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HIDALGO COUNTY, TEXAS

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

TEXAS STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman

A. H. Dunlap, Member

J. W. Pritchett, Member

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

May 1941

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Tex. State board

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Introduction
by
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United States Department of the Interior,
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This release contains a description of 630 wells in Hidalgo County, Texas, including the location, depth and size of the wells, the depth to which the wells are cased, the depth to the water level on a given date, the method used in lifting the water, and the use to which the water is put. It contains logs of 83 of the wells, analyses or partial analyses of water from 217 of them, and a map which shows all the wells described, each having a number on the map corresponding to the number assigned to it in the tables of records.

The records were obtained in the course of an investigation which was undertaken as part of a state-wide study of the underground water resources of Texas. The investigation was made by the State Board of Water Engineers, in cooperation with the Geological Survey of the United States Department of the Interior and the Engineering Experiment Station of the Agricultural and Mechanical College of Texas.

The field work was started in the summer of 1933 and discontinued in the fall of that year for lack of funds. It was taken up again and completed in the summer of 1939. The work was carried out by J. T. Lonsdale, formerly of the Department of Geology of the A. & M. College, and now of the Department of Geology of Ames College, Iowa. Mr. Lonsdale was assisted in 1933 by S. S. Nye, Assistant Geologist in the Geological Survey. The analyses were made in the laboratories of the Geological Survey at Washington, D. C. and Austin, Texas by E. W. Lohr, Assistant Chemist.

A part of the records obtained in 1933 were published in mimeograph form in 1938.

The records serve as a guide to land owners, well drillers and others who may need information regarding wells and pumping plants, the depth to ground water in different parts of the county and the quantity and quality of water yielded by wells.

The publication was mimeographed by employees of the Work Projects Administration Project No. 17276.

184605 I/73

Records of wells in Hidalgo County, Texas

(All wells are drilled or bored unless otherwise indicated in "Remarks" column.)

No.	Distance from Puerto Rico	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
1	9¼ miles northeast	A. C. Jones	--	--	150	4¼	--	--
2	9-¾ miles northeast	do.	--	--	350	4	--	--
3	do.	do.	--	--	150	6- 5/8	--	--
4	10½ miles northeast	L. J. Lipps	--	--	80	3/16	--	--
5	7-¾ miles northeast	Mrs. M. M. Fairbanks	--	--	400+	5	--	--
6	9¼ miles northeast	L. J. Lipps	--	--	80	4¼	--	--
7	2 miles north	H. O. Casas	M. Pena	1910	90	4	--	--
8	2½ miles northwest	C. G. Barrera	F. Vela	1912	123	6	--	--
9	2½ miles north	J. Barrera	--	--	115	6	--	--
10	do.	do.	--	--	107	6	--	--
c/ 11	2 miles north	S. Casas	--	--	97	4¼	--	--
c/ 12	2½ miles north	Placedo Casas	Paulo Casas	1921	40	4¼	23	17
13	3 miles north	R. Casas	P. Garcia	1902	80	84	--	--
14	do.	do.	R. Casas	1921	91	4¼	60?	31?
15	4 miles north	do.	R. Panajua	1921	57	84	--	--
16	do.	do.	Pancho Vela	1908	110	6	--	--
17	3¼ miles north	Felipe Garza	Felipe Garza	1927	74	4- 3/4	--	--
18	5½ miles north	H. B. Hargrove	H. B. Hargrove	--	78	4¼	--	--
19	5 miles north	do.	do.	--	84	4¼	--	--
20	3 miles northwest	A. Guerra	Francisco Garza	1902	65	48	--	--
21	do.	do.	C. Aguirre	1914	62	96	--	--
22	3¼ miles northwest	Crisante G. Barrera	Sabina Gonzales	1888	56	84	--	--
23	2¼ miles northeast	A. G. Munoz	Francisco Vela	1918	125	4	--	--
24	2-¾ miles northeast	M. Hinojosa	--	--	120	4	--	--
25	2-¾ miles north	Santa Monica School	--	--	155	4¼	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
1	--	-41.1	May 18, 1933	W	S	Water hard and slightly salty. Milpas well.
2	--	-19.8	do.	W	S	Temperature 85° F. Salado (deep) well.
3	--	-100?	Reported	W	S	Salado (shallow) well.
4	--	--	--	W	S	Encalmada well.
5	--	-22	July 6, 1933	C,W,G	S	Water salty. Charco large well.
6	--	--	--	W	S	Numero Dos well.
7	--	-28	June 21, 1933	W	D,S	Irrigates garden. On rolling ground.
8	4	-30	do.	W	D,S	Irrigates garden. Yield, 15 gallons a minute.
9	--	-30	do.	W	D,S,I	
10	--	-40	do.	W	D,S,I	Together with well 9 irrigates 10 acres citrus fruits. Yield, 15 gallons a
11	--	-29	do.	W	D,S	Irrigates garden. Yield, 8 <u>minute.</u> gallons a minute.
12	8	-22	July 8, 1933	H	S	Water from sandy caliche.
13	--	-30	do.	W	D,S	Dug well. Water slightly salty.
14	10	-30	do.	W	D,S	Do.
15	--	-51	July 9, 1933	H	S	Dug well. Water salty.
16	125	-47	do.	W	D,S	Water salty.
17	8½	-35	do.	W	D,S	Do.
18	78	-71	July 12, 1933	W	S	Yield, 10 gallons a minute. Water salty. Located in Starr County.
19	--	-70	do.	W	S	Yield, 8 gallons a minute.
20	--	-32	July 9, 1933	C,G	D,S	Dug well. Located in Starr County.
21	--	-32	do.	C,S	D,S,I	Dug well. Irrigates citrus fruits and supplies boiler water for cotton gin.
22	--	-30	do.	W	D,S	Dug well. Located in Starr County.
23	60	-42.5	June 22, 1933	W	D,S,I	
24	--	-26	July 21, 1933	W	D,S	Yield, 15 gallons a minute.
25	--	-28	do.	W	D	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Puerto Rico	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
26	3 miles northeast	F. G. Hinojosa	L. Calderon	1928	100	6	35	65
27	4-3/4 miles northeast	Petro Valdez	Petro Valdez	1919	103	6	50	53
28	4 1/2 miles northeast	do.	do.	1926	66	6	50	16
29	5 miles north	H. B. Hargrove	H. B. Hargrove	1926	85	4 1/4	62	16
30	5 1/4 miles north	do.	do.	1928	85	3	--	--
31	5 1/2 miles northeast	do.	do.	1930	96	4 1/4	70	14
32	8-3/4 miles northeast	A. C. Jones	--	--	150	5-3/16	--	--
33	8 1/2 miles northeast	do.	--	--	150	5-3/16	--	--

No.	Distance from Guerra Store	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
34	6 1/2 miles north	Mrs. H. M. King Est.	--	--	--	--	--	--
35	9 1/2 miles northeast	do.	C. M. Hatcher	1924	771	4 1/2	--	--
36	8 1/4 miles northwest	L. J. Lipps	--	--	450	4 1/4	--	--
37	9 miles northwest	do.	--	--	648	4 1/4	--	--
38	6-3/4 miles northwest	do.	--	--	535	8	--	--
39	5 1/4 miles north	Mrs. H. M. King Est.	--	--	--	4	--	--
40	3-3/4 miles northwest	do.	H. L. Curry	1927	740	3 1/4	--	--
41	6 miles northeast	do.	--	1917	552	3 1/2	--	--
42	3 miles northeast	do.	--	1919	516	3 1/4	--	--
43	1 1/2 miles northwest	D. Guerra & Sons	H. L. Curry	1923	643	4 1/4	--	--
44	2 miles north	Raphael Garcia	Raphael Garcia	1931	55	4 1/4	--	--
45	2 1/2 miles north	D. G. Guerra	Otto Custer	1927	792	4 1/2	700	92
46	4 1/2 miles northeast	Mrs. H. M. King Est.	H. L. Curry	1931	903	5-3/16	--	--
47	7 1/2 miles northeast	do.	Chester Davis	1921	718	4 1/4	--	--
48	6 1/4 miles northeast	do.	J. C. Curry	--	787	8	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
26	80	-37	July 8, 1933	W	D,S	Slightly salty. Yield, about 15 gallons a minute.
27	14	-58	July 9, 1933	W	S	Water salty, from sandy caliche. Yield, about 15 gallons a minute.
28	14	-56	do.	H	D,S	Salty.
29	85	-68	do.	W	S	Slightly salty. Yield, 4 gallons a minute. South well.
30	85	-75	do.	W	D,S	Yield, small. Slightly salty. North well.
31	96	-71	do.	W	S	Salty. Another sand at 59 to 63 feet.
32	--	-58.1	May 18, 1933	W	S	Christalinos well.
33	--	-67.2	do.	W	S	Well 10.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
34	--	+2	Apr. 21, 1933	Flow	S	Yield, 15 gallons a minute. Temperature $81\frac{10}{2}$ ° F. On slope.
35	771	+1	do.	Flow	S	Yield, 6 gallons a minute. Temperature $85\frac{10}{2}$ ° F. On hilltop. Hacha well.
36	--	--	--	W	S	Temperature 83° F.
37	--	--	--	W	S	Temperature 85°. Water from sandstone. Agua Dulce well.
38	--	-20.5	--	W	S	Muertos well.
39	--	-14	--	W	D,S	Temperature 85° F. On hilltop. Santa Fe Pancho well.
40	740	+5	Apr. 21, 1933	Flow	S	Temperature 87° F. Yield, 4 gallons a minute. On slope. South Copita well.
41	552	+10±	do.	Flow	S	Temperature $87\frac{10}{2}$ ° F. Yield, about 25 gallons a minute. In sink. East
42	516	- 3.6	do.	W	S	Temperature 83° F. Copita well. Todos Santos well.
43	643	+ 2	July 14, 1933	Flow W	D,S	Flow, 5 gallons a minute.
44	50	-40	do.	C,G	S	Salty.
45	792	+ 3±	do.	Flow W	D,S	Water also at 480 to 498 feet. Flow, 10 gallons a minute.
46	903	--	Apr. 24, 1933	Flow	S	Bitter. Temperature 88° F. Yield, 13 gallons a minute.
47	718	+10±	--	Flow	S	Temperature $85\frac{10}{2}$ ° F. Salty and bitter. Yield, 18 gallons a minute. Near edge
48	787	- 7.7	Apr. 24, 1933	W	D,S	Temperature 86° F. On hilltop. Tampico well. of lake.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Guerra Store	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
49	8 miles northeast	Mrs. H. M. King Est.	--	--	--	5- 3/16	--	--
50	6 miles northeast	do.	--	--	646	5- 3/16	--	--
51	5-3/4 miles northeast	do.	--	--	--	9	--	--

No.	Distance from Puerto Rico	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/ 52	In Puerto Rico	F. R. Barrera	N. Pena	1922	75	6	--	--
53	1 mile northwest	do.	F. R. Barrera	1915	75	6	39	36
54	In Puerto Rico	do.	Lino Trevino	1931	72	5- 3/16	32	40
55	3/4 mile west	A. Guerra	--	--	84	4 $\frac{1}{4}$	--	--
c/ 56	do.	G. Perez	--	--	85	6	--	--
57	do.	Antonio Perez	Antonio Perez	1932	69	6	34	35
58	1 $\frac{1}{2}$ miles southwest	do.	N. Pena	1920	115	4 $\frac{1}{4}$	--	--
59	1-3/4 miles southwest	Bonifacio Perez	do.	1920	130	4 $\frac{1}{2}$	--	--
c/ 60	3 $\frac{1}{2}$ miles southwest	Dario Perez	do.	1924	130	4 $\frac{1}{4}$	85	--
61	4 miles south	Roman Chabana	do.	1923	120	4 $\frac{1}{4}$	80	--
c/ 62	2 miles southwest	Martias Pena	--	--	125	4 $\frac{1}{4}$	--	--
63	do.	Liberato Calderon	Liberato Calderon	1919	130	6	65	--
64	1 $\frac{1}{2}$ miles southwest	Onesimo Rodriguez	do.	1923	115	6	65	--
65	1 mile southwest	Anastacio Casos	Marcos Pena	1915	97	8	--	--
66	1 mile south	do.	N. Pena	1924	79	5- 3/16	--	--
67	1/2 mile south	Jesusa G. Trevino	do.	1927	61	6	--	--
68	1/4 mile south	do.	do.	1927	74	8	40	34
69	3/4 mile southeast	Pedro Longoria	Aciano Sanchez	1910	67	96	--	--
70	1 mile southeast	Juan N. Cabasos	N. Pena	1924	76	5- 3/16	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
49	--	+10±	--	Flow	S	Temperature 89° F. Yield, 18 gallons a minute. On hilltop. Cantinas well.
50	646	+10±	--	Flow	S	Temperature 87½° F. Yield, 8 gallons a minute. Near edge of lake.
51	--	+10±	--	Flow	S	Temperature 84° F. Yield, 5 gallons a minute. Near edge of lake.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
52	--	-29.5	Aug. 12, 1933	W	D,S,I	
53	4	-38	do.	W	D,S	Yield, 10 gallons a minute.
54	--	-29	do.	W	D,S	Do.
55	--	-25	Aug. 12, 1933	W	D,S	On slope.
56	--	-62	do.	W	D,S	Do.
57	None	-35	do.	H	D,S	Water from red and white sand.
58	8	-60	do.	W	D,S	Yield, small.
59	10	-60±	do.	H	D,S	Yield, 10 gallons a minute.
60	10	-97	do.	W	S	Salty.
61	--	-84	do.	W	D,S	Salty. Water from caliche and red sand.
62	--	-61	July 12, 1933	W	D,S	Yield, 5 gallons a minute.
63	3	-65	do.	W	D,S,I	Water from red and white sand.
64	None	-63	do.	W	D,S	
65	5	-45	do.	W	D,S,I	
66	10	-43	July 11, 1933	H	D,S	Slightly salty.
67	4	-34	do.	H	D,S	
68	--	24.5	do.	W	D,S	
69	--	-41	do.	W	D,S	Dug well.
70	--	-31	do.	W	D,S,I	Irrigates citrus fruits.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102 .

Records of wells in Hidalgo County--Continued

No.	Distance from Puerto Rico	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
71	1 1/4 miles southeast	Jesus Bazan	N. Pena	1925	105	4 1/4	38	--
c/ 72	1 1/2 miles south	Alfredo Rodriguez	Alfredo Rodriguez	1928	72	5	--	--
73	2 1/2 miles southwest	A. Guerra	--	--	84	96	--	--
74	1-3/4 miles east	A. O. Luck	--	--	120	60	--	--
75	1 mile east	Crisoforo Longoria	L. Calderon	1923	90	4 1/4	--	--
76	1 mile southeast	Ricardo Gonzalez	Ricardo Gonzalez	1929	64	4	36	0.2
77	1 1/4 miles southeast	Manuel C. Vela	N. Pena	1919	125	4 1/4	100	25
c/ 78	1 1/2 miles southeast	Enemencio Bazan	do.	1929	100	6	--	--
c/ 79	1-3/4 miles southeast	Bernardino Bazan Est.	do.	1919	82	4 1/4	--	--
c/ 80	3 1/4 miles southeast	Mrs. M. M. Fairbanks	Wm. Collins	1912	150	6	--	--
c/ 81	do.	do.	Curry Bros.	--	450	8	--	--
82	4 1/4 miles northeast	do.	--	--	129	5	--	--
83	6 1/4 miles east	do.	--	--	200+	4 1/4	--	--

No.	Distance from Linn	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
84	7 miles northwest	Mrs. M. M. Fairbanks	Curry Bros.	--	300	4	--	--
c/ 85	4 1/2 miles northwest	Henry Guerra	Otto Custer	1925	672	5	--	--
86	3 1/4 miles northwest	Baker Est.	--	--	85	96	--	--
87	do.	do.	--	--	500+	6	--	--

No.	Distance from Guerra Store	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
88	3/4 mile west	D. Guerra & Sons	--	1908	500+	4 1/4	--	--
c/ 89	At Guerra Store	do.	H. L. Curry	1925	625	4 1/4	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
71	3	-25	July 11, 1933	W	D,S	Irrigates garden. Water from red sand and clay.
72	5	-57	do.	W	D,S	Water from sandy red caliche.
73	--	-83	do.	W	D,S	Dug well.
74	--	-36	June 21, 1933	W	D,S	Dug well. Yield, about 20 gallons a minute.
75	3	-25	June 11, 1933	H	D,S	
76	None	-30	do.	H	D,S	Water from crevice in caliche. Yield, about 10 gallons a minute.
77	3	-29	do.	W	D,S,I	Water from caliche.
78	10	-31.5	do.	W	D,S	
79	20	--	do.	H	D,S	
80	150	-35	Aug. 12, 1933	W	D,S	West well.
81	--	-30 ₊	do.	C,W,G	D,S	Yield, about 50 gallons a minute. East well. Base of hill. Water from sand-
82	--	-48	do.	C,W,G	S	Slightly salty. Yield, 10 stone . gallons a minute.
83	--	-37	do.	W	S	Salty. Originally flowed. Palomas well.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
84	--	-35.5	Aug. 12, 1933	W	S	Originally flowed. Present yield, 20 gallons a minute.
85	672	-22.5	June 30, 1933	C,W,G	D,S	
86	--	-28	do.	W	S	Dug well. Yield, 8 gallons a minute. In draw.
87	--	-11	do.	C,W,G	D,S	Yield, 12 gallons a minute. On hilltop.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
88	--	- 5 ₊	--	W	D,S	
89	625	+ 1	July 20, 1933	Flow W	D,S	Flow, 1 gallon a minute.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102 .

Records of wells in Hidalgo County--Continued

No.	Distance from Guerra Store	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
90	1-3/4 miles southwest	--	--	--	--	--	--	--
91	2 1/2 miles southwest	-- Doughty	W. T. Sprague	1907	440	4 1/4	--	--
92	2 miles southeast	D. Guerra & Sons	H. L. Curry	1917	525	4 1/4	--	--
93	2 miles south	do.	--	1905	525+	4 1/4	--	--
c/94	2-3/4 miles south	do.	H. L. Curry	1920	575	4 1/4	--	--
95	3 1/2 miles south	do.	do.	1905	525+	4 1/4	--	--
96	1 1/2 miles east	do.	Curry Bros	1893	600+	4 1/4	--	--
97	5 1/2 miles east	Mrs. H. M. King Est.	H. L. Curry	1917	1,070	5-3/16	--	--
98	3 miles southeast	D. Guerra & Sons	do.	1915	575	5-3/16	--	--
99	3 1/2 miles southeast	do.	do.	1912	560	4 1/4	--	--
100	4-3/4 miles southeast	P. Y. Perez	do.	1912	630	4 1/4	--	--

No.	Distance from McCook	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
101	8 miles northwest	Provin & Davenport	--	1933	1,030	4 1/4	750	60
102	5 miles northwest	Boston Texas Land Co.	-- Stoops	1906	310	5-3/16	290	20
103	6 miles northwest	G. E. Stevens	-- Newbro	1928	337	4 1/4	285	52
104	6-3/4 miles northwest	P. J. Stevens	do.	1930	335	4 1/4	--	--
105	5-3/4 miles north	Andrew Reule	J. Speers	1929	338	4 1/4	--	--
106	1 1/2 miles north	R. A. Kremel	R. A. Kremel	1933	350	5	345	5
c/107	7 1/4 miles northeast	J. C. Thompson	--	--	300	4 1/4	--	--
c/108	7 miles northeast	-- Taylor	Hidalgo Oil Co.	--	1,760	--	--	--
c/109	6 1/4 miles northeast	Mrs. M. M. Fairbanks	--	1926	170	4 1/4	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
90	--	--	--	--	--	Abandoned oil test.
91	440	--	Aug. 15, 1933	C,W,G	S	Originally flowed.
92	525	+ 1	do.	Flow	D,S	Yield, 3 gallons a minute. On slope. San Carlos well.
93	525	+ 0.5	do.	Flow W	S	Flow, $\frac{1}{2}$ gallon a minute. On slope.
94	575	+ 5±	do.	Flow	D,S	Yield, 7 gallons a minute. San Felipe well.
95	--	+ 3	do.	Flow	D,S	Yield, 1 gallon a minute. On slope. Charita well.
96	--	+ 8	do.	Flow	D,S	Yield, 15 gallons a minute.
97	960	+ 8±	Apr. 24, 1933	Flow	S	Yield, $9\frac{1}{2}$ gallons a minute. Temperature 87° F. Near edge of lake. Machos well.
98	575	+ 1	Aug. 15, 1933	Flow	D,S	Yield, 8 gallons a minute. Near edge of lake. Golfo well.
99	560	+ 2	do.	Flow	D,S	Bad water at 40 feet. Yield, 3 gallons a minute. Near edge of lake. Toro well.
100	630	-32	Aug. 17, 1933	W	D,S,I	Irrigates $\frac{1}{4}$ acre citrus fruits. Originally flowed. On hilltop.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
101	1,030	-185	July 10, 1933	W	D,S	Other sands at about 370 and 500 feet. Located in Starr County.
102	310	-189	do.	W	S	Yield, 1 gallon a minute. Pinto Ballo well.
103	337	-186	do.	W	D,S	Salty. On slope. See log.
104	335	-148	do.	W	D	Salty. On slope.
105	338	-160	do.	W	D,S	Salty.
106	60	-175	do.	C,G	D,S	Water from sandy clay. Other sands at 260 and 305 feet. Yield, 7 gallons a minute. Drawdown 75 feet, 40 minutes after start of pump. See log.
107	--	-79	--	C,W,G	S	Salty.
108	--	--	--	--	--	Abandoned oil test. See log.
109	60	-100	Aug. 20, 1933	C,W,G	D,S	Water from caliche.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Linn	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
110	8½ miles southwest	Mrs. M. M. Fairbanks	--	1926	156	4¼	--	--
111	7½ miles west	do.	H. L. Curry	1910	350	6	--	--
112	7¼ miles west	do.	--	1910	150	5	--	--
113	5 miles west	D. Guerra & Sons	--	1908	440	5- 3/16	--	--
114	6½ miles southwest	J. J. Young	Juan Mercado	1919	125	6	--	--
115	6¼ miles southwest	do.	--	1925	125	6	--	--
116	do.	do.	Juan Mercado	1921	120	4¼	--	--
117	7 miles southwest	do.	do.	1932	140	4¼	--	--
c/118	5-¾ miles southwest	Frank Rabb Est.	--	--	80+	5- 3/16	--	--
119	4½ miles southwest	do.	--	--	84	5- 3/16	--	--
120	4 miles southwest	J. J. Young	--	--	71	5- 3/16	--	--
c/121	3½ miles southwest	J. A. White	Ned Wells	1929	80	8	50	30
122	3¼ miles southwest	O. J. Blane	--	1931	60	4¼	--	--
123	3 miles southwest	R. R. Jackson	--	--	48	4¼	--	--
c/124	1½ miles west	W. J. Wylie	--	1926	65	4¼	--	--
125	¾ mile north	A. Guerra	--	--	--	4	--	--
c/126	½ mile north	do.	--	--	90	4	--	--
c/127	¾ mile north	do.	--	--	115	4	--	--
c/128	¼ mile north	do.	--	1925	173	5	--	--
c/129	½ mile south	Walter Doughty	Juan N. Cavazos	1931	67	4	--	--
130	In Linn	S. P. R. R. Co.	J. W. Jackson	1927	765	6	402	101
131	½ mile south	Valley Gin Co.	--	1927	120+	4	--	--
132	1½ miles northeast	Juan N. Guerra	Juan N. Guerra	1926	68	4¼	--	--
133	do.	Juan Chapa	Juan N. Cavazos	1929	66	4¼	--	--

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
110	20	-101	Aug. 20, 1933	C,W,G	S	Water from caliche.
111	--	- 29	July 5, 1933	C,G	S	Near edge of lake.
112	--	- 58	do.	W	S	Yield, 10 gallons a minute. Dominguez well.
113	44	- 45	July 6, 1933	W	D,S	
114	-80	- 49	do.	W	D,S	On slope.
115	60	- 66	do.	W	D,S	
116	20	- 72	do.	W	D,S	
117	40	-102	do.	C,G	S	
118	--	- 80	Aug. 10, 1933	C,G	D,S	On slope.
119	--	- 48	do.	W	S	
120	--	- 41	do.	W	S	
121	80	- 50	Aug. 7, 1933	C,G	D,S,I	Irrigates 1 acre berries and 10 acres citrus fruits. Has pumped 10 hours continuously at 35 gallons a minute. Water from gray sand. On slope.
122	10	- 38	do.	W	D,S,I	Irrigates $\frac{1}{2}$ acre of nursery.
123	--	- 40	do.	W	D,S	
124	10	- 34	June 25, 1933	W	D,I	Irrigates yard.
125	--	- 19	do.	W	D	
126	--	- 30	do.	W	D,S	
127	--	- 30	do.	W	D,S	
128	--	- 30	do.	W	D,S	
129	--	- 28	do.	W	D,S	
130	765	+ 10 ₊	do.	Flow G	--	Slightly salty. Another water-bearing sand at 730 to 744 feet. Yield: flow, 10 gallons a minute; pump, 250 gallons a minute. See log.
131	--	--	Aug. 8, 1933	W	D	
132	60	- 40	do.	W	S	Salty.
133	--	- 41	do.	W	S	Salty. Gas reported.

Records of wells in Hidalgo County--Continued

No.	Distance from Linn	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/134	3 miles east	A. B. Garza	H. L. Curry	1923	650	4 $\frac{1}{4}$	--	--
135	1 $\frac{1}{2}$ miles northeast	A. M. Chapa	Juan N. Cavazos	1920	75	4 $\frac{1}{4}$	--	--
136	1 $\frac{1}{4}$ miles east	M. Chapa	do.	1920	210	5- 3/16	--	--
137	1 $\frac{1}{2}$ miles east	do.	do.	1910	64	4 $\frac{1}{4}$	--	--
138	1 $\frac{1}{2}$ miles southeast	A. Guerra	--	--	213	5	--	--
139	1 $\frac{1}{2}$ miles southwest	J. J. Mullinax	--	1895	60	4 $\frac{1}{4}$	--	--
140	2 $\frac{1}{4}$ miles southwest	J. A. Torres	J. A. Torres	1932	42	3 $\frac{1}{2}$	38 $\frac{1}{2}$	3 $\frac{1}{2}$
141	2 $\frac{1}{2}$ miles south	G. Carrisal	Francisco Calvio	1928	50	4 $\frac{1}{4}$	--	--

No.	Distance from Solino	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
142	2 miles northwest	Manuel Bravo	Manuel Bravo	1931	37	4- 3/4	--	--
c/143	2 $\frac{1}{4}$ miles northwest	M. Cantu	--	--	38	96	--	--
c/144	1 $\frac{1}{4}$ miles northwest	Carlos Hinojosa	Carlos Hinojosa	1923	52	4 $\frac{1}{4}$	--	--
c/145	1 $\frac{1}{2}$ miles north	Mrs. Agnes Puckett	Francisco Mares	1930	37	5- 3/16	--	--
c/146	1 mile northeast	Juan B. Gonzalez	Carlos Hinojosa	1930	75	6	--	--
c/147	7 $\frac{1}{2}$ miles northeast	A. V. Garza	--	--	750+	4 $\frac{1}{4}$	--	--
148	8 $\frac{1}{4}$ miles northeast	P. Garza	--	--	750+	4 $\frac{1}{4}$	--	--
149	8 $\frac{1}{2}$ miles northeast	Jose G. Trevino	J. Curry	1918	776	6	--	--
150	9 miles northeast	Roma Garza	--	--	750+	4 $\frac{1}{4}$	--	--
151	11-3/4 miles northeast	--	--	--	750+	5- 3/16	--	--
c/152	10 $\frac{1}{2}$ miles northeast	Dr. -- Corbit	--	1927	900+	5- 3/16	--	--
153	8 $\frac{1}{2}$ miles northeast	Mrs. M. M. Fairbanks	--	--	900+	6	--	--

a/ W, windmill; H, hand, C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
134	650	- 5	July 28, 1933	W	D,S	
135	75	- 46	Aug. 2, 1933	W	D,S	Slightly salty.
136	216	- 41	do.	W	S	Salty.
137	60	- 44	do.	W	D,S	On slope. Salty.
138	--	- 38	June 25, 1933	W	D,S	
139	--	- 33	July 12, 1933	W	D,S	
140	20	- 33.5	do.	H	D,S	Water from sand.
141	20	- 39	Aug. 2, 1933	W	D,S	Water from caliche. On slope.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
142	--	- 36	Aug. 1, 1933	W	D,S	
143	--	- 36	do.	W	D,S	Dug well.
144	--	- 45	do.	W	D,S	
145	7	- 36.5	do.	C,W,G	D,S	On slope.
146	5	- 42	Aug. 2, 1933	W	D,S	
147	--	- 11.5	Aug. 5, 1933	W	D,S	
148	--	- 9	do.	W	D,S,I	Irrigates one-tenth acre citrus fruits. Water has slight hydrogen sulphide
149	--	+ 5±	do.	Flow	D,S	Water has slight hydrogen sulphide taste and odor. Yield, 10
150	--	+ 1±	do.	Flow	D,S	Yield, 5 gallons a minute. 10 gallons a minute.
151	--	+ 2±	Aug. 20, 1933	Flow	D,S	Water has slight hydrogen sulphide odor and taste. Yield, 5 gallons a
152	--	- 30	do.	W	D,S	On hill-top. Near edge of lake. minute.
153	--	+ 5±	do.	Flow	S	Slightly salty. Yield, 10 gallons a minute. Near edge of lake.

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

c/ See table of chemical analyses on pages 94 to 102 .

Records of wells in Hidalgo County--Continued

No.	Distance from McCook	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
154	5-3/4 miles west	Boston Texas Land Co.	H. C. Stoops	1906	240	6 1/2	220	20
155	4 miles west	do.	do.	1905	178	4 1/4	158	20
156	4 1/2 miles west	do.	do.	1905	255	6 1/2	235	20
157	1 1/2 miles west	do.	do.	1905	265	5-3/16	235	30
c/158	1 mile north	John Walker	E. Newbro	1926	280	5	--	--
c/159	1/2 mile north	John T. Judd	do.	1927	290	6	--	--
c/160	In McCook	M. Nusbaum	do.	1927	285	4 1/4	--	--
c/161	2 1/2 miles south	P. Christenson	James Speer	1930	265	4 1/4	251	14
162	3 1/4 miles southeast	J. W. Burrsey	E. Newbro	1927	338	4 1/4	338	--
163	3 1/4 miles east	C. Bunsey	do.	1926	380	4 1/4	370	10
164	5 1/4 miles east	O. M. Johnson	--	1926	163	4 1/4	--	--

No.	Distance from Solino	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/165	2 1/2 miles southwest	E. Vela	E. Vela	1928	72	4 1/4	--	--
166	3 1/2 miles west	Frank Rabb Est.	--	--	77	4 1/4	--	--
c/167	3 miles south	A. J. Norwood	A. L. Willingham	1927	255	4 1/4	240	15
168	1/2 mile northeast	Mrs. G. C. Cavazos	Juan Z. Cavazos	1921	65	5-3/16	60	--
169	do.	Jack Lane	C. Hinojosa	1924	67	4	--	--
c/170	1-3/4 miles east	-- Doughty	Curry Bros.	1908	950+	6	--	--
c/171	1/2 mile west	Crisanto Vela	M. Soto	1930	56	5-3/16	--	--
172	do.	E. H. Carlsbath	--	1926	76	4 1/4	--	--
173	1 mile west	Joaquin Cavazos	Juan Cavazos	1920	75	4 1/4	70	--
174	1/2 mile southeast	Cotton Belt Gin Co.	do.	1923	95	4 1/4	--	--
c/175	1 mile south	F. B. Vela	--	--	63	4 1/4	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
154	240	-173	July 18, 1933	C,W,G	D,S	Water from sand and gravel. Yield, reported 50 gallons a minute in pump-
155	178	-160	do.	C,W,G	D,S	Water from sand and gravel. <u>ing test.</u> Yield, reported 30 gallons a minute in
156	255	-174	do.	W	S	Rifle well. <u>pumping test.</u>
157	265	-188	do.	W	S	Salty. Water from sand and gravel. Yield, reported 50 gallons a minute in
158	--	-167	do.	W	D,S	<u>pumping test.</u> Sunshine well.
159	--	-185	do.	W	D,S	
160	220	-183	do.	W	D,S	Water from fine red sand.
161	265	-211	do.	W	D,S	Do.
162	338	-160	July 15, 1933	W	D,S,I	Irrigates $1\frac{1}{4}$ acres citrus fruits. Yield, 10 gallons a minute.
163	375	-139	do.	W	D,S,I	Slightly salty. Irrigates 1 acre citrus fruits. Water from fine white sand. Other sands at 190 and 300 feet.
164	--	- 72	do.	W	S	Salty. <u>Yield, 10 gallons a minute.</u>

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
165	4	- 64	Aug. 7, 1933	W	D,S	On slope.
166	--	- 50	do.	W	D,S	Slightly salty. On slope.
167	242	--	--	W	D,S	Another sand at 90 to 110 feet.
168	20	- 48	Aug. 7, 1933	W	D,S	Slightly salty. Water from sandstone.
169	20	- 45.5	do.	W	D,S	
170	950±	- 20	--	W	D,S	Originally flowed.
171	6	- 43	July 26, 1933	W	D,S	
172	10	- 40±	do.	W	D,S	
173	6	- 43	do.	W	D,S	Water from sand rock. On slope.
174	80	- 50	do.	C,G	D,Ind	Slightly salty. Water from gravel and sand. Yield, 10 gallons a minute.
175	--	- 56	do.	W	D,S	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Solino	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
176	1 mile southwest	Mrs. A. R. Calzado	Juan Mercado	1932	60	4 $\frac{1}{4}$	--	--
177	do.	Ohlanbush Lumber Co.	Juan Cavazos	1932	60	4 $\frac{1}{4}$	--	--
c/178	do.	J. A. Deaton	J. A. Deaton	--	57	4 $\frac{1}{4}$	43	14
c/179	1-3/4 miles southwest	Frank Rabb Est.	R. Serde	1926	60	5-3/16	--	--
c/180	6 miles east	Delta Orchards Co.	--	--	1,100+	5-3/16	--	--
c/181	6 $\frac{1}{2}$ miles southeast	Steuver Est.	--	--	1,000+	6	--	--
182	do.	--	--	--	886	--	--	--
183	9 miles east	C. L. Pollock	H. Curry	1915	870	4 $\frac{1}{4}$	--	--
c/184	7-3/4 miles east	Community	--	1926	940+	4 $\frac{1}{4}$	--	--

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/185	21 $\frac{1}{2}$ miles northwest	W. D. Jeffress	--	--	280	4 $\frac{1}{4}$	--	--
186	17 $\frac{3}{4}$ miles northwest	A. L. Landry	J. Speer	1931	260	4 $\frac{1}{4}$	--	--
c/187	11 $\frac{1}{2}$ miles northwest	Hammond Bros.	--	1900	900+	8	--	--
c/188	10 $\frac{1}{4}$ miles northwest	J. F. Shary	O. C. Withers	1913	372	6	357	15
c/189	9 $\frac{1}{4}$ miles northwest	do.	do.	1913	136	6	133	3
c/190	9 $\frac{1}{2}$ miles north	W. M. Brewster	--	1908	180	4 $\frac{1}{4}$	--	--
191	8 miles north	Jose Guerra	--	--	131	8	--	--
192	9 $\frac{1}{2}$ miles north	Alfonso Alamiedo	--	1915	250	10	--	--
193	do.	H. H. Linder	A. L. Willingham	1923	256	4 $\frac{1}{4}$	243	13
194	8 $\frac{1}{2}$ miles north	L. E. Tinkler	do.	1924	248	5-3/16	228	20
195	9 $\frac{1}{2}$ miles northeast	A. Guerra	--	--	147	4 $\frac{1}{4}$	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
176	7	- 40	July 26, 1933	W	D,S	
177	6	- 43	do.	W	D,S	
178	14	- 40	do.	W	D,S	Water from sand.
179	60	- 54	do.	W	S	
180	--	+ 3 _±	Aug. 2, 1933	Flow W	D,S	Flow, 5 gallons a minute. Near edge of lake.
181	--	- 10 _±	June 28, 1933	W	D,S	
182	--	--	--	--	--	
183	--	- 6	June 28, 1933	W	D,S	Located in Willacy County.
184	--	- 10 _±	do.	W	D,S	

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
185	--	-147	Aug. 22, 1933	W	S	
186	200+	-200	do.	W	D,S	Salty.
187	--	- 27	June 16, 1933	W	D,S	Originally flowed.
188	372	- 68	--	W	S	Other sands at 70, 120, 130, 220, and 270 feet. Yield, 8 gallons a minute.
189	--	--	--	None	N	Water from red clay and sand.
190	180	- 35	Aug. 25, 1933	W	D,S	On slope.
191	--	- 54	do.	W	D,S	
192	--	- 48	do.	W	D,S	
193	245	- 65.5	July 29, 1933	W	D,S	Slightly salty. Water from sand.
194	236	--	do.	C,G	D,S	Do.
195	--	- 52	do.	W	S	Salty.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Hargill	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/196	1-3/4 miles west	Delta Orchards Co.	--	--	1,100	--	--	--
197	3/4 mile southwest	Community	--	--	900	--	--	--
c/198	In Hargill	Edinburg Independent School District	A. L. Willingham	1932	870	6	840	30
199	1 mile south	Delta Orchards Co.	McNeil & Custer	--	456	4 1/4	--	--
c/200	2 1/2 miles east	do.	--	--	930	--	--	--
200a	2 1/4 miles east	D. F. Stevenson	Hargill Oil Co.	1928	968	--	962	6
201	5 1/2 miles east	W. H. Keenly	--	--	310	--	--	--
202	7 1/2 miles east	C. O. Sundling	Ed Kieke	--	350	5	--	--
203	8-3/4 miles east	First Nat'l Bank of Raymondville	--	--	350	--	--	--
204	9 1/4 miles east	--	--	--	450	--	--	--

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
205	19 1/4 miles west	C. Reyna	Juan Cavazos	--	125	4 1/4	100	25
206	do.	Martin Cavazos	do.	1926	190	4 1/4	180	10
207	19 1/4 miles northwest	Mrs. R. L. Cavazos	do.	1928	170	5-3/16	--	--
c/208	18 miles northwest	E. Salinas	-- Colbath	1927	205	4 1/4	195	10
209	17 miles west	T. C. Gill	--	1913	145	4 1/4	--	--
c/210	14 miles west	Brock & Showers	--	--	197	4 1/4	--	--
c/211	14 miles northwest	do.	--	--	396	3	200	200
212	12 miles northwest	Hammond Bros.	--	1910	310	10	--	--
c/213	10 1/2 miles northwest	do.	O. C. Woods	1911	750	6	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
196	--	--	--	W	--	
197	--	--	--	W	D,S	
198	840	- 10	--	--	D,S	Water from gray sand. Yield, 40 gallons a minute. Other sands at 40 to 60, 320 to 335, 620 to 650, and 760 to 775
199	456	- 20±	--	W	D,S	feet; all contain salty water.
200	--	--	--	--	--	
200a	--	--	--	--	--	Oil test. See log.
201	--	--	--	--	--	Water from gravel.
202	350	- 17.2	--	W	D,S	Water from gravel and sand, has sulphur taste.
203	--	- 17.8	--	--	D,S	Salty.
204	--	- 22.5	--	H	D,S	

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
205	--	-101	--	W	D,S	Water from gravel.
206	--	-100	--	W	D,S	Water from sand. On slope.
207	170	-138	--	W	D,S	Water from sand and gravel. On slope.
208	125	-136.5	--	W	D,S	See log.
209	--	-116	--	W	D,S	
210	197	-101	--	W	D,S	
211	396	-106	--	W	D,S	Yield, 15 gallons a minute. Drawdown, 94 feet.
212	--	-144	--	W	S	Salty.
213	--	- 49.5	--	W	D,S	North well.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/214	10 $\frac{1}{2}$ miles northwest	Hammond Bros.	O. C. Woods	1910	1,447	4	--	--
215	9-3/4 miles west	H. G. Trospen	-- Colbath	1931	180	5- 3/16	180	--
216	8 miles northwest	J. F. Shary	O. C. Withers	1913	300	6	290	10
217	4 $\frac{3}{4}$ miles northwest	do.	do.	1913	550	10	525	25
c/218	3 $\frac{1}{2}$ miles north	Baptist Seminary	A. L. Willingham	1929	425	4 $\frac{1}{4}$	415	10
219	2-3/4 miles north	S. P. Ry. Co.	J. W. Jackson	1927	1,040	6	972	68
220	6 $\frac{1}{2}$ miles north	Geo. Zimmer	--	1913	240	4	225	15
c/221	7 $\frac{1}{4}$ miles north	Alamo Cotton Oil Co.	A. L. Willingham	1929	258	4	240	18
222	8 miles northeast	Salvador Cardenas	--	1918	74	4 $\frac{1}{4}$	--	--
c/223	do.	Juan de la Vina	--	--	130	4 $\frac{1}{4}$	--	--
223a	8 $\frac{1}{4}$ miles northeast	Engleman Garden, Inc.	J. & C. Drilling Co.	1934	7,502	10- 3/4	--	--
224	9 miles northeast	Carmel Cardenas	--	--	84	4 $\frac{1}{2}$	--	--
225	6-3/4 miles northeast	Community	E. Kieke	--	462	5	--	--
226	8 miles northeast	do.	--	--	480	5	--	--

No.	Distance from Hargill	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
227	4-3/4 miles south	Delta Orchards Co.	--	--	460+	5	--	--
c/228	do.	do.	E. Kieke	--	465	--	--	--
229	4-3/4 miles southeast	Community	--	--	450	--	--	--
230	5 miles southeast	Delta Orchards Co.	E. Kieke	--	127	--	--	--
c/231	6 $\frac{1}{2}$ miles southeast	Engleman Gardens Co.	--	--	120	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
214	1,447	- 31.5	--	W	D,S	Sands at 511 to 522, 772 to 785, 1,035 to 1,040, 1,125 to 1,165, 1,170 to 1,187, 1,257 to 1,273, 1,362 to 1,376 and 1,406 to 1,417 feet. Reported yield during pumping test 200 gallons a minute. Water mostly from sandstone.
215	180	- 98	--	W	D,S	Water from sand, South well. See log. and salty. Another sand at 80 feet;
216	200	--	--	None	N	Water also contains salty water. reported salty to 200 feet.
217	550	- 22	--	W	S	Salty. Another sand at 450 feet. Casing probably defective.
218	420	- 21	--	W	D,S	Water from gray sand. Reported yield in test 50 gallons a minute. On hill.
219	1,040	+ 10±	--	Flow T	N	Sand at 126 to 134, 586 See log. to 669, and 800 to 818 feet. Water from hard sand. Yield: flow, 42 gallons a minute; pump, 225 gallons a minute.
220	160	- 56.5	--	W	D,S	Salty. Yield, minute. See log. 20 gallons a minute.
221	258	--	--	W	D,S	
222	--	- 50	--	W	S	Salty. On slope.
223	--	- 47	--	W	D,S	
223a	--	--	--	--	--	Oil test. See log.
224	--	- 54.5	--	W	D,S	Salty.
225	--	- 32.5	--	W	N	
226	--	--	--	W	N	

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
227	--	- 25.5	--	None	N	
228	--	--	--	W	D,S	
229	--	--	--	W	D,S	
230	--	--	--	--	--	
231	--	- 40±	Aug, 23, 1933	None	N	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102 .

Records of wells in Hidalgo County--Continued

No.	Distance from Hargill	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
232	4-3/4 miles southeast	Delta Orchards Co.	--	--	123	--	--	--
233	5 1/4 miles southeast	do.	--	--	125	--	--	--
234	6 miles southeast	Barton Hughes	A. L. Curry	--	80	6	70	--
c/235	do.	do.	E. Kieke	--	98	5	90	--
c/236	5-3/4 miles southeast	Fred Henson	--	--	61	--	--	--
237	5 1/2 miles southeast	Mary L. Barman	H. L. Curry	1915	920	--	--	--
238	6 1/4 miles southeast	O. K. Dickinson & T. D. Harris	do.	--	710	--	--	--
c/239	do.	Delta Orchards Co.	--	--	160	--	--	--
240	7 1/2 miles southeast	Merchants Nat'l Bank, Brownsville	E. Kieke	--	270	5	--	--
241	7-3/4 miles east	W. Erickson	--	--	235	--	--	--
242	8 1/4 miles southeast	C. O. Sundling	--	--	150	4 1/4	140	10
243	9 miles east	A. Swenson Est.	H. L. Curry	1912	1,115+	5	1,100+	--
c/244	9 1/2 miles southeast	J. Reynolds	E. Kieke	--	240+	--	230	10
245	do.	C. I. H. Baker	--	--	35	--	25	10
246	8 1/2 miles southeast	Mrs. Amanda Lund	--	--	239	--	--	--
247	9 1/4 miles southeast	C. O. Pearson	--	--	27	--	--	--
248	9 1/2 miles southeast	J. R. Barr	--	1915	665	--	--	--
249	9-3/4 miles southeast	F. R. Johnston	--	--	30	84	20	10
250	11 1/4 miles southeast	S. Ross	--	--	35	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
232	--	--	Aug. 23, 1933	W	N	
253	--	- 20	do.	W	D,S	
254	--	- 40 _±	Aug. 2, 1933	W	S	Salty. Water from sand.
235	--	- 25	do.	W	D,S	Water from sand.
236	--	- 40 _±	do.	W	D,S	
237	--	- 15 _±	Aug. 23, 1933	H	N	Salty in 1939.
238	--	- 20 _±	Aug. 2, 1933	W	S	Salty.
239	--	- 16.5	Aug. 23, 1933	W	D,S	
240	--	- 30.5	do.	W	D,S	Salty
241	--	- 25 _±	Aug. 24, 1933	W	S	Not in use in 1939.
242	130	- 17.2	do.	W	N	Water from sand. Salty in 1939.
243	1,115	+ 1 _±	do.	Flow W	D,S	Slightly salty. Flow, 1 gallon a minute.
244	--	- 20 _±	do.	--	S	Water from sand.
245	--	- 25	do.	W	D,S	Dug well. Water from sand.
246	--	--	do.	H	S	Salty.
247	--	- 27	do.	W	D,S	Dug well.
248	--	- 6 _±	do.	W	S	Salty. Not in use in 1939.
249	--	- 17	do.	W	D,S	Dug well. Water from sand. Not in use in 1939.
250	--	--	do.	W	D,S	

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

c/ See table of chemical analyses on pages 94 to 102 .

Records of wells in Hidalgo County--Continued

No.	Distance from Sam Fordyce	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/251	5 miles north	W. R. Jackson	--	--	170	4 $\frac{1}{4}$	--	--
252	4-3/4 miles northwest	M. Pena	C. Smith	1927	120	4 $\frac{1}{4}$	--	--
c/253	4 miles northwest	Maximo Diaz	Maximo Diaz	1929	--	--	--	--
254	do.	Tomas Flores	Tomas Flores	1883	140	4 $\frac{1}{4}$	--	--
c/255	3-3/4 miles north	-- Hart	--	--	99	8	--	--
c/256	3 $\frac{1}{2}$ miles northwest	P. S. Rivas	--	1926	87	5- 3/16	--	--
c/257	3 $\frac{1}{4}$ miles northwest	Lopez Guerra	Juan Vela	1930	90	5- 3/16	--	--
258	3 miles northwest	Victorina Garza Chapa	--	--	144	4 $\frac{1}{4}$	--	--
259	2-3/4 miles north	Luis L. Longoria	W. Reyes	1922	73	4 $\frac{1}{4}$	--	--
260	2 $\frac{1}{4}$ miles northwest	Juan Ramirez	Juan Vela	1929	82	4 $\frac{1}{4}$	--	--
261	3 $\frac{1}{4}$ miles northwest	Mrs. A. F. Flores	--	1925	110	4 $\frac{1}{4}$	--	--
262	3 miles northwest	do.	E. Newbro	1929	230	4 $\frac{1}{4}$	--	--
c/263	2 $\frac{1}{2}$ miles northwest	E. W. Sullivan	E. W. Johnson	1924	80	4 $\frac{1}{4}$	41	20
264	1 $\frac{1}{2}$ miles northwest	G. Garcia	--	1883	19	48	--	--
265	2 miles west	John Lawrence	--	1916	90	6	--	--
266	1 mile west	Garcia Land and Cattle Co.	Chancellor Oil Co.	--	--	--	--	--
267	3 $\frac{1}{2}$ miles northeast	--	--	--	--	--	--	--
268	6-3/4 miles northeast	--	-- Colbath	1928	110	4 $\frac{1}{4}$	105	--
269	5 miles northeast	L. Garza	--	--	134	4 $\frac{1}{4}$	--	--
270	3 $\frac{1}{2}$ miles northeast	--	--	--	--	--	--	--
271	6 $\frac{1}{4}$ miles northeast	F. Kurz	John Hartzell	--	242	10	230	12
c/272	do.	Mary Fleoden	-- Killinger	1928	106	6	78	28
273	do.	Henry Bunges	--	1927	129	6	109	20

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
251	--	-111	July 26, 1933	W	D,S	
252	--	- 94	do.	W	D,S	Slightly salty.
253	--	--	do.	W	D,S	
254	120	- 78	do.	W	D,S	
255	--	- 70	July 16, 1933	W	D,S	On slope.
256	80	- 61	do.	W	D,S	
257	--	- 62	do.	W	D,S	
258	--	- 95	do.	H	S	Salty.
259	72	- 59	July 17, 1933	W	D,S	
260	82	- 51	do.	W	D,S	On slope.
261	--	- 85	July 16, 1933	W	S	Salty.
262	210	--	do.	W	S	Do.
263	80	- 10	do.	W	D,S	Water from sand and gravel. See log.
264	--	- 16	July 17, 1933	W	D,S	Dug well. On slope.
265	90	- 32	do.	W	D,S	Slightly salty. Water from sand and gravel. On slope.
266	--	--	--	--	--	Oil test. See log.
267	--	--	--	--	--	Do.
268	110	- 95	July 26, 1933	C,G	N	Water from sand and gravel. On hill.
269	--	-100	July 17, 1933	W	D,S	On slope.
270	--	--	--	--	--	Gas well.
271	242	- 95	Aug. 20, 1933	C,G	--	Irrigated 3 acres in 1932. Water from coarse sand. Another sand at 104 feet. Reported yield, 50 gallons a minute.
272	95	- 90	July 17, 1933	W	D,S	
273	129	- 60	do.	W	D,S	

Records of wells in Hidalgo County--Continued

No.	Distance from Mission	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/274	7½ miles northwest	Augustine Zamora	-- Colbath	1926	120	4¼	82	28
c/275	do.	Brock & Showers	--	--	161	4¼	--	--
276	9¼ miles northwest	Mrs. H. M. King Est.	--	--	175	4¼	--	--
277	8-¾ miles northwest	Kanellos, Brock & Showers	-- Colbath	--	227	5- 3/16	180	10
278	8½ miles northwest	do.	--	--	2,729	--	--	--
c/279	7-¾ miles northwest	R. W. Lindsay	-- Colbath	1933	331	5- 3/16	278	15
c/280	7 miles north	G. W. B. Garrett	E. Newbro	1928	241	4¼	241	7
c/281	7¼ miles north	J. F. Shary	--	1930	248	4¼	--	--
282	6-¾ miles north	Mrs. W. J. Wicks	--	1925	123	4¼	120	--
283	7½ miles northeast	F. W. Borman	--	1915	175	4¼	--	--
c/284	6-¾ miles northeast	W. B. Beard	-- Killinger	1929	50	4¼	--	--
285	6¼ miles northeast	J. F. Shary	--	--	150	4¼	--	--
c/286	5 miles north	do.	--	--	257	4¼	--	--
287	5-¾ miles northeast	Carrie Stroman	--	1918	87	4¼	--	--
288	5½ miles northeast	J. M. Kandle	--	1918	102	6	--	--
c/289	4-¾ miles northeast	H. T. Klatt	-- Colbath	1918	101	4¼	100+	--
c/290	4¼ miles northeast	J. F. Shary	--	--	104	4¼	--	--
c/291	do.	M. L. Watson	John Moore	1930	55	5- 3/16	--	--
c/292	4 miles northeast	J. L. Crump	-- Colbath	1933	35	5- 3/16	--	--
293	2-¾ miles northeast	Thomas Hatch	John Moore	1931	78	6	65	13

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/294	1 mile southwest	E. Metzger	A. L. Willingham	1924	118	4	93	25
295	4-¾ miles southwest	R. L. Cowden Co.	--	1926	65	4¼	--	--
296	5 miles southwest	H. M. Melet	--	1930	67	4¼	--	--

a/ W, windmill, H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
274	120	- 92	Aug. 20, 1933	W	D,S	On hill.
275	--	- 88	do.	W	D,S	On slope.
276	--	--	do.	W	D,S	
277	210	- 96.5	Aug. 11, 1933	C,G	D,S	Yield, 15 gallons a minute. On slope.
278	--	--	--	--	--	Oil test. See log.
279	278	--	Aug. 11, 1933	C,E	D,S	Yield, 35 gallons a minute. On slope. See log.
280	248	-114	Aug. 16, 1933	W	D,S	Another sand at about 90 feet.
281	--	- 96	do.	W	D,S	On slope. Water is said to kill flowers.
282	123	- 60	do.	W	S	Salty.
283	--	- 58	do.	W	D,S	Do.
284	50	- 36	do.	W	D,S	Water from fine gravel.
285	--	- 49	do.	W	D,S	Salty.
286	--	- 60	do.	W	D,S	
287	--	- 45	do.	W	S	Salty.
288	--	- 55±	do.	W	D,S	Do.
289	101	- 49	do.	W	D,S	Other sands at 18, 44 and 80 feet; all salty
290	--	- 60±	do.	C,E	D,S	
291	55	- 43	do.	C,G	D,S	
292	35	- 6	do.	W	D,S	Water from caliche.
293	78	- 30±	do.	W	D,S	Water from white sand. Reported yield in pumping test 50 gallons a minute.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
294	118	--	June 27, 1933	W	D,S	Water from gravel.
295	--	--	do.	W	D,S	
296	--	- 25	June 30, 1933	C,E	S	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
297	3-3/4 miles southwest	A. B. McAfee	--	1929	194	4 1/4	--	--
298	3 miles west	Mrs. J. H. Stoner	--	--	--	4 1/4	--	--
299	2 1/4 miles southwest	F. H. Biggs	--	--	70	3 1/2	--	--
300	2 miles west	G. Calloway	--	1913	70	4 1/4	--	--
301	2 miles west	J. M. Boyd	--	1924	68	4 1/4	--	--
c/302	2 1/4 miles south	E. Short	A. L. Willingham	1926	128	4 1/4	--	--
303	In Edinburg	Central Power & Light Co.	do.	1922	156	8	118	40
c/304	1 1/4 miles south	Mrs. C. Germantz	--	1918	110	4 1/4	--	--
c/305	3 1/4 miles southeast	F. H. Hull	Wm. Edwards	1920	120	4 1/4	--	--
306	2-3/4 miles southeast	Mrs. R. P. Bouse	--	1919	96	6	--	--
307	1 1/2 miles southeast	Hugo Conlee	--	1923	120	4 1/4	110	10
c/308	1-3/4 miles northeast	C. R. Fitzpatrick	--	1924	87	4 1/4	--	--
c/309	2 1/2 miles northeast	C. B. Starr	--	1926	200+	3 1/2	--	--
310	4 miles northeast	V. Z. Young	A. L. Willingham	1928	136	4 1/4	126	10
c/311	4-3/4 miles northeast	E. Bader	do.	1927	136	3 1/2	120	16
312	4 miles northeast	Gulfcoast Orchards Co.	--	1925	119	4 1/4	--	--
c/313	3 1/2 miles east	W. L. Matthews	--	1924	65	3 1/2	--	--
314	4 miles east	C. L. Heinemann	--	1924	69	4 1/4	--	--
c/315	4 1/2 miles southeast	John Stutt	--	1921	100	4 1/4	--	--
c/316	1 mile southeast	O. W. Curry	-- Withers	1927	122	4 1/4	115	5
317	1 1/2 miles southeast	E. Mooney	--	1917	126	4 1/4	--	--
318	3 1/4 miles southeast	Mrs. H. Hansen	Wm. Brewster	1917	123	3 1/2	--	--
319	6 miles east	J. H. Merrill	A. L. Willingham	--	155	4	145	10
c/320	do.	E. S. Doughtie	-- Withers	--	167	4 1/4	163	4
321	6 1/4 miles east	M. C. Carr	--	--	170	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
297	--	- 7	Aug. 10, 1933	W	D,S	
298	--	- 8	do.	W	S	Salty.
299	70	- 5	do.	W	S	Do.
300	70	- 8	July 17, 1933	W	S	Do.
301	68	- 30	do.	W	D,S	Do.
302	128	- 25	Aug. 15, 1933	W	D,S	Water from sand.
303	156	- 6.5	June 8, 1933	None	N	Water from gravel. Reported yield in pumping test 350 gallons a minute. See
304	110	- 30	Aug. 15, 1933	W	D,S	log.
305	--	- 8.5	Aug. 16, 1933	W	D,S	
306	96	- 10	do.	W	D,S	
307	120	- 12	do.	W	D,S	
308	87	- 8	do.	W	D,S	
309	200 ₊	--	--	W	D,S	
310	136	- 7	Aug. 1, 1933	H	S	Water from sand.
311	136	- 9	do.	H	D,S	Water from gravel. Another water-bearing bed at 60 feet contains salty
312	119	- 10	do.	C,E	D,S	water.
313	10	- 8.5	do.	W	D,S	
314	69	- 11	do.	W	D,S	
315	100	- 5	do.	W	D,S	
316	122	- 6	do.	W	D,S	
317	126	- 9	do.	W	D,S	
318	123	- 6	do.	W	S	Water originally was potable but now is bad.
319	155	- 12	Aug. 25, 1933	W	D,S	Water from sand.
320	167	- 24	Aug. 26, 1933	W	S	Do.
321	--	--	Aug. 25, 1933	H	D,S	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Edinburg	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/322	6 $\frac{1}{4}$ miles east	J. C. Tipps, et al.	A. L. Willingham	1926	147	--	--	--
323	5 $\frac{1}{4}$ miles northeast	R. L. Teal	--	--	155	4	--	--
c/324	5 $\frac{1}{2}$ miles northeast	H. C. Aderhold	--	--	125	--	--	--
No.	Distance from Edcouch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
325	4-3/4 miles northwest	J. C. Engleman	--	--	200+	6	--	--
325a	4-3/4 miles west	C. H. Swallow	Dee Davenport	1937	7,959	16	--	--
c/326	3 miles west	J. A. Lijiestrand	A. C. Brewster	--	151	5	150	1
327	3 $\frac{1}{2}$ miles southwest	H. A. Yohey	--	--	13	48	--	--
328	1 $\frac{1}{2}$ miles southwest	E. R. Moore	--	--	14	--	--	--
c/329	1 $\frac{1}{4}$ miles northwest	Adolph Carlson	Smith Bros.	--	133	5	--	--
330	1 $\frac{1}{2}$ miles northwest	J. S. Downey	Ed Kieke	1925	135	--	--	--
331	1-3/4 miles northeast	Gill Bros.	--	--	160	5	--	--
332	1 mile northeast	Delta Orchards Co.	--	--	130	4 $\frac{1}{4}$	--	--
333	In Edcouch	R. R. Hill	Ed Kieke	--	143	8	139	4
c/334	$\frac{1}{2}$ mile south	Mrs. C. L. Rice	do.	1921	130	10	--	--
335	$\frac{1}{2}$ mile southeast	E. Roser	do.	--	140	5	--	--
c/336	2 miles southeast	C. A. Pearson	--	--	178	4 $\frac{1}{4}$	158	20
c/337	2 $\frac{1}{2}$ miles northeast	J. F. Byrnes	E. Juncke	--	495	6	--	--
338	2 miles east	--	--	--	75	5	--	--
c/339	1-3/4 miles east	John Wade	Ed Kieke	--	135	5	115	20
340	4 $\frac{1}{4}$ miles southeast	F. W. Johnson	--	1933	41	6	--	--
340a	4 miles southeast	Am. Rio Grande Land & Irr. Co.	Union Sulphur Co.	1934	6,431	12 $\frac{1}{2}$	--	--
341	3 $\frac{1}{2}$ miles southeast	A. B. Baker	--	--	120	5	--	--
342	5 miles northeast	Blasa H. de Lorias	--	--	33	6	20	10

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
322	--	- 18.7	Aug. 26, 1933	H	D,S	
323	155	- 8	do.	W	D,S	Salty.
324	--	- 20	do.	W	D,S	
No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
325	--	- 24.6	Aug. 23, 1933	W	D,S	Salty.
325a	--	--	--	--	--	Oil test. See log.
326	151	- 8	Aug. 17, 1933	W	D,S	Water from red gravel.
327	--	- 5	do.	--	N	Dug well.
328	--	- 6.5	do.	None	N	Salty.
329	--	- 16	do.	W	D,S	
330	--	- 15	do.	W	D,S	Water from sand.
331	160	- 22	do.	W	S	Salty.
332	--	- 35	Aug. 2, 1933	H	N	
333	143	- 20 ₊	Aug. 1, 1933	H	N	Salty. Water from fine sand.
334	--	- 60 ₊ ?	do.	W	D,S	
335	140	- 8	Aug. 18, 1933	W	D,S	
336	178	--	Aug. 17, 1933	W	D,S	Water from gravel.
337	495	- 20 ₊	Aug. 18, 1933	W	D,S	Temperature 79° F.
338	--	- 6	do.	W	N	Salty.
339	135	- 9.5	do.	W	D,S	Temperature 80° F.
340	--	- 16	do.	H	N	Salty. Temperature 77° F.
340a	--	--	--	--	--	Oil test. See log.
341	--	- 12.5	Aug. 18, 1933	W	N	Salty.
342	33	- 17.5	Aug. 24, 1933	H	D,S	Water from sand.

Records of wells in Hidalgo County--Continued

No.	Distance from Sam Fordyce	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
343	1-3/4 miles southwest	Town of Los Ebanos	Maximo Diaz	1915	60	4 1/4	--	--
344	2 1/4 miles southwest	M. Carrizales	--	1918	42	4 1/4	--	--
345	2 miles southwest	Jose Pena	M. Flores	1932	35	30	--	--
346	1-3/4 miles southwest	Luis Pena	--	1926	80	5	--	--
347	In Sam Fordyce	Yturria Town & Improvement Co.	-- Colbath	1932	65	4 1/4	--	--
348	1/2 mile east	Fordyce Gin Co.	--	1926	100+	8	--	--
c/349	1 mile east	Oscar Daskam	E. Daskam	1933	108	5-3/16	103	5
350	1 1/4 miles east	T. Card	--	--	108	5-3/16	52	10
351	3 1/4 miles east	La Joya Est.	A. L. Willingham	1926	180	8	90	90
c/352	3 1/2 miles east	N. G. Cavazos	Juan Cavazos	1927	126	5-3/16	72	54
c/353	3-3/4 miles east	Salomon Chapa	Servilo de Luna	1929	87	3 1/2	--	--
c/354	4-3/4 miles east	David Chapa	Juan Cavazos	1924	90	5-3/16	75	15
c/355	6 miles east	Mrs. D. Lowry	--	--	138	6	--	--
356	5 1/2 miles southeast	N. G. Cavazos	N. G. Cavazos	1914	120	4 1/2	--	--

No.	Distance from Mission	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/357	5 1/2 miles west	Brock & Showers	--	--	153	5-3/16	--	--
358	5 1/2 miles west	Vela Bros.	Ned Wells	1920	120	4 1/4	70	--
359	5 1/2 miles southwest	--	Servilo de Luna	1912	90	4 1/4	--	--
c/360	2 1/4 miles west	L. V. Williams	-- Killinger	1931	40	4 1/4	30	10
361	1 1/4 miles west	J. J. Smith	J. J. Smith	1924	32	4 1/4	26	6
c/362	2 miles southwest	Mrs. H. K. Wood	O. C. Wood	1918	44	5-3/16	21	23

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
343	60	- 25	July 24, 1933	W	D,S	
344	40	- 25	do.	W	D,S	Irrigates 2 acres citrus fruits. Water from sand.
345	--	- 28	do.	W	S	Dug well. Flooded by river water at high stage.
346	80	- 29	do.	W	D,S,I	Irrigates citrus fruits.
347	65	- 42	do.	W	S	Salty. On slope.
348	100+	- 31	do.	C,G	Ind	On slope.
349	108	- 67	do.	C,G	D,S,I	Irrigates 3 acres citrus fruits and vegetables. Yield, 10 gallons a minute
350	108	- 46	do.	C,E	Ind	Another Water from sandstone. See log. sand at 72 to 108 feet. Yield, 25 gal-
351	180	- 35+	June 7, 1933	C,E	N	Water from lons a minute. On slope. sand. Reported yield in pumping test 350 gallons a minute. See log.
352	120	- 60	Aug. 20, 1933	C,G	D,S,I	Irrigates 20 acres citrus fruits with tank wagon. Water from sandstone.
353	87	- 48	do.	W	D,S,I	Irrigates Yield, 35 gallons a minute. garden.
354	90	- 40+	do.	W	D,S,I	Irrigates garden. Water from sandstone.
355	--	- 37	do.	W	D,S	
356	120	- 7	do.	W	D,S	Salty. Water from sandy clay.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
357	--	- 14	Aug. 20, 1933	W	S	
358	--	- 36	do.	W	D,S	Water from gravel. On slope. Not used in 1939.
359	--	- 25	do.	W	D	Water from gravel. On slope.
360	--	- 22	do.	W	D,S	Do.
361	--	- 26	Aug. 1, 1933	H	D,S	Salt water at 14 feet.
362	44	- 24	July 7, 1933	W	D,S	Water from gravel. North well.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Mission	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/363	2 miles southwest	Mrs. H. K. Wood	O. C. Wood	1931	60	60	30	30
364	2-3/4 miles southwest	T. McBride	E. J. Basye	1932	90	12	--	--
c/365	2 1/2 miles northeast	Mrs. G. F. Gray	--	1925	265	4 1/4	260	5
c/366	3 1/4 miles northeast	W. K. Boatwright	--	1924	130	5-3/16	--	--
367	2 1/4 miles northeast	Marion MacDonald	--	1913	99	5-3/16	--	--
368	1/2 mile southwest	City of Mission	-- Colbath	1933	90	12	40	30
369	3/4 mile southeast	T. L. Langham	Chas. Colbath	1925	265	4 1/4	--	--
c/370	1 mile south	Dr. W. Woods	W. Woods	1926	68	24	48	20
371	do.	H. P. Peterson	F. Burrhus	1932	86	8	71	15
372	1 1/2 miles south	L. L. Kessler	W. Newhouse	1932	92	6	70	22
373	do.	do.	-- Killinger	1931	52	5-3/16	48	4
374	do.	Boyd & Bois	E. H. Ray	1933	98	10	82	16
375	1 mile southeast	J. B. Close	F. Burrhus	1932	71	10	59	12
376	1 1/4 miles southeast	R. E. Doyle	--	--	40	--	--	--
c/377	1-3/4 miles southeast	Evan Rees	-- Newhouse	1932	75	14	55	20
378	2 1/2 miles south	Layne-Texas Co.	Layne-Texas Co.	1927	110	18	55	55
379	3 1/4 miles south	L. Marsell	E. J. Bayse	1931	90	16	--	--
380	2 miles east	Bentsen's Nursery	--	--	42	5-3/16	--	--
381	do.	H. L. Rapp	-- Killinger	1933	62	10	37	25

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
363	60	-10.9	Sept. 1, 1939	G,T	I	Irrigates 40 acres citrus fruits and vegetables. Water from gravel. Reported yield in pumping test 450 gal-
364	90	--	do.	T,O	I	Irrigates 100 acres citrus fruits and vegetables. Reported yield in pumping test 800 gal-
365	265	- 49	Aug. 1, 1933	W	S	lons a minute.
366	130	- 21.5	do.	W	S	
367	--	- 26	do.	W	S	Salty.
368	90	- 17	June 5, 1933	--	D,S Ind	Water from gravel and sand. Reported yield in pumping test 850 gallons a minute. Drawdown, 20 feet in 3 days.
369	--	- 40±	Aug. 8, 1933	W	D,S	Slightly salty. See log.
370	68.5	- 22	June 6, 1933	T,E	D,S Ind	Water from sand and gravel. Reported yield, 700 gallons a minute. See log.
371	86	- 12	Aug. 24, 1933	C,E,G	I	Irrigates 36 acres citrus fruits and field crops. Pit 4 feet in diameter to 23 feet. Water from gravel. Reported yield, about 1,000 gallons a minute.
372	92	- 16	do.	C,E,G	I	Irrigates 135 acres citrus fruits and field crops. Pit 3 feet in diameter to 18 feet. Water from gravel. Reported yield, 400 gallons a minute. See log.
373	52	- 19	do.	W	D,S	Water from gravel. South well. On slope.
374	98	- 19	do.	C,E,G	I	Irrigates 80 acres citrus fruits and field crops. Pit 4 feet in diameter to 21 feet. Water from gravel. Reported yield, 700 gallons a minute.
375	71	- 17	Aug. 23, 1933	C,E,G	I	Irrigates 33 acres citrus fruits. Pit 3 feet in diameter to 36 feet. Water from gravel. Reported yield, 700 gallons a minute.
376	--	--	do.	C,G	S	Salty, bitter. See log.
377	75	- 14	Aug. 17, 1933	T,G	I	Irrigates 80 acres citrus fruits. Pit 4 feet in diameter at top. Reported yield, 800 gallons a minute from gravel.
378	110	- 18	do.	T,G	I	Irrigates 40 acres field crops. Reported yield, 1,100 gallons a minute. Water from sand and gravel.
379	90	- 17.5	do.	T,G	I	Irrigates 80 acres citrus fruits and vegetables. Reported yield, 700 gallons a minute. Water from gravel.
380	--	- 14	do.	W	D,S	
381	62	- 10.5	do.	T,G	D,S,I	Irrigates 20 acres citrus fruits. Water from gravel. Reported yield, 800 gallons a minute. Not used in 1939.

Records of wells in Hidalgo County--Continued

No.	Distance from Mission	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/382	2½ miles east	Willdel Citrus Groves	E. H. Ray	1930	55	12	38	17
c/383	3 miles east	L. C. Swantz	do.	1931	57	8	35	14
384	3¼ miles southeast	H. Powell	do.	1931	75	10	55	20
385	3 miles southeast	W. C. Whyte	do.	1931	50	8	35	14
386	do.	C. H. Ray	C. H. Ray	1931	77	6	55	22
c/387	2½ miles southeast	H. F. Krusemark	E. H. Ray	1930	68	6	56	12
388	2-¾ miles southeast	do.	--	1919	56	4¼	56	--
c/389	2½ miles southeast	H. W. Grover	E. H. Ray	1932	72	10	39	33
390	3½ miles southeast	S. West	do.	1933	88	8	72	16

No.	Distance from McAllen	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
391	3¼ miles southwest	J. J. Carr	J. J. Carr	1930	100	8	85	15
392	1-¾ miles southwest	W. H. Jordan	Juan Vela	1933	50	4¼	45	5
393	3 miles north	W. H. Smith	--	--	77	4¼	--	--
394	3¼ miles northeast	G. A. Eby	U. G. Jarris	1912	156	4¼	156	--
395	2-¾ miles northeast	do.	Frank Reed	1911	98	4¼	92	6
396	2-¾ miles north	W. D. Gray	--	1929	80	4¼	80	--
397	2½ miles north	Purcell & Brandon	-- Killinger	1930	80	6½	72	8

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
382	55	--	Aug. 17, 1933	T,G	I	Irrigates 65 acres citrus fruits. Water from gravel. Reported yield, 1,000 gal-
383	50	- 18	Sept. 2, 1939	T,G	I	Irrigates 38 acres lons a minute. citrus fruits. Pit 4 feet in diameter to 12 feet. Reported yield, 800 gal-
384	75	--	Aug. 17, 1933	T,G	I	Irrigates 30 acres citrus gravel. fruits. Pit 5 feet in diameter to 20 feet. Water from gravel. Reported
385	50	- 10	Aug. 16, 1933	C,E,G	I	Irrigates yield, 800 gallons a minute, 13 acres citrus fruits. Pit 5 feet in diameter to 12 feet. Water from gravel. Reported yield, 500 gallons a minute.
386	77	- 11	do.	C,E,G	I	Irrigates 15 acres citrus fruits. Pit 6 feet in diameter to 30 feet. Water from gravel. Reported yield, 500 gal-
387	68	- 18	do.	C,E,G	I	Irrigates 20 acres lons a minute. citrus fruits. Pit 5 feet in diameter to 18 feet. Reported yield, 450 gal-
388	56	- 18	do.	W	D,S	lons a minute.
389	72	- 11	do.	T,G	I	Irrigates 55 acres citrus fruits. Water from gravel. Reported yield, about 500 gallons a minute. Reported drawdown,
390	88	- 9.5	do.	C,E,G	I	Irrigated 20 acres 20 feet. See log. citrus fruits and vegetables. Pit 3.5 feet in diameter to 10 feet. Water from gravel. Reported yield, 700 gal-

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
391	100	- 13	Aug. 16, 1933	C,E,G	I	Irrigates 5 acres citrus fruits. Pit 5 feet in diameter to 18 feet. Reported yield, 250 gallons a minute. See log.
392	50	- 12	Aug. 8, 1933	W	D,S	Water from gravel. On slope.
393	--	- 21	June 14, 1933	W	D,S	
394	156	--	do.	H	D,S	Slightly salty. Other sands at 30 and 92 feet. Water from gravel.
395	98	- 30±	do.	W	D,S	Salt water at 30 feet. Water from gravel.
396	80	- 30±	do.	W	D,S	Salt water at 12 feet. Water from sand.
397	80	--	do.	W	D,S	Bitter. Water from sand.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from McAllen	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/398	1½ miles north	C. G. Fink	--	1927	194	4¼	--	--
c/399	2¼ miles northeast	Ada R. Sigrist	--	1915	80	4¼	--	--
400	do.	Mary King	J. P. Moore	--	53	4¼	--	--
401	do.	C. W. Rogers	Juan Cavazos	1912	86	4¼	--	--
402	1½ miles southwest	Dr. A. B. Cockrell	--	--	65	4¼	--	--
403	2 miles south	M. R. Nelson	--	--	--	--	--	--
404	1¼ miles south	C. L. Fulwider	--	--	83	10	--	--
405	1¼ miles southeast	J. H. Smith	Ned Wells	1916	86	4¼	84	2
406	1½ miles southeast	Mrs. Zoe Roger	do.	--	58	4¼	--	--
407	2½ miles southeast	M. D. Page	--	1913	125	4¼	--	--
408	2 miles east	H. F. Richards	--	1924	86	5- 3/16	--	--
c/409	3-¾ miles northeast	H. R. Giles	--	1925	76	4¼	--	--
410	4¼ miles northeast	Central Power & Light Co.	A. L. Willingham	1931	100	4¼	96	4
411	5 miles east	H. M. Hess	--	1923	105	7	--	--
c/412	4¼ miles east	G. E. Alcott	Ned Wells	1929	96	4¼	85	--
413	5½ miles northeast	-- Aldrich	--	1920	120	4½	--	--
414	6-¾ miles northeast	Peter Iverson	--	1918	79	4¼	--	--
415	6½ miles east	L. L. Stone	--	--	106	4¼	--	--

No.	Distance from Donna	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
416	6¼ miles northwest	B. L. Parham	--	--	100	4¼	--	--
417	5 miles northwest	P. L. Gross	P. L. Gross	--	15	42	--	--
418	4¼ miles northwest	W. Jacob	--	--	108	4¼	--	--
419	2-¾ miles west	T. T. Keffer	--	--	35	5- 3/16	--	--

a/ W, windmill; E, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
398	194	- 19	June 14, 1933	W	D,S	
399	80	- 17.5	do.	W	D,S	
400	53	- 28	do.	W	S	Salty.
401	86	- 18	do.	W	D,S	Water from gravel.
402	--	- 8	Aug. 11, 1933	W	D,S	
403	--	--	--	--	--	Salty.
404	--	- 14	Aug. 11, 1933	W	S	Do.
405	86	- 26	do.	W	D,S	Water from gravel.
406	58	--	do.	W	D,S	Do.
407	125	- 35 _±	do.	W	D,S	Salt water at 30 and 60 feet.
408	86	- 23 _±	do.	W	D,S	
409	76	- 14	do.	W	D,S	
410	100	- 12.5	do.	C,E	D,S	Salt water at 60 feet. Water from gravel and sand. Not used in 1939.
411	105	- 11	Aug. 19, 1933	W	D,S	Not used in 1939.
412	96	- 12 _±	do.	W	D,S	Water from gravel and sand.
413	120	- 12 _±	do.	W	D,S	
414	79	- 8	do.	W	D,S	
415	106	- 12	Aug. 21, 1933	W	D,S	Bitter and salty.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
416	100	- 15	Aug. 21, 1933	W	D,S	
417	--	- 9	do.	C,E	D,S	Dug well.
418	108	- 6	do.	W	D,S	
419	35	- 5 _±	do.	W	D,S	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Donna	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
420	3½ miles northwest	A. R. Schuhart	Wm. Brewster	--	114	4¼	--	--
421	2½ miles northwest	A. Herzog	D. Smith	1921	136	4¼	--	--
422	1-¾ miles northeast	J. B. Millican	--	--	18	--	12	6
423	1-¾ miles north	K. W. Townsend	--	--	14	24	--	--
424	3-¾ miles north	F. Giese	--	--	8	10	--	--
425	5½ miles north	Isaac Brown	--	--	11½	60	--	--
426	5½ miles northeast	Anton Henza	Anton Henza	--	18	48	--	--
427	3-¾ miles northeast	Mrs. S. St. Clair	--	--	15	--	--	--
428	¾ miles northeast	M. W. Smith	M. W. Smith	--	18	30	--	--
429	3 miles east	C. C. Marshall	--	--	10	--	--	--
430	4 miles northeast	I. H. Fields	--	--	20	8	--	--
431	4¼ miles northeast	W. T. Lacy	T. D. Blackwell	--	26	8	--	--
c/432	4-¾ miles northeast	C. Spears	C. Spears	--	15	--	--	--
433	5¼ miles northeast	R. Helder	--	--	13	5	12	--

No.	Distance from Mercedes	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
434	7½ miles northwest	-- Schwadie	--	--	8	6	--	--
435	6¼ miles northwest	--	--	--	11	6	--	--
436	5-¾ miles northwest	Adam Wood	--	--	19	--	--	--
437	5½ miles northwest	Am. Rio Grande Land & Irr. Co.	--	--	15	--	--	--
438	4½ miles northwest	J. B. Funk	J. B. Funk	--	6	48	--	--
439	3-¾ miles northwest	O. T. Dunlap	--	--	5½	8	--	--
440	5 miles northwest	C. Eamel	--	--	10	36	--	--
441	5-¾ miles northwest	Southland Life Ins. Co.	--	--	14	60	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
420	114	- 3	Aug. 21, 1933	W	D,S	
421	136	- 7.5	Aug. 25, 1933	None	N	Salty.
422	--	- 6	Aug. 22, 1933	--	D	Dug well. Salty. Water from sand.
423	--	- 7	do.	W	D,S	Water from silt.
424	--	- 2.5	Aug. 25, 1933	H	D,S	
425	--	- 7.5	do.	W	D,S	Dug well.
426	--	- 9	Aug. 17, 1933	H	D,S	Dug well. Water from sand.
427	--	- 6	Aug. 15, 1933	H	D,S	Water from fine sand.
428	--	- 14.5	do.	W	D,S	Water from sand.
429	--	- 3.5	do.	H	D	
430	--	- 15 ₊	Aug. 27, 1933	H	D,S	
431	--	- 18 ₊	do.	None	N	Salty.
432	--	- 7.5	do.	H	D,S	Temperature 80° F.
433	--	- 4.5	do.	H	D,S	Salty. Water from yellow sand.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
434	--	- 6	Aug. 17, 1933	H	D,S	Salty.
435	--	- 10	July 28, 1933	H	N	
436	--	- 11.5	July 27, 1933	--	D,S	Salty. Water from sand.
437	--	- 10	do.	--	D,S	
438	--	- 4.5	July 28, 1933	None	D,S	Dug well. Water from sandy clay.
439	--	- 4	do.	None	N	Salty. Water from silt and clay.
440	--	- 8.7	do.	H	D,S	Dug well.
441	--	- 11	do.	W	D,S	Do.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Mercedes	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
442	6 $\frac{1}{4}$ miles northwest	M. G. Carter	--	--	20	120	18	--
443	6 miles northwest	F. Bennett	--	--	14	4	--	--
c/444	7 $\frac{1}{4}$ miles northwest	Mrs. E. J. Hutchison	--	--	12	36	--	--
445	4 $\frac{1}{2}$ miles northwest	A. J. Wright	--	--	20	4	--	--
446	4 $\frac{1}{4}$ miles northwest	A. H. Downing	--	--	24	6	22	--
447	3 $\frac{1}{2}$ miles north	K. A. Pleasant	--	--	14	42	--	--
448	3 $\frac{1}{4}$ miles northwest	Am. Rio Grande Land & Irr. Co.	--	--	9	48	--	--
449	1 $\frac{1}{2}$ miles north	E. C. Ramsey	C. Newman	--	54	4	50?	--
450	2 $\frac{1}{2}$ miles north	J. G. T. Colley	--	--	13	48	--	--
451	2-3/4 miles north	Mrs. F. M. Carter	--	--	30+	--	--	--
452	7 miles northwest	Mrs. E. J. Hutchison	--	--	150	5	--	--
453	5 $\frac{1}{4}$ miles northeast	C. W. Schwarz	--	--	18	--	--	--
c/454	4-3/4 miles northeast	Albert Schwarz	--	--	80+	--	--	--
455	4 $\frac{1}{4}$ miles northeast	J. M. Waller	--	--	11	30	--	--
456	do.	-- Marcus	--	--	14	4	--	--
c/457	3 miles north	L. T. Galbreath	--	--	14	36	--	--
c/458	2 $\frac{1}{2}$ miles north	F. O. Underhill	--	--	40	1 $\frac{1}{4}$	--	--
459	2 miles north	I. Seinheimer	--	--	5	30	--	--
460	1 $\frac{1}{2}$ miles north	H. J. Riesterer	--	--	19	4	--	--
461	1 $\frac{1}{2}$ miles northeast	J. H. McKinney	--	--	32	3	15	17
c/462	2 miles northeast	J. Ziebarth	--	1931	90	--	--	--
463	2 $\frac{1}{2}$ miles northeast	H. H. Wetegrove	C. Newman	--	35+	2	18	17
464	3 miles northeast	M. L. Kleener	--	--	11	--	--	--
465	3 $\frac{1}{2}$ miles northeast	J. I. Mills	--	--	18	--	--	--
466	4 miles northeast	V. V. Brown	--	--	35	3	--	--

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
442	--	- 9	July 28, 1933	H	D,S	Dug well. Water from sand and gravel.
443	--	- 6.5	July 29, 1933	None	N	
444	--	- 6	Aug. 18, 1933	H	D,S	Dug well.
445	--	- 6.5	Aug. 3, 1933	None	N	Salty.
446	--	- 6	do.	W	D,S	Water from fine gravel and sand.
447	--	- 7±	do.	W	D,S	Dug well.
448	--	- 6	do.	W	D,S	Do.
449	--	- 7±	Aug. 4, 1933	C,E	D,S	
450	--	- 10	Aug. 9, 1933	C,E	D,S	Dug well.
451	--	- 5±	do.	W	D,S	
452	--	- 8	Aug. 19, 1933	W	D	Old well. Not used in 1939.
453	--	- 10±	Aug. 14, 1933	W	D,S	Dug well.
454	--	--	Aug. 10, 1933	W	D,S	
455	--	- 6	do.	H	S	Dug well.
456	--	- 6.4	Aug. 14, 1933	None	D,S	
457	--	- 10.5	Aug. 9, 1933	W	D,S	Dug well.
458	--	- 20±	do.	C,E	D,S	
459	--	- 5	do.	None	S	Dug well.
460	--	- 12	do.	W	D,S	
461	--	- 5.75	Aug. 10, 1933	W	S	Water from fine sand.
462	--	--	do.	H	D,S	
463	--	--	do.	W	D,S	Water from sand.
464	--	- 7.5	Aug. 14, 1933	None	D,S	Dug well. Water from white sand.
465	--	- 8±	do.	H	N	Salty and hard.
466	--	- 16	July 25, 1933	H	D,S	Water from sand.

Records of wells in Hidalgo County--Continued

No.	Distance from Mission	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/467	4 miles south	Oblate Fathers	--	1913	150	4 $\frac{1}{4}$	--	--
468	do.	H. P. Porter	F. Burrhus	1933	120	8	90	30
469	do.	R. C. Bruttche	do.	--	--	8	--	--
470	5 miles south	O. A. Smith	do.	1933	116	8	92	24
471	5 miles southeast	F. Burrhus	do.	1933	115	8	91	20
c/472	4 miles southeast	M. Madsen	--	1913	120	4 $\frac{1}{4}$	80	--
473	3-3/4 miles southeast	do.	F. Burrhus	1932	113	10	79	34
474	5 miles southeast	J. H. Shary	--	1921	120	4 $\frac{1}{4}$	--	--

No.	Distance from McAllen	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
475	4 miles southwest	J. W. Herrington	--	--	--	--	--	--
476	3 $\frac{1}{2}$ miles southwest	J. J. Carr	J. J. Carr	1922	85	4 $\frac{1}{4}$	85	--
477	3 $\frac{1}{4}$ miles southwest	J. H. Curtis	Ned Wells	1929	104	10	78	26
478	3 $\frac{1}{4}$ miles south	R. W. Rowe	--	1923	93	4 $\frac{1}{4}$	--	--
479	4 miles southwest	G. T. Meister	C. H. Ray	1932	104	12	80	22
480	4 $\frac{1}{2}$ miles southwest	J. J. Hackney	J. J. Hackney	1931	108	8	92	16
c/481	4 miles south	O. A. Bakhaus	-- Bayse	--	--	--	--	--
482	4 $\frac{1}{2}$ miles south	-- Fletcher	C. H. Ray	1932	110	10	85	25
483	5 miles south	W. J. Zackman	-- Bayse	1931	120	12	100	20
c/484	7 miles south	Central Power & Light Co.	--	--	--	--	--	--

a/ W, windmill; E, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
467	150	- 47	Aug. 7, 1933	C,E	D,S	Yield, 16 gallons a minute. On hilltop.
468	120	--	do.	None	N	Water from sand and gravel. See log.
469	--	--	do.	T,G	I	Irrigates 15 acres citrus fruits.
470	116	- 14	do.	C,E,G	I	Irrigates 75 acres field crop. Pit 6 feet in diameter to 19 feet. Bitter taste. Water from sand and gravel. Reported yield, about 1,000 gallons a
471	115	- 11	do.	C,E,G	I	Irrigates 60 acres field crop. Pit to 16 feet. Reported yield, about
472	120	16	Sept. 2, 1939	W	D,S	Water from gravel. 800 gallons a minute.
473	113	- 13.5	Aug. 7, 1933	C,E,G	I	Irrigates 70 acres citrus fruits and field crops. Pit 4½ feet in diameter to 22 feet. Water from gravel. Reported yield, 1,000 gallons a minute.
474	120	- 14	do.	W	D,S	

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
475	--	--	--	--	I	
476	85	--	Aug. 7, 1933	W	D,S	Water from gravel.
477	104	- 10	do.	T,O	I	Irrigates 100 acres. Reported yield, about 1,000 gallons a minute. Reported drawdown, 30 feet 5 minutes after start
478	93	- 13	do.	W	D,S	Water from gravel. of pump.
479	104	- 20+	do.	C,E,G	I	Irrigates 80 acres citrus fruits. Pit 4 feet in diameter to 22 feet. Reported yield, about 1,000 gallons a minute.
480	108	- 20+	Aug. 8, 1933	T,G	I	Irrigates 38 acres citrus fruits. Reported yield, 500 gallons a minute.
481	--	--	--	T,G	I	Irrigates 100 acres vegetables.
482	110	- 21+	Aug. 8, 1933	T,G	I	Irrigates 30 acres vegetables and field crops. Water from gravel. Reported yield, 800 gallons a minute.
483	120	- 18	June 10, 1933	T,E	I	Water from gravel and sand. Reported yield, 700 gallons a minute. Reported drawdown, 20 feet one hour after start
484	--	--	--	C,E	D,S Ind	Yield, about 150 gallons a minute. of pump.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from McAllen	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
484a	7 miles south	Mrs. M. M. Fairbanks	King-Woods Oil Co.	1934	2,536	--	--	--
485	6½ miles south	Anton Thesar	Juan Vela	1913	99	4¼	--	--
486	3-¾ miles south	Robert Gregory	--	--	--	4¼	--	--
487	5 miles south	-- Evans	--	--	82	4¼	--	--
c/488	5½ miles southeast	G. M. Shoup	--	1918	125	4¼	--	--
c/489	6½ miles southeast	Valley View School	Juan Perez	1927	105	4¼	100	--
490	7 miles south	Valley Gin Co.	--	1925	110	4¼	--	--
c/491	7¼ miles south	W. W. Stevens	Wm. Schulz	1913	90	4¼	--	--
492	7 miles south	E. C. Chastain	E. C. Chastain	1925	60	6	--	--
493	7½ miles south	M. M. Damron	Juan Perez	1925	100	4¼	98	--
494	8½ miles southeast	Amado Lozano	Amado Lozado	1928	75	4¼	--	--
c/495	8¼ miles southeast	J. G. Moutier	--	1917	110	4¼	100	10
c/496	8 miles southeast	R. J. Sorensen	--	1917	110	4½	105	--
497	8-¾ miles southeast	John Klumb	Juan Vela	1928	83	4¼	--	--
498	6½ miles southeast	E. T. Swanberg	--	--	70	4¼	--	--
c/499	6 miles southeast	J. S. Ward	--	1920	90	5- 3/16	--	--
c/500	4¼ miles southeast	John C. Kelly	--	1912	78	4¼	--	--
501	4-¾ miles southeast	C. W. Dawley	--	1924	49	4¼	--	--
502	6¼ miles southeast	F. R. Lenser	Wm. Brewster	1922	103	4¼	90	13
503	8½ miles southeast	G. Belke Est.	do.	1925	95	4¼	95	--
504	7½ miles southeast	Mutual Life Ins. Co.	--	1913	104	4¼	--	--
c/505	7 miles southeast	Southwestern Life Ins. Co.	--	1923	75	4¼	--	--
c/506	8¼ miles southeast	W. J. Wittenberg	Wm. Brewster	1927	80	4¼	80	--
c/507	do.	C. Wichman	--	1920	108	4¼	--	--
508	8 miles southeast	--	--	--	--	--	--	--

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
484a	--	--	--	--	--	Oil test. See log.
485	--	- 11	Aug. 9, 1933	W	D,S	
486	--	- 9	do.	H	D,S	Slightly salty.
487	82	- 7	do.	H	D,S	
488	125	- 10 ₊	do.	W	D,S	
489	105	- 12	do.	W	D	Water from gravel. On slope.
490	110	- 12	do.	W	D,S	Not used in 1939.
491	90	- 9	do.	W	D,S	
492	60	- 36	do.	W	D,S	Water from sand.
493	100	- 12	do.	W	D,S	Salt water at 14 feet.
494	75	- 11	do.	W	D,S	Water from gravel.
495	110	- 17	do.	W	D,S	Water from gravel and sand.
496	110	- 8.5	do.	W	D,S	Water from gravel. Probably has leaky casing.
497	83	- 10	Aug. 10, 1933	W	D,S	
498	70	- 4	do.	H	D,S	
499	90	- 5	do.	H	D,S	
500	78	- 7	do.	W	D,S	
501	--	- 15	do.	W	S	Salty.
502	103	- 17	Aug. 14, 1933	W	S	Salty. Water from gravel.
503	90	- 20 ₊	do.	W	D,S	Water from sand. Salt water at 35 feet.
504	104	- 3	do.	W	D,S	
505	75	- 5	do.	H	S	
506	80	- 13	do.	W	D,S	Water from gravel.
507	108	- 15	do.	W	D,S	Water from sand.
508	--	--	--	--	--	Abandoned oil test.

Records of wells in Hidalgo County--Continued

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No.	Distance from McAllen	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/509	8½ miles southeast	C. R. Boase	--	1926	105	4¼	--	--
510	8-¾ miles southeast	Santa Clara Community	--	1925	85+	4¼	--	--
c/511	10½ miles southeast	J. A. Unland	J. A. Unland	1926	86	4¼	86	--

No.	Distance from Donna	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/512	3½ miles southwest	J. A. Elmer	Wm. Brewster	1921	104	4¼	--	--
c/513	2 miles southwest	E. L. Gililand	--	1923	50	4¼	40	10
c/514	4½ miles south	O. Dean	--	--	70+	5	--	--
515	4 miles southeast	--	--	--	12	6	--	--
516	do.	C. J. Bair	--	--	11	24	--	--
517	2-¾ miles southeast	D. A. Cleveland	--	--	23	--	19	4
518	4½ miles east	G. H. Molby	--	--	13	30	--	--
c/519	5 miles southeast	C. H. Cotton	--	--	36	--	--	--
c/520	5½ miles southeast	J. H. Couch	--	--	36	6	30	5

No.	Distance from Mercedes	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
521	3½ miles southwest	W. M. Welch	--	--	100+	--	--	--
522	3 miles west	L. R. Crockett	A. L. Willingham	1920	135	4¼	125	10
c/523	2¼ miles west	South Palm Garden School	A. E. Darlington	1924	20	4½	15	5
524	2¼ miles southwest	C. H. Mann	--	--	30	--	--	--
525	1-¾ miles northwest	E. E. Drew	--	--	20	5	--	--
526	1¼ miles north	F. H. Karle	--	--	25	1¼	20	5
527	1½ miles northeast	-- Killman	--	--	15	2	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

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No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
509	--	- 9	Aug. 14, 1933	W	D,S	
510	85 ₊	--	do.	C,G	D,S	
511	86	- 25 ₊	do.	W	D,S	Water from fine sand.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
512	104	- 12	Aug. 14, 1933	W	S	Water from gravel.
513	50	- 15	do.	W	D,S	Do.
514	--	--	Aug. 22, 1933	W	D,S	
515	--	- 7.5	Aug. 19, 1933	H	D,S	Salty.
516	--	- 7.5	do.	W	D,S	Dug well. Salty. Water from sand.
517	--	- 11	do.	W	D,S	Water from gravel.
518	--	- 5.5	July 28, 1933	W	D,S	Water from sandy clay.
519	--	- 11.5	Aug. 19, 1933	W	D,S	Dug well.
520	--	- 16.5	do.	W	D,S	Water from sand and gravel.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
521	--	--	Aug. 19, 1933	C,E	D,S	
522	--	- 13.5	do.	W	D,S	Water from sand.
523	--	- 6	do.	W	D,S	Do.
524	--	- 17	do.	W	D,S	Salty.
525	--	- 7.5	Aug. 3, 1933	H	D,S	
526	--	- 9	Aug. 4, 1933	W	D,S	Water from sand.
527	--	- 10	Aug. 10, 1933	W	D,S	

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from Merced	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/528	1 1/4 miles northeast	Henry Williamson	--	--	45	4	--	--
c/529	1 1/2 miles northeast	W. A. Critchfield	W. A. Critchfield	--	40	3 1/2	15	25
530	2 miles northeast	P. R. Lucky & M. B. Ermich	--	--	11	60	--	--
531	1 mile southeast	W. K. Swift	--	--	40	4 1/4	--	--
532	2 miles east	S. J. P. Bohannon	A. E. Darlington	--	32	6	16	16
533	3 miles southeast	W. H. Drawe	--	--	13	36	--	--
534	5 1/2 miles southeast	C. F. Barter	C. F. Barter	--	50	2	33	17

No.	Distance from Donna	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
535	8 miles southwest	D. A. Knapp	--	1929	126	4 1/4	104	22
536	7 1/2 miles southwest	H. Landa	--	1913	68	4 1/4	--	--
537	6 miles south	J. O. Bain	--	--	110	5	--	--
c/538	6 1/2 miles south	Run School No. 4	R. H. Harvey	--	110	5	--	--
539	7 miles south	F. Campbell	--	--	26	48	--	--
540	8 miles south	E. A. Boyce	--	--	22	48	16	--
c/541	6-3/4 miles south	Temple Orchards Co.	--	1932	120	4 1/4	--	--
c/542	6 1/2 miles southeast	-- Shepperd	--	--	187	4 1/4	--	--
c/543	7 miles southeast	A. L. Steele	C. Newman	--	80	3 1/2	--	--

No.	Distance from Merced	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
544	4 1/2 miles south	Ray Brown	--	--	18	60	--	--
c/545	do.	Wm. McKinney	--	--	100+	--	--	--
c/546	5 miles southeast	W. D. Chadick	C. Newman	--	145	6	135	10
547	4 miles southeast	Wm. Lingenbrink	Ike Bettison	1916	2,566	--	--	--

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
528	--	- 13.5	Aug. 10, 1933	W	D,S	
529	40	- 11.5	do.	W	D,S	Water from sand.
530	--	- 9	Aug. 14, 1933	None	N	Dug well.
531	--	- 11	July 25, 1933	W	D,S	
532	--	- 10	Aug. 14, 1933	H	D,S	Water from sand.
533	--	- 12	Aug. 21, 1933	H	D	Dug well.
534	--	- 20+	do.	W	D,S	Water from sand.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
535	--	- 15	Aug. 21, 1933	C,G	D,S	Water from gravel. Near edge of lake.
536	--	- 14	do.	W	D,S	
537	--	- 12	Aug. 27, 1933	W	D,S	
538	--	- 16	Aug. 22, 1933	W	D,S	Water from sand.
539	--	- 14.5	do.	None	--	Dug well. Water from sand.
540	--	- 16	do.	C,E	D,S	Do.
541	--	- 15+	do.	W	D,S	Water from gravel.
542	--	- 30+	do.	H	D,S	Do.
543	--	- 22	do.	W	D,S	

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
544	--	- 8	Aug. 22, 1933	None	S	Dug well. Salty.
545	--	--	Aug. 21, 1933	H	D,S	
546	100	- 40+	do.	W	D,S	Water from gravel.
547	--	--	--	--	--	Oil test. See log.

Records of wells in Hidalgo County--Continued

No.	Distance from Puerto Rico	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
548	4½ miles northeast	--	--	--	2,000	--	--	--
c/549	5¼ miles northeast	McAllen Ranch	E. Rupp	1938	648	5-3/16	--	--
c/550	4¼ miles northeast	do.	do.	1938	684	5-3/16	643	41
c/551	2 miles east	do.	A. D. Killinger	1938	246	5-3/16	230	16
552	1 mile southeast	A. Longoria	Rowan and Hope	--	7,000	--	---	--
c/553	1½ miles east	Manuel Vela	A. D. Killinger	1939	713	4	602	27
c/554	3½ miles south	Wood Christian	do.	1939	947	4	916	12

No.	Distance from Guerra Store	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
555	2 miles southwest	Richard King	E. Rupp	1938	780	6	765	15
556	1½ miles southwest	W. M. Doughty No. 1	Garland Johnson	--	3,009	--	--	--
c/557	2½ miles west	D. Guerra and Sons	E. Rupp	1938	834	5	701	36
558	6½ miles north	Richard King	do.	1938	604	6	575	29
559	4½ miles northeast	do.	do.	1938	920	6	800	29
c/560	4 miles southeast	Romola Garza	A. D. Killinger	1938	742	4	717	23
c/561	3½ miles southeast	D. Guerra and Sons	E. Rupp	1938	811	5	772	39
562	5¼ miles east	Richard King	do.	1938	1,002	6	976	26
563	9 miles northeast	do.	do.	1938	787	6	750	37
c/564	7 miles east	Romaldo Garza	A. D. Killinger	1939	715	5-3/16	686	26
565	9¼ miles east	Richard King	E. Rupp	1938	850	6	696	26

No.	Distance from McCook	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
566	2½ miles northwest	--	--	--	1,166	--	--	--
567	3½ miles north	E. Vrana	L. S. Doubrava	1936	300	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
548	--	--	--	--	--	Schlumberger core hole. See log.
549	649	--	Aug. 5, 1939 d/	Flow	S	Do.
550	643	+ 30	do.	Flow	S	Yield, 5 gallons a minute. Water from sandstone. See log.
551	216	- 60	Aug. 15, 1939	W	S	See log.
552	--	--	--	--	--	Oil test. See log.
553	640	+ 9	Aug. 3, 1939	Flow	D,S	Yield, 5 gallons a minute. Water from sandstone. See log.
554	947	+ 0.1	do.	Flow	S	Yield, 1 gallon a minute. Water from sandstone. See log.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
555	760	--	Aug. 5, 1939 d/	Flow	S	Yield, 5 gallons a minute. See log.
556	--	--	--	--	--	Oil test. See log.
557	701	--	Aug. 12, 1939	Flow	S	Plugged back to 737 feet. Yield, 25 gallons a minute. See log.
558	604	- 4	Aug. 5, 1939 d/	W	S	See log. La Medina well.
559	802	--	do.	Flow	S	Plugged back to 802 feet. Yield, 18 gallons a minute. See log.
560	742	+ 1.5	Aug. 3, 1939	Flow	S	Yield, $\frac{1}{2}$ gallon a minute. Sands at 142 to 174 and 512 to 585 feet. See log.
561	772	--	Aug. 10, 1939	Flow	S	Yield, 5 gallons a minute. See log.
562	1,002	--	Aug. 5, 1939 d/	Flow	S	Yield, 30 gallons a minute. See log.
563	787	--	do.	Flow	S	Yield, 5 gallons a minute. See log.
564	686	- 3	Aug. 30, 1939	W	S	Yield, small. See log.
565	850	- 8	Aug. 5, 1939 d/	W	S	Other sands at 732 to 771 and 824 to 850 feet. See log. Camto Verde well.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
566	--	--	--	--	--	Schlumberger core hole. See log.
567	--	--	Sept. 2, 1939	W	--	

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

c/ See table of chemical analyses on pages 94 to 102.

d/ Reported by owner or driller.

Records of wells in Hidalgo County--Continued

No.	Distance from McCook	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
c/568	2 miles north	T. Tice	A. Erdmann	1936	423	4-3/4	--	--
c/569	1 1/2 miles north	R. A. Kremel	R. A. Kremel	1937	335	4	330	5
570	6 miles northeast	--	--	--	1,302	--	--	--
c/571	9 miles northeast	McAllen Ranch	E. Rupp	1938	756	5	731	25
c/572	10 1/2 miles northeast	do.	do.	1938	800	5	766	34

No.	Distance from Linn	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
573	4 1/2 miles southwest	J. E. Garrett	B. M. Roark	1938	88	14	--	--
574	3 1/2 miles southwest	I. A. White	do.	1938	85	11	--	--
575	2 1/2 miles southwest	O. Mahew	do.	1938	78	16	--	--
576	2 miles southwest	D. C. Abney	do.	1938	78	11	--	--
c/577	1 1/2 miles southwest	Southern Floral Co.	A. D. Killinger	1937	88	24	50	38
578	1/4 mile southeast	W. M. Doughty	King-Woods Oil Co.	1935	6,012	--	--	--
c/579	1 1/2 miles east	M. Chapa	E. Rupp	1938	471	4	430	41
c/580	1 1/2 miles northeast	J. N. Guerra	do.	1938	488	5	--	--
c/581	3-3/4 miles east	Juanlina Garza	A. D. Killinger	1937	705	4 1/4	670	35
c/582	4 1/2 miles east	P. C. Zamora	E. Rupp	1937	631	4	487	88
c/583	3 1/2 miles east	Richard King	do.	1938	625	5	602	23
c/584	6 miles east	Geo. H. Coates	A. D. Killinger	1939	782	5	725	33
c/585	7-3/4 miles east	Dr. -- Corbit	E. Rupp	1939	762	5	728	34

a/ W, windmill; E, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
568	--	-158±	Aug. 11, 1939	W	D,S	Reported to kill plants.
569	335	-150±	do.	W	D,S	No. 106 redrilled.
570	--	--	--	--	--	Schlumberger core hole, See log.
571	730	+ 15	Aug. 3, 1939	Flow	S	Yield, 9 gallons a minute. Water from sandstone. See log.
572	766	+ 15	do.	Flow	S	Do.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
573	88	- 51	Sept. 1, 1939	T,G	I	Reported yield, 400 gallons a minute.
574	85	- 45	Sept. 2, 1939	T,G	I	Reported yield, 400 gallons a minute. Irrigates 10 acres orchard, 20 acres field crops. No. 121 redrilled.
575	78	- 32	do.	T,G	I	Reported yield, 400 gallons a minute. Irrigates 10 acres orchard, 20 acres
576	78	- 30	do.	T,G	I	Reported yield, 500 gal- field crops. lons a minute. Irrigates 15 acres orchard, 20 acres field crop.
577	13	- 30.5	Aug. 15, 1939	T,G	I	Reported yield, 500 gallons a minute. Pumped at that rate continuously for three weeks. Irrigates 50 acres plants
578	--	--	--	--	--	Oil test. See log. and flowers.
579	431	--	Aug. 10, 1939	A,G	Ind	Reported yield, 60,000 gallons a day continuously for 6 weeks. On site of
580	--	- 7	do.	W	D,S	Same location as No. No. 136. See log. 132.
581	705	+ 1.5	do.	Flow	D,S	Yield, 4 gallons a minute. Salt water sands at 134 and 156 feet. See log.
582	499	- 8	do.	W	D,S	See log.
583	602	- 37	do.	W	S	Do.
584	725	- 6	do.	W	D,S	Do.
585	728	+ 5±	do.	Flow	S	Yield, 2 gallons a minute. See log.

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

c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Distance from McCook	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
586	9 $\frac{1}{4}$ miles southwest	--	--	--	706	--	--	--
587	5 miles southwest	--	--	--	1,255	--	--	--
c/588	3 $\frac{1}{2}$ miles southwest	F. J. Dusek	A. Erdmann	1936	370	4	350	20
c/589	2 miles north	C. Pollock	A. L. Willingham	1936	350	4	340	10
c/590	1 $\frac{1}{2}$ miles southwest	Dallas Joint Stock and Land Bank	--	--	300	4	--	--
c/591	3/4 mile west	E. Riethmyer	--	--	375	4	--	--
c/592	1/2 mile east	McCook Gin Co.	L. Kuscer	1935	344	4	--	--
593	2 $\frac{1}{4}$ miles east	--	--	--	1,617	--	--	--
c/594	1-3/4 miles south	Mildred Davis	A. L. Willingham	1934	351	6	327	14
c/595	2 $\frac{1}{4}$ miles southeast	Cora Davis	--	--	580	5 $\frac{1}{2}$	--	--
c/596	3-3/4 miles southeast	Anna Dube	A. Erdmann	1936	371	4	350	21
c/597	5-3/4 miles southeast	J. E. Winston	A. D. Killinger	1938	777	4 $\frac{1}{4}$	734	43
c/598	6 miles east	Hammond Bros.	do.	1939	564	5- 3/16	332	32

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
586	--	--	--	--	--	Schlumberger core hole. See log.
587	--	--	--	--	--	Do.
588	370	-175	Aug. 11, 1939	W	D,S	Salt water sand at 285 feet.
589	350	-150+	do.	W	D,S	Salt water sand at 175 feet.
590	--	--	Sept. 2, 1939	W	D,S	
591	--	--	do.	W	D,S	
592	--	--	Aug. 11, 1939	C,S	Ind	
593	--	--	--	--	--	Schlumberger core hole. See log.
594	--	-210	Aug. 11, 1939	W	D,S	
595	--	-131.5	do.	W	D,S	A very old well. Reported that it once flowed.
596	371	-175	do.	W	D,S	Reported to kill shrubs.
597	758	-100	Aug. 14, 1939	A,G	D,S	Reported yield, 100 gallons a minute. See log.
598	564	- 53	do.	W	S	See log.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used, A, airlift.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Location	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
599	Edinburg, 3-3/4 miles northeast	J. de la Vina	Pan American Production Co.	1939	8,123	10-3/4	--	--
600	Edinburg, 3 miles northeast	Delta Orchards Co.	Gulf States Oil Co.	1936	6,808	--	--	--
c/601	Sam Fordyce, 3 miles northwest	R. R. Chamberlain	A. D. Killinger	1938	100	5 1/2	47	5
c/602	Sam Fordyce, 3 1/2 miles northeast	Daskam Bros.	Daskam Bros.	1939	148	5-3/16	--	--
603	Sam Fordyce, 4 1/2 miles northeast	--	--	--	1,005	--	--	--
604	Sam Fordyce, 9 miles northeast	--	--	--	765	--	--	--
605	Sam Fordyce, 8 1/2 miles northeast	Brock and Showers	Showers and Moncrief	1935	5,818	10-3/4	--	--
606	Sam Fordyce, 6 1/4 miles east	do.	Gato Oil Co.	1935	5,025	--	--	--
607	Mission, 3 1/2 miles west	C. Green	Bluff Petroleum Co.	--	5,531	--	--	--
c/608	Mission, 1 1/2 miles east	A. T. Patterson	A. D. Killinger	1938	354	4 1/4	347	6
c/609	Mission, 6 1/4 miles northeast	Bentsen Bros.	do.	1938	537	3 1/2	475	62
c/610	Edinburg, 3-3/4 miles southeast	H. F. Potts	do.	1939	253	3 1/4	230	23
611	Edinburg, 7-3/4 miles northeast	J. C. Engleman	Quintana Petroleum Co.	1936	8,883	10-3/4	--	--
612	Edcouch, 5 1/4 miles east	Am. Rio Grande Land & Irr. Co.	Union Sulphur Co.	1936	7,960	10	--	--
c/613	Sam Fordyce, 5 1/2 miles northeast	F. Chapa	--	--	85	94	--	--
c/614	Sam Fordyce, 5 1/4 miles east	M. C. Hanson	A. D. Killinger	1938	278	4 1/4	243	27
615	Mission, 4 miles south	Oblate Fathers	La Lomita Oil Syndicate	--	2,708	--	--	--
616	McAllen, 5 miles east	City of San Juan	Layne-Texas Co.	--	869	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift <u>a/</u>	Use of water <u>b/</u>	Remarks
		Above or below measuring point (ft.)	Date of measurement			
599	--	--	--	--	--	Oil test. See log.
600	--	--	--	--	--	Do.
601	100	-42	Aug. 14, 1939	C,E	D	
602	148	-65	Aug. 20, 1939	C	S	
603	--	--	--	--	--	Schlumberger core hole. See log.
604	--	--	--	--	--	Do.
605	--	--	--	--	--	Oil test. See log.
606	--	--	--	--	--	Do.
607	--	--	--	--	--	Do.
608	353	-28	Aug. 5, 1939	--	--	See log.
609	537	-16	Aug. 14, 1939	C,E	D	Do.
610	253	- 9	Aug. 3, 1939	--	D	Salt water sands at 65 and 104 feet. See log.
611	--	--	--	--	--	Oil test. See log.
612	--	--	--	--	--	Do.
613	--	-72	Aug. 14, 1939	C,G	D,S	Very old dug well.
614	243	-47	Aug. 25, 1939	--	D	See log.
615	--	--	--	--	--	Oil test. See log.
616	--	--	--	--	--	Not used. See log.

b/ S, stock; D, domestic; I, irrigation; Ind, industrial; N, not used.
c/ See table of chemical analyses on pages 94 to 102.

Records of wells in Hidalgo County--Continued

No.	Location	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Principal water-bearing bed	
							Depth to top of bed (ft.)	Thickness (ft.)
617	Donna, 6 $\frac{1}{2}$ miles southwest	--	--	--	1,500	--	--	--
618	Donna, 4 miles south	C. C. Nelson	Gerald Oil & Gas Co.	1937	6,237	--	--	--
619	Donna, 4 $\frac{1}{2}$ miles southeast	Am. Rio Grande Land & Irr. Co.	Atlantic Refining Co.	1938	9,180	16	--	--
c/620	Donna, 5-3/4 miles east	O. E. Ridenovr	A. L. Willingham	1921	139	4 $\frac{1}{4}$	--	--
621	Mercedes, 4 miles northwest	Peoples Oil & Gas Co.	--	--	3,400	--	--	--
622	Puerto Rico, 2 $\frac{1}{2}$ miles northwest	A. Guerra	Bryan and Tharp	1933	1,313	--	--	--
623	Mission, 5 miles south	J. H. Shary	Maddox-Turnball, and Irvin	--	6,009	--	--	--
c/624	Mercedes, 4 $\frac{1}{2}$ miles south	Relampago School	--	--	70	--	--	--
625	Guerra Store, 10 miles northwest	L. J. Lipps	--	--	650	--	--	--

a/ W, windmill; H, hand; C, cylinder; G, gasoline; S, steam; E, electric; T, turbine; O, oil; A, airlift.

No.	Depth to which well is cased (ft.)	Water level		Method of lift a/	Use of water b/	Remarks
		Above or below measuring point (ft.)	Date of measurement			
617	--	--	--	--	--	Schlumberger core hole. See log.
618	--	--	--	--	--	Oil test. See log.
619	--	--	--	--	--	Do.
620	--	-14	Sept. 6, 1939	W	D,S	
621	--	--	--	--	--	Oil test. See log.
622	--	--	--	--	--	Oil test. See log. In Starr County.
623	--	--	--	--	--	Oil test. See log.
624	--	18		W	D	
625	--	--	Apr. 16, 1941	Flows	S	Tordias well, number 988 Brooks County. Estimated yield 10 gallons a minute.

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

c/ See table of chemical analyses on pages 94 to 102 .

Table of Drillers' Logs, Hidalgo County, Texas

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 103</u>		
G. E. Stevens, 6 miles northwest of McCook.		
Soil - - - - -	8	8
Red clay - - - - -	60	68
White gumbo - - - - -	12	80
Blue sticky clay - - - - -	199	279
Gravel - - - - -	5	284
Blue clay and shale - - - - -	1	285
Water sand - - - - -	52	337
TOTAL DEPTH - - - - -		337
CASING RECORD: 337 feet of 4 $\frac{1}{4}$ -inch casing bottom 40 feet perforated.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 106</u>		
R. A. Kremmel well, 1 $\frac{1}{2}$ miles north of McCook.		
Sand - - - - -	9	9
Caliche - - - - -	31	40
Red clay - - - - -	4	44
Caliche - - - - -	36	80
Red clay and caliche - - - - -	238	318
Sand, fine, red - - - - -	27	345
Sand, clay with water - - - - -	5	350
TOTAL DEPTH - - - - -		350
CASING RECORD: 60 feet of 5-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 108</u>		
Hidalgo Oil Co. Taylor well, 7 miles northeast of McCook.		
Red surface sand - - - - -	10	10
Hard lime rock (caliche) - - - - -	93	103
Caliche and sand with streaks water sand - - - - -	309	412
Pink and buff clay - - - - -	1	413
Clay and sand - - - - -	4	417
Grayish green clay and shale - - - - -	69	486
Sandy shale - - - - -	7	493
Sandy shale - - - - -	121	614
Hard sandy shale - - - - -	21	635
Sticky blue shale - - - - -	33	668
Sticky shale and gumbo - - - - -	20	688
Hard streaks shale - - - - -	10	698
Hard flaky shale - - - - -	10	708
Shale and streaks sand - - - - -	34	742
Packed sand and shale - - - - -	28	770
Sand and shale in streaks - - - - -	67	837
Sandy shale some water - - - - -	57	894
Sand and shale in streaks - - - - -	37	931
Coarse grayish brown sand - - - - -	5	936
Chocolate sticky shale - - - - -	18	954
Sandy shale grayish brown - - - - -	2	956
Sticky shale chocolate - - - - -	29	985
Sandy shale - - - - -	10	995

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 108--Continued</u>		
Green shale sandy - - - - -	2	997
Gray sand - - - - -	21	1018
Gray sand and shale - - - - -	4	1022
Sticky shale and gumbo - - - - -	32	1054
Shale, sand and sandy shale - - - - -	52	1106
Sticky clay - - - - -	7	1113
Sticky shale and sand - - - - -	70	1183
Sticky blue and gray shale - - - - -	10	1193
Hard sand - - - - -	3	1196
Brown sand - - - - -	3	1199
Sand, sticky shale and ash - - - - -	4	1203
Gray sand and ash - - - - -	11	1214
Mottled gray shale and sand streaks - - - - -	63	1277
Sandy shale - - - - -	29	1306
Sticky chocolate shale streaks sand - - - - -	69	1375
Shale and gyp - - - - -	14	1389
Sticky shale - - - - -	51	1440
Gray water sand - - - - -	23	1463
Gray sand and shale - - - - -	47	1510
Mottled brown shale - - - - -	2	1512
Mottled brown and gray sandy shale - - - - -	44	1556
Gray sandy shale, boulders, and ash - - - - -	3	1559
Sticky gumbo and blue-gray clay - - - - -	11	1570
Blue gray sandy shale - - - - -	18	1588
Sandy shale and boulders - - - - -	26	1614
Mottled pink and blue shale - - - - -	61	1675
Gray sandy shale - - - - -	15	1690
Pink sand and pyrite - - - - -	3	1693
Sandy shale - - - - -	27	1720
Sticky blue and gray shale - - - - -	40	1760
TOTAL DEPTH - - - - -		1760

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 130</u>		
Southern Pacific Railway Company, in Linn.		
Surface sand - - - - -	3	3
Caliche - - - - -	90	93
Fine red sand - - - - -	12	105
Gumbo - - - - -	11	116
Sand - - - - -	7	123
Gumbo and shale - - - - -	46	169
Caliche - - - - -	27	196
Shale - - - - -	16	212
Tough gumbo - - - - -	98	310
(Continued on next page)		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (foot)	Depth (foot)
<u>Driller's log of well 130--Continued</u>		
Sand - - - - -	20	330
Gumbo - - - - -	72	402
Sand - - - - -	99	501
Gumbo - - - - -	6	507
Sand - - - - -	15	522
Gumbo - - - - -	6	528
Sand - - - - -	6	534
Rock - - - - -	2	536
Gumbo - - - - -	52	588
Sand - - - - -	8	596
Gumbo - - - - -	7	603
Hard sand-soft rock - - -	7	610
Gumbo - - - - -	7	617
Sand and shale - - - - -	23	640
Gumbo - - - - -	52	692
Shale and sand - - - - -	38	730
Sand - - - - -	14	744
Shale, sand and gumbo - -	21	765
TOTAL DEPTH - - - - -		765
CASING RECORD: 765 feet of 6-inch casing with 60 feet screen 461 to 521 and 40 feet screen 705 to 745.		

<u>Driller's log of well 200a</u>		
Hargill Oil Co., D. F. Stevenson well 1, 2 $\frac{1}{4}$ miles east of Hargill.		
Surface materials - - - -	20	20
Hard limestone - - - - -	10	30
Sand - - - - -	10	40
Hard-packed yellow clay -	50	90
Water sand - - - - -	20	110
Chalk - - - - -	11	121
Sandy clay - - - - -	89	210
Chalk rock - - - - -	2	212
Hard-packed clay - - - - -	21	233
Sand - - - - -	5	238
Clay, lime and gravel - -	30	268
Sandy clay - - - - -	17	285
Dry gumbo - - - - -	26	311
Gumbo - - - - -	53	364
Shale - - - - -	13	377
Gumbo - - - - -	29	406
Sandy shale - - - - -	36	442
Gumbo - - - - -	82	524
Shale and sand - - - - -	21	545
Gumbo - - - - -	19	564
Hard-packed shale - - - -	51	615
Gumbo - - - - -	20	635
Shale and gumbo - - - - -	30	665
Gumbo - - - - -	50	715
Gumbo, shale and chalk - -	30	745
Sandy shale - - - - -	39	784
Gumbo - - - - -	25	809

	Thickness (foot)	Depth (foot)
<u>Driller's log of well 200a--Continued</u>		
Limey chalk - - - - -	8	817
Sticky red shale - - - -	48	865
Hard gumbo - - - - -	11	876
Gumbo - - - - -	12	888
Shale - - - - -	17	905
Rock - - - - -	2	907
Gumbo - - - - -	41	948
Shale - - - - -	8	956
Gumbo - - - - -	6	962
Water sand - - - - -	6	968
TOTAL DEPTH - - - - -		968

<u>Driller's log of well 208</u>		
E. Salinas, at Jarachinos Ranch, 18 miles northwest of Edinburg.		
Caliche and gravel - - - -	37	37
Gravel and gray clay - - -	57	94
Sand - - - - -	17	111
Clay - - - - -	84	195
Sand - - - - -	10	205
TOTAL DEPTH - - - - -		205
CASING RECORD: 125 feet of 4 $\frac{1}{4}$ -inch casing.		

<u>Driller's log of well 214</u>		
Hammond Bros. well at Sterling Ranch, 10 $\frac{1}{2}$ miles northwest of Edinburg.		
Soil, sand and clay - - - -	315	315
Gumbo - - - - -	196	511
Fine blue sand - - - - -	11	522
Gumbo - - - - -	25	547
Rock - - - - -	1	548
Gumbo and gravel - - - - -	31	579
Gumbo - - - - -	63	642
Hard sandy clay - - - - -	35	677
Soft clay - - - - -	3	680
Hard sandy clay and pyrites - - - - -	50	730
Gumbo and gravel - - - - -	22	752
Lime rock and gumbo - - -	20	772
Gumbo and gravel - - - - -	3	775
Sand and clay - - - - -	10	785
Gumbo and lime rock - - -	35	820
Hard lime rock - - - - -	2	822
Gumbo and lime rock - - -	64	886
Hard lime rock - - - - -	11	897
Gumbo - - - - -	33	930
Rock and shale - - - - -	18	948
Gumbo - - - - -	2	950
Rock and shale - - - - -	27	977
Gumbo, hard streaks - - -	19	996
Rock - - - - -	1	997

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 214--Continued</u>		
Fine hard sand - - - - -	19	1016
Gumbo - - - - -	19	1035
Good water sand - - - - -	5	1040
Shale, streaks of sand - -	21	1061
Good water sand - - - - -	19	1080
Rock - - - - -	1	1081
Gumbo - - - - -	44	1125
Sandy shale - - - - -	14	1139
Rock - - - - -	4	1143
Hard sandy clay - - - - -	14	1157
Fine white sand - - - - -	4	1161
Gumbo - - - - -	4	1165
Fine white sand - - - - -	5	1170
Clay - - - - -	17	1187
Hard sandy shale and fine sand - - - - -	11	1198
Gumbo - - - - -	35	1233
Shale - - - - -	23	1256
Rock - - - - -	1	1257
Hard sandy clay - - - - -	16	1273
Fine pack sand - - - - -	12	1285
Gumbo - - - - -	44	1329
Shale and sand - - - - -	6	1335
Shale - - - - -	25	1360
Rock - - - - -	2	1362
Hard sand shale - - - - -	14	1376
Sand - - - - -	3	1379
Hard dry gumbo - - - - -	27	1406
Fine sand - - - - -	11	1417
Hard sandy clay - - - - -	15	1432
Gumbo - - - - -	15	1447
TOTAL DEPTH - - - - -		1447
CASING RECORD: 1,447 feet of 6-inch and 4-inch casing with eight screens on all sands from 522 to bottom.		

<u>Driller's log of well 218</u>		
Baptist Seminary, $3\frac{1}{2}$ miles north of Edinburg.		
Soil - - - - -	10	10
Red clay and gravelly clay	30	40
Caliche - - - - -	30	70
Yellow clay - - - - -	70	140
Gravel and sand, bad water	30	170
Clay, yellow and gray - -	245	415
Gray sand - - - - -	10	425
TOTAL DEPTH - - - - -		425
CASING RECORD: 420 feet of $4\frac{1}{2}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 219</u>		
Southern Pacific Railway Company, at icing plant, $2\frac{3}{4}$ miles north of Edinburg.		
Sand and surface soil - - -	8	8
Caliche - - - - -	104	112
Sand and rock - - - - -	14	126
Gravel and salt water - - -	8	134
Hard gumbo - - - - -	38	172
Shale - - - - -	24	196
Tough gumbo - - - - -	34	230
Pack sand and soft rock - -	25	255
Sandy shale - - - - -	65	320
Tough gumbo - - - - -	50	370
Shale - - - - -	9	379
Pink gumbo - - - - -	41	420
Sand - - - - -	18	438
Packed sand and rock - - -	19	457
Boulders and sand rock - -	20	477
Shale and sand - - - - -	17	494
Gumbo - - - - -	20	514
Pink gumbo - - - - -	25	539
Hard black slate-strong gas	13	552
Hard gumbo - - - - -	15	567
Shale-sandy streaks - - - -	19	586
Sand with boulders - - - -	83	669
Broken shale-gumbo - - - -	36	705
Hard gumbo - - - - -	95	800
Hard porous sand - - - - -	18	818
Hard gumbo - - - - -	154	972
Hard porous sand - - - - -	68	1040
TOTAL DEPTH - - - - -		1040
CASING RECORD: 1,040 of 6-inch and 4-inch casing with 100 feet screen 585 and 40 feet screen 1,000 to 1,040.		

<u>Driller's log of well 223a</u>		
Engleman Gardens Inc., $8\frac{1}{2}$ miles north-east of Edinburg.		
Not given - - - - -	585	585
Sticky shale - - - - -	17	602
Sand - - - - -	35	637
Clay with sand breaks - -	41	678
Clay - - - - -	7	685
Sand - - - - -	10	695
Sticky clay - - - - -	15	710
Gravel and clay - - - - -	35	745
Clay - - - - -	18	763
Sand - - - - -	11	774
Gravel and clay - - - - -	34	808
Clay and sand - - - - -	52	860

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 223a--Continued</u>		
Sandy clay and fine gravel	459	1319
Shale - - - - -	31	1350
Sand - - - - -	10	1360
Shale - - - - -	41	1401
Gravel and shale - - - - -	14	1415
Shale - - - - -	38	1453
Shale with streaks of gravel - - - - -	17	1470
Sandy shale - - - - -	62	1532
Shale and lime - - - - -	16	1548
Sandy shale and lime - - -	122	1670
Sandy shale with lime breaks - - - - -	117	1787
Hard sandy lime - - - - -	9	1796
Hard shale - - - - -	14	1810
Shale with streaks of lime-	51	1861
Sticky shale - - - - -	11	1872
Hard shale - - - - -	18	1890
Sticky shale - - - - -	13	1903
Shale - - - - -	112	2015
Broken lime - - - - -	6	2021
Shale - - - - -	66	2087
Sand and shale - - - - -	20	2107
Sand with streaks of lime -	50	2157
Shale - - - - -	102	2259
Pink shale - - - - -	4	2263
Shale - - - - -	34	2297
Shale and gypsum - - - - -	23	2320
Shale - - - - -	68	2388
Hard-packed shale - - - - -	146	2534
Sand - - - - -	9	2543
Hard-packed sand lime - - -	7	2550
Broken shale and lime - - -	25	2575
Hard-packed shale, streaked with gypsum - - - - -	162	2737
Sandy shale - - - - -	10	2747
Shale and lime - - - - -	75	2822
Shale - - - - -	48	2870
Shale streaked with gypsum-	127	2997
Hard broken lime - - - - -	15	3012
Shale and shells - - - - -	28	3040
Brown shale - - - - -	69	3109
Shale with streaks of lime-	11	3120
TOTAL DEPTH - - - - -		7502
CASING RECORD: 585 feet of 10 $\frac{3}{4}$ -inch casing at top.		

<u>Driller's log of well 263</u>		
E. W. Sullivan, at Sullivan City, 2 $\frac{1}{2}$ miles northwest of Sam Fordyce.		
Soil - - - - -	8	8
Clay reddish - - - - -	33	41
Sand and gravel - - - - -	20	61

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 263--Continued</u>		
Clay, red - - - - -	19	80
TOTAL DEPTH - - - - -		80
CASING RECORD: 80 feet 4 $\frac{1}{4}$ -inch perforated from 41 to 61.		

<u>Partial driller's log of well 266</u>		
Chancellor Oil Co., Garcia Land and Cattle Co., 1 mile west of Sam Fordyce.		
Soil - - - - -	20	20
Subsoil - - - - -	24	44
Clay - - - - -	16	60
Sand and gravel, water- -	48	108
Clay - - - - -	44	152
Brown clay - - - - -	18	170
Clay - - - - -	92	262
Lime rock - - - - -	19	281
Shale lime and shells - -	109	390
Brown, blue and pink shale	120	510
Sand and gravel - - - - -	50	560
Shale and lime - - - - -	25	585
Sticky shale - - - - -	20	605
Shale - - - - -	40	645
Shale and lime - - - - -	65	710
Sandy shale - - - - -	14	724
Sticky shale - - - - -	11	735
Sandy shale - - - - -	10	745
Shale brown and blue - -	55	800
Brown shale and lime - -	42	842
Sticky shale - - - - -	51	893
Sandy shale - - - - -	19	912
Sticky shale - - - - -	33	945
Sand water - - - - -	8	953
Shale and lime - - - - -	17	970
Sticky shale - - - - -	66	1036
Sandy shale - - - - -	12	1048
Sticky shale - - - - -	22	1070
Brown shale - - - - -	16	1086
Pink shale - - - - -	28	1114
Sandy shale - - - - -	14	1128
Brown shale - - - - -	7	1135
Pink shale - - - - -	85	1220
Sticky blue shale - - - -	22	1242
Sandy pink shale - - - -	12	1254
Mottled gray, brown and blue shale - - - - -	81	1335
Brown sandy shale - - - -	13	1348
Brown and gray shale - -	17	1365
Sandy lime - - - - -	8	1373
Gray sticky shale - - - -	29	1402
Gray shale and lime - - -	25	1427
Sticky blue shale - - - -	28	1455
Shale and gray lime - - -	24	1479

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 278</u>		
Kanellos, Brock and Showers well. miles northwest of Mission.		8 $\frac{1}{2}$
Brown shale - - - - -	90	90
Sand and shale streaks -	60	150
Sand, gravel and shale -	200	350
Gray sand and blue shale	140	490
Blue shale streaks sand -	90	580
Red shale - - - - -	3	583
Sticky shale - - - - -	33	616
Red sandy shale - - - - -	22	638
Red and blue shale - - -	16	654
Sticky shale and streaks sand - - - - -	22	676
Shale and sand, fresh water flow - - - - -	27	703
Sand water - - - - -	6	709
Sticky shale - - - - -	14	723
Sandy shale - - - - -	2	725
Sticky shale streaks sand	40	765
Sticky shale - - - - -	30	795
Shale streaks sand - - -	100	895
Sticky chocolate shale -	65	960
Chalky shale - - - - -	37	997
Hard tight shale - - - -	3	1000
Shale - - - - -	27	1027
Hard sand - - - - -	21	1048
Core - - - - -	5	1053
Sticky shale - - - - -	11	1064
TOTAL DEPTH - - - - -		2729

<u>Driller's log of well 279</u>		
R. W. Lindsay at Lindsay club house, miles northwest of Mission.		7 $\frac{3}{4}$
Sand - - - - -	10	10
Clay and sand - - - - -	19	29
Blue clay - - - - -	13	42
Sand - - - - -	17	59
Gravel - - - - -	10	69
Sand - - - - -	7	76
Gravel - - - - -	1	77
Clay and sand - - - - -	40	117
Red sandy clay - - - - -	11	128
Conglomerate, clay seams -	80	208
Fine sand - - - - -	123	331
CASING RECORD: 278 feet of 5-3/16-inch casing.		

<u>Driller's log of well 303</u>		
Central Power and Light Co., in Edinburg.		
Soil - - - - -	8	8
Clay - - - - -	32	40
Sand, salt water - - - -	2	42
Caliche and clay - - - -	44	86
Sand, little gravel, water	8	94

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 303--Continued</u>		
Hard sand - - - - -	24	118
Gravel - - - - -	38	156
TOTAL DEPTH - - - - -		156

<u>Driller's log of well 325a</u>		
Dee Davenport, C. H. Swallow well 1-A, 4 $\frac{3}{4}$ miles west of Edcouch.		
Surface sand and clay - -	100	100
Shale and gravel - - - -	101	201
Sand and gravel - - - - -	99	300
Shale - - - - -	180	480
Shale and lime - - - - -	72	552
Hard-packed sticky shale	38	590
Hard-packed sand and gravel	95	685
Hard-packed shale and lime	81	766
Shale - - - - -	214	980
Shale, hard lime and shells	20	1000
Shale and lime with streaks of shell - - - - -	151	1151
Hard-packed shale and boulders - - - - -	111	1262
Sand and shale - - - - -	38	1300
Hard-packed sticky shale and lime - - - - -	17	1317
Shale - - - - -	144	1461
Shale and lime - - - - -	26	1487
Shale - - - - -	167	1654
Sand and lime boulders -	36	1690
Hard-packed shale and lime - - - - -	95	1785
Hard-packed shale, lime and shells - - - - -	15	1800
Hard-packed sticky shale-	17	1817
Shale and lime - - - - -	286	2103
Shale, lime and boulders-	165	2268
Hard-packed shale and shells - - - - -	32	2300
Shale and lime with shells	200	2500
Shale and lime - - - - -	50	2550
Shale, boulders and lime-	80	2630
Shale - - - - -	49	2679
Hard-packed shale, lime and shells - - - - -	39	2718
Hard-packed shale and lime - - - - -	120	2838
Shale and lime - - - - -	153	2991
Hard-packed shale and lime	89	3080
Shale - - - - -	29	3109
Shale and lime - - - - -	191	3300
Hard-packed shale with streaks of sand - - - -	65	3365
Shale and lime - - - - -	35	3400

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 325a--Continued</u>		
Sandy shale and lime - - -	40	3440
Shale, lime and shells - -	85	3525
Shale and lime - - - - -	21	3546
Shale - - - - -	137	3683
Shale with streaks of sand	156	3839
Shale and lime with streaks of sand - - - - -	151	3990
Hard-packed shale and lime	135	4125
Hard-packed shale and crystallized lime - - -	26	4151
Hard-packed shale and lime - - - - -	142	4293
Shale - - - - -	42	4335
Shale and lime - - - - -	47	4382
Shale - - - - -	108	4490
Hard-packed streaked shale	48	4538
Solid lime - - - - -	3	4541
TOTAL DEPTH - - - - -		7959
CASING RECORD: 250 feet of 16-inch casing; 1,262 feet of 10 $\frac{3}{4}$ -inch; 7,960 feet of 7-inch.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 340a</u>		
Union Sulphur Co., American Rio Grande Land & Irrigation Company well 1, 4 miles southeast of Edcouch.		
Surface sand - - - - -	35	35
Sand and gravel - - - - -	13	48
Sand - - - - -	54	102
Sandy clay - - - - -	7	109
Sticky shale - - - - -	61	170
Shale - - - - -	6	176
Sand and gravel - - - - -	161	337
Shale - - - - -	97	434
Shale and gravel	56	490
Sand with streaks of shale	26	516
Sandy shale and boulders	50	566
Hard-packed shale and boulders - - - - -	33	599
Gumbo - - - - -	12	611
Hard-packed shale and boulders - - - - -	22	633
Broken sand, shale and boulders - - - - -	8	641
Boulders and sand - - - -	25	666
Sticky shale - - - - -	11	677
Sticky shale and boulders	12	689
Shale and boulders - - - -	35	724
Sand - - - - -	34	758
Hard gravel and sand - - -	20	778
Shale - - - - -	16	794
Shale with streaks of sand - - - - -	12	806

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 340a--Continued</u>		
Gumbo - - - - -	15	821
Sandy shale - - - - -	11	832
Shale and boulders - -	16	848
Gumbo - - - - -	12	860
Shale and boulders - -	6	866
Sandy shale - - - - -	54	920
Shale and boulders - -	24	944
Shale - - - - -	14	958
Shale and boulders - -	46	1004
Hard-packed sand and boulders - - - - -	14	1018
Hard-packed sand - - -	12	1030
Shale and boulders - -	8	1038
Shale - - - - -	3	1041
Shale and boulders - -	23	1064
Hard-packed sand and boulders - - - - -	23	1087
Hard-packed shale - - -	7	1094
Hard-packed sand with broken rock - - - - -	3	1097
Hard-packed sand - - -	2	1099
Sandy shale with streaks of sticky shale - - -	25	1124
Sticky shale - - - - -	31	1155
Sandy shale - - - - -	28	1183
Sticky shale - - - - -	74	1257
Sandy shale - - - - -	13	1270
Sandy shale and boulders	26	1296
Packed sand - - - - -	18	1314
Sandy shale - - - - -	16	1330
Sticky shale - - - - -	23	1353
Hard-packed sandy shale	26	1379
Sandy shale - - - - -	6	1385
Water sand - - - - -	16	1401
Sand - - - - -	17	1418
Hard-packed sandy shale and boulders - - - -	18	1436
Hard-packed sandy lime- and boulders - - - -	9	1445
Hard-packed sandy shale and boulders - - - -	59	1504
Sand and boulders - - -	28	1532
Sandy shale - - - - -	31	1563
Hard-packed shale and boulders - - - - -	21	1584
Sticky shale - - - - -	11	1595
Hard-packed sandy shale and boulders - - - -	64	1659
Hard lime - - - - -	2	1661
Sticky shale - - - - -	22	1683
Sandy shale with hard streaks - - - - -	9	1692
Sticky shale - - - - -	6	1698

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 340a--Continued</u>		
Sandy brown shale, water -	11	1709
Sticky shale - - - - -	14	1723
Packed water sand - - - - -	2	1725
Packed sand and boulders -	29	1754
Hard-packed sand - - - - -	17	1771
Shale and lime - - - - -	1	1772
Sticky shale and lime - -	21	1793
Sticky, sandy brown shale and lime, water - - - - -	13	1806
Sandy shale with hard streaks - - - - -	40	1846
Sticky shale and boulders	20	1866
Sandy shale - - - - -	4	1870
Hard-packed sand and shale	24	1894
Sticky shale - - - - -	17	1911
Hard-packed sandy dry shale and boulders - - -	13	1924
Hard-packed shale and boulders - - - - -	2	1926
Sticky shale - - - - -	8	1934
Sand - - - - -	27	1961
Sticky shale - - - - -	7	1968
Hard-packed shale with streaks of hard-packed sand - - - - -	44	2012
Shale and lime - - - - -	25	2037
Sandy shale - - - - -	30	2067
Hard-packed sandy shale -	58	2125
Sticky shale - - - - -	7	2132
Hard-packed sand - - - - -	40	2172
Sticky shale - - - - -	8	2180
Hard-packed sand - - - - -	86	2266
Hard-packed sandy shale, water - - - - -	28	2294
Hard-packed sandy shale -	9	2303
Hard-packed sand - - - - -	17	2320
Hard-packed sandy shale and lime - - - - -	14	2334
Sticky red shale - - - - -	38	2372
Sticky shale - - - - -	19	2391
Sticky red shale - - - - -	15	2406
Hard-packed brown shale -	10	2416
Sandy shale, water - - - -	5	2421
Sandy shale - - - - -	19	2440
Sticky shale - - - - -	26	2466
Sticky shale with streaks of sand - - - - -	9	2475
Sticky shale - - - - -	7	2482
Sandy shale and lime - - -	37	2519
TOTAL DEPTH - - - - -		6431
CASING RECORD: 1,132 feet of 12½-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 349</u>		
Oscar Daskam, 1 mile east of Sam Fordyce.		
Soil - - - - -	20	20
Gravel - - - - -	20	40
Volcanic ash - - - - -	4	44
Red clay and brown sand -	26	70
Sand rock - - - - -	2	72
Blue gray sand, salt water	5	77
Red clay - - - - -	7	84
Sand rock, water - - - - -	4	88
Red clay with blue shale -	15	103
Sand rock and sand - - - -	5	108
TOTAL DEPTH - - - - -		108
CASING RECORD: 108 feet of 5-3/16-inch casing perforated 84 to 89 and 100 to 108.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 351</u>		
La Joya Estates, 3¼ miles east of Sam Fordyce.		
Soil - - - - -	12	12
Light sand - - - - -	26	38
Gravel, loose - - - - -	32	70
Clay - - - - -	20	90
Gravel and sand with clay beds, water - - - - -	90	180
TOTAL DEPTH - - - - -		180
CASING RECORD: 180 feet of 8-inch casing bottom 80 feet perforated.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 368</u>		
City of Mission, ½ mile southwest of Mission.		
Caliche - - - - -	10	10
Sand - - - - -	8	18
Clay - - - - -	22	40
Sand and gravel - - - - -	32	72
Clay and gravel - - - - -	18	90
TOTAL DEPTH - - - - -		90

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 370</u>		
Dr.W.Woods at swimming pool 1 mile south of Mission.		
Sandy loam - - - - -	11	11
Sand and gravel - - - - -	19	30
Sand and gravel, some clay -	6	36
Sand and gravel - - - - -	32	68
TOTAL DEPTH - - - - -		68
CASING RECORD: 48 feet of 24-inch concrete casing, 22 feet of 12-inch wire rap screen.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 371</u>		
H. P. Peterson, 1 mile south of Mission.		
Clay - - - - -	16	16
Quicksand - - - - -	42	58

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 371--Continued</u>		
Clay - - - - -	13	71
Gravel - - - - -	15	86
TOTAL DEPTH - - - - -		86
CASING RECORD: Cistern 23 feet, 63 feet 8-inch casing bottom 15 feet being screen.		

<u>Driller's log of well 375</u>		
J. B. Close, 1 mile southeast of Mission.		
Clay - - - - -	14	14
Quicksand - - - - -	19	33
Clay - - - - -	7	40
Gravel - - - - -	31	71
TOTAL DEPTH - - - - -		71
CASING RECORD: Cistern 19½ feet, 36½ feet 10-inch casing, 15 feet 8-inch screen.		

<u>Driller's log of well 389</u>		
H. W. Grover, 2½ miles southeast of Mission.		
Dirt - - - - -	11	11
Sand, dark - - - - -	27	38
Clay - - - - -	1	39
Gravel - - - - -	33	72
TOTAL DEPTH - - - - -		72
CASING RECORD: 50 feet of 10-inch casing, 22 feet of 8-inch screen.		

<u>Driller's log of well 391</u>		
J. J. Carr, 3½ miles southwest of McAllen		
Clay - - - - -	12	12
Sandy clay - - - - -	6	18
Quicksand - - - - -	37	55
Gravel - - - - -	5	60
Sand - - - - -	25	85
Sand and gravel - - - - -	15	100
TOTAL DEPTH - - - - -		100
CASING RECORD: Cistern 18 feet, 67 feet of 8-inch casing, 15 feet of 6-inch screen.		

<u>Driller's log of well 468</u>		
H. P. Porter, 4 miles south of Mission.		
Clay - - - - -	21	21
Sand - - - - -	4	25
Clay - - - - -	20	45
Sand - - - - -	5	50
Clay - - - - -	15	65
Sand rock, hard - - - - -	8	73
Clay - - - - -	1	74
Sand rock - - - - -	12	86
Clay - - - - -	4	90

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 468--Continued</u>		
Gravel - - - - -	6	96
Sand, clay and sand rock - - - - -	10	106
Gravel - - - - -	2	108
Sand rock - - - - -	1	109
Gravel - - - - -	2	111
Water sand, coarse black - - - - -	2	113
Sand rock - - - - -	7	120
TOTAL DEPTH - - - - -		120

<u>Driller's log of well 484a</u>		
Mrs. M. M. Fairbanks tract, 7 miles south of McAllen.		
Sandy clay - - - - -	31	31
Hard-packed sand and gravel	3	34
Clay with streaks of gravel	18	52
Sand and gravel - - - - -	34	86
Shale - - - - -	4	90
Water sand - - - - -	30	120
Sand and gravel - - - - -	50	170
Shale - - - - -	41	211
Shale and gravel - - - - -	5	216
Sandy clay - - - - -	5	221
Conglomerate - - - - -	3	224
Sand - - - - -	196	420
Sandy clay - - - - -	113	533
Sand and gravel - - - - -	17	550
Sand and gravel with streaks of shale - - - - -	114	664
Sand with streaks of shale	280	944
Sticky shale - - - - -	33	977
Shale with streaks of sand	72	1049
Sticky shale - - - - -	7	1056
Shale with streaks of hard- packed sand - - - - -	50	1106
Sticky shale - - - - -	22	1128
Sandy shale - - - - -	4	1132
Sticky shale - - - - -	29	1161
Sandy shale - - - - -	6	1167
Tough shale - - - - -	65	1232
Shale - - - - -	52	1284
Hard-packed shale - - - - -	3	1287
Soft-packed sand - - - - -	3	1290
Shale - - - - -	45	1335
Sticky shale - - - - -	91	1426
Sandy shale - - - - -	12	1438
Tough shale - - - - -	48	1486
Hard-packed sticky shale - - - - -	109	1595
Water sand - - - - -	15	1610
Sticky shale - - - - -	89	1699
Sand - - - - -	5	1704
Sticky shale - - - - -	150	1854
Sandy shale - - - - -	26	1880

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 484a--Continued</u>		
Hard-packed tough shale -	47	1927
Sandy shale - - - - -	21	1948
Tough Sticky shale - - -	261	2209
Rock - - - - -	3	2212
Sticky shale - - - - -	5	2217
Sandy shale - - - - -	13	2230
Tough shale - - - - -	5	2235
Sandy shale - - - - -	60	2295
Sticky shale - - - - -	8	2303
Sandy shale - - - - -	20	2323
Sticky shale - - - - -	5	2328
Sand - - - - -	22	2350
Shale - - - - -	20	2370
Lime and tough shale - -	166	2536
TOTAL DEPTH - - - - -		2536
CASING RECORD: 200 feet of 10-inch casing at top.		

<u>Driller's log of well 547</u>		
Wm. Lingenbrink, 4 miles southeast of Mercedes.		
Clay - - - - -	30	30
Sand - - - - -	72	102
Gumbo - - - - -	28	130
Gravel - - - - -	72	202
Sand - - - - -	23	225
Rock - - - - -	12	237
Gumbo - - - - -	64	301
Boulders - - - - -	28	329
Packed sand - - - - -	23	352
Gumbo - - - - -	31	383
Gray rock - - - - -	16	399
Gumbo - - - - -	3	402
Sand - - - - -	32	434
Gumbo - - - - -	156	590
Packed sand - - - - -	12	602
Boulders - - - - -	106	708
Gumbo - - - - -	21	729
Boulders - - - - -	24	753
Gumbo - - - - -	56	809
Boulders and sand - - -	11	820
Gumbo - - - - -	80	900
Rock - - - - -	9	909
Gumbo - - - - -	96	1005
Rock - - - - -	55	1060
Gumbo - - - - -	72	1132
Boulders - - - - -	48	1180
Sand rock - - - - -	25	1205
Gumbo - - - - -	28	1233
Rock - - - - -	27	1260
Sand - - - - -	12	1272
Rock - - - - -	42	1314
Gumbo - - - - -	41	1355

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 547--Continued</u>		
Rock - - - - -	110	1465
Gumbo - - - - -	7	1472
Rock - - - - -	17	1489
Gumbo - - - - -	31	1520
Sand - - - - -	11	1531
Gumbo - - - - -	39	1570
Rock - - - - -	25	1595
Gumbo - - - - -	11	1606
Blue shale - - - - -	82	1688
Rock - - - - -	26	1714
Blue shale - - - - -	17	1731
Gumbo - - - - -	74	1805
Sand rock - - - - -	27	1832
Blue shale - - - - -	33	1865
Gumbo - - - - -	66	1931
Blue gumbo - - - - -	24	1955
Rock - - - - -	66	2021
Gumbo - - - - -	9	2030
Lime rock - - - - -	12	2042
Gumbo - - - - -	11	2053
Rock - - - - -	8	2061
Blue gumbo - - - - -	18	2079
Rock - - - - -	22	2101
Gumbo - - - - -	10	2111
Sand rock - - - - -	29	2140
Gumbo - - - - -	15	2155
Sand rock with gray pyrite - - - - -	12	2167
Gumbo - - - - -	13	2180
Rock - - - - -	45	2225
Blue gumbo - - - - -	83	2308
Sand rock - - - - -	12	2320
Gray-blue gumbo - - - -	50	2370
Sand rock - - - - -	20	2390
Gray-blue gumbo - - - -	39	2429
Shale and black sand - -	20	2449
Hard-packed blue gumbo -	41	2490
Hard rock - - - - -	14	2504
Gumbo - - - - -	19	2523
Rock - - - - -	3	2526
Gumbo - - - - -	15	2541
Rock - - - - -	5	2546
Gumbo - - - - -	10	2556
Rock - - - - -	3	2559
Gumbo - - - - -	7	2566
TOTAL DEPTH - - - - -		2566

<u>Driller's log of well 548</u>		
Schlumberger core hole, 4 $\frac{1}{2}$ miles north-east of Puerto Rico.		
Caliche - - - - -	76	76
Sandy shale - - - - -	180	256
Sand with hard break sand shale - - - - -	14	270

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 548--Continued</u>		
Shale - - - - -	46	316
Sand and shale - - - - -	80	396
Sand with hard breaks water - - - - -	170	566
Sand shale - - - - -	50	616
Sandy shale with sand breaks and hard sand water - - - - -	102	718
Shale and sandy shale breaks, water - - - - -	20	738
Sand, hard sand with shale breaks, water - - - - -	107	845
Rock - - - - -	1	846
Sand rock with soft breaks, water - - - - -	12	858
Shale, sticky - - - - -	17	875
Sand with hard breaks, water - - - - -	85	960
Shale - - - - -	15	975
Sand with hard breaks, water - - - - -	25	1000
Sand and shale water - - - - -	105	1105
Sand with hard breaks, water - - - - -	55	1160
Shale - - - - -	46	1206
Sand with hard breaks, water - - - - -	70	1276
Sand with hard sandy shale, water - - - - -	34	1310
Shale - - - - -	6	1316
Sandy shale and hard sand water - - - - -	15	1331
Sandy shale, water - - - - -	28	1359
Sand with hard breaks, water - - - - -	23	1382
Sandy shale, water - - - - -	27	1409
Sandy with hard breaks water - - - - -	167	1576
Sandy shale, water - - - - -	40	1616
Shale - - - - -	123	1739
Sand, shale with breaks hard sand - - - - -	100	1839
Shale - - - - -	140	1979
Sandy shale - - - - -	21	2000
TOTAL DEPTH - - - - -		2000

<u>Driller's log of well 549</u>		
McAllen Ranch, 5 $\frac{1}{4}$ miles northeast of Puerto Rico.		
Surface - - - - -	11	11
Rock - - - - -	44	55
Clay and rock - - - - -	10	65
Sand and rock - - - - -	15	80

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 549--Continued</u>		
Sand - - - - -	7	87
Rock - - - - -	28	115
Clay - - - - -	60	175
Clay and rock - - - - -	20	195
Red clay - - - - -	30	225
Red clay and rock - - - - -	15	240
Red clay - - - - -	8	248
Gravel - - - - -	7	255
Red clay - - - - -	17	272
Sand - - - - -	38	310
Clay - - - - -	55	365
Sand - - - - -	19	384
Hard white clay - - - - -	16	400
Clay - - - - -	43	443
Sand - - - - -	34	477
White clay - - - - -	43	520
Blue clay - - - - -	10	530
Gray clay - - - - -	13	543
Sand - - - - -	17	560
White clay and rock - - - - -	10	570
Sand and clay - - - - -	36	606
Clay and rock - - - - -	14	620
Red, gray and blue clay - - - - -	28	648
TOTAL DEPTH - - - - -		648
CASING RECORD: 104 feet of 5-3/16-inch casing, 551 feet of 4 $\frac{1}{4}$ -inch casing with 6 feet lap.		

<u>Driller's log of well 550</u>		
McAllen Ranch, 4 $\frac{1}{4}$ miles northeast of Puerto Rico.		
Surface - - - - -	12	12
Caliche - - - - -	28	40
Rock and clay - - - - -	40	80
Red clay and rock - - - - -	45	125
White clay and rock - - - - -	9	134
No record - - - - -	84	218
Sand - - - - -	22	240
Clay - - - - -	4	244
Sand - - - - -	18	262
Clay and rock - - - - -	68	330
Sand - - - - -	35	365
Red and white clay - - - - -	7	372
White clay and rock - - - - -	6	378
Sand - - - - -	59	437
Red clay - - - - -	5	442
Sand - - - - -	23	465
Gray clay - - - - -	6	471
Sand - - - - -	4	475
Blue clay - - - - -	5	480
Sand - - - - -	14	494
Blue clay - - - - -	16	510

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 550--Continued</u>		
Gray clay and rock - - - - -	34	544
Blue and white clay and rock - - - - -	21	565
Sand - - - - -	24	589
Clay - - - - -	3	592
Sand - - - - -	6	598
Clay - - - - -	7	605
Soft red yellow clay - - -	10	615
Hard packed sand rock - -	15	630
Soft yellow clay - - - - -	13	643
Sand - - - - -	41	684
TOTAL DEPTH - - - - -		684
CASING RECORD: 98 feet 8 inches of 5-3/16-inch casing, 550 feet of 4 1/4-inch casing with 7 feet overlap.		

<u>Driller's log of well 551</u>		
McAllen Ranch, 2 miles east of Puerto Rico.		
Caliche - - - - -	50	50
Sand and caliche - - - - -	28	78
Clay and caliche - - - - -	152	230
Clay, sand, streaks water sand - - - - -	16	246
TOTAL DEPTH - - - - -		246

<u>Partial driller's log of well 552</u>		
Rowan and Hope, Longoria, 1 mile south-east of Puerto Rico.		
Hard caliche - - - - -	91	91
Hard caliche sand - - - - -	107	198
Hard sand - - - - -	31	229
Shale and sandy shale - -	82	311
Shale - - - - -	89	400
Hard sand and shale - - -	145	545
Hard sandy shale - - - - -	169	714
Hard sand - - - - -	25	739
Shale - - - - -	151	890
Sand - - - - -	40	930
Shale, sand streaks - - -	26	956
Sand hard streaks - - - -	44	1000
Sand and shale - - - - -	90	1090
Hard sand streaks - - - -	110	1200
Shale streaks of sand - -	320	1520
Shale - - - - -	224	1744
Shale, streaks sand - - -	100	1844
Sand - - - - -	12	1856
Shale - - - - -	204	2060
Hard streaks sand - - - -	40	2100
Shale, streaks hard sand -	50	2150
TOTAL DEPTH - - - - -		7000
CASING RECORD: 968 feet of 10 3/4-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 553</u>		
Manuel Vela, 1 1/2 miles southeast of Puerto Rico.		
Sand - - - - -	3	3
Caliche and clay streaks	120	123
Clay and shale streaks -	73	196
Sand - - - - -	4	200
Clay and shale streaks -	45	245
Sand - - - - -	11	256
Clay and shale streaks -	124	380
Cemented sand - - - - -	4	384
Hard shale and clay streaks - - - - -	51	435
Sticky clay - - - - -	65	500
Cemented sand - - - - -	7	507
Hard sandy shale - - - - -	63	570
Hard shale and sand streaks - - - - -	32	602
Sandstone - - - - -	22	624
Sand - - - - -	5	629
Hard sandy shale and sand streaks - - - - -	41	670
Washed out - - - - -	43	713
TOTAL DEPTH - - - - -		713
CASING RECORD: 640 feet of 4-inch casing. A Schlumberger test hole finished as water well.		

<u>Driller's log of well 554</u>		
Wood Christian, 3 1/2 miles south of Puerto Rico.		
Caliche sand - - - - -	3	3
Hard caliche - - - - -	52	55
Sandy caliche - - - - -	4	59
Caliche - - - - -	18	77
Sandy clay - - - - -	7	84
Caliche and hard shale streaks - - - - -	53	137
Shale - - - - -	32	169
Sticky clay - - - - -	16	185
Shale - - - - -	43	228
Clay - - - - -	26	254
Sand - - - - -	1	255
Clay - - - - -	45	300
Rotten shale - - - - -	15	315
Sticky shale and clay - -	26	341
Hard sandstone, water - -	9	350
Clay - - - - -	6	356
Sand and clay streaks - -	7	363
Sticky clay - - - - -	7	370
Shale - - - - -	28	398
Sand and shale streaks -	5	403
Hard sandstone - - - - -	2	405
Sticky clay - - - - -	3	408

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Table of Drillers' Logs, Hidalgo County--Continued

Thickness		Depth	Thickness		Depth
(feet)		(feet)	(feet)		(feet)
<u>Driller's log of well 554--Continued</u>			<u>Driller's log of well 555</u>		
Gumbo - - - - -	18	426	Richard King, Los Indios well, 2 miles southwest of Guerra Store.		
Fine sand - - - - -	8	434	Sandy soil - - - - -	5	5
Sticky clay - - - - -	30	464	Caliche - - - - -	45	50
Shale - - - - -	13	477	Clay and rocks - - - - -	60	110
Sand - - - - -	4	481	Rocks - - - - -	20	130
Shale - - - - -	20	501	Soft clay and rocks - - -	50	180
Sandstone - - - - -	3	504	Sandy clay and sand rocks-	40	220
Sticky clay - - - - -	10	514	Soft pink and blue clay		
Fine sand - - - - -	16	530	and rocks - - - - -	50	270
Sand and clay streaks - -	10	540	Red clay - - - - -	12	282
Sandstone and clay streaks	18	558	Sand - - - - -	10	292
Sandstone - - - - -	21	579	Soft clay - - - - -	8	300
Sandstone and clay streaks	5	584	Red clay sticky some blue-	10	310
Clay - - - - -	28	612	Soft clay and rocks with		
Hard caliche - - - - -	6	618	sand breaks - - - - -	21	331
Clay - - - - -	10	628	Soft clay with rock - - -	39	370
Hard caliche - - - - -	2	630	Brown and blue sticky clay	45	415
Clay - - - - -	14	644	Sand - - - - -	18	433
Sand - - - - -	16	660	Clay and rocks - - - - -	13	446
Clay and shale streaks -	8	668	Sand and gravel - - - - -	69	515
Streaks of rock and sandy			Clay - - - - -	20	535
clay - - - - -	6	674	Sand - - - - -	40	575
Hard sand - - - - -	4	678	Clay blue - - - - -	5	580
Tough red clay and shale			Sand and gravel - - - - -	60	640
streaks - - - - -	40	718	Clay - - - - -	6	646
Shale - - - - -	38	756	Red sticky clay - - - - -	38	684
Tough shale - - - - -	19	775	Sand - - - - -	34	718
Clay and sand streaks - -	20	795	Blue sticky clay - - - - -	12	730
Sand, fine tight - - - -	9	804	Sand - - - - -	14	744
Clay and sand streaks - -	9	813	Clay sticky - - - - -	21	765
Rock - - - - -	1	814	Sand - - - - -	15	780
Clay - - - - -	10	824	TOTAL DEPTH - - - - -		780
Rock - - - - -	1	825	CASING RECORD: 148 feet of 6-inch casing, 612 feet of 4-inch casing.		
Clay and shale - - - - -	71	896			
Rock - - - - -	1	897			
Shale - - - - -	1	898			
Rock - - - - -	1	899			
Shale - - - - -	1	900	<u>Driller's log of well 556</u>		
Sand - - - - -	3	903	Carl and Johnson, W. M. Doughty No. 1, 1½ miles southwest of Guerra Store.		
Rock - - - - -	1	904	Surface - - - - -	8	8
Sand - - - - -	2	906	Caliche and sand breaks -	122	130
Clay - - - - -	3	909	Gravel - - - - -	5	135
Rock - - - - -	1	910	Clay and shale, hard sand		
Sandy clay - - - - -	2	912	streaks - - - - -	130	265
Sand rock - - - - -	4	916	Pink gumbo - - - - -	35	300
Sand - - - - -	12	928	Sandy shale - - - - -	7	307
Clay - - - - -	3	931	Blue gumbo - - - - -	28	335
Sand - - - - -	8	939	Sand - - - - -	5	340
Clay - - - - -	8	947	Sticky shale - - - - -	15	355
TOTAL DEPTH - - - - -		947	Gumbo and gypsum - - - -	10	365
CASING RECORD: 947 feet of 4-inch casing.			Sand - - - - -	5	370

(Continued on next page)

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 556--Continued</u>		
Brown shale - - - - -	40	410
Brown and sandy shale - -	45	455
Sticky shale - - - - -	5	460
Brown sand - - - - -	20	480
Sandy shale - - - - -	20	500
Brown sand - - - - -	10	510
Sticky shale - - - - -	15	525
Brown sand - - - - -	10	535
Sandy shale, streaks of blue gumbo - - - - -	105	640
Sticky shale and gravel -	25	665
Pink gumbo - - - - -	25	690
Sticky blue shale - - - -	5	695
Hard sand - - - - -	10	705
Sandy shale and lime - -	15	720
Sticky shale - - - - -	20	740
Sandy shale, blue - - - -	50	790
Sticky shale, blue - - - -	10	800
Hard sand and lime - - - -	10	810
Sticky shale, blue - - - -	5	815
Sandy lime - - - - -	7	822
Blue sandy shale - - - - -	28	850
Hard sand, show gas - - - -	5	855
Sandy shale - - - - -	30	885
Hard shale - - - - -	5	890
Sticky shale - - - - -	5	895
Gumbo, blue - - - - -	10	905
Hard sand - - - - -	4	909
Blue sand - - - - -	4	913
Blue gumbo - - - - -	36	949
Green sand, show gas - - - -	5	954
Green sandy shale - - - - -	6	960
Sticky shale - - - - -	20	980
Sticky shale, brown - - - -	44	1024
Hard brown sand - - - - -	10	1034
Sandy shale - - - - -	4	1038
Brown sand - - - - -	17	1055
Gumbo, blue - - - - -	3	1058
Brown sandy shale - - - - -	5	1063
Sandy shale - - - - -	7	1070
Sticky shale and gumbo - -	65	1135
Brown sand - - - - -	3	1138
Sandy shale - - - - -	20	1158
Brown sandy shale - - - - -	5	1163
Sticky shale - - - - -	22	1185
Gumbo - - - - -	9	1194
Blue and yellow sand - - - -	6	1200
Blue sand and sulphur water - - - - -	5	1205
Sand - - - - -	3	1208
Sticky shale - - - - -	26	1234
Sand - - - - -	2	1236
Yellow sand - - - - -	5	1241

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 556--Continued</u>		
Sand - - - - -	24	1265
Gumbo - - - - -	10	1275
Shale - - - - -	20	1295
Gumbo and sticky shale - -	44	1339
Sand - - - - -	11	1350
Shale and gumbo - - - - -	58	1408
Sand - - - - -	12	1420
Sticky shale and gumbo - -	38	1458
Yellow sand - - - - -	5	1463
Gumbo - - - - -	27	1490
Hard sandy lime - - - - -	14	1504
Hard sandy lime, show gas -	5	1509
Sticky shale and sandy shale	31	1540
Green sand - - - - -	15	1555
Gumbo and sticky shale - -	47	1602
Sand - - - - -	15	1617
Sand with shale breaks - -	33	1650
Gumbo - - - - -	7	1657
Gray sand - - - - -	5	1662
Sandy shale - - - - -	13	1675
Shale - - - - -	15	1690
Gumbo and gypsum - - - - -	25	1715
Brown and blue sand, show gas - - - - -	5	1720
Sand - - - - -	20	1740
Gumbo - - - - -	4	1744
Sand, brown - - - - -	6	1750
Sand and shale - - - - -	30	1780
Gravel - - - - -	10	1790
Shale - - - - -	15	1805
Gumbo - - - - -	6	1811
Sand - - - - -	7	1818
Sand and sandy shale - - - -	6	1824
Sandy shale - - - - -	11	1835
Shale - - - - -	15	1850
Gumbo - - - - -	45	1895
Broken shale - - - - -	22	1917
Sand blue - - - - -	5	1922
Sand - - - - -	8	1930
Shale - - - - -	15	1945
Gumbo - - - - -	10	1955
Shale and lime - - - - -	8	1963
Sticky shale - - - - -	33	1996
Blue sand - - - - -	6	2002
Sand - - - - -	11	2013
Gumbo - - - - -	13	2026
Blue sand - - - - -	5	2031
Sand - - - - -	9	2040
Shale - - - - -	15	2055
Gumbo - - - - -	5	2060
Brown sand - - - - -	5	2065
Sandy shale - - - - -	10	2075
Gumbo, sticky shale - - - -	99	2174

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Table of Drillers' Logs Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 556--Continued</u>		
Sand, gas show - - - - -	6	2180
Sand and gravel - - - - -	5	2185
Shale - - - - -	14	2199
Gumbo, sticky lime - - - -	23	2222
Blue sand - - - - -	4	2226
Gumbo, sticky shale - - -	29	2255
Shale, broken sticky lime	20	2275
Blue-gray sand, gas show -	9	2284
Sand - - - - -	6	2290
Gumbo break - - - - -	3	2293
Sand - - - - -	4	2297
Gumbo - - - - -	8	2305
Gravel - - - - -	5	2310
Shale sticky - - - - -	17	2327
Blue sand into blue shale-	6	2333
Blue shale, streaks gumbo-	66	2399
Sandy blue shale - - - - -	5	2404
Sandy shale - - - - -	6	2410
Gumbo - - - - -	40	2450
Shale with sticky streaks-	44	2494
Gumbo - - - - -	26	2520
Shale clay, streaks sticky lime - - - - -	25	2545
Sand into salt water, show gas in top - - - - -	5	2550
Sand, sandy shale - - - - -	20	2570
Sticky shale - - - - -	20	2590
Sticky lime, gumbo - - - -	21	2611
Sand, show gas and salt water - - - - -	4	2615
Sand - - - - -	12	2627
Shale, broken lime - - - -	47	2674
Sand, gas - - - - -	4	2678
Sand, gas, salt water - -	4	2682
Sand - - - - -	17	2699
Bluish gray sand and gas -	3	2702
Hard sand - - - - -	5	2707
Sand - - - - -	3	2710
Shale and conglomerate - -	30	2740
Sticky lime - - - - -	6	2746
Sand, bluish gray - - - -	4	2750
Sand - - - - -	5	2755
Hard shale, sticky lime -	40	2795
Sandy shale - - - - -	5	2800
Bluish sand, gas show - -	10	2810
Sand - - - - -	2	2812
Brown brittle shale - - -	54	2866
Sticky shale - - - - -	6	2872
Hard shale, broken streaks of lime - - - - -	15	2887
Sand - - - - -	11	2898
Lime, shale and sand - - -	17	2915
Bluish hard sand, gas - -	5	2920

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 556--Continued</u>		
Conglomerate - - - - -	9	2929
Grayish blue sand - - - -	10	2939
Sand - - - - -	4	2943
Sticky lime shale, streaks gumbo and conglomerate -	66	3009
TOTAL DEPTH - - - - -		3009

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 557</u>		
D. Guerra and Sons, 2 $\frac{1}{2}$ miles west of Guerra Store.		
Soil - - - - -	10	10
Caliche and clay - - - - -	30	40
Sand, breaks caliche - - -	10	50
Clay and caliche - - - - -	20	70
Sand, clay and caliche - -	30	100
Soft red clay - - - - -	50	150
Sand - - - - -	50	200
Sand and rock - - - - -	30	230
Sandy clay - - - - -	15	245
Pink clay - - - - -	67	312
Sand - - - - -	18	330
Clay and rock - - - - -	20	350
Red, brown and blue clay -	44	394
Sand - - - - -	23	417
Clay - - - - -	5	422
Hard sand - - - - -	43	465
Clay - - - - -	6	471
Sand - - - - -	12	483
Clay - - - - -	6	489
Sand - - - - -	35	524
Clay - - - - -	11	535
Sand - - - - -	32	567
Clay - - - - -	3	570
Sand and boulders - - - -	9	579
White clay and rock - - -	16	595
Sand - - - - -	25	620
Clay - - - - -	4	624
Sand - - - - -	23	647
Blue, white and red clay -	18	665
Hard sand - - - - -	32	697
Clay - - - - -	4	701
Sand - - - - -	36	737
Clay and boulders - - - -	5	742
Sand and boulders - - - -	49	791
Blue clay - - - - -	21	812
Hard sand - - - - -	22	834
TOTAL DEPTH - - - - -		834
CASING RECORD: 100 feet of 5-inch casing, 601 feet of 4-inch casing. Plugged back to 737.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 558</u>		
Richard King, La Medina well, $6\frac{1}{2}$ miles north of Guerra Store.		
Sandy soil - - - - -	14	14
Hard caliche - - - - -	56	70
Yellow clay sticky - - -	20	90
Sandy clay with sand rock	113	203
Yellow clay sticky - - -	22	225
Sandy clay and rock - -	30	255
Soft red clay - - - - -	55	310
Red clay and some rock -	67	377
Red clay sticky - - - -	56	433
Sand and gravel - - - -	30	463
Red clay sticky - - - -	54	517
Sand and some gravel in bottom - - - - -	24	541
Clay sticky - - - - -	7	548
Sand, red clay with sand breaks, hard - - - - -	22	570
Sandy red and white clay and rock - - - - -	5	575
Sand and gravel - - - -	29	604
TOTAL DEPTH - - - - -		604
CASING RECORD: 146 feet, 6 inches 6-inch casing, 427 feet, 8 inches 4-inch, 40 feet 3-inch strainer.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 559</u>		
Richard King, New Copita well, $4\frac{1}{2}$ miles northeast of Guerra Store.		
Sandy soil - - - - -	5	5
Caliche hard - - - - -	45	50
Sand streaks and rock -	10	60
Sandy pink and white clay and rock - - - - -	20	80
Red clay and rock - - -	160	240
Red sticky clay - - - -	72	312
Sand - - - - -	12	324
Clay and rock - - - - -	26	350
Red clay hard and sticky	50	400
Red clay sticky with rock - - - - -	60	460
Hard red clay with rock and sand - - - - -	24	484
Red clay - - - - -	13	497
Sand and gravel - - - -	25	522
Clay and boulders - - -	5	527
Soft sticky clay - - - -	7	534
Sand - - - - -	16	550
Red sticky clay - - - -	29	579
Sand - - - - -	5	584
Clay, blue - - - - -	5	589
Sand - - - - -	13	602
Blue sticky clay - - - -	22	624

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 559--Continued</u>		
Sand - - - - -	31	655
Clay sticky - - - - -	8	663
Sand - - - - -	10	673
Sticky clay - - - - -	55	728
Sand - - - - -	12	740
Clay - - - - -	3	743
Sand - - - - -	12	755
Clay - - - - -	5	760
Sand - - - - -	10	770
Clay - - - - -	5	775
Sand - - - - -	21	796
Sticky clay - - - - -	4	800
Sand - - - - -	29	829
Clay - - - - -	1	830
Sand - - - - -	10	840
Soft blue clay and boulders	71	911
Hard blue rocks - - - -	9	920
TOTAL DEPTH - - - - -		920
CASING RECORD: 147 feet of 6-inch casing, 629 feet 4-inch casing, 26 feet 3-inch perforated liner.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 560</u>		
Romola Garza, 4 miles southeast of Guerra Store.		
Surface - - - - -	7	7
Caliche - - - - -	13	20
Clay - - - - -	20	40
Sandy caliche - - - - -	64	104
Clay and caliche - - - -	20	124
Sand - - - - -	18	142
Sand fine salt water - - -	32	174
Sandy clay and sand - - -	30	204
Clay - - - - -	16	220
Sandy clay - - - - -	33	253
Sandy clay and sand streaks	117	370
Clay - - - - -	82	452
Sand, fine - - - - -	13	465
Sandy clay - - - - -	17	482
Clay - - - - -	30	512
Sand, salt water - - - -	73	585
Sandy clay - - - - -	12	597
Clay - - - - -	35	632
Sand and clay streaks - -	36	668
Clay - - - - -	49	717
Sand - - - - -	23	740
Clay - - - - -	2	742
TOTAL DEPTH - - - - -		742
CASING RECORD: 742 feet of 4-inch casing.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 561</u>		
D. Guerra and Sons, $3\frac{1}{2}$ miles southeast of Guerra Store.		
Soil - - - - -	12	12
Caliche - - - - -	38	50
Sand - - - - -	10	60
Caliche - - - - -	15	75
Sandy clay and rock - -	25	100
Red sandy clay - - - - -	150	250
Clay and rock - - - - -	60	310
White clay - - - - -	17	327
Hard sand - - - - -	14	341
Clay - - - - -	119	460
Gumbo - - - - -	20	480
Gypsum and clay - - - -	40	520
Hard sand - - - - -	22	542
Clay - - - - -	6	548
Hard sand - - - - -	9	557
Red clay - - - - -	13	575
Sand - - - - -	50	625
Clay - - - - -	2	627
Sand - - - - -	9	636
Red clay - - - - -	24	660
Sand - - - - -	2	662
Clay - - - - -	13	675
Sand - - - - -	11	686
Clay - - - - -	2	688
Gravel and sand - - - -	10	698
Clay - - - - -	15	713
Sand - - - - -	39	752
Sand and boulders - - -	13	770
Clay - - - - -	2	772
Sand - - - - -	39	811
TOTAL DEPTH - - - - -		811
CASING RECORD: 40 feet of 5-inch casing, 732 feet of 4-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 562</u>		
Richard King, New Tampico well, $5\frac{1}{4}$ miles east of Guerra Store.		
Soil sandy - - - - -	10	10
Clay and caliche - - - -	80	90
Sandy clay - - - - -	20	110
Clay white and pink - -	15	125
Sand and some gravel - -	20	145
Clay sticky - - - - -	40	185
Sand and gravel - - - -	25	210
Hard rock - - - - -	10	220
Red sticky clay - - - -	40	260
White and blue clay, rocks	48	308
Sandy blue clay and gypsum	102	410
Blue clay, soft - - - -	30	440
Red clay sticky - - - -	10	450
Sand - - - - -	10	460

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 562--Continued</u>		
Red sticky clay - - - - -	40	500
White sand - - - - -	10	510
Gypsum - - - - -	16	526
Clay sticky - - - - -	5	531
Gypsum - - - - -	8	539
Red and blue sticky clay -	31	570
Red clay sticky, few rocks	55	625
Sand - - - - -	37	662
Red, brown and blue clay -	28	690
Red clay sticky - - - - -	24	714
Sand and gravel - - - - -	35	749
Soft clay and rocks - - -	8	757
Red sticky clay - - - - -	13	770
Red sticky clay and rocks-	30	800
Sand and gravel - - - - -	23	823
Clay - - - - -	4	827
Sand - - - - -	13	840
Blue sticky clay - - - - -	19	859
Sand - - - - -	30	889
Brown and yellow sticky clay - - - - -	41	930
Sand - - - - -	20	950
White and pink clay and rocks - - - - -	28	978
Sand - - - - -	24	1002
TOTAL DEPTH - - - - -		1002
CASING RECORD: 147 feet of 5-inch casing, 827 feet of 4-inch casing, 30 feet of 3-inch perforated liner.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 563</u>		
Richard King, Andrea well, 9 miles north-east of Guerra Store. Store in Kenedy County.		
Sandy soil - - - - -	8	8
Sand - - - - -	9	17
Caliche - - - - -	5	22
White clay - - - - -	38	60
Sand - - - - -	12	72
Light blue clay - - - - -	29	101
Clay and rocks - - - - -	29	130
Red clay sticky - - - - -	60	190
Sand - - - - -	18	208
Red clay sticky - - - - -	52	260
Sandy clay and rocks - - -	51	311
Clay sticky - - - - -	19	330
Sandy blue clay and boulders	20	350
Blue clay sticky - - - - -	5	355
Sandy gravel and boulders-	48	403
Blue clay sticky - - - - -	37	440
Blue and red clay - - - -	20	460
Red clay plenty sticky - -	10	470
Clay and rocks - - - - -	23	493

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 563--Continued</u>		
Sand - - - - -	47	540
Clay - - - - -	8	548
Sand and gravel - - - -	12	560
Red clay sticky - - - -	49	609
Sand - - - - -	12	621
Red sticky clay - - - -	44	665
Sand - - - - -	10	675
Red clay sticky - - - -	37	712
Sand - - - - -	28	740
Red clay - - - - -	10	750
Sand - - - - -	37	787
TOTAL DEPTH - - - - -		787
CASING RECORD: 140 feet of 6 inches of 6-inch casing, 610 feet of 4-inch casing, 40 feet of 3-inch strainer.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 564</u>		
Romaldo Garza, 7 miles east of Guerra Store.		
Surface - - - - -	6	6
Shale and sand streaks-	22	28
Red clay - - - - -	14	42
Shale - - - - -	22	64
Hard clay - - - - -	21	85
Caliche clay - - - - -	23	108
Caliche - - - - -	11	119
Caliche clay - - - - -	10	129
Sticky clay - - - - -	51	180
Sand - - - - -	28	208
Clay and sandy clay streaks - - - - -	50	258
Sand - - - - -	4	262
Clay - - - - -	16	278
Clay and sand streaks -	16	294
Soft clay - - - - -	64	358
Sand - - - - -	21	379
Clay - - - - -	9	388
Sand and shale streaks-	12	400
Sand with gypsum - - -	37	437
Shale and sandy clay -	4	441
Sand and hard sand streaks - - - - -	29	470
Sticky clay - - - - -	21	491
Sand and clay streaks -	3	494
Sand - - - - -	8	502
Clay and shale streaks	6	508
Hard red shale - - - -	12	520
Hard shale and clay streaks - - - - -	82	602
Clay - - - - -	68	670
Rotten shale - - - - -	11	681
Sand - - - - -	4	685
Clay - - - - -	1	686

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 564--Continued</u>		
Sand - - - - -	26	712
Clay - - - - -	3	715
TOTAL DEPTH - - - - -		715
CASING RECORD: 86 feet of 5-3/16-inch casing, 600 feet of 3-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 565</u>		
Richard King, Camto Verde well, 9 $\frac{1}{4}$ miles east of Guerra Store, in Kenedy County.		
Sandy soil - - - - -	20	20
Caliche some pink clay - -	45	65
Sand, some gravel - - - -	65	130
Clay and rocks - - - - -	60	190
White sticky clay - - - -	30	220
Red sticky clay - - - - -	16	236
Sand - - - - -	15	251
White sticky clay - - - -	42	293
Sand - - - - -	7	300
Blue sticky clay - - - - -	25	325
Gypsum and sticky white clay - - - - -	60	385
Soft sand, clay and gypsum	10	395
Hard rocks and boulders -	30	425
Blue sticky clay - - - - -	7	432
Sand and boulders - - - -	43	475
Brown and red sticky clay	85	560
Clay and white sand - - - -	24	584
Fine brown sand - - - - -	36	620
Red clay - - - - -	12	632
Sand - - - - -	18	650
Clay - - - - -	10	660
Sand - - - - -	14	674
Red and brown sticky clay	22	696
Sand and gravel, mostly gravel - - - - -	26	722
Red sticky clay - - - - -	10	732
Sand and gravel - - - - -	39	771
Red sticky clay - - - - -	14	785
Red and blue sticky clay with rock - - - - -	17	802
Sand, may be hard clay and rock - - - - -	8	810
Red sticky clay - - - - -	14	824
Sand, good - - - - -	26	850
TOTAL DEPTH - - - - -		850
CASING RECORD: 147 feet of 6-inch casing, 547 feet of 4-inch casing, 48 feet of 3-inch strainer.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 566</u>		
Schlumberger core hole, 2 $\frac{1}{2}$ miles north-west of McCook.		
Sand and caliche - - - - -	44	44
Shale - - - - -	12	56
Sand - - - - -	60	116
Shale - - - - -	194	310
Sand water - - - - -	38	348
Shale - - - - -	29	377
Sand water - - - - -	33	410
Shale - - - - -	52	462
Sand water - - - - -	64	526
Sand and hard sand water -	40	566
Shale - - - - -	20	586
Sandy shale - - - - -	68	654
Sand water - - - - -	32	686
Sand and sandy shale - - -	10	696
Sandy shale - - - - -	51	747
Sand - - - - -	40	787
Shale - - - - -	55	842
Sand - - - - -	29	871
Sandy shale - - - - -	115	986
Hard and soft sand - - - -	65	1051
Sandy shale - - - - -	17	1068
Sand - - - - -	23	1091
Shale - - - - -	59	1150
Sand, hard - - - - -	16	1166
TOTAL DEPTH - - - - -		1166

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 570</u>		
Schlumberger core hole, 6 miles north-east of McCook.		
Sand - - - - -	5	5
Caliche - - - - -	20	25
Sand - - - - -	10	35
Sandy ash - - - - -	10	45
Sand - - - - -	10	55
Caliche - - - - -	10	65
Sand - - - - -	10	75
Sandy shale - - - - -	30	105
Shale - - - - -	10	115
Sand - - - - -	20	135
Sandy ash - - - - -	10	145
Shale - - - - -	10	155
Sandy shale - - - - -	30	185
Shale - - - - -	20	205
Sandy shale - - - - -	90	295
Sand - - - - -	20	315
Sandy shale - - - - -	30	345
Sand - - - - -	15	360
Shale - - - - -	13	373
Sand - - - - -	31	404
Sandy shale - - - - -	91	495
Shale - - - - -	7	502

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 570--Continued</u>		
Sandy shale - - - - -	23	525
Sand with some shale breaks, water - - - - -	75	600
Sandy shale (725-75 water)	160	760
Sand - - - - -	50	810
Sandy shale - - - - -	25	835
Sandy shale and sand - -	10	845
Sand - - - - -	10	855
Sandy shale, water - - -	20	875
Sand - - - - -	10	885
Sand with hard breaks, water - - - - -	10	895
Hard shale, water - - -	10	905
Sand water - - - - -	10	915
Hard sand water - - - - -	10	925
Sand water - - - - -	20	945
Shale, hard - - - - -	70	1015
Shale - - - - -	12	1027
Sandy shale, water - - -	8	1035
Sand - - - - -	80	1115
Sandy shale - - - - -	42	1157
Sand - - - - -	145	1302
TOTAL DEPTH - - - - -		1302

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 571</u>		
McAllen Ranch, 9 miles northeast of McCook.		
Soil - - - - -	4	4
Caliche rock - - - - -	88	92
Sand breaks, boulders - -	13	105
Clay rock - - - - -	74	179
Red clay - - - - -	28	207
Sand - - - - -	15	222
Red clay - - - - -	78	300
Red clay with hard rock -	30	330
Sand break - - - - -	20	350
Red clay and hard rock - -	18	368
Sand and boulders - - - -	20	388
Blue clay boulders - - - -	56	444
Hard sand - - - - -	32	476
Hard rocks - - - - -	20	496
Yellow clay - - - - -	37	533
Hard rocks - - - - -	7	540
Hard sand - - - - -	22	562
Yellow and blue clay - - -	33	595
Hard blue clay, rocks - -	30	625
Sand - - - - -	18	643
Clay and rocks - - - - -	52	695
Sand, hard - - - - -	18	713
Soft clay, rock - - - - -	18	731
Hard sand and boulders - -	25	756
TOTAL DEPTH - - - - -		756
CASING RECORD: 73- feet of 5-inch casing.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 572</u>		
McAllen Ranch, 10 $\frac{1}{2}$ miles northeast of McCook.		
Rock - - - - -	21	21
Caliche rock - - - - -	69	90
Sand - - - - -	10	100
Rocks, broken - - - - -	60	160
Soft sticky clay - - - - -	60	220
Sand, boulders - - - - -	10	230
Hard rock and red clay - -	10	240
Sand - - - - -	28	268
Red clay - - - - -	12	280
White clay rock - - - - -	60	340
Pink clay - - - - -	11	351
Sand - - - - -	8	359
Yellow and blue clay - - -	20	379
Sand - - - - -	27	406
Soft blue clay, boulders -	26	432
Hard sand, clay breaks - -	34	466
Boulders - - - - -	5	471
Clay, rocks - - - - -	41	512
Hard sand - - - - -	23	535
Yellow clay - - - - -	65	600
Sand - - - - -	35	635
Blue and white clay and rocks - - - - -	14	649
Hard sand and boulders - -	8	657
Blue clay and boulders - -	35	692
Hard sand - - - - -	11	703
Yellow clay - - - - -	22	725
Blue clay and rocks - - -	41	766
Hard sand - - - - -	34	800
TOTAL DEPTH - - - - -		800
CASING RECORD: 141 feet of 5-inch casing, 625 feet of 4-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 578</u>		
King-Woods Oil Co., W. M. Doughty well, $\frac{1}{4}$ mile southeast of Linn.		
Surface clay - - - - -	155	155
Sand, streaks clay - - - -	295	450
Sandy shale - - - - -	275	725
Shale with hard streaks -	98	823
Sandy shale and sand - - -	92	915
Shale - - - - -	168	1083
Hard sand - - - - -	37	1120
Sticky shale - - - - -	69	1189
Shale - - - - -	55	1244
Shaly lime - - - - -	8	1252
Sandy shale - - - - -	24	1276
Sticky shale - - - - -	50	1326
Hard sand and shale - - -	6	1332
Shale - - - - -	118	1450
Sandy shale - - - - -	60	1510

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 578-Cont.</u>		
Sticky shale - - - - -	30	1540
Sandy shale - - - - -	174	1714
Hard shale - - - - -	65	1779
Sandy shale - - - - -	2	1781
Sticky shale - - - - -	52	1833
Tough sticky shale - - -	47	1880
Sand - - - - -	40	1920
Hard sticky shale - - -	32	1952
Brittle shale - - - - -	8	1960
Sticky shale - - - - -	14	1974
Sand, salt water - - - -	52	2026
TOTAL DEPTH - - - - -		6012

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 579</u>		
M. Chapa, 1 $\frac{1}{2}$ miles east of Linn.		
Surface - - - - -	7	7
No record - - - - -	11	18
Rock - - - - -	32	50
Clay - - - - -	15	65
Sand - - - - -	41	106
Red clay - - - - -	93	199
Sand - - - - -	20	219
White clay and rock - - -	152	371
Red and yellow clay - - -	59	430
Sand - - - - -	41	471
TOTAL DEPTH - - - - -		471
CASING RECORD: 431 feet of 4-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 581</u>		
Juanlina Garza, 3 $\frac{1}{2}$ miles east of Linn.		
Dirt - - - - -	5	5
Sandy clay - - - - -	10	15
Clay, hard - - - - -	5	20
Sandy clay - - - - -	15	35
Caliche and sandy clay -	5	40
Caliche and clay - - - -	40	80
Clay - - - - -	54	134
Sand - - - - -	22	156
Sandy clay - - - - -	15	171
Clay - - - - -	30	201
Hard caliche, sandy clay	14	215
Sandy caliche, clay - - -	16	231
Sand, caliche - - - - -	16	247
Firm sand and clay - - -	65	312
Hard sand and caliche -	28	340
Clay - - - - -	95	435
Clay with 2 feet fine sand - - - - -	27	462
Blue shale - - - - -	23	485
Sand - - - - -	16	501
Red and blue clay - - -	51	552
Sand - - - - -	3	555
Red clay - - - - -	20	575

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 581--Continued</u>		
Red clay sand streaks - -	66	641
Sand - - - - -	9	650
Clay and sand streaks - -	20	670
Sand, water - - - - -	35	705
TOTAL DEPTH - - - - -		705
CASING RECORD: 705 feet of 4 $\frac{1}{2}$ -inch casing.		

<u>Partial driller's log of well 582</u>		
P. C. Zamora, 4 $\frac{1}{2}$ miles east of Linn.		
Surface - - - - -	6	6
Soft packed brown clay -	16	22
Gypsum and clay - - - -	38	60
Caliche - - - - -	53	113
Sticky red clay - - - - -	37	150
Sand - - - - -	10	160
Light red clay - - - - -	47	207
Sandy red clay - - - - -	73	280
Fine-grained sand - - - -	30	310
Soft packed white clay -	70	380
Yellow clay - - - - -	34	414
Gray sand - - - - -	26	440
Yellow clay - - - - -	28	468
Sand - - - - -	10	478
No record - - - - -	9	487
Sand - - - - -	88	575
TOTAL DEPTH - - - - -		631
CASING RECORD: 499 feet of 4-inch casing bottom 11 feet perforated.		

<u>Driller's log of well 583</u>		
Richard King, 3 $\frac{1}{2}$ miles east of Linn.		
Sand - - - - -	10	10
Clay - - - - -	6	16
Caliche, clay and sand -	54	70
Rock and sand - - - - -	20	90
Red clay, sand breaks - -	20	110
Red clay - - - - -	60	170
Sand breaks - - - - -	20	190
Sandy clay and rock - - -	100	290
Sand breaks and boulders-	15	305
Clay and rock - - - - -	25	330
Pink and white clay - - -	70	400
Red clay - - - - -	30	430
Sand - - - - -	20	450
Clay and rock - - - - -	31	481
Sand - - - - -	19	500
Clay - - - - -	8	508
Sand - - - - -	16	524
Clay - - - - -	5	529
Sand - - - - -	5	534
Clay - - - - -	6	540
Sand - - - - -	29	569

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 583--Continued</u>		
Clay - - - - -	5	574
Hard sand - - - - -	10	584
Clay - - - - -	18	602
Sand - - - - -	23	625
TOTAL DEPTH - - - - -		625
CASING RECORD: 100 feet of 5-inch casing, 502 feet of 4-inch casing.		

<u>Driller's log of well 584</u>		
George H. Coates, 6 miles east of Linn.		
Surface - - - - -	20	20
Soft clay - - - - -	49	69
Caliche, hard and soft - -	23	92
Clay hard streaks - - - -	45	137
Soft clay - - - - -	5	142
Hard sticky clay - - - - -	10	152
Soft clay - - - - -	45	197
Clay and sand streaks - -	5	202
Sand with hard streaks - -	12	214
Sticky clay - - - - -	6	220
Sandy clay - - - - -	80	300
Sand and caliche - - - - -	39	339
Sandy clay - - - - -	20	359
Clay and hard streaks - -	18	377
Clay - - - - -	66	443
Sandy clay - - - - -	21	464
Clay, hard sand streaks - -	12	476
Sandy clay and hard streaks	14	490
Clay and hard sand streaks	21	511
Sand and shale streaks - -	55	566
Hard sand and sticky clay streaks - - - - -	20	586
Sticky clay and hard clay-	18	604
Yellow and brown shale - -	16	620
Sticky clay - - - - -	61	681
Shale and sticky clay - -	10	691
Sand and sandy clay streaks	6	697
Sticky clay - - - - -	4	701
Sand - - - - -	7	708
Hard sandstone - - - - -	12	720
Sticky clay - - - - -	5	725
Sand - - - - -	33	758
Clay - - - - -	5	763
Sandstone - - - - -	10	773
Sticky clay - - - - -	1	774
Sandstone - - - - -	8	782
TOTAL DEPTH - - - - -		782
CASING RECORD: 725 feet of 5-inch casing.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 585</u>		
Dr. -- Corbitt, 7 $\frac{1}{2}$ miles east of Linn.		
Clay - - - - -	12	12
Clay and caliche - - - - -	8	20
Sand, clay - - - - -	20	40
Clay - - - - -	10	50
Sand streaks - - - - -	10	60
Clay - - - - -	185	245
Sand - - - - -	21	266
Clay, sand breaks - - - - -	124	390
Clay - - - - -	70	460
Clay and rocks - - - - -	20	480
Fine sand - - - - -	15	495
Blue clay - - - - -	34	529
Sand - - - - -	16	545
Clay - - - - -	37	582
Sand - - - - -	42	624
Rock - - - - -	1	625
Red clay and rock - - - - -	45	670
Sand - - - - -	25	695
Red clay - - - - -	33	728
Sand - - - - -	34	762
TOTAL DEPTH - - - - -		762
CASING RECORD: 40 feet of 5-inch casing, 688 feet of 4 $\frac{1}{4}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 586</u>		
Schlumberger core hole, 9 $\frac{1}{4}$ miles southwest of McCook.		
Sand and sandy shale - - -	37	37
Sand - - - - -	12	49
Hard sand - - - - -	27	76
No record - - - - -	5	81
Hard sand water - - - - -	82	163
Shale - - - - -	50	213
Sand, hard breaks water -	46	259
Shale - - - - -	17	276
No record - - - - -	35	311
Sand - - - - -	37	348
Sandy shale - - - - -	58	406
Sand - - - - -	72	478
Shale - - - - -	80	558
Shale and sandy shale - -	37	595
Shale - - - - -	9	604
Sand - - - - -	10	614
Shale - - - - -	92	706
TOTAL DEPTH - - - - -		706

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 587</u>		
Schlumberger core hole, 5 miles southwest of McCook.		
Sand - - - - -	25	25
Sandy ash - - - - -	90	115
Sand water - - - - -	20	135
Sandy shale - - - - -	20	155

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 587--Continued</u>		
Sand water - - - - -	77	232
Hard sand water - - - - -	6	238
Sand water - - - - -	4	242
Hard sand - - - - -	3	245
Sand with hard breaks water	60	305
Sand - - - - -	30	335
Shale - - - - -	30	365
Sand - - - - -	40	405
Sand with hard breaks - -	60	465
Sand - - - - -	60	525
Shale - - - - -	30	555
Sand - - - - -	70	625
Shale - - - - -	30	655
Sandy shale - - - - -	40	695
Sand - - - - -	20	715
Sand with hard breaks - -	20	735
Sand - - - - -	10	745
Sandy shale - - - - -	10	755
Sand - - - - -	30	785
Sandy shale - - - - -	80	865
Shale - - - - -	85	950
Sticky shale - - - - -	35	985
Sandy shale - - - - -	15	1000
Sand - - - - -	55	1055
Sandy shale - - - - -	60	1115
Shale - - - - -	10	1125
Sandy shale - - - - -	70	1195
Shale - - - - -	30	1225
Sandy shale - - - - -	5	1230
Sand - - - - -	18	1248
Shale - - - - -	7	1255
TOTAL DEPTH - - - - -		1255

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 593</u>		
Schlumberger core hole, 2 $\frac{1}{4}$ miles east of McCook.		
Sand - - - - -	15	15
Caliche - - - - -	5	20
Sandy shale - - - - -	25	45
Hard shale - - - - -	30	75
Shale - - - - -	20	95
Sandy shale - - - - -	110	205
Sandy ash - - - - -	30	235
Sand - - - - -	60	295
Sand with shale breaks - -	10	305
Shale - - - - -	20	325
Sandy shale - - - - -	10	335
Sand water - - - - -	30	365
Sandy shale - - - - -	10	375
Sand water - - - - -	10	385
Sand with shale breaks, water - - - - -	20	405
Sandy shale - - - - -	10	415

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 593--Continued</u>		
Sand water - - - - -	20	435
Shale - - - - -	16	451
Sand water - - - - -	149	600
Sand with some hard breaks	25	625
Sand water - - - - -	30	655
Sandy shale with some hard breaks - - - - -	20	675
Shale - - - - -	20	695
Sand water - - - - -	100	795
Hard sand water - - - - -	10	805
Sand water - - - - -	50	855
Shale - - - - -	50	905
Sand - - - - -	15	920
Sandy shale - - - - -	2	922
No record - - - - -	15	937
Sand - - - - -	28	965
Sandy shale - - - - -	35	1000
Sand - - - - -	45	1045
Sandy shale - - - - -	10	1055
Sand with some shale breaks - - - - -	30	1085
Sandy shale - - - - -	10	1095
Shale - - - - -	10	1105
Sand - - - - -	100	1205
Sandy shale - - - - -	20	1225
Sand - - - - -	20	1245
Sandy shale - - - - -	40	1285
Shale - - - - -	35	1320
Sandy shale - - - - -	77	1397
Hard shale - - - - -	10	1407
Very hard shale - - - - -	10	1417
Hard shale - - - - -	10	1427
Sandy shale - - - - -	10	1437
Shale - - - - -	10	1447
Sandy shale - - - - -	10	1457
No record - - - - -	50	1507
Shale - - - - -	10	1517
Sandy shale - - - - -	20	1537
Sand - - - - -	10	1547
Shale - - - - -	40	1587
Sandy shale - - - - -	10	1597
Shale - - - - -	20	1617
TOTAL DEPTH - - - - -		1617

<u>Driller's log of well 597</u>		
J. E. Winston, at La Gloria Ranch, $5\frac{3}{4}$ miles southeast of McCook.		
Surface - - - - -	14	14
Caliche - - - - -	30	44
Caliche clay - - - - -	53	97
Sandy clay - - - - -	7	104
Clay - - - - -	23	127
Sand and clay streaks - -	30	157
Clay - - - - -	62	219

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 597--Continued</u>		
Rotten shale - - - - -	14	233
Clay - - - - -	32	265
Rotten shale - - - - -	32	297
Clay - - - - -	14	311
Clay and hard sand streaks - - - - -	31	342
Clay and rotten shale -	48	390
Soft clay - - - - -	10	400
Sandy clay - - - - -	4	404
Sticky clay - - - - -	18	422
Sand - - - - -	4	426
Sticky clay - - - - -	1	427
Sand - - - - -	10	437
Clay hard - - - - -	3	440
Sand - - - - -	5	445
Sticky clay - - - - -	25	470
Sand and clay - - - - -	6	476
Clay - - - - -	4	480
Clay and rotten shale streaks - - - - -	14	494
Hard sand and clay streaks - - - - -	7	501
Soft sand, clay - - - - -	38	539
Sandy shale - - - - -	10	549
Hard sandy shale - - - - -	11	560
Sand, brown coarse - - -	8	568
Sticky clay - - - - -	13	581
Hard shale, sand streaks	17	598
Sandy clay and hard streaks - - - - -	84	682
Rotten shale and hard sand - - - - -	16	698
Sandy clay - - - - -	8	706
Sand hard streaks - - -	17	723
Sticky clay - - - - -	11	734
Sand and hard streaks -	43	777
TOTAL DEPTH - - - - -		777
CASING RECORD: 758 feet of $4\frac{1}{4}$ -inch casing.		

<u>Driller's log of well 598</u>		
Hammond Brothers, 6 miles east of McCook.		
Surface - - - - -	10	10
Caliche - - - - -	31	41
Caliche and hard clay -	33	74
Clay - - - - -	25	99
Clay and caliche - - - -	11	110
Sandy shale - - - - -	64	174
Hard clay - - - - -	31	205
Sandy clay - - - - -	26	231
Clay - - - - -	8	239
Sticky clay - - - - -	5	244
(Continued on next page)		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 598--Continued</u>		
Soft clay hard streaks - - -	26	270
Sand, shale streaks - - -	43	313
Clay - - - - -	17	330
Sandy clay - - - - -	44	374
Sticky clay - - - - -	22	396
Sandy clay - - - - -	28	424
Sticky clay - - - - -	5	429
Sandy clay and sand streaks	13	442
Sticky clay, sandy clay streaks - - - - -	13	455
Rock - - - - -	1	456
Clay - - - - -	3	459
Rock - - - - -	1	460
Sticky clay - - - - -	16	476
Sandy clay - - - - -	9	485
Sand, shale streaks - - -	8	493
Clay - - - - -	8	501
Rock - - - - -	1	502
Clay - - - - -	2	504
Rock - - - - -	1	505
Clay - - - - -	10	515
Sandy clay, shale - - - -	17	532
Sand, hard - - - - -	32	564
TOTAL DEPTH - - - - -		564
CASING RECORD: 120 feet of 5-3/16-inch casing, 444 feet of 4 1/8-inch casing bottom 36 feet perforated.		

<u>Driller's log of well 599</u>		
Pan American Production Co. De La Vina well, 8 3/4 miles northeast of Edinburg.		
Caliche sand - - - - -	62	62
Shale - - - - -	338	400
Gravel - - - - -	20	420
Shale with sticky streaks-	202	622
Shale and sand - - - - -	148	770
Sticky shale - - - - -	423	1193
Shale shells - - - - -	407	1600
Sticky shale - - - - -	130	1730
Hard lime gravel - - - - -	10	1740
Sticky shale shells - - -	5	1745
Shale - - - - -	257	2002
TOTAL DEPTH - - - - -		8123
CASING RECORD: 1,800 feet of 10 3/4-inch casing.		

<u>Driller's log of well 600</u>		
Gulf States Oil Company, Delta Orchards well, 8 miles northeast of Edinburg.		
Surface and caliche - - -	30	30
Caliche - - - - -	35	65
Sand - - - - -	20	85
Caliche - - - - -	33	118

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 600--Continued</u>		
Sand - - - - -	40	158
Gumbo - - - - -	25	183
Sand - - - - -	30	213
Gumbo - - - - -	47	260
Sand and gravel - - - - -	10	270
Gumbo - - - - -	290	560
Sand and gravel - - - - -	35	595
Gumbo - - - - -	60	655
Sand and gravel - - - - -	20	675
Gumbo - - - - -	12	687
Sand and gravel - - - - -	33	720
Gumbo - - - - -	49	769
Sand and gravel - - - - -	12	781
Sandy shale - - - - -	26	807
Sand and gravel - - - - -	45	852
Sticky shale - - - - -	8	860
Sand and gravel - - - - -	46	906
Sticky shale - - - - -	28	934
Sand and gravel - - - - -	26	960
Sand - - - - -	13	973
Sand and gravel - - - - -	52	1025
Sticky shale - - - - -	3	1028
Sand and gravel - - - - -	152	1180
Sticky shale - - - - -	33	1213
Sand and gravel - - - - -	145	1358
Shale, sand and lime - - -	262	1620
Shale and boulders - - - -	115	1735
Shale and lime - - - - -	265	2000
TOTAL DEPTH - - - - -		6808

<u>Driller's log of well 603</u>		
Schlumberger core hole, 4 1/2 miles north-east of Sam Fordyce.		
Sand - - - - -	17	17
Gravel - - - - -	4	21
Sand - - - - -	44	65
Sandy ash, water - - - - -	150	215
Ash - - - - -	10	225
Shale - - - - -	30	255
Sandy shale, water - - - -	50	305
Shale - - - - -	30	335
Sand (water) - - - - -	45	380
Shale - - - - -	5	385
Sand - - - - -	5	390
Shale - - - - -	85	475
Sand - - - - -	15	490
Shale - - - - -	20	510
Sandy shale - - - - -	30	540
Shale - - - - -	25	565
Sandy shale - - - - -	33	598
Sand - - - - -	17	615
Shale - - - - -	100	715
Sandy shale - - - - -	30	745

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 603--Continued</u>		
Shale - - - - -	20	765
Sandy shale with shale breaks - - - - -	10	775
Sandy shale - - - - -	10	785
Shale - - - - -	20	805
Sandy shale - - - - -	20	825
Shale - - - - -	45	870
Sandy shale - - - - -	25	895
Sand - - - - -	80	975
Sticky shale - - - - -	20	995
Sandy shale - - - - -	10	1005
TOTAL DEPTH - - - - -		1005

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 604</u>		
Schlumberger core hole, 9 miles north- east of Sam Fordyce.		
Sand - - - - -	27	27
Sand with hard streaks -	20	47
Gravel - - - - -	3	50
Rock - - - - -	1	51
Sand water - - - - -	44	95
Sand with hard breaks, water - - - - -	52	147
Hard sand and rock, water	19	166
Sand, (water) - - - - -	37	203
Sandy shale - - - - -	12	215
Sand and rock, water - -	10	225
Sand with hard breaks, water - - - - -	60	285
Sand with some shale breaks - - - - -	10	295
Rock with sand breaks - -	10	305
Sand water - - - - -	20	325
Hard sand, water - - - -	30	355
Sand with hard streaks, water - - - - -	10	365
Sandy shale - - - - -	10	375
Shale - - - - -	40	415
Sandy shale - - - - -	20	435
Sand with hard breaks, water - - - - -	20	455
Sandy shale - - - - -	10	465
Sand with some hard breaks, water - - - - -	40	505
Shale - - - - -	20	525
Sandy shale - - - - -	10	535
Shale - - - - -	120	655
Sandy shale - - - - -	25	680
Sand - - - - -	45	725
Sandy shale - - - - -	10	735
Shale - - - - -	30	765
TOTAL DEPTH - - - - -		765

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 605</u>		
Showers and Moncrief, Brock and Showers well, 8½ miles northeast of Sam Fordyce.		
Surface - - - - -	10	10
Sand and gravel - - - - -	83	93
Sand and clay - - - - -	115	208
Water sand - - - - -	277	485
Sand, gravel - - - - -	85	570
Shale - - - - -	15	585
Sand and shale - - - - -	15	600
Shale and shells - - - -	400	1000
Sticky shale - - - - -	90	1090
Shale and shells - - - -	85	1175
Sticky shale - - - - -	35	1210
Sticky brown shale, brown shale and thin streaks-	25	1235
Lime shell - - - - -	260	1495
Shale and shells - - - -	55	1550
Sticky shale - - - - -	70	1620
Shale and shells - - - -	160	1780
Sticky shale - - - - -	95	1875
Shale - - - - -	64	1939
Sandy shale - - - - -	38	1977
Sticky shale - - - - -	118	2095
TOTAL DEPTH - - - - -		5818
CASING RECORD: 208 feet of 10¾-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 606</u>		
Gato Oil Company, Brock and Showers well, 6¼ miles east of Sam Fordyce.		
Caliche and sand - - - -	26	26
Caliche - - - - -	62	88
Sand and gravel - - - - -	83	171
Clay - - - - -	21	192
Sand and gravel - - - - -	14	206
Gumbo - - - - -	26	232
Sand and gravel - - - - -	128	360
Gumbo - - - - -	30	390
Sticky shale - - - - -	102	492
Shale and boulders - - -	37	529
Sandy shale - - - - -	38	567
Sand - - - - -	15	582
Sticky shale - - - - -	15	597
Sand - - - - -	9	606
Shale - - - - -	11	617
Sand - - - - -	5	622
Gumbo - - - - -	51	673
Sandy shale - - - - -	16	689
Sticky pink shale - - - -	60	749
Sandy shale - - - - -	23	772
Sticky shale - - - - -	29	801

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 606--Cont.</u>		
Sandy shale - - - - -	21	822
Sticky shale - - - - -	33	855
Hard brown shale - - - - -	24	879
Sticky shale - - - - -	15	894
Shale - - - - -	18	912
Gumbo and lime, tough - - -	84	996
Shale and lime - - - - -	28	1024
Sticky shale - - - - -	23	1047
Gumbo and lime - - - - -	97	1144
Shale - - - - -	25	1169
Gumbo - - - - -	50	1219
Hard sandy shale - - - - -	36	1255
Sticky shale - - - - -	31	1286
Sandy shale - - - - -	50	1336
Streaks lime and shale - - -	21	1357
Sticky shale - - - - -	86	1443
Sand, show gas - - - - -	3	1446
Hard broken flaky shale - - -	385	1831
Sticky shale - - - - -	8	1839
Lime rock - - - - -	2	1841
Shale and boulders - - - - -	18	1859
Dry shale and gypsum - - - -	32	1891
Sticky shale - - - - -	31	1922
Shale and boulders - - - - -	23	1945
Sticky shale - - - - -	57	2002
TOTAL DEPTH - - - - -		5025

<u>Partial driller's log of well 607</u>		
Bluff Petroleum Company, Green well, 3½ miles west of Mission.		
Surface clay - - - - -	7	7
Surface sand - - - - -	40	47
Sand and gravel - - - - -	150	197
Clay - - - - -	30	227
Clay and hard sand - - - - -	30	257
Clay - - - - -	15	272
Sand (gas) - - - - -	8	280
Clay - - - - -	40	320
Hard sand rock - - - - -	7	327
Clay - - - - -	15	342
Hard sand rock - - - - -	6	348
Clay - - - - -	20	368
Sand and clay - - - - -	82	450
Hard sand rock - - - - -	18	468
Sand and green shale - - - - -	34	502
Shale - - - - -	38	540
Sand and shale - - - - -	12	552
Shale - - - - -	38	590
Sandy shale - - - - -	39	629
Shale and boulders - - - - -	151	780
Shale - - - - -	50	830
Hard sand - - - - -	10	840

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 607--Cont.</u>		
Shale - - - - -	55	895
Shale and shells - - - - -	25	920
Shale - - - - -	25	945
Soft shale - - - - -	20	965
Shale - - - - -	36	1001
Sticky shale - - - - -	18	1019
Sandy shale - - - - -	9	1028
Sticky shale - - - - -	9	1037
Shale - - - - -	35	1072
Brittle shale - - - - -	18	1090
Shale - - - - -	50	1140
Sandy shale - - - - -	25	1165
Shale - - - - -	31	1196
Sticky shale - - - - -	119	1315
Hard sticky shale - - - - -	65	1380
Sandy shale, shells - - - - -	20	1400
Sticky shale, lime - - - - -	82	1482
Shale - - - - -	36	1518
Sticky shale - - - - -	12	1530
Sandy shale - - - - -	22	1552
Shale, lime shells - - - - -	22	1574
Shale - - - - -	16	1590
Sticky shale - - - - -	110	1700
Hard shale - - - - -	50	1750
Soft shale - - - - -	50	1800
Shale - - - - -	100	1900
TOTAL DEPTH - - - - -		5531

<u>Driller's log of well 608</u>		
A. T. Patterson, 1½ miles east of Mission.		
Surface and clay - - - - -	45	45
Sand and gravel, salty water - - - - -	46	91
Cemented sand and gravel - - -	5	96
Loose gravel - - - - -	2	98
Cemented sand and gravel - - -	16	114
Loose gravel - - - - -	4	118
Cemented sand and gravel - - -	17	135
Sand, clay and gravel - - - - -	39	174
Fine loose gravel - - - - -	10	184
Sand, clay and gravel - - - - -	28	212
Pink clay - - - - -	2	214
Sand clay, streaks - - - - -	36	250
Yellow clay - - - - -	10	260
Sandy clay, streaks - - - - -	48	308
Clay - - - - -	7	315
Sand and clay streaks - - - - -	18	333
Gravel and clay - - - - -	4	337
Sandy clay - - - - -	3	340
Clay - - - - -	7	347

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 608--Continued</u>		
Fine sand, good water - - - -	6	353
Streaky clay - - - - - - - -	1	354
TOTAL DEPTH - - - - - - - -		354
CASING RECORD: 353 feet of 4 $\frac{1}{4}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 609</u>		
Bentsen Brothers, 6 $\frac{1}{4}$ miles northeast of Mission.		
Dirt - - - - - - - - - -	6	6
Sand and dirt - - - - - - - -	8	14
Caliche - - - - - - - - - -	14	28
Soft clay and caliche - - - -	22	50
Soft clay - - - - - - - - - -	20	70
Sand and gravel - - - - - - - -	15	85
Clay - - - - - - - - - - - -	4	89
Cemented gravel - - - - - - - -	1	90
Sand and gravel, streaks cemented gravel - - - - - - - -	70	160
Red clay - - - - - - - - - - -	10	170
Sand rock with large gravel - - - - - - - - - - - -	27	197
Hard cemented gravel - - - - -	4	201
Yellow clay - - - - - - - - - -	11	212
Yellow and red sand - - - - - -	20	232
Pink clay - - - - - - - - - - -	3	235
Sand and gravel and broken streaks - - - - - - - - - - - -	61	296
Sandy clay and sand, gravel streaks - - - - - - - - - - - -	14	310
Red clay - - - - - - - - - - - -	53	363
Brown sand - - - - - - - - - - -	17	380
Clay - - - - - - - - - - - - - -	14	394
Clay, sand streaks - - - - - - -	41	435
Hard clay and sand streaks - - -	40	475
Sand with hard streaks - - - - -	62	537
TOTAL DEPTH - - - - - - - - - -		537
CASING RECORD: 537 feet of 3 $\frac{1}{2}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 610</u>		
H. F. Potts, 3 $\frac{3}{4}$ miles southeast of Edinburg.		
Old hole, no record,		
salt water - - - - - - - - - -	103	103
Sand - - - - - - - - - - - - - -	4	107
Sand and clay streaks - - - - -	3	110
Sand - - - - - - - - - - - - - -	5	115
Pea gravel and sandstone - - - -	10	125
Sand and pea gravel streaks - - -	66	191
Clay - - - - - - - - - - - - - -	20	211
Fine sand and shale streaks - - -	19	230
Coarse sand - - - - - - - - - - -	23	253
TOTAL DEPTH - - - - - - - - - -		253
CASING RECORD: 253 feet of 3 $\frac{1}{4}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 611</u>		
Quintana Petroleum Company, J. C.		
Engleman well, 7 $\frac{3}{4}$ miles northeast of Edinburg.		
Sand and caliche, some clay streaks - - - - - - - - - -	151	151
Sand - - - - - - - - - - - - - -	12	163
Soft sand and gravel - - - - - - -	12	175
Soft sand - - - - - - - - - - - -	28	203
Sand and gravel - - - - - - - - - -	135	338
Sand and caliche - - - - - - - - -	62	400
Sand - - - - - - - - - - - - - -	28	428
Soft sand - - - - - - - - - - - -	72	500
Sticky shale - - - - - - - - - - -	76	576
Sand and shale - - - - - - - - - -	131	707
Medium soft sand - - - - - - - - -	28	735
Sand and shale - - - - - - - - - -	67	802
Shale and caliche - - - - - - - - -	82	884
Shale and sand, medium hard - - - - - - - - - - - - - -	46	930
Hard sand - - - - - - - - - - - - -	2	932
Shale and sand, hard streaks - - - - - - - - - - - - -	26	958
Shale - - - - - - - - - - - - - -	27	985
Sand, shale, hard streaks - - - -	24	1009
Soft sand - - - - - - - - - - - - -	14	1023
Shale - - - - - - - - - - - - - -	19	1042
Sand with hard streaks - - - - - -	123	1165
Hard broken sand - - - - - - - - - -	50	1215
Hard shale and lime, sandy streaks - - - - - - - - - - - - -	107	1322
Shale - - - - - - - - - - - - - -	15	1337
Sandy shale, gummy streaks - - - -	43	1380
Sandy shale, sandy streaks - - - -	35	1415
Gummy shale, hard sandy - - - - -	57	1472
Extra hard broken lime - - - - - -	21	1493
Hard lime and shale - - - - - - - -	34	1527
Firm lime and shale - - - - - - - -	58	1585
Hard broken lime and shale, sandy streaks - - - - - - - - - -	89	1674
Gumbo - - - - - - - - - - - - - -	30	1704
Hard limy shale, sandy streaks - - - - - - - - - - - - -	50	1754
Shale, hard lime streaks - - - - -	49	1803
Sandy shale gummy streaks - - - -	22	1825
Broken lime and sand streaks - - - - - - - - - - - - -	16	1841
Gummy shale - - - - - - - - - - - -	10	1851
Hard shale and lime - - - - - - - -	86	1937
Rock - - - - - - - - - - - - - - -	5	1942
Hard shale with sticky streaks - - - - - - - - - - - - -	61	2003
TOTAL DEPTH - - - - - - - - - - -		8883
CASING RECORD: 637 feet of 10 $\frac{3}{4}$ -inch casing.		

Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 612</u>		
Union Sulphur Company, American Rio Grande Land and Irrigation Company No. 10, 5 $\frac{1}{4}$ miles east of Edcouch.		
Surface gravel - - - - -	45	45
Clay - - - - -	159	204
Sand and gravel - - - - -	106	310
Sand - - - - -	36	346
Shale and gravel - - - - -	36	382
Clay - - - - -	23	405
Sand, gravel - - - - -	35	440
Shale and gravel - - - - -	113	553
Sand, shale and gravel - -	139	692
Sandy shale and boulders -	303	995
Hard sand and boulders - -	27	1022
Sandy shale - - - - -	17	1039
Sandy shale and boulders -	140	1179
Sand and shale - - - - -	30	1209
Shale - - - - -	14	1223
Shale, little sticky - - -	106	1331
Shale and boulders - - - -	34	1365
Shale, little sticky - - -	9	1374
Shale, sticky - - - - -	53	1427
Sand, hard streaks - - - -	41	1468
Sandy shale - - - - -	82	1550
Sand and shale boulders -	62	1612
Sand and shale - - - - -	83	1695
Shale and boulders - - - -	134	1829
Shale, gray - - - - -	40	1869
Sandy shale - - - - -	31	1900
Hard sand - - - - -	12	1912
Sand and shale, streak of sandy shale - - - - -	72	1984
Sandy shale - - - - -	40	2024
TOTAL DEPTH - - - - -		7960
CASING RECORD: 1, 215 feet of 10-inch casing.		

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 614</u>		
M. C. Hanson well, 5 $\frac{1}{4}$ miles east of Sam Fordyce.		
Dirt and sand - - - - -	20	20
Caliche and sand streaks -	8	28
Hard caliche and sand streaks - - - - -	10	38
Cemented gravel - - - - -	6	44
Clay - - - - -	15	59
Gravel - - - - -	2	61
Sandy clay and shale streaks	61	122
Sticky clay - - - - -	26	148
Sandy clay - - - - -	4	152
Cemented sand - - - - -	36	188
Sticky clay - - - - -	55	243
Sand - - - - -	27	270

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 614--Continued</u>		
Clay - - - - -	8	278
TOTAL DEPTH - - - - -		278
CASING RECORD: 243 feet of 4 $\frac{1}{4}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 615</u>		
LaLomita Oil Syndicate, at Mission of Oblate Fathers, 4 miles south of Mission.		
Hard sandstone - - - - -	310	310
Sand - - - - -	40	350
Gray shale and gumbo - -	80	430
Gray shale - - - - -	50	480
Gray clay and gravel - -	60	540
Shale and sand - - - - -	70	610
Limestone - - - - -	20	630
Shale - - - - -	70	700
Shale and sand, oil showing - - - - -	20	720
Pink shale - - - - -	75	795
Hard sand - - - - -	20	815
Gumbo streaked with sand	45	860
Blue gumbo - - - - -	18	878
Shale and gumbo - - - -	22	900
Shale and sand - - - - -	50	950
Hard sand - - - - -	15	965
Gumbo and shale streaked with sand - - - - -	210	1175
Hard sand - - - - -	6	1181
Shale - - - - -	99	1280
Hard sand - - - - -	12	1292
Shale - - - - -	28	1320
Hard sand - - - - -	10	1330
Shale - - - - -	31	1361
Hard sand - - - - -	10	1371
Shale - - - - -	9	1380
Hard sandstone - - - - -	8	1388
Gumbo and shale - - - -	37	1425
Gumbo - - - - -	40	1465
Shale - - - - -	35	1500
Shale mixed with boulders	25	1525
TOTAL DEPTH - - - - -		2703

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 616</u>		
San Juan, 5 miles east of McAllen.		
Red clay - - - - -	18	18
Clay - - - - -	10	28
Red clay - - - - -	2	30
Joint clay - - - - -	80	110
Red clay - - - - -	43	153
Sand - - - - -	63	216
Soft clay - - - - -	22	238

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 616--Continued</u>		
Clay - - - - -	9	247
Sand - - - - -	65	312
Clay - - - - -	10	322
Gumbo - - - - -	11	333
Sand - - - - -	31	364
Gumbo - - - - -	44	408
Sand - - - - -	22	430
Sand and gravel - - - - -	42	472
Sand - - - - -	10	482
Gravel - - - - -	11	493
Gumbo - - - - -	22	515
Sand - - - - -	22	537
Sand and gravel - - - - -	20	557
Sand - - - - -	10	567
Gravel - - - - -	11	578
Gumbo - - - - -	121	699
Rock - - - - -	3	702
Gumbo - - - - -	14	716
Rock - - - - -	5	721
Sand, gravel and boulders - - - - -	23	744
Sand - - - - -	16	760
Gumbo - - - - -	39	799
Sand - - - - -	11	810
Sand and gravel - - - - -	43	853
Sand - - - - -	16	869
TOTAL DEPTH - - - - -		869

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 617</u>		
Schlumberger core hole, $6\frac{1}{2}$ miles southwest of Donna.		
Surface soil - - - - -	40	40
Caliche - - - - -	66	106
Gravel - - - - -	3	109
Sand and gravel - - - - -	120	229
Gravel and clay streaks - - - - -	56	285
Gravel - - - - -	21	306
Caliche and clay - - - - -	89	395
Gravel - - - - -	52	447
Sticky clay - - - - -	25	472
Ash and gravel beds - - - - -	66	538
Sand and gravel - - - - -	20	558
Clay and streaks of sand - - - - -	32	590
Sand and gravel - - - - -	14	604
Clay - - - - -	10	614
Sand and gravel - - - - -	17	631
Clay - - - - -	20	651
Sand and gravel - - - - -	29	680
Clay - - - - -	15	695
Sand and gravel - - - - -	55	750
Shale - - - - -	70	820
Shale with sandy streaks - - - - -	40	860
Sand - - - - -	15	875
Shale - - - - -	135	1010
Sandy shale - - - - -	250	1260
Sand and gravel - - - - -	75	1335

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 617--Continued</u>		
Sticky shale - - - - -	165	1500
TOTAL DEPTH - - - - -		1500

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 618</u>		
Gerald Oil and Gas Company, Nelson well, 4 miles south of Donna.		
Clay - - - - -	90	90
Sand and gravel - - - - -	135	225
Sticky shale - - - - -	76	301
Shale and sand streaks - - - - -	199	500
Shale - - - - -	25	525
Sand - - - - -	13	538
Shale - - - - -	152	690
Sand - - - - -	7	697
Sand and shale streaks - - - - -	24	721
Hard sandy shale, streaky - - - - -	879	1600
Shale - - - - -	100	1700
Sand and shale - - - - -	290	1990
Shale - - - - -	110	2100
TOTAL DEPTH - - - - -		6237
CASING RECORD: 301 feet of $12\frac{1}{2}$ -inch casing.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 619</u>		
Atlantic Refining Company, American Rio Grande Land and Irrigation Company well, $4\frac{1}{2}$ miles southeast of Donna.		
Surface sand - - - - -	240	240
Sand and gravel - - - - -	80	320
Sand and shale - - - - -	780	1100
Shale and shells - - - - -	523	1623
Hard sand - - - - -	47	1670
Sand and shale - - - - -	200	1870
Shale and shells - - - - -	398	2268
TOTAL DEPTH - - - - -		9180
CASING RECORD: Cased to 8,619 starting with 16-inch casing and reduced to $10\frac{3}{4}$ and 7-inch.		

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 621</u>		
Peoples' Oil and Gas Company, Eppersheim well, 4 miles northwest of Mercedes.		
Sand - - - - -	6 to 18	18
Clay - - - - -	10	28
Sand - - - - -	117	145
Lime - - - - -	2	147
Sand - - - - -	33	180
Gravel - - - - -	30	210
Clay - - - - -	30	240
Sand - - - - -	110	350
Gumbo - - - - -	30	380
Hard red shale - - - - -	65	445
Hard gumbo - - - - -	91	536
Hard sand - - - - -	24	560

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Table of Drillers' Logs, Hidalgo County--Continued

	Thickness (feet)	Depth (feet)
<u>Partial driller's log of well 621-Cont.</u>		
Red shale - - - - -	26	586
Shale - - - - -	41	627
Black gumbo - - - - -	3	630
Red shale - - - - -	35	665
Hard sand and gumbo - - -	70	735
Gumbo - - - - -	7	742
Hard sand - - - - -	14	756
Gumbo and sand - - - - -	25	781
Gumbo, hard sand - - - - -	31	812
Gumbo - - - - -	63	875
Rock sand - - - - -	5	880
Hard sand - - - - -	75	955
Gumbo - - - - -	75	1030
Hard sand, blue and red shale - - - - -	35	1065
Hard sand - - - - -	55	1120
Gumbo and sand - - - - -	25	1145
Sand, shale and gumbo - -	5	1150
Sand, shale and gumbo - -	20	1170
Hard red gumbo - - - - -	20	1190
Broken formation gray sand to shale - - - - -	30	1220
Gray gumbo, salt - - - - -	10	1230
Sandy shale - - - - -	30	1260
Red gumbo - - - - -	25	1285
Broken formation, sand and gumbo - - - - -	30	1315
Lignite - - - - -	5	1320
Lime - - - - -	6	1326
Shale - - - - -	10	1336
Broken rock - - - - -	22	1358
Shale and gumbo - - - - -	10	1368
Broken rock - - - - -	2	1370
Hard shale and shells - -	14	1384
Rock - - - - -	2	1386
Blue hard shale and shell	24	1410
Gumbo - - - - -	20	1430
Blue sandy shale - - - - -	15	1445
Blue shale - - - - -	15	1460
Hard sand - - - - -	10	1470
Hard shale and sand - - -	25	1495
Rock - - - - -	7	1502
TOTAL DEPTH - - - - -		3400

Driller's log of well 622

Bryan and Tharp, $2\frac{1}{2}$ miles northwest of Puerto Rico.

Red sand - - - - -	5	5
Caliche - - - - -	82	87
Caliche, sandy clay - -	21	108
Sand and gravel - - - - -	7	115
Red clay - - - - -	21	136
Lime and clay - - - - -	4	140

	Thickness (feet)	Depth (feet)
<u>Driller's log of well 622-Cont.</u>		
Shale - - - - -	35	175
Lime and gravel - - - - -	11	186
Brown shale, lime - - - -	98	284
Gray and brown shale - -	62	346
Sand and lime - - - - -	34	380
Blue and brown shale - -	56	436
Water sand - - - - -	40	476
Sand and shale - - - - -	44	520
Sand - - - - -	180	700
Hard sand, soft streaks -	83	783
Sand - - - - -	84	867
Blue shale - - - - -	67	934
Sand - - - - -	6	940
Blue and gray shale - - -	29	969
Sand - - - - -	5	974
Blue, gray and brown sandy shale - - - - -	113	1087
Blue sandy shale - - - - -	5	1092
Sand - - - - -	28	1120
Blue and brown shale - -	21	1141
Blue sand and gravel, thin layers shale - - - - -	11	1152
Sticky brown shale - - -	31	1183
Sand, thin layers shale -	8	1191
Blue and brown shale - -	26	1217
Blue and brown hard sandy shale - - - - -	3	1220
Blue and brown shale - -	15	1235
Blue sand - - - - -	2	1237
Blue and brown sandy shale - - - - -	25	1262
Sticky shale - - - - -	1	1263
Sandy brown shale streaked with blue shale - - - -	50	1313
TOTAL DEPTH - - - - -		1313

Partial driller's log of well 623

Maddox, Turnbull and Irvin well, 5 miles south of Mission.

Surface sand and clay - -	90	90
Gravel - - - - -	10	100
Sand rock - - - - -	80	180
Shale, shells - - - - -	90	270
Sand, boulders - - - - -	100	370
Hard sand - - - - -	30	400
Sand and gravel - - - - -	35	435
Broken sand and gravel -	141	576
Sand and shale - - - - -	39	615
Sand and gravel - - - - -	220	835
Shale and lime streaks -	125	960
Shale and streaks of gravel - - - - -	75	1035
Shale and lime shells - -	255	1290
TOTAL DEPTH - - - - -		6009

Partial analyses of ground waters in Hidalgo County, Texas

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
6	L. J. Lipps	80	Apr. 16, 1941	1,509	22	10	546	20	212	156	660	-	-	96
11	S. Casos	97	Aug. 31, 1939	1,249	-	-	420	0	548	176	310	36	-	136
12	Placedo Casos	40	do.	-	29	16	274	0	384	91	211	34	-	138 a/
36	L. J. Lipps	450	Apr. 16, 1941	986	44	24	302	0	268	99	38	-	-	208
37	do.	648	do.	1,043	14	6.3	382	0	260	111	398	4.0	-	61
38	do.	535	do.	978	30	16	325	12	262	96	362	14	-	141
41	Mrs. H. M. King	552	do.	1,565	48	20	482	20	208	572	330	.5	-	202
42	do.	515	do.	905	19	9.4	321	7.9	304	103	298	.8	-	86
45	D. G. Guerra	792	do.	2,264	92	37	669	16	160	684	695	-	-	382
52	F. Barrera	75	Aug. 31, 1939	-	114	63	383	16	142	145	755	18	1.1	543 a/
56	G. Perez	85	do.	-	59	32	395	5.9	552	236	280	38	1.5	279 a/
58	Antonio Perez	115	do.	-	58	41	306	0	566	253	515	28	1.3	313 a/
60	Dario Perez	130	do.	-	-	-	-	-	-	655	2,070	-	-	-
62	Martias Pena	125	Sept. 2, 1939	1,114	-	-	318	30	302	71	430	17	-	300
72	Alfredo Rodriguez	72	do.	599	-	-	216	30	274	36	158	12	-	76
78	Enemencio Bazan	100	Aug. 31, 1939	914	-	-	304	26	306	83	248	68	-	129 a/
79	Bernardino Bazan Est.	82	do.	-	26	16	242	33	314	63	190	14	-	131 a/
80	Mrs. H. M. Fairbanks	150	Aug. 25, 1933	563	30b/	-	167	0	363	40b/	122	6.6	-	153
81	do.	450	do.	-	90b/	-	-	0	312	460b/	1,100	-	-	-
85	Henry Guerra	672	Sept. 7, 1939	-	98	74	681	0	392	421	890	15	1.0	548 a/
39	D. Guerra & Sons	625	Aug. 25, 1933	1,207	24b/	-	442	4.9	195	146	520	0	-	92
94	do.	575	do.	1,504	31	11	500	0	196	342	490	0	-	123
107	J. C. Thompson	300	Aug. 25, 1933	-	80b/	-	-	0	253	150b/	1,270	-	-	375

a/ Calculated.
b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
108	-- Taylor	--	Aug. 26, 1933	1,695	5b/	-	665	40	128	80b/	380	0.25	-	50
109	Mrs. H. M. Fairbanks	170	do.	-	83	33	122	0	254	44b/	252	14	-	355
113	Frank Rabb, Est.	80+	Sept. 2, 1939	875	-	-	209	0	268	55	345	16	-	322
121	J. A. White	80	Aug. 26, 1933	1,031	62	32	272	0	333	114	295	12	-	286
124	W. J. Wylie	55	Sept. 1, 1939	-	43	28	305	0	422	129	230	7.0	2.2	222 a/
126	A. Guerra	90	Sept. 7, 1939	-	-	-	-	-	-	195	590	54	-	-
127	do.	115	do.	1,458	-	-	410	5.9	273	193	530	16	-	375
128	do.	173	Aug. 26, 1933	-	100b/	-	-	0	426	270b/	620	-	-	502
129	Walter Doughty	57	Sept. 7, 1939	1,717	-	-	529	31	332	200	630	14	-	352
134	A. B. Garza	650	do.	-	36	17	686	16	344	246	765	7.5	1.0	150 a/
143	M. Cantu	38	Sept. 5, 1939	-	55	28	424	0	695	79	345	4.0	1.7	252 a/
144	Carlos Hinojosa	52	do.	-	-	-	-	-	-	117	360	26	-	-
145	Mrs. Agnes Puckett	37	do.	-	-	-	-	-	-	127	540	8.2	-	-
146	Juan B. Gonzalez	75	do.	-	-	-	-	-	-	260	900	19	-	-
147	A. V. Garza	750+	Sept. 1, 1939	-	40	15	615	14	313	274	660	-	.9	162 a/
152	Dr. -- Corbit	900+	Sept. 4, 1939	-	78	18	735	3.9	204	391	910	-	.9	269 a/
153	John Walker	280	Sept. -, 1939	-	-	-	-	-	-	409	1,030	-	2.1	-
159	John T. Judd	290	Aug. 11, 1939	2,057	-	-	642	0	382	200	905	5.0	1.6	450
160	M. Nusbaum	285	do.	1,966	-	-	540	12	352	133	850	20	-	330
160	do.	235	Aug. 26, 1933	-	76	39	632	0	396	139	842	19	-	350
161	P. Christenson	265	Sept. -, 1939	2,672	-	-	746	0	350	458	1,050	4.0	1.7	660
165	E. Vela	72	Sept. 5, 1939	-	-	-	-	-	-	119	450	-	-	-
167	A. J. Norwood	255	do.	2,804	-	-	895	14	223	476	1,190	14	-	450
170	-- Doughty	950+	do.	2,546	-	-	902	3.9	134	437	1,135	-	-	210
171	Crisanto Vela	56	do.	1,651	-	-	532	43	352	221	600	11	-	288
175	F. B. Vela	63	do.	-	-	-	-	-	-	210	450	12	-	-
178	J. A. Deaton	57	do.	1,028	-	-	239	13	332	95	360	8.2	-	283
179	Frank Rabb, Est.	60	do.	-	-	-	-	-	-	213	675	7.5	-	-
130	Delta Orchards	1,100+	Sept. 4, 1939	-	163	50	1,006	0	101	1,097	1,115	-	.7	612 a/

a/ Calculated.

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
181	Steuer Est.	1,000+	Sept. 7, 1939	-	-	-	-	-	-	474	1,510	5.0	.6	-
184	Community	940+	do.	5,037	-	-	1,333	0	84	2,428	980	-	-	1,080
185	W. D. Jeffress	280	Aug. 26, 1933	-	134	40	281	0	402	109	455	32	-	499
187	Hammond Bros.	900+	Aug. 25, 1933	1,154	8b/	-	441	18	288	339	255	0.25	-	20
187	do.	900+	Aug. 3, 1939	1,185	-	-	450	39	243	352	265	-	-	26
188	J. F. Shary	372	Sept. 5, 1939	2,812	-	-	894	16	265	500	1,150	15	1.5	453
189	do.	136	do.	2,855	-	-	916	0	358	417	1,220	12	2.0	472
190	W. M. Brewster	180	Sept. 2, 1939	-	44	19	140	2.0	281	24b/	130	60	1.0	188 a/
192	Alfonso Alamiedo	250	Aug. 25, 1933	-	65b/	-	-	-	434	360b/	980	-	-	363
196	Delta Orchards Co.	1,100+	Sept. 4, 1939	-	112	43	1,075	3.9	160	530	1,490	-	.9	456 a/
198	Edinburg Ind. School Dist.	870	do.	-	134	39	1,008	0	117	576	1,410	-	.6	495 a/
200	Delta Orchards Co.	930	do.	-	127	38	1,121	0	122	612	1,540	-	.7	473 a/
208	E. Salinas	205	Aug. 25, 1933	-	91	27	323	0	332	90b/	455	40	-	338
210	Brock & Showers	197	do.	1,703	160	-	380	0	537	75b/	715	4.8	-	705
211	do.	396	do.	-	108	53	723	0	292	334	1,005	4.7	-	47
213	Hammond Bros.	750	do.	-	55	23	521	0	310	417	480	0	-	232
214	do.	1,447	do.	1,574	12b/	-	579	12	291	573	318	0.25	-	45
218	Baptist Seminary	425	Sept. 4, 1939	3,166	-	-	1,014	26	320	534	1,310	8.0	-	510 a/
221	Alamo Cotton Oil Co.	258	Sept. 5, 1939	3,658	-	-	1,176	0	417	886	1,275	18	2.1	525
223	Juan de la Vina	130	Sept. 7, 1939	-	106	82	1,179	0	488	537	1,560	-	2.1	601a/
228	Delta Orchards Co.	465	do.	3,882	-	-	1,252	0	412	712	1,535	-	2.7	600
231	Engleman Gardens Co.	120	Sept. 4, 1939	-	56	41	1,012	20	436	589	1,060	-	3.6	308 a/

a/ Calculated.

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables)

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
235	Barton Hughes	98	Aug. 23, 1933	2,854	28b/	-	1,030	22	553	631	920	0	-	204
236	Fred Henson	61	Sept. 7, 1939	3,958	-	-	1,434	67	319	507	1,705	-	-	291
239	Delta Orchards Co.	160	do.	3,638	-	-	1,367	0	510	552	1,525	-	-	172
244	J. Reynolds	240+	do.	-	34	30	1,098	9.8	606	580	1,040	-	4.7	208
251	W. R. Jackson	170	Sept. 5, 1939	1,535	-	-	420	0	234	210	640	16	-	412
253	Maximo Diaz	-	do.	-	-	-	-	-	-	121	320	28	-	-
255	-- Hart	99	do.	629	-	-	203	26	304	83	127	8.8	-	123
256	P. S. Rivas	87	do.	-	-	-	-	-	-	153	440	19	-	-
257	Lopez Guerra	90	do.	-	-	-	-	-	-	27b/	60	9.6	-	-
263	E. W. Sullivan	80	do.	-	-	-	-	-	-	549	1,120	40	-	-
272	Mary Fleoden	106	do.	-	-	-	-	-	-	277	545	20	-	-
274	Augustine Zamora	120	Aug. 25, 1933	-	154	38	428	0	250	291	680	4.3	-	541
275	Brock & Showers	161	do.	1,179	60b/	-	342	0	170	100b/	560	1.0	-	291
277	do.	227	do.	1,449	84	35	410	0	370	133	520	0	-	354
279	R. W. Lindsay	331	Sept. 5, 1939	-	128	53	515	0	304	340	735	19	.8	537 a/
280	G.W.B. Garrett	241	do.	-	107	47	697	0	310	345	960	6.0	1.0	460 a/
281	J. F. Shary	243	do.	2,585	-	-	753	0	206	430	1,080	-	-	585
284	W. B. Beard	50	Aug. 27, 1933	794	35b/	-	271	-	276	100b/	210	3.6	-	123
286	J. F. Shary	257	do.	-	114	49	603	0	307	316	860	4.0	-	436
289	H. T. Klatt	101	Aug. 24, 1933	-	73	27	443	0	364	362	410	4.5	-	293
290	J. F. Shary	104	Sept. 7, 1939	-	-	-	-	-	-	309	300	3.2	1.4	-
291	M. L. Watson	55	do.	1,850	-	-	609	-	449	343	575	48	4.1	252
292	J. L. Crump	35	do.	-	-	-	-	-	-	863	2,040	15	.8	-
294	E. Metzger	118	Sept. 5, 1939	2,840	-	-	798	-	432	524	1,090	-	1.2	705
302	E. Short	128	Aug. 27, 1933	-	90b/	-	-	0	449	500b/	825	-	-	645
304	Mrs. C. Germantz	110	do.	-	200b/	-	-	0	437	200b/	930	-	-	690
305	F. H. Hull	120	do.	-	260b/	-	-	0	433	160b/	1,360	-	-	1,065

a/ Calculated

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

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Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
308	C. R. Fitzpatrick	37	Aug. 27, 1933	-	110b/	-	-	0	528	420b/	1,410	0	-	630
309	C. B. Starr	200+	do.	-	120b/	-	-	0	544	480b/	1,095	-	-	585
311	E. Bader	136	Sept. 5, 1939	-	50	60	1,098	0	430	726	1,165	-	2.6	371 a/
313	W. L. Mathews	65	do.	3,682	-	-	1,246	-	558	874	1,240	-	4.7	420
315	John Stutt	100	Sept. 6, 1939	-	88	43	648	3.9	366	473	710	-	1.8	396 a/
316	O. W. Curry	122	Aug. 27, 1933	-	97	48	582	0	476	396	640	0	-	439
320	E.S. Doughtie	167	Sept. 5, 1939	-	-	-	-	-	-	657	1,260	5.0	1.4	-
322	J. C. Tipps et al	147	do.	2,778	-	-	922	-	418	586	1,000	1.7	3.2	368
324	H.C. Aderhold	125	do.	3,246	-	-	1,082	-	352	550	1,360	0	3.0	435
326	J. A. Lijiestrand	151	Aug. 17, 1933	-	140b/	-	-	0	298	480b/	990	-	-	690
329	Adolph Carlson	133	Sept. 5, 1939	-	-	-	-	-	-	577	920	-	2.3	-
334	Mrs. C.L. Rice	130	do.	-	72	49	917	0	370	665	975	-	2.0	381 a/
336	C. A. Pearson	178	Aug. 17, 1933	-	130b/	-	-	0	284	500b/	250	-	-	682
337	J. F. Byrnes	495	Aug. 18, 1933	-	110b/	-	-	0	346	210b/	1,215	-	-	540
339	John Wade	135	Sept. 5, 1939	-	-	-	-	-	-	666	1,150	-	1.5	-
349	Oscar Daskam	103	do.	-	-	-	-	-	-	323	1,120	32	.6	-
352	H. G. Cavazos	126	Aug. 24, 1933	1,306	67	28	381	0	316	155	470	22	-	282
353	Soloman Chapa	87	Sept. 5, 1939	-	-	-	-	-	-	187	670	13	1.5	-
354	David Chapa	90	do.	-	-	-	-	-	-	284	1,405	74	1.0	-
355	Mrs. D. Lowry	133	Aug. 24, 1933	1,221	50b/	-	394	0	370	161	425	5.4	-	219
357	Brock & Showers	153	do.	-	156	46	410	0	307	240	675	20	-	579
360	L.V. Williams	40	Sept. 5, 1939	1,780	-	-	409	-	233	604	460	-	1.9	585
362	Mrs. H.K. Wood	44	Sept. 2, 1939	1,551	-	-	297	-	278	414	450	13	.5	660
363	do.	60	do.	-	164	56	251	0	300	398	360	18	.8	640
365	Mrs. G. F. Gray	265	Sept. 7, 1939	2,647	-	-	705	-	278	449	1,110	6.7	.7	735
366	W.K. Boatwright	130	Aug. 24, 1933	-	280b/	-	-	0	324	460b/	2,525	-	-	1,305
370	Dr. W. Woods	63 ¹ / ₂	do.	-	118	44	228	-	327	328	252	6.8	-	475
377	Evan Rees	75	Sept. 2, 1939	-	-	-	-	-	-	691	590	10	-	-

a/ Calculated.

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
382	Willdel Citrus Groves	55	Sept. 2, 1939	-	127	46	244	0	269	347	318	7.1	-	506 a/
383	L. O. Swantz	57	do.	-	105	37	308	0	310	369	310	6.4	1.1	414 a/
387	H. F. Krusemark	68	do.	-	-	-	-	-	-	488	540	7.0	.7	-
389	H. W. Grover	72	do.	-	227	80	345	0	268	521	620	8.8	.6	896 a/
398	C. G. Fink	194	Sept. 7, 1939	1,133	-	-	299	-	302	274	310	-	.6	322
399	Ada R. Sigrist	80	Aug. 24, 1933	-	195	64	472	0	478	394	690	0.30	-	750
409	H. R. Giles	76	Sept. 7, 1939	2,242	-	-	565	-	399	403	840	-	.5	705
412	G. E. Alcott	96	Aug. 24, 1933	-	226	78	508	0	384	585	755	0.75	-	885
432	C. Spears	15	Aug. 25, 1933	-	132	35	159	0	286	175	285	0.50	-	474
444	Mrs. E. J. Hutchison	12	Sept. 7, 1939	2,278	-	-	340	0	534	445	730	-	-	146
454	Albert Schwarz	80+	Sept. 6, 1939	-	-	-	-	-	-	528	560	-	.2	-
458	F.O. Underhill	40	do.	-	122	36	300	0	384	378	270	16	.7	453 a/
462	J. Ziebarth	90	do.	-	136	90	178	0	394	295	395	40	.8	834 a/
467	Oblate Fathers	150	Sept. -, 1939	-	-	-	-	-	-	958	1,185	12	2.9	-
467	do.	150	Sept. 2, 1939	-	87	30	70	0	270	113	103	.6	-	340 a/
472	M. Madsen	120	do.	-	150	48	138	0	384	248	210	3.0	-	572 a/
481	O. H. Bakhaus	-	Aug. 25, 1933	969	162	38	110	0	384	246	150	1.8	-	561
484	Central Power & Light Co.	-	do.	914	164	43	83	0	444	190	136	1.9	-	536
488	G. M. Shoup	125	Sept. 3, 1939	-	172	67	232	0	320	333	500	2.3	.6	705 a/
489	Valley View School	105	do.	487	-	-	70	0	246	109	80	-	.5	278
491	W. W. Stevens	90	do.	626	-	-	77	0	230	155	135	-	.5	375
495	J. G. Moutier	110	Sept. 4, 1939	844	-	-	117	0	356	208	160	-	.3	430
496	R.J. Sorenson	110	do.	-	-	-	-	-	-	274	325	-	.2	-
499	J. S. Ward	90	Sept. 3, 1939	-	-	-	-	-	-	379	545	-	.6	-
500	John C. Kelly	78	do.	-	-	-	-	-	-	1,221	1,290	13	0	-
505	Southwestern Life Ins. Co.	75	Sept. 4, 1939	3,059	-	-	660	0	380	793	1,020	-	.2	1,140

a/ Calculated.
 b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
506	W.J.Wittenberg	80	Sept. 4, 1939	-	662	100	651	0	324	783	1,700	-	.1	2,065
507	C. Wichman	108	do.	1,209	-	-	191	7.9	222	207	450	-	.4	630
509	C. R. Boase	105	do.	-	-	-	-	-	-	153	66	-	.3	-
511	J. A. Unland	86	do.	798	-	-	203	14	296	183	163	-	1.2	255
512	J. A. Elmer	104	do.	-	183	73	1,421	0	556	2,451	555	72	4.2	769
513	E.L.Gililand	50	Aug. 25, 1933	-	68	43	342	0	378	519	169	2.9	-	346
514	O. Dean	70+	Sept. 6, 1939	1,305	-	-	212	0	364	275	335	-	.4	668
519	C. H. Cotton	36	do.	-	-	-	-	-	-	329	135	-	1.0	-
520	J. H. Couch	36	Aug. 19, 1933	757	50b/	-	120	0	334	184	133	0.50	-	399
523	South Palm Garden School	20	Sept. 6, 1939	1,072	-	-	227	0	376	274	225	3.0	1.8	423
528	Henry Williamson	45	do.	1,437	-	-	378	22	330	431	315	10	1.6	390
529	W. A. Critchfield	40	do.	782	-	-	113	18	182	219	132	-	1.0	420
534	C. F. Barter	50	Apr. 17, 1941	1,567	174	40	322	0	434	566	250	1.5	-	599
538	Run School No. 4	110	Sept. 6, 1939	-	134	40	225	0	392	365	200	3.5	.5	499 a/
541	Temple Orchards Co.	120	do.	-	-	-	-	-	-	878	995	552	0	-
542	-- Sheppard	187	do.	-	118	40	145	0	430	166	175	2.2	.3	459 a/
543	A. L. Steele	80	do.	-	293	122	265	0	460	723	430	-	.7	1,233 a/
545	Wm. McKinney	100+	do.	-	-	-	-	-	-	313	190	6.0	.2	-
546	W. D. Chadick	145	Aug. 24, 1933	-	104	28	87	0	292	135	130	1.4	-	375
549	McAllen Ranch	648	Aug. 10, 1939	1,222	-	-	476	30	139	164	490	-	-	32
550	do.	684	do.	1,032	-	-	421	0	292	151	392	-	-	34
551	do.	246	do.	1,044	-	-	314	3.9	275	121	332	20	-	231
553	Manuel Vela	713	Aug. 31, 1939	959	-	-	379	22	286	203	243	-	2.5	20
554	Wood Christian	947	Sept. 1, 1939	955	-	-	379	22	288	200	245	-	2.5	10
557	D. Guerra & Sons	334	Aug. 31, 1939	1,430	-	-	500	6.9	171	247	580	-	.9	141

a/ Calculated.

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
558	Richard King	604	Apr. 16, 1941	815	12	5.0	306	24	256	36	318	0	-	50
559	do.	920	do.	2,913	142	47	782	0	146	1,375	495	0	-	548
560	Romola Garza	742	Aug. 3, 1939	1,373	-	-	499	22	152	193	585	-	1.1	106
561	D. Guerra & Sons	311	Aug. 10, 1939	1,931	-	-	673	0	364	707	430	-	-	177
564	Romaldo Garza	715	Aug. 30, 1939	3,132	108	29	1,016	0	141	569	1,340	-	-	339 a/
567	E. Vrana	300	Sept. 2, 1939	3,659	-	-	1,028	16	250	549	1,550	25	-	878
568	T. Tice	423	Aug. 11, 1939	-	-	-	-	-	-	252	900	-	1.2	-
569	R. A. Kremel	335	do.	2,440	-	-	708	0	330	282	1,090	19	-	578
571	McAllen Ranch	756	Sept. 1, 1939	957	-	-	381	15	309	168	270	-	2.4	14
572	do.	800	do.	978	-	-	381	14	290	238	234	-	2.5	13
577	Southern Floral Co.	88	do.	-	56	32	264	0	381	109	292	9.8	-	271 a/
579	M. Chapa	471	Aug. 7, 1939	2,603	-	-	904	7.9	292	391	1,120	5.0	-	278
580	J. N. Guerra	488	Aug. 10, 1939	2,054	-	-	735	0	324	295	850	7.5	-	130
581	Juanlina Garza	705	Sept. 1, 1939	-	38	13	571	0	188	354	615	-	-	148 a/
582	P. C. Zamora	631	Aug. 10, 1939	2,064	-	-	730	9.8	261	341	845	-	-	139
583	R. King	625	do.	1,923	-	-	701	13	251	320	775	-	-	138
584	Geo. H. Coates	732	Sept. 1, 1939	1,944	-	-	685	0	170	430	750	-	-	156
585	Dr. -- Corbit	762	Aug. 31, 1939	1,580	-	-	573	0	296	244	620	-	-	126
588	F. J. Dusek	370	Aug. 11, 1939	-	-	-	-	-	-	221	740	-	1.0	-
588	do.	370	Aug. 31, 1939	-	-	-	-	-	-	240	608	-	.8	-
589	C. Pollock	350	Aug. 11, 1939	-	-	-	-	0	-	261	1,030	19	-	-
590	Dallas Joint Stock & Land Bank	300	Sept. 2, 1939	-	102	54	685	0	377	254	970	26	1.0	476 a/
590	do.	300	Aug. 11, 1939	-	-	-	-	-	-	273	975	-	1.8	-
591	E. Riethmyer	375	Sept. 2, 1939	-	93	51	570	0	375	169	845	3.8	1.2	442 a/
592	McCook Gin Co.	344	Aug. 11, 1939	1,933	-	-	584	0	338	183	885	18	1.9	465
594	Mildred Davis	351	do.	3,415	-	-	999	7.9	304	526	1,505	-	1.9	765
595	Cora Davis	530	do.	2,056	-	-	624	0	344	258	830	-	-	435
595	do.	580	Sept. 2, 1939	-	104	49	609	3.9	303	255	390	3.3	.9	461 a/

a/ Calculated.

b/ By turbidity.

Partial analyses of ground waters in Hidalgo County, Texas--Continued

(Analyzed by E. W. Lohr. Parts per million. For records of wells see corresponding numbers in well tables.)

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Carbonate (CO ₃)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃
596	Mrs. Anna Dube	371	Aug. 11, 1939	2,873	-	-	797	0	264	540	1,165	21	1.5	720
597	J. E. Winston	777	Aug. 3, 1939	1,495	-	-	557	16	200	278	570	-	-	72
598	Hammond Bros.	564	Aug. 30, 1939	2,378	-	-	769	0	242	280	1,115	-	-	390
601	R. R. Chamberlain	100	Sept. 5, 1939	3,550	-	-	1,171	0	235	759	1,470	23	-	532
602	Daskam Bros.	148	Aug. -, 1939	-	-	-	-	-	-	124	400	-	-	-
608	A.T. Patterson	354	Aug. 5, 1939	2,290	-	-	806	7.9	152	324	1,060	-	-	213
609	Bentsen Bros.	537	Aug. 3, 1939	2,056	-	-	716	22	212	356	840	-	-	210
610	H. F. Potts	253	Aug. -, 1939	1,438	-	-	459	7.9	308	377	400	-	-	225
610	do.	253	Sept. 7, 1939	-	65	29	456	0	374	379	402	-	1.8	281 a/
613	F. Chapa	85	Sept. 6, 1939	-	-	-	-	-	-	15b/	66	-	-	-
614	M. C. Hanson	278	Aug. 5, 1939	3,475	-	-	1,105	16	203	1,356	860	-	-	420
620	O.E. Ridenour	139	Sept. 6, 1939	-	164	180	2,373	0	642	2,930	1,930	2.5	3.1	1,143 a/
624	Relampago School	70	Apr. 17, 1941	1,187	235	61	104	0	352	241	370	2.6	-	838
625	L. J. Lipps	650	Apr. 16, 1941	864	16	6.5	316	20	284	66	308	1.5	-	67

a/ Calculated.

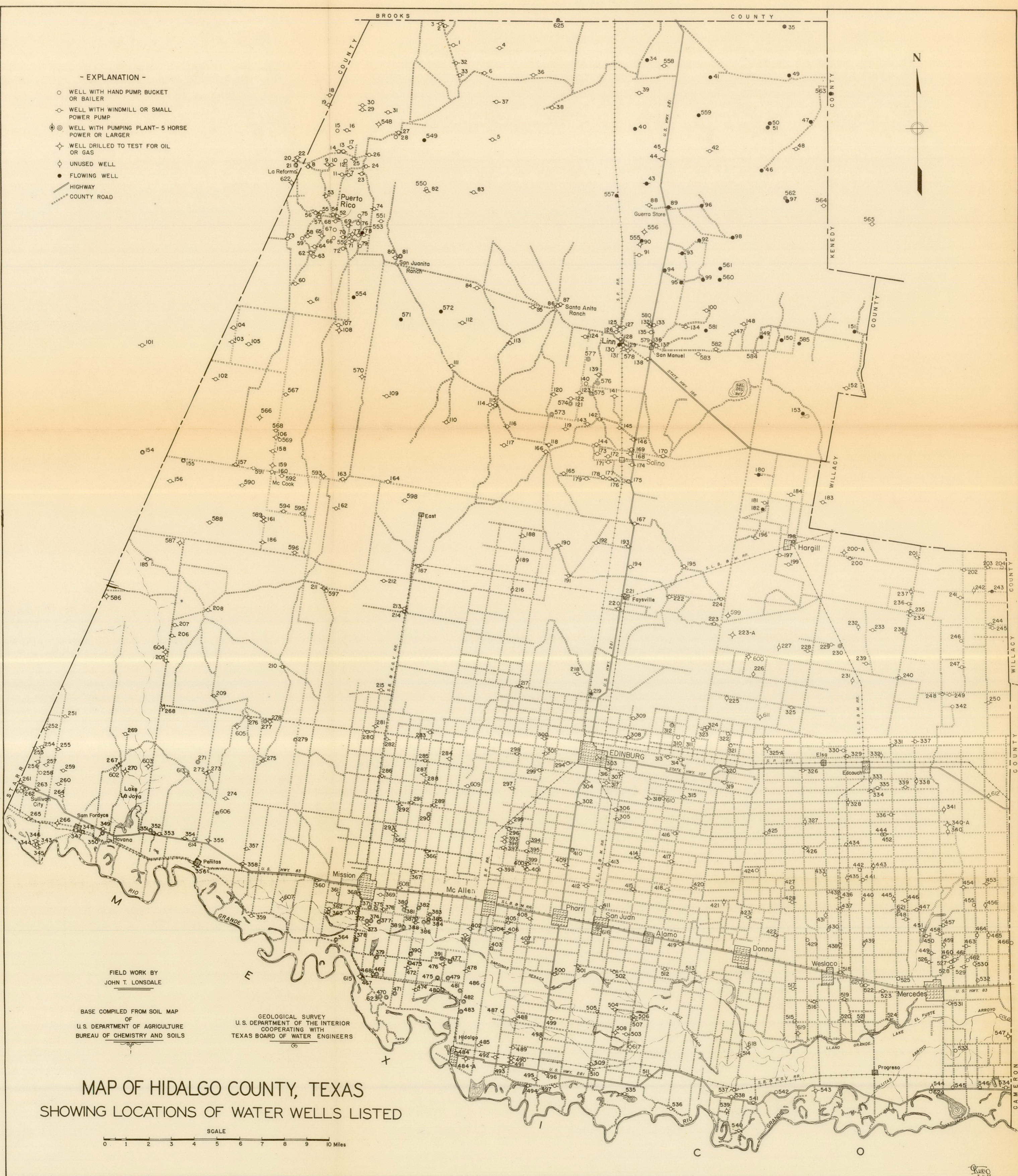
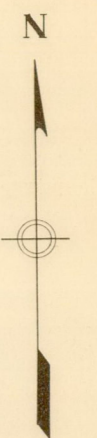
b/ By turbidity.

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- EXPLANATION -

- WELL WITH HAND PUMP, BUCKET OR BAILER
- WELL WITH WINDMILL OR SMALL POWER PUMP
- ⊙ WELL WITH PUMPING PLANT- 5 HORSE POWER OR LARGER
- ⋄ WELL DRILLED TO TEST FOR OIL OR GAS
- ◇ UNUSED WELL
- FLOWING WELL
- HIGHWAY
- - - COUNTY ROAD

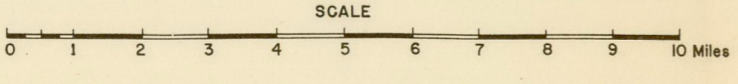


FIELD WORK BY
JOHN T. LONSDALE

BASE COMPILED FROM SOIL MAP
OF
U.S. DEPARTMENT OF AGRICULTURE
BUREAU OF CHEMISTRY AND SOILS

GEOLOGICAL SURVEY
U.S. DEPARTMENT OF THE INTERIOR
COOPERATING WITH
TEXAS BOARD OF WATER ENGINEERS

MAP OF HIDALGO COUNTY, TEXAS SHOWING LOCATIONS OF WATER WELLS LISTED



7-11-31

