1937	1,130	160	54	193	289	51	530	619
505	W.P.A. test well	19	do.	2,046	-	-	-	500	195	870	-
506	A.W. Mixon	83	do.	751	-	-	-	305	47	278	-
508	Geo. Moore	39	Apr. 6,1937	2,377	275	100	472	348	209	1,150	1,097
509	W.J. Schorre	155	Mar.24,1937	1,757	-	-	-	293	78	900	-
510	P. Dittferth	-	do.	1,144	254	49	105	331	43	530	835
512	School Land	120	do.	982	126	47	175	159	66	490	509
513	J.R.F. Kruse	60	do.	3,353	-	-	-	293	321	1,700	-
514	Steinert Estate	-	Mar.23,1937	492	-	-	-	317	58	96	-
515	Fritz Berkenhoff	65	do.	1,396	-	-	-	55	93	780	-
516	H.A. Schlennstedt	100	Mar.25,1937	496	-	-	-	323	31	120	-
517	W.P.A. test well	22	Apr. 5,1937	1,435	-	-	-	220	257	570	-
518	R. Ammermann	89	do.	341	-	-	-	177	31	97	-
519	F. Reibschlaeger	112	Mar.23,1937	877	115	28	188	470	45	270	402
520	B. Mueller	100	Apr. 5,1937	598	87	19	119	354	43	166	297
521	F.J. Matula	55	Apr. 6,1937	918	-	-	-	207	81	405	-
522	Mrs. Katie Lyons	85	do.	631	94	18	128	378	27	178	311

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MAP OF KARNES COUNTY, TEXAS

SHOWING LOCATIONS OF WATER WELLS LISTED



- EXPLANATION -
- WELL WITH HAND PUMP BUCKET OR BAILER
 - ◐ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ⊗ WELL WITH PUMPING PLANT - 5 HORSE POWER OR LARGER
 - ◇ UNUSED WELL
 - ◊ TEST WELL DRILLED BY W.P.A. LABOR
 - ✦ WELL DRILLED FOR OIL OR GAS
 - ⊕ SPRING
 - FLOWING WELL
 - IMPROVED ROAD
 - - - UNIMPROVED ROAD

FIELD WORK BY
G. H. SHAFER
PROJECT SUPERINTENDENT
W.P.A. PROJECT 2083
BASE COMPILED FROM
LAND OWNERSHIP MAP
AND FIELD NOTES

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

