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VAL VERDE COUNTY, TEXAS

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

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VAL VERDE COUNTY, TEXAS

Introduction

By
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This publication contains records of water wells and springs, logs of wells and test holes and analyses of water from wells, springs and test holes. These form a partial inventory of the water resources of Val Verde County.

The information was obtained by means of a project of the Division of Professional and Service Projects of the Work Projects Administration which is sponsored by the State Board of Water Engineers. The United Stated Department of Interior, Geological Survey, cooperated in the technical direction of the project.

Mr. J. M. Frazier was superintendent of the project in Val Verde County which was started March 22, 1939 and was completed September 21, 1939. The Commissioners' Count of Val Verde County furnished transportation for the workers.

Considerable attention was given to the large number of springs most of which are found along Devils River. A total of 105 springs are listed in this release many of which were measured with a weir.

The analyses were made by chemists employed on Work Projects Administration Project 10443 under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry of The University of Texas, and E. W. Lohr, Chemist of the Quality of Water Division of the Geological Survey; the Bureau of Industrial Chemistry furnished laboratory space and equipment. This release was typed by typists employed on that project.

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

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

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
XV-1	8 miles east	B. S. Harrison	H. Brown	Flat	1897	60	6½	0.5
XV-2	2¾ miles east	Otto Koog	J. T. Crawford	Gentle slope	1935	135	8	1.6
XV-3	1¼ miles northeast	Petro Martinez	do.	Flat	1930	56	4½	0.6

No.	Distance from Langtry	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/ 2	25 miles northwest	Bassett Est.	--	Flat	1929	4,010	--	--
d/ 3	30 miles north	Wes White	--	Hillside	1927	180	--	--
d/ 4	29 miles north	do.	--	Hilltop	1925	160	--	--
d/ 5	30 miles north	do.	--	Hillside	1933	40	--	--
d/ 6	do.	Carl Malone	--	do.	1930	90	--	--
d/ 7	26 miles north	H. Eastman	--	do.	--	640	--	--
8	25 miles north	Son Chapman	--	do.	--	510	--	--
d/ 9	28 miles north	J. B. Malone	--	River bottoms	--	Spring	--	--
10	do.	do.	--	Edge of cliff	--	Spring	--	--
d/11	do.	do.	--	--	1926	90	--	--
d/12	27 miles north	do.	--	Creek bottoms	1929	10	--	2
d/13	29 miles north	H. J. Y. Mills	O. C. Owens	--	1931	6,790	--	--
d/14	30 miles north	W. H. Bunger	A. Gray	Hillside	1915	105	--	--
15	do.	Bunger Bros.	Sol Meyer	Creek Bottoms	1879	75	--	1.4
d/16	32 miles north	J. Mitchell	--	do.	--	54	--	2.6
d/17	33 miles north	do.	--	--	--	157	--	2
18	30 miles north	N. J. Waidlaw	--	Hillside	1910	280	--	--

a/ Measuring point was usually top of casing, top of pipe clamp or top of well curb it was above ground level unless below ground indicated by minus (-) sign.
b/ B, bucket; C, cylinder; W, windmill; G, gasoline; E, electric; H, hand; number indicates horsepower.

Records obtained by J. M. Frazier, Project Superintendent
(Chemical analyses of water from these wells and spring are in the table of analyses.

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
XV-1	40.7	July 27, 1939	C,W	D,S	Reported strong supply of soft water. Cased with 6¼-inch galvanized iron pipe to bottom. U.S.G.S. observation well.
XV-2	77.9	do.	C,W	D,S	Reported strong supply of soft water. U.S.G.S. observation well.
XV-3	39.1	do.	C,W	D,S	Reported strong supply. Iron casing to bottom. U.S.G.S. observation well.

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
2	600	e/	--	--	Oil test. See log.
3	140	e/	C,W	S	Reported strong supply.
4	120	e/	C,W	S	Do.
5	18	e/	C,W	D,S	Do.
6	50	e/	C,W	D,S	Reported week supply.
7	600	e/	C,W	D,S	Reported strong supply.
8	305	e/	C,W	D,S	Do.
9	--	May 17, 1939	--	S	"Bill Taylor Spring One". Measured yield, 10 gallons a minute from one opening in limestone. Reported unfailing supply. Temperatur 72°F.
10	--	do.	--	S	"Bill Taylor Spring Two". Measured yield, 23 gallons a minute from 3 opening in limestone. Reported unfailing supply. Temperature 72°F.
11	45	e/	C,W	D,S	Reported strong supply.
12	8.1	May 17, 1939	C,W	D,S	Do.
13	--	--	--	--	Oil test.
14	40	e/	C,W	D,S	Reported strong supply.
15	60.8	Sept. 5, 1939	C,W	S	Do.
16	46.9	May 9, 1939	C,W	S	Reported weak supply.
17	68	do.	C,W	S	Well not used at present.
18	250	e/	S,W	D,S	Reported strong supply. Mineral taste.

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

Records of wells and springs in Val Verde County--Continued

No.	Distance from Langtry	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/ 19	31 miles north	Bob Cauthorn	--	In draw	1879	340	--	--
20	30 miles north	do.	Whit. Wardlow	Hill-top	1918	480	--	0.6
21	27 miles north	Ed. Arledge	--	Hill-side	1912	200	--	0.5
22	28 miles north	do.	G. C. Christian	do.	1937	300	--	--
23	do.	do.	--	do.	1914	300	--	1.5
24	26 miles north	H. J. Y. Mills	--	Bottom of Hill	1929	69	8	1.8
25	25 miles north	C. R. Baker	H. Mills	Hill-top	1915	80	6¼	3
d/ 26	do.	do.	--	In draw	1938	553	--	--
27	24 miles north	H. Y. L. Mills	--	Creek bottoms	--	Spring	--	--
d/ 28	23 miles north	J. Everett	J. Everett	Hill-top	1928	248	--	--
d/ 29	22 miles north	do.	--	Hill-side	1927	213	6¼	--
30	21 miles north	Walter Babb	-- Snow	In canyon	1937	215	--	--
31	do.	Ed Arledge	do.	Hill-side	--	250	--	--
32	do.	do.	--	--	--	283	--	1
33	do.	Walter Babb	--	River bottoms	--	Spring	--	--
34	do.	F. Everett	--	do.	--	Spring	--	--
35	22 miles north	Mrs. F. Everett	--	do.	--	Spring	--	--
36	21 miles north	F. Everett	--	do.	--	Spring	--	--
37	20 miles north	do.	--	do.	--	Spring	--	--
d/ 39	22 miles north	J. F. Humphries	--	do.	1929	69	--	--
40	do.	do.	--	In canyon	--	Spring	--	--
41	18 miles northeast	Murrah Ranch	--	Hill-top	--	--	--	1
42	16 miles northeast	William Lawson	--	do.	--	900	--	--
43	15 miles northeast	Lucius Hines	-- Snow	do.	1926	560	--	0.9
44	14 miles north	Levi Hines	--	Edge of canyon	--	Spring	--	--
d/ 45	do.	do.	--	River bottom	--	Spring	--	--

J. M. Frazier, Project Superintendent

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
19	197	e/	C,W	S	Reported strong supply. Mineral taste.
20	364.3	May 9, 1939	C,W	D,S	Do.
21	150.5	May 3, 1939	C,W	D,S	Reported weak supply.
22	195	e/	C,W	S	Reported strong taste of minerals.
23	114.0	May 9, 1939	C,W	D,S	Reported weak supply.
24	67.8	May 10, 1939	C,W	D,S	Reported strong supply.
25	63.1	do.	C,W	D,S	Do.
26	230	e/	C,W	--	Reported weak supply.
27	--	May 18, 1939	--	S	"Howard Springs". Measured yield, 1,150 gallons a minute from limestone. Temperature 72° F.
28	230	e/	C,W	S	Reported strong supply of soft water.
29	44	e/	C,W	N	Sulphur taste and odor. Unused well.
30	140	e/	C,W	D,S	
31	210	e/	C,W	D,S	Reported strong supply of soft water.
32	229.4	Apr. 19, 1939	C,W	S	do.
33	--	May 16,	--	S	Measured flow, 475 gallons a minute from two openings at base of canyon wall. Temperature, 72° F.
34	--	do.	--	S	Measured flow, 28 gallons a minute from two openings in limestone. Temperature, 72°F.
35	--	May 8, 1939	--	S	Measured flow, 340 gallons a minute from one openings Temperature, 72°F.
36	--	May 15, 1939	--	S	Measured flow, 100 gallons a minute from one opening in limestone. Temperature, 74°F.
37	--	do.	C,W	D,S,I	"Tardy Spring Two". Measured flow, 1,150+ gallons a minute from one opening in river sand. Temperature 74° F.
39	38	e/	C, W	D,S,I	Reported strong supply.
40	--	May 16, 1939	[illegible]	S	"Spring Canyon". Measured flow 28 gallons a minute from two opening in limestone. Temperature, 74°F.
41	367.0	May 4, 1939	C,W	S	Well unused at present.
[illegible]	250	e/	C,W	S	
[illegible]	374.2	May 3, 1939	C,W	D,S	Reported strong supply of soft water.
44	--	Apr. 25, 1939	--	S	Measured flow, 600 gallons a minute from six openings in limestone.
45	--	do.	--	S	Measured flow, 1,600 gallons a minute from six openings in base of limestone cliff. Temperature, 72° F.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Langtry	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/ 46	14 miles north	J. Cox	--	River bottoms	--	Spring	--	--
d/ 47	do.	do.	--	do.	--	Spring	--	--
48	do.	--	--	do.	--	Spring	--	--
49	13 miles north	J. Cox	--	River terrace	--	Spring	--	--
50	do.	do.	--	River bottoms	--	Spring	--	--
52	14 miles north	do.	--	Hilltop	--	520	--	1
d/ 53	16 miles north	Walter Babb	-- Snow	Near draw	1904	480	--	1.5
d/ 54	15 miles north	J. Cox	--	Hilltop	--	800	--	--
55	13 miles north	do.	--	In draw	1903	500	--	--
56	11 miles northeast	French Ingram	--	Base of bluff	--	Spring	--	--
d/ 57	8 miles north	do.	--	Hillside	1921	350	--	--
d/ 58	7 miles north	do.	Phantom Oil Co.	Flat	1930	3,010	8	--
d/ 59	14 miles northwest	A. Madison	Henry Brooks	Hilltop	1938	--	--	--
60	15 miles northwest	S. P. R. R.	--	Flat	--	1,000	6	--
d/ 62	do.	S. C. Owen	-- Crawford	Hillside	1934	700	--	--
63	7 miles northwest	Fermin Aguirre	--	Hilltop	--	800	--	1
64	4 miles west	J. H. Fisher	--	do.	1938	885	--	1
d/ 65	2½ miles northwest	do.	--	do.	1879	700	--	1.5
66	1 mile southwest	S. P. R. R.	--	Creek bottoms	--	Spring	--	--
d/ 68	4½ miles east	A. L. Brown	--	Hillside	1920	750	--	--
d/ 69	6 miles northeast	French Ingram	--	Base of cliff	--	Spring	--	--
70	8 miles northeast	John Ingram	--	River bottoms	--	Spring	--	--
72	10 miles east	H. Martin	-- Daniels	Hilltop	1939	565	--	--
d/ 73	7½ miles east	J. S. Ross	A. L. Brown	Flat	1929	1,250	--	--
74	9 miles east	Dr. U. E. Ross	A. F. Holdeman	Hilltop	1927	1,213	--	--
75	12 miles east	E. M. Zuberbueler	-- Dallais	do.	1938	800	--	--

No.	Depth below measuring point (ft.)	Date of measurement	Pump and power b/	Use of water c/	Remarks
46	--	Apr. 25, 1939	--	S	Measured flow, 180 gallons a minute from three opening in limestone. Temperature, 74° F.
47	--	do.	--	S	Measured flow, 90 gallons a minute from one opening in river sand. Temperature, 74° F.
48	--	do.	--	S	Measured flow, 25 gallons a minute from one opening in base of cliff. Fails in dry seasons. Temperature,
49	--	Apr. 26, 1939	--	S	Measured flow, 425 gallons a minute from 74° F. three openings in base of limestone ledge. Tempera-
50	--	Apr. 25, 1939	--	D,S,I	"Corn Spring". Measured flow, 100 ture, 74° F. gallons a minute from three openings in river sand.
52	397.2	Apr. 27, 1939	C,W	S	Reported strong supply. Temperature, 74° F.
53	215.8	May 2, 1939	C,W	S	
54	585	e/	C,W	S	Reported strong supply.
55	280	e/	C,W	D,S	Reported strong supply of soft water.
56	--	May 2, 1939	--	S	"Wildcat Springs". Measured flow, 5 gallons a minute from opening in limestone. Temperature, 76°F.
57	296	e/	C,W	D,S	Reported strong supply.
58	396	e/	--	--	Oil test. See log.
59	--	--	C,W	S	
60	900	e/	C,D 50	D,S RR	Reported diesel pumps 60 gallons a minute for three hours. Water treated with softener.
62	60	e/	C,W	D,S	Reported strong supply of hard water.
63	44.1	Apr. 18, 1939	C,W	D,S	Reported strong supply of soft water.
64	202.8	do.	C,W	S	Do.
65	307.1	do.	C,W	D,S	Do.
66	--	do.	T,G	D,S	"Pump Canyon Spring". Measured flow, 135 gallons a minute from several openings. Furnishes water for
68	397.8	May 22, 1939	C,W	--	Reported weak supply of town, ranch and railroad. soft water.
69	--	May 26, 1939	--	S	Measured flow, 25 gallons a minute from one opening in limestone. Temperature, 72° F.
70	--	May 23, 1939	--	S	Measured flow, 2 gallons a minute from one opening in base of cliff.
71	407.1	June 16, 1939	--	S	Water reported hard.
72	350	e/	C,W	D,S	Water reported soft.
74	390	e/	C,W	S	DO.
75	450	e/	C,W	D,S	Reported strong supply of soft water.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Comstock	Owner	Dilller	Topo-graphic situa-tion	Date com-pleted	Depth of well (ft.)	Diam-eter of well (in.)	Height of measuring point above ground (ft.) a/
d/ 76	10 miles west	Mrs. E. P. Bell	--	Fill-side	1931	480	--	--
77	9 miles west	do.	--	In Draw	--	Spring	--	--
78	7½ miles west	do.	--	Canyon bottoms	--	Spring	--	--
79	10 miles west	F. E. Bell	--	River bottoms	--	Spring	--	--
d/ 80	10½ miles northwest	do.	--	Hilltop	1930	680	--	--
81	do.	Mrs. F. E. Bell	--	River bottoms	--	Spring	--	--
d/ 82	11 miles northwest	do.	--	do.	--	Spring	--	--
d/ 83	11½ miles northwest	do.	--	Canyon bottoms	--	Spring	--	--
d/ 84	6 miles northwest	P. W. Kelly	--	Side of draw	--	--	--	--
d/ 85	4 miles northwest	do.	--	Flat	1900	610	--	--
d/ 86	2 miles north	Kolly Est.	--	--	1939	580	--	--
87	4 miles north	A. A. Baker	--Strickland	Hill-side	1919	1,070	--	--
d/ 88	9½ miles northeast	L. M. Prater	M. O. Daniels	Hill-top	1939	630	--	--
89	10 miles northeast	Tom Bright	--	Flat	1900	550	--	1
90	11½ miles northeast	J. W. Bright	--Edwards	Hill-side	1912	337	--	--
d/ 91	11 miles north	F. W. Greenwood	--	Hilltop	--	700	--	--
92	6½ miles north	A. A. Baker	--Boyken	do.	1924	1,050	--	--
d/ 93	9 miles north	Prosser & Walker	--Strickland	Hill-side	1919	600	--	--
94	do.	do.	--	Flat	1900	550	--	--
d/ 95	10 miles north	do.	--Strickland	Hill-top	1920	450	--	--
d/ 96	do.	F. Greenwood Sr.	--	do.	--	800	--	--
d/ 97	11 miles north	Illinois Pipeline Co.	--	Hill-side	--	650	--	--
d/ 98	11½ miles north	Prosser & Walker	--	Hilltop	1879	600	--	--
d/ 99	11 miles north	do.	--Strickland	do.	1919	520	--	--

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

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

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
76	380	May 5, 1939	C,W	D,S	
77	--	--	--	S	Not flowing when visited.
78	--	Apr. 20, 1939	-	S	Estimated flow, one gallon an hour.
79	--	May 25, 1939	--	S	"Rattlesnake Spring." Reported flow, 25 gallons a minute form crevice in base of cliff.
80	640	d/	C,W	S	Reported strong supply.
81	--	May 25, 1939	--	D,S RR	Measured flow, 575 gallons a minute from crevices in limestone. Temperature, 72°F.
82	--	--	--	S	Reported flow, 500 gallons a minute from two openings in base of cliff. Temperature, 72° F.
83	--	--	--	S	"Deadman's Spring". Reported flow, 700 gallons a minute from one opening in limestone. Temperature, 72° F.
84	399.8	May 3, 1939	C,W	S	
85	300	-- d/	C,W	D,S	Reported strong supply.
86	--	--	--	S	
87	400	d/	C,W	D,S,I	Reported strong supply of hard water. Irrigates small garden.
88	250	d/	C,W	D,S	Reported strong supply of soft water.
89	248.8	Aug. 29, 1939	C,W,G	D,S	Do.
90	325	d/	C,W	D,S	Do.
91	350	d/	C,W	D,S	Do.
92	810	June 16, 1939	C,W	S	Do.
93	397	d/	C,W	S	Do.
94	350	d/	C,W	D,S	Do.
95	350	d/	C,W	S	Do.
96	401	d/	C,W	D,S	Do.
97	340	d/	--	N	Not used at present.
98	390	d/	C,W	S	"Chula Vista Well". Reported strong supply.
99	350	d/	C,W	S	Reported strong supply.

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

Records of wells and springs in Val Verde County--Continued

No.	Distance from Comstock	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
100	12½ miles northwest	H. Martin	--	Flat	1905	480	--	--
d/ 101	20⅓ miles northwest	William Lausen	G. Christai	Hilltop	1936	820	--	--
d/ 102	22 miles northwest	J. T. Mayfield	--	do.	--	550	--	--
d/ 103	23 miles northwest	Tom Everett	Dahl Bros.	In draw	1910	570	--	--
104	25 miles northwest	do.	--	Hilltop	1920	400	--	--
d/ 105	23 miles north	F. Barrett	--	Hillside	1895	600	--	--
106	21 miles north	J. T. Mayfield	--	Bottom of draw	1902	430	--	2
d/ 107	20 miles north	William Lausen	--	Canyon bottoms	1914	620	--	--
d/ 108	19⅓ miles north	do.	--	Flat	1910	550	--	--
d/ 109	do.	R. W. Prosser	--	Hillside	1910	600	--	--
d/ 110	18 miles north	do.	-- Boykin	--	1919	300	--	--
d/ 111	17 miles north	do.	--	Flat	1898	600	--	--
d/ 112	do.	do.	--	Hilltop	1920	350	--	--
d/ 113	16 miles north	M. Rose	L. Danials	Hillside	1939	202	--	--
d/ 114	18 miles north	Texas Highway Dept.	--	do.	1939	100	--	--
d/ 115	do.	do.	M. D. Danials	do.	1939	98	--	0
d/ 116	18½ miles north	W. T. Baker	--	River bottoms	--	Spring	--	--
d/ 117	19½ miles north	S. E. Hallam	--	Creek bed	--	Spring	--	--
d/ 118	20⅔ miles north	do.	--	Hilltop	1927	300	--	1
120	22½ miles north	C. B. Hudspeth	--	Creek bottoms	--	Spring	--	--
121	24 miles north	do	--	Mouth of draw	--	Spring	--	--
122	25 miles north	H. E. Guinn	--	Hilltop	1927	800	--	--
123	do.	do.	--	Hillside	1895	445	--	--
d/ 124	24 miles north	Illinois Pipeline Co.	--	Flat	1928	680	6	--
d/ 125	26 miles north	H. E. Guinn	--	Hilltop	1895	600	--	--
126	28 miles north	Bob Cauthorn	--	do.	--	700	--	--

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
100	397	e/	C,W	D,S	Reported strong supply of hard water. Irrigates small gardon.
101	350	e/	C,W	S	Reported strong supply of soft water.
102	250	e/	C,W	S	Do.
103	100	e/	C,W	--	Do.
104	150	e/	C,W	--	Reported weak supply of soft water.
105	410	e/	C,W	D,S	Reported strong supply of soft water.
106	234.9	Sept. 6, 1939	C,W	D,S	Do.
107	405	e/	C,W	S	Do.
108	397	e/	C,W	D,S	Do.
109	450	e/	C,W	S	"Cedar Well". Reported strong supply.
110	200	e/	C,W	S	"Grace Well". Reported strong supply.
111	450	e/	C,W	D,S	Reported strong supply of soft water.
112	240	e/	C,W	S	Reported strong supply.
113	190	e/	--	S	
114	87.9	June 15, 1939	--	D	Unused well.
115	87.9	do.	--	D	Do.
116	--	--	--	S	Reported flow, 500 gallons a minute from openings in rock ledge. Temperature, 71° F.
117	--	June 18, 1939	--	S	"Huffstutter Spring". Measured flow, 275 gallons a minute from openings in limestone. Temperature, 72° F.
118	226.7	do.	C,W	S	Reported strong supply of soft water.
120	--	--	--	D,S,I	Reported flow 1,000 gallons a minute. Temperature, 72° F.
121	--	June 14, 1939	--	--	Measured flow, 20 gallons a minute from gravel and sand. Temperature 72° F.
122	450	e/	C,W	D,S	
123	410	e/	C,W	D,S	Reported weak supply of soft water.
124	--	--	C,E 5	Ind	Reported weak supply.
125	450	e/	C,W	S	Reported strong supply of soft water.
126	485	e/	C,W	D,S	Reported strong supply of soft water. Oder of sulphur.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Comstock	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
127	28 miles north	Bob Cauthorn	--	Hilltop	--	600	--	--
128	34 miles north	Fred Erwood	A. F. Holderman	do.	1930	526	--	0.8
d/129	36 miles north	Bob Cauthorn	--	Hillside	1929	408	--	1
130	do.	Ira M. Carson	--	--	1904	300	--	2
d/131	do.	Massey West	--	Hillside	1934	350	--	--
132	37½ miles north	W. W. West	--	do.	1904	350	--	1
d/133	38½ miles north	Massey West	--	do.	1910	310	--	--
134	33 miles north	do.	--	do.	1879	130	--	1
135	32 miles north	do.	--	do.	1904	130	--	--
136	31 miles north	J. C. Mayfield Jr.	--	Flat	1928	125	6	0.8
137	26 miles north	C. B. Hudspeth	--	Bottom of hill	--	Spring	--	--
138	do.	do.	--	In draw	--	Spring	--	--
139	do.	do.	--	River bottoms	--	Spring	--	--
140	do.	Mrs. J. Jarrett	--	Hillside	1925	125	--	1
141	27 miles north	T. J. Jarrett	--	do.	--	90	--	1
142	29 miles north	J. C. Mayfield Jr.	--	do.	1927	79	--	1
143	30½ miles north	H. V. Morris	--	do.	1923	85	--	--
144	30 miles north	V. Cauthorn	--	do.	1934	325	--	--
145	33 miles north	R. G. Nance	--Burchard	Flat	1900	75	--	1
146	do.	do.	--	River bottoms	--	Spring	--	--
147	34½ miles north	B. E. Wilson	--	do.	--	Spring	--	--
d/149	41 miles north	do.	--	Hillside	1934	75	--	--
150	36 miles north	do.	--	do.	--	130	6	--
151	44 miles north	do.	E. Mills	do.	1938	216	--	1
152	36½ miles north	do.	--	do.	1888	220	--	0.5
d/153	39 miles north	C. B. Hudspeth	--Danials	do.	1939	365	--	0.8

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
127	410	d/	C,W	D,S	Reported strong supply of soft water.
128	390.8	May 10, 1939	C,W	S	Do.
129	302.1	do.	C,W	S	Do.
130	238.0	do.	C,W	--	Do.
131	170	d/	C,W	S	Reported strong supply of hard water.
132	177.0	May 10, 1939	C,W	D,S	Reported strong supply of soft water.
133	280	d/	C,W	D,S	Do.
134	98.7	May 31, 1939	C,W	D,S	Do.
135	91.4	do.	C,W	D,S	Do.
136	97.2	do.	C,W	D,S	Reported strong supply of hard water.
137	--	June 6, 1939	--	D,S	Measured flow, 700 gallons a minute from four openings under rock ledge. Temperature 71°F.
138	--	June 13, 1939	--	S	"Pecan Spring Two". Measured flow, 125 gallons a minute from one opening.
139	--	--	--	S	"Pecan Spring". Estimated flow, 2,000 gallons a minute from one opening.
140	70.6	June 15, 1939	C,W	D,S	Reported strong supply of soft water.
141	77.7	do.	C,W	D,S	Do.
142	53.5	do.	C,W	D,S	Do.
143	31.06	d/	C,W	D,S	Do.
144	177	d/	C,W	D,S	Reported strong supply for Juno post office and store.
145	30.2	June 31, 1939	C,W	D,S	Reported strong supply of soft water.
146	--	--	--	S	"Stein Springs". Reported flow, 5 gallons a minute from gravel. Temperature, 72° F.
147	--	May 30, 1939	--	D,S	"Beaver Lake Springs". Measured flow, 6 gallons a minute. Temperature, 72°F.
148	55	d/	C,W	D,S	Reported strong supply.
150	39	d/	C,W	D,S	"Bunk House Well". Reported strong supply of hard water.
151	91.6	May 31, 1939	C,W	S	Reported strong supply.
152	136.8	do.	C,W	D,S	"Old Headquarters Well". Reported strong supply of soft water.
153	296.8	do.	C,W	S	Reported strong supply of soft water.

Records of wells and springs in Val Verde County,--Continued

No.	Distance from Comstock	Owner	Driller	Topographic situation	Date completed	Depth of well (in.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
154	40 miles north	C. B. Hudspeth	-- Danials	Hillside	1938	308	--	1
155	41 miles north	do.	--	do.	1916	216	--	2
d/156	43 miles north	Mrs. B. Glasscock	--	do.	1932	125	--	--
157	42 miles north	do.	--	do.	--	95	--	1.6
158	40 miles north	T. L. Drisdale	--	do.	1879	90	--	--
159	38 miles north	J. O. Taylor	F. B. Rutledge	do.	1909	100	--	1
d/160	37 miles north	do.	--	Flat	1934	130	--	--
162	36 miles north	do.	--	Hillside	1904	120	--	1
d/163	36 miles northeast	do.	--	do.	--	147	--	--
164	31 miles northeast	George Whitehead	--	Hilltop	1912	390	--	--
d/165	do.	H. Whitehead	--	Bottom of hill	1921	--	--	--
d/166	38 miles northeast	Topsy Whitehead	--	Hillside	1931	350	--	--
d/167	39 miles northeast	L. D. Whitehead	--	Hilltop	1910	400	--	--
d/168	44 miles northeast	Lee Whitehead	--	Hillside	1930	360	--	--

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/202	50 miles north	F. H. Whitehead	--	Hillside	1918	320	--	0.8
203	do.	do.	--	do.	1920	300	--	1
d/204	49 miles north	do.	--	Hilltop	1937	300	--	--
d/205	do.	do.	--	do.	1936	260	--	--
206	48 miles north	do.	--	Hillside	1937	360	--	--
d/207	46½ miles north	Topsy Whitehead	--	do.	1937	325	--	0.8
208	48 miles north	do.	--	do.	--	350	--	--
d/209	do.	Chas. Whitehead	--	do.	1910	370	--	0.6

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

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

No.	Depth below measuring point (ft.)	Date of measurement	Pump and power b/	Use of water	Remarks
154	300.1	May 31, 1939	C,W	S	Reported strong supply of soft water.
155	212.0	do.	C,W	S	"County Line Well". Reported strong supply of soft water.
156	110	May 30, 1939	C,W	D,S	Reported strong supply of hard water.
157	82.0	do.	C,W	D,S	Reported weak supply.
158	81	e/	C,W	D,S	Reported strong supply.
159	93.1	May 30, 1939	C,W	S	Reported strong supply of soft water.
160	115	e/	C,W	S	Reported strong supply of hard water.
162	95.6	May 30, 1939	C,W	D,S	Do.
163	146	e/	C,W	S	"South Well". Reported strong supply of hard water.
164	185	e/	C,W	D,S	Reported strong supply of soft water.
165	--	--	C,W	D,S	Do.
166	301	e/	C,W	S	Reported weak supply.
167	310	e/	C,W	S	Reported strong supply of soft water.
168	320	e/	C,W	D,S	Do.

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
202	220.9	Aug. 16, 1939	C,W	D,S	Reported strong supply.
203	230.5	do.	C,W	D,S	Reported strong supply of hard water.
204	--	--	--	N	Dry well.
205	--	--	--	N	Do.
206	302	e/	C,W	S	Reported weak supply.
207	252.6	Aug. 16, 1939	C,W	S	Reported strong supply.
208	251	e/	C,W	S	Reported weak supply of hard water.
209	217.7	Aug. 16, 1939	C,W	D,S	Reported strong supply of hard water.

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

Records of wells and springs in Val Verde County-Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
210	45 miles north	Chas. Whitehead	--	Hillside	1931	450	--	0.8
d/211	45½ miles north	do.	Al Hughes	Hilltop	1937	270	--	0.8
212	45 miles north	do.	do.	do.	1937	240	--	0.8
213	do.	Whitehead & Wardlow	--	Flat	1915	240	--	0.4
d/214	46 miles north	do.	Cash Oil Co.	Hillside	--	3,503	--	--
d/215	do.	do.	Campbell & Ross	Flat	1938	310	2	--
d/216	45½ miles north	do.	Magnolia Pet. Co.	Hillside	1938	6,725	--	--
217	44 miles north	H. Galloway	J. Galloway	do.	1925	305	--	--
d/218	do.	do.	J. Sharp	--	1935	375	--	--
d/219	do.	do.	J. Galloway	Hilltop	1936	312	--	0.6
222	43 miles north	Whitehead & Wardlow	--	do.	1938	300	--	0.7
d/223	42 miles north	T. E. Rode	--	Hillside	1938	450	--	--
224	41 miles north	do.	C. W. Moore	Hilltop	1909	286	--	1
d/226	42½ miles north	John Galloway	John Galloway	Hillside	1934	300	--	0.8
227	do.	do.	do.	Bottom of hill	1931	300	--	0.7
229	41 miles north	do.	do.	Hilltop	--	600	--	0
231	40 miles north	Emory Davis	--	Hillside	1928	260	--	0.8
d/232	39 miles north	do.	--	Hilltop	1930	520	--	--
d/233	39½ miles north	do.	--	do.	1932	400	--	--
d/234	39 miles north	do.	--	Hillside	1932	290	--	--
d/235	38½ miles north	do.	C. A. Taylor	Flat	1939	--	--	--
d/236	40 miles north	J. E. Quigg	--	Hillside	--	90	--	--
d/237	41 miles north	do.	--Danials	do.	1933	237	--	--
d/238	do.	do.	do.	do.	1939	317	--	--
239	do.	do.	B. Myers	do.	1939	321	--	--
d/240	do.	do.	--Plasker	--	1932	236	--	--

J. M. Frazier, Project Superintendent

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
210	226.1	Aug. 16, 1939	C,[illegible]	D,S	Reported strong supply of herd water. Water level, 231.72, November 2, 1937.
211	193.4	do.	C,[illegible]	S	Reported weak supply of hard water.
212	193.8	do.	C,[illegible]	S	Do.
213	185.7	do.	C,W	S	Well was cleaned in 1937. Reported weak supply.
214	--	--	--	--	Oil test. See log. Well is plugged.
215	279	c/	C,G	--	Oil test. See log.
216	--	--	--	--	Do.
217	233	c/	C,[illegible]	S	Reported strong supply.
218	--	--	--	--	Dry well.
219	235.1	Aug. 22, 1939	C,W	S	Reported strong supply of soft water.
222	244.8	Aug. 8, 1939	C,W	S	Reported weak supply of soft water.
223	280	e/	C,[illegible]	S	Do.
224	240	Aug. 22, 1939	C,W	D,S	Reported strong supply of soft water.
226	168.1	Aug. 8, 1939	C,W	D,S	Reported weak supply of soft water
227	167.9	do.	C,[illegible]	D,S	Reported weak supply of soft water at 125 feet. Water level, 108.12 on November 2, 1937. Measured by G. [illegible] Cromack.
229	272.6	do.	C,[illegible]	S	Reported weak supply of soft water, with taste and odor of sulphur.
231	185.1	do.	C,W	D,S	Reported strong supply of hard water.
232	190	e/	C,[illegible]	D,S	Reported weak supply of hard water.
233	--	--	--	N	Dry well.
234	--	--	--	N	Do.
235	165	e/	--	--	Oil test.
236	--	--	C,W	S	Reported weak supply. Well is natural cavern.
237	--	--	--	N	Dry well.
238	259	e/	C,W	D,S	Reported weak supply. Some oil reported in water.
239	280	e/	C,G	D,S	Do.
240	--	--	--	N	Dry well.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (in.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/241	41 miles north	J. E. Quigg	--	Hillside	1937	242	--	--
244	44 miles north	D. Harrison	--	do.	--	266	--	0.5
d/245	do.	do.	Al Hughes	do.	1939	313	--	--
246	43 miles north	do.	--	do.	1939	230	--	--
247	40 miles north	Felix Harrison	--Danials	do.	1935	434	--	1.2
d/248	do.	do.	--Moore	In draw	1908	590	--	1
d/249	41 miles north	G. Whitehead	--	Hillside	1929	450	--	--
d/250	do.	do.	--	do.	1930	360	--	0.4
251	42 miles north	do.	--	Bottom of hill	1904	189	--	1
252	do.	W. Fawcett	--	Hilltop	1918	250	--	2
253	do.	do.	Al Hughes	--	1938	243	6	1
d/255	43 miles north	do.	--	Head of draw	--	Spring	--	--
d/256	do.	E. K. Fawcett	Al Hughes	Hillside	1932	270	--	--
257	40 miles north	do.	--	do.	1912	270	--	1
258	do.	do.	--	Flat	1894	201	--	--
259	38 miles north	do.	--	Side of Creek	--	Spring	--	--
d/260	36½ miles north	do.	--	River bank	--	Spring	--	--
d/261	do.	do.	--	do.	--	Spring	--	--
d/262	36 miles north	do.	--	do.	--	Spring	--	--
d/263	37 miles north	do.	--	Bank of creek	--	Spring	--	--
d/264	do.	do.	--	do.	--	Spring	--	--
265	36½ miles north	do.	--	Creek bottoms	--	Spring	--	--
d/266	3[illegible] do.	do.	--	Creek bank	--	Spring	--	--
d/267	36 miles north	do.	--	do.	--	Spring	--	--
268	do.	do.	--	Creek bottoms	--	Spring	--	--
d/269	do.	do.	--	do.	--	Spring	--	--

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
241	--	--	--	N	Dry well.
244	237.9	Aug. 18, 1939	C,W	D,S	Reported weak supply of soft water.
245	[illegible]	--	--	N	Dry well.
246	205.3	Aug. 10, 1939	--	S	Reported strong supply.
247	110.0	Aug. 22, 1939	C,W	D,S	Reported weak supply of hard water.
248	135.3	do.	C,W	D,S	Do.
249	310	e/	C,W	S	Reported strong supply.
250	250.9	Aug. 23, 1939	C,W	S	Do.
251	176.4	June 23, 1939	C,W	D,S	Reported weak supply.
252	203.7	Aug. 23, 1939	C,W	--	Reported weak supply of soft water.
253	196.6	do.	C,W	D,S	Reported strong supply of soft water.
255	--	do.	--	S	Measured flow, one gallon a minute from one opening in limestone. Temperature, 74° F.
256	175	e/	C,W	D,S	Reported strong supply of soft water.
257	189.1	Aug. 23, 1939	C,W	D,S	Reported weak supply of soft water.
258	190	e/	C,W	D,S	Do.
259	--	--	--	S	Estimated flow, 1,500 gallons a minute from many openings in base of limestone bluff.
260	--	--	--	S	Estimated flow, 2,000 gallons a minute from many openings in limestone cliff. Temperature, 72° F.
261	--	--	--	S	Estimated flow, 8,000 gallons a minute from many opening in base of limestone cliff. Temperature 72°F.
262	--	--	--	S	Estimated flow, 2,000 gallons a minute from three openings in limestone. Temperature 74° F.
263	--	June 21, 1939	--	S	Measured flow, 115 gallons a minute. Temperature 72° F.
264	--	do.	--	S	Measured flow, 13 gallons a minute from base of bluff. Temperature, 72° F.
265	--	do.	--	S	Measured flow, 25 gallons a minute from base of bluff. Temperature, 72° F.
266	--	do.	--	S	Measured flow, 25 gallons a minute. Temperature, 72° F.
267	--	do.	--	S	Measured flow, 15 gallons a minute from three opening in limestone. Temperature, 72° F.
268	--	do.	--	S	Measured flow, 35 gallons a minute. Temperature, 72° F.
269	--	do.	--	S	Measured flow, 28 gallons a minute from four openings in base of cliff. Temperature, 72° F.

Records of wells and springs in Val Verde County--County-Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/270	35½ miles north	E. F. Fawcett	--	Bank of creek	--	Spring	--	--
271	do.	do.	--	do.	--	Spring	--	--
d/272	do.	do.	--	do.	--	Spring	--	--
d/273	do.	do.	--	Side of canyon	--	Spring	--	--
d/274	do.	do.	--	Creek bank	--	Spring	--	--
275	do.	do.	--	do.	--	Spring	--	--
d/276	35 miles north	do.	--	do.	--	Spring	--	--
d/277	do.	do.	--	do.	--	Spring	--	--
d/278	do.	do.	--	do.	--	Spring	--	--
d/279	do.	do.	--	do.	--	Spring	--	--
d/280	37 miles north	E. K. Fawcett	A. L. Hughes	Top of ridge	1937	525	--	--
d/281	35 miles north	do.	do.	Hilltop	1937	475	--	--
d/282	34 miles north	do.	--	River bottoms	--	Spring	--	--
d/283	33 miles north	do.	--	Bank of river	--	Spring	--	--
284	31½ miles north	A. Madison	--	do.	--	Spring	--	--
d/285	31 miles north	do.	--	River bed	--	Spring	--	--
d/286	do.	do.	--	Bank of river	--	Spring	--	--
d/287	30 miles north	do.	--	do.	--	Spring	--	--
d/288	33 miles north	E. K. Fawcett	A. L. Bricker	Hillside	1919	116	6	--
d/289	34 miles north	do.	M. D. Danials	Hilltop	1927	129	6	--
d/290	35 miles north	do.	do.	do.	1927	169	--	--
d/291	do.	do.	-- Moore	Hillside	1914	137	6	--
d/292	37 miles north	Bob Miers	--	do.	1932	475	--	--
d/293	35 miles north	do.	--	do.	1920	520	--	--
294	32 miles north	do.	--	Flat	--	320	--	--
296	35 miles north	do.	--	do.	--	309	--	--

J. M. Frazier, Project Superintendent

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
270	--	June 21, 1939	--	S	Measured flow, 560 gallons a minute from one opening in base of cliff. Temperature, 72°F.
271	--	do.	--	S	Measured flow, 55 gallons a minute from two openings in base of cliff. Temperature, 72° F.
272	--	do.	--	S	Measured flow, 25 gallons a minute from one opening in base of cliff. Temperature, 72° F.
273	--	do.	--	S	Measured flow, 50 gallons a minute from side of limestone cliff. Temperature, 72° F.
274	--	do.	--	S	Measured flow, 80 gallons a minute from base of cliff. Temperature, 72° F.
275	--	do.	--	S	Measured flow, 350 gallons a minute from base of cliff. Temperature, 72° F.
276	--	do.	--	S	Measured flow, 5 gallons a minute from base of cliff. Temperature, 72° F.
277	--	June 22, 1929	--	S	Measured flow, 10 gallons a minute from several opening in base of cliff. Temperature, 72° F.
278	--	do.	--	S	Measured flow, 60 gallons a minute from several opening in base of cliff. Temperature, 72° F.
279	--	--	--	S	Reported flow, one-half gallon a minute. Temperature, 72° F.
280	385	-e/	C,W	S	Reported strong supply.
281	--	--	--	--	Dry well.
282	--	--	--	S	"Dolan Springs". Reported flow, 125 gallons a minute from crevice in limestone.
283	--	--	--	S	"Dolan Springs". Reported flow, 200 gallons a minute from one opening in limestone Temperature 72°F.
284	--	June 27, 1939	--	S	Measured flow, 200 gallons a minute from one opening in limestone. Temperature, 72° F.
285	--	--	--	S	Reported flow, 500 gallons a minute from one opening in limestone. Temperature, 72° F.
286	--	--	--	S	Reported flow, 50 gallons a minute from two openings in base of cliff. Temperature, 72° F.
287	--	--	--	S	Reported flow, 5 gallons a minute from openings in bluff. Temperature, 72° F.
288	104	e/	C,W	S	Reported strong supply.
289	43	e/	C,W	S	Do.
290	120	e/	C,W	S	Do.
291	120	e/	C,W	D,S	Do.
292	350	e/	C,W	S	Reported weak supply.
293	350	e/	C,W	S	Do.
294	271	Aug. 14, 1939	C,W	D,S	Do.
296	235	e/	C,W	D,S	Do.

Records of wells and springs in Val Verde County-Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
297	36 miles north	F. L. Davis	--	Hillside	--	355	--	--
298	do.	do.	--	do.	1936	390	--	--
d/299	37 miles north	D. Dunbar	--	do.	1920	300	--	--
300	34 miles north	Chris Hutto	--	do.	1928	650	--	1.2
301	32 miles north	Chris & Carl Hutto	E. Mills	do.	1937	365	--	1
302	30 miles north	Carl Hutto	-- Moore	Bottom of Hill	1913	400	--	0.6
303	30 miles northeast	Ace Bricker	--	Flat	--	500	--	--
304	28 miles northeast	C. T. Couples	--	Hilltop	--	600	--	--
d/305	26 miles north	O. Brotherton	Forsland Oil Co.	do.	1923	2,928	6	--
306	27 miles north	J. Carruthers	--	do.	1900	300	--	--
307	28 miles north	H. Miers	--	do.	1938	690	--	--
309	28 miles north	do.	--	Hillside	--	600	--	2
d/310	27 miles north	do.	J. Daniels	Hilltop	1931	700	--	--
311	26 miles north	do.	--	do.	1902	700	--	--
312	27 miles north	A. Madison	--	Hillside	1925	700	--	1
313	26 miles north	Tom Bright	--	Bank of river	--	Spring	--	--
d/314	do.	do.	--	do.	--	Spring	--	--
d/315	25 miles north	R. Gillis	--	River bed	--	Spring	--	--
316	24 miles north	do.	--	do.	--	Spring	--	--
317	23 miles north	L. L. Hinds	--	Bank of river	--	Spring	--	--
d/318	do.	do.	--	Side of draw	--	Spring	--	--
d/319	20 miles north	J. C. Mayfield	--	Bank of river	--	Spring	--	--
d/320	do.	do.	--	River bed	--	Spring	--	--
d/321	19 miles north	do.	Douglas Oil Co.	Hillside	1927	1,492	--	--

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

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

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
297	283.8	Aug. 7, 1939	C,W	D,S	Reported weak supply.
298	276.6	Aug. 14, 1939	C,W	D,S	Reported weak supply.
299	203	e/	C,W	D,S	Reported strong supply of soft water.
300	223.5	Aug. 17, 1939	C,W	D,S	Reported weak supply of soft water.
301	293.2	do.	C,W	D,S	Reported strong supply of soft water.
302	292.7	do.	C,W	D,S	Do.
303	228	e/	C,W	D,S	Do.
304	357	e/	C,W	--	Reported weak supply of soft water.
305	325	e/	C,W	D,S	Reported strong supply of soft water. Well was first drilled as a oil test. See log.
306	481	e/	C,W	D,S	Reported weak supply of soft water.
307	430	e/	C,W	S	Reported strong supply of soft water.
309	403.0	Aug. 15, 1939	C,W	S	Reported weak supply of soft water.
310	637	e/	C,W	S	Reported strong supply of soft water.
311	450	e/	C,W	D,S	Do.
312	99.5	June 28, 1939	C,W	D,S	Do.
313	--	June 28, 1939	--	S	Measured flow, 6 gallons a minute from two openings in limestone. Temperature, 72° F.
314	--	do.	--	S	Measured flow, one-half gallons a minute from opening in limestone. Temperature, 72° F.
315	--	--	--	S	Reported flow, 5,000 gallons a minute from nine openings in limestone. Temperature, 72° F.
316	--	July 18, 1939	--	S	Measured flow, 80 gallons a minute from three openings in limestone. Temperature, 72° F.
317	--	July 19, 1939	--	S	Measured flow, one gallon a minute from one opening. Temperature, 74° F.
318	--	do.	--	S	"Little Satan Spring". Measured flow, three gallons a minute. Temperature, 74° F.
319	--	July 14, 1939	--	S	Measured flow, 25 gallons a minute from one opening in a crevice. Temperature, 72°,F.
320	--	do.	--	S	Measured flow, 55 gallons a minute from one opening in limestone. Temperature, 74° F.
321	--	--	--	--	Oil test. See log.

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

Records of wells and springs in Val Verde County--Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/322	19 miles north	J. C. Mayfield	--	Bank of river	--	Spring	--	--
d/323	do.	do.	--	do.	--	Spring	--	--
d/324	18½ miles north	do.	--	do.	--	Spring	--	--
d/325	do.	do.	--	do.	--	Spring	--	--
326	19 miles north	do.	--	do.	--	Spring	--	--
d/327	do.	do.	--	do.	--	Spring	--	--
d/328	22 miles north	L. L. Hines	--	Side of draw	--	Spring	--	--
d/329	21 miles north	R. Cauthorn	--	Bank of river	--	Spring	--	--
d/330	do.	do.	--	do.	--	Spring	--	--
d/331	do.	do.	--	do.	--	Spring	--	--
332	do.	do.	--	In draw	--	Spring	--	--
333	21½ miles north	do.	--	Bank of river	--	Spring	--	--
d/334	do.	do.	--	do.	--	Spring	--	--
d/335	do.	do.	--	River bottoms	--	Spring	--	--
336	do.	do.	--	Bank of river	--	Spring	--	--
d/337	22 miles north	do.	--	do.	--	Spring	--	--
d/338	do.	do.	--	do.	--	Spring	--	--
d/339	do.	do.	--	do.	--	Spring	--	--
d/340	do.	do.	--	do.	--	Spring	--	--
d/341	do.	do.	--	do.	--	Spring	--	--
342	do.	do.	--	do.	--	Spring	--	--
d/343	do.	do.	--	do.	--	Spring	--	--
d/344	do.	do.	--	do.	--	Spring	--	--
345	19 miles north	Sam Smith	--	do.	--	Spring	--	--
346	18½ miles north	do.	--	In draw	--	Spring	--	--
347	21 miles north	-- Markwood	--	Hillside	1920	300	--	1.3

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
322	--	July 11, 1939	--	S	Measured flow, 3 gallons a minute from one opening in limestone. Temperature, 74° F.
323	--	do.	--	S	Measured flow, 20 gallons a minute from one opening in limestone. Temperature, 74° F.
324	--	do.	--	S	Measured flow, 120 gallons a minute from one opening in limestone. Temperature, 74° F.
325	--	do.	--	S	Measured flow, 160 gallons a minute from one opening in limestone.
326	--	do.	--	S	Measured flow, 46 gallons a minute from one opening in limestone. Temperature, 74° F.
327	--	--	--	S	Reported flow, 20 gallons a minute from one opening in limestone. Temperature, 74° F.
328 T	--	July 19, 1939	--	S	"Big Satan Spring". Measured flow, 5 gallons a minute from one opening. Temperature, 74° F.
329	--	July 7, 1939	--	S	Measured flow, 80 gallons a minute from three openings in limestone. Temperature, 72°, F.
330	--	July 12, 1939	--	S	Measured flow, 675 gallons a minute from one opening in limestone. Temperature, 72° F.
331	--	do.	--	S	Measured flow, 4 gallons a minute from two openings in limestone. Temperature, 74° F.
332	--	do.	--	S	Measured flow, 55 gallons a minute from one opening in limestone. Temperature, 74° F.
333	--	do.	--	S	Measured flow, 135 gallons a minute from one opening in limestone. Temperature, 73° F.
334	--	do.	--	S	Measured flow, 35 gallons a minute from limestone. Temperature, 73° F.
335	--	--	--	S	Reported flow, 1,700 gallons a minute from limestone. Temperature, 75° F.
336	--	July 13, 1939	--	S	Measured flow, 220 gallons a minute from crevice in limestone. Temperature, 72° F.
337	--	do.	--	S	Measured flow, 540 gallons a minute from one opening in limestone. Temperature, 72° F.
338	--	do.	--	S	Measured flow, 340 gallons a minute from one opening in limestone. Temperature, 72° F.
339	--	do.	--	S	Measured flow, 70 gallons a minute from one opening in limestone. Temperature, 72° F.
340	--	do.	--	S	Measured flow, 275 gallons a minute from three openings in limestone. Temperature, 72° F.
341	--	--	--	S	Measured flow, 490 gallons a minute from one crevice in limestone. Temperature, 72° F.
342	--	--	--	S	Reported flow, 2,500 gallons a minute from four openings in limestone. Temperature, 72° F.
343	--	July 14, 1939	--	S	Measured flow, 40 gallons a minute from one opening in limestone. Temperature, 72° F.
344	--	do.	--	S	Measured flow, 135 gallons a minute from one crevice. Temperature, 72° F.
345	--	June 7, 1939	--	S	Measured flow, 260 gallons a minute from three opening in limestone. Temperature, 74° F.
346	--	June 7, 1939	--	S	Measured flow, 125 gallons a minute from two opening in limestone. Temperature, 72° F.
347	293.6	Sept. 5, 1939	C,W	D,S	Reported strong supply of soft water.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
d/348	15 miles north	G. H. & S. H. Parker	--	--	1938	478	6	--
d/349	16 miles north	R. Gillis	--	Hilltop	1930	1,160	6	--
d/350	18 miles north	H. Gillis	--	do.	1932	600	--	--
d/351	16 miles north	R. Gillis	--	In draw	1909	420	--	--
352	18 miles northeast	B. Lewis	--	Hillside	--	430	--	--
353	14 miles northeast	do.	--	Flat	--	19	36	--
356	12 miles northeast	L. Rust	--	do.	--	140	--	1
d/358	7 miles northeast	do.	W. H. Bowers	--	1932	--	--	--
360	9 miles east	B. S. Harrison	Plateau Oil Co.	Hillside	1926	3,507	--	1
362	11 miles east	F. W. Herbst	--	Flat	1914	280	--	--
364	10 miles southeast	do.	--	do.	--	17	48	2
365	11 miles ssoutheast	do.	--	do.	--	100	12	0.5
d/368	9 miles southeast	Jim White	--	do.	1938	190	5-3/8	--
369	8 miles southeast	do.	--	do.	1900	18	48	3
d/402	4½ miles east	-- Morrow	--	--	--	260	5	--
403	5½ miles east	C. H. Adams	--	do.	1934	500	4	--
404	4½ miles east	E. L. Heart	--	do.	1905	160	5½	--
407	3½ miles east	John Green	J. T. Crawford	do.	1935	145	8	0.6
413	3½ miles east	S. H. Barton	--	do.	1932	360	--	1
d/414	3 miles southeast	W. J. Barns	-- Terrell	Hilltop	1929	790	5-3/8	--
d/415	2½ miles south	Jim White	--	Flat	--	--	18	4.8
418	3 miles southwest	F. L. Childs	--	River bottoms	1928	51	24	0.5
421	3 miles west	N. Briggs	N. Briggs	Creek bottoms	1928	8	48	--
426	3½ miles west	W. S. Stevenson	--	--	1927	4,500	8	--
427	4½ miles west	do.	--	Flat	--	520	--	--
430	2½ miles west	F. Cantu	--	do.	1903	20	36	0

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
348	280	c/	C,W	S	Reported strong supply of soft water.
349	280	c/	C,W	D,S	Reported strong supply. Cased with 6-inch casing to 300 feet.
350	250	c/	C,W	S	Reported strong supply of soft water.
351	292	c/	C,W	D,S	Do.
352	282.1	Apr. 3, 1939	C,W	D,S	Do.
353	10.7	do.	C,W	S	Dug well. Reported weak supply of hard water.
356	128.9	do.	C,W	S	Reported strong supply of soft water.
358	--	--	--	--	Oil test. See log.
360	102.9	July 27, 1939	C,-	D,S	Reported strong supply of hard water. Originally drilled as oil test. See log.
362	8	c/	C,-	D,S	Reported strong supply of soft water. Water has sulphur taste and milky color.
364	16.0	July 31, 1939	H,B	D,S	Reported strong supply of soft water.
365	26.3	do.	C,-	S	Reported strong supply of soft water. Water has taste of sulphur.
368	20	c/	C,-	S	Reported strong supply of soft water.
369	16.2	July 28, 1939	C,E	D	Do.
402	68	c/	--	--	Iron casing to bottom.
403	190	c/	C,W,G	D,S	Reported strong supply of soft water.
404	36	c/	C,W	D,S	Reported strong supply of soft water. Supplies dairy herd.
407	55.3	July 27, 1939	C,W	D,S	Reported strong supply of soft water.
413	133.4	July 31, 1939	C,W	S	Reported strong supply of hard water. Sulphur taste and odor.
414	128.4	do.	--	--	Do.
415	13.4	July 28, 1939	C,W,G	D,S	Reported strong supply of soft water.
418	24.5	Apr. 15, 1939	C,W	D	Do.
421	6	c/	C,E	D,S	Do.
426	--	--	--	S	Reported strong supply. Oil test. Plugged back to 500 feet.
427	445	c/	C,-	D,S	Reported strong supply of soft water.
430	6.6	Apr. 6, 1939	C,-	D,S	Dug well. Has been dry three times in 15 years.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
431	2 miles west	F. Cantu	--	Flat	--	Spring	--	--
433	1 mile northeast	City of Del Rio	--	Creek bottoms	--	Spring	--	--
435	2 miles northeast	Jap Lowe	--	do.	--	Spring	--	--
d/436	2½ miles north	W. Lawson	--	Flat	--	50	--	--
438	4½ miles north	W. S. Stephenson	--	Hilltop	--	480	--	0.5
d/439	5½ miles north	State Highway Dept.	-- Danials	Flat	1939	325	6	1.4
440	6½ miles north	C. L. Kelley	N. C. Ardwell	Hillside	1919	554	--	--
d/441	6¾ miles northwest	F. Greenwood	G. Crystal	--	1936	401	--	--
442	7 miles north	do.	do.	Hillside	1938	500	--	1
443	8½ miles north	G. C. Pool	--	Creek bottoms	--	Spring	--	--
445	10 miles north	do.	--	Hilltop	1927	220	--	1.2
446	13 miles north	H. Miers	--	Flat	--	500	--	--
447	12 miles north	G. H. Parker	--	do.	1910	480	--	1.5
448	14 miles north	C. P. & L. Co.	--	Creek bottoms	--	Spring	--	--
449	15 miles north	do.	--	Hilltop	1929	240	6	--
450	16 miles north	do.	--	River bank	--	River	--	--
d/451	17 miles north	J. C. Mayfield	S. A. McCaskey	Head of draw	1927	3,502	8	--
452	do.	Sellers Bros.	--	Hillside	1920	450	--	1
455	16 miles northwest	do.	--	Hilltop	1919	620	--	--
454	14 miles northwest	R. Sellers	--Danials	Hillside	1921	100	--	1
d/455	13 miles northwest	do.	--	Bottom of draw	--	Spring	--	--
456	11 miles northwest	F. Kirtchgraber	--	Hillside	--	600	--	0.5
458	do.	J. Jones	--	Bank of river	--	Spring	--	--
459	9 miles northwest	do.	--	Hilltop	1923	540	--	1
d/460	8 miles northwest	W. S. Stevenson	-- Danials	--	1939	320	--	--
d/461	6½ miles northwest	J. S. Nixon	--	Creek bottoms	--	520	6	--

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
431	--	Apr. 6, 1939	--	D,S,I	Measured flow, 105 gallons a minute from crevice in limestone.
433	--	--	--	D,I	"San Felipe Spring". Measured flow, 55,000 gallons a minute average eight measurements, from seven open-
435	--	Apr. 4, 1939	--	S	"San Felipe Spring". Measured ings in limestone, flow, 60 gallons a minute from three openings.
436	23	e/	C,W	D,S	Reported strong Head spring of the "San Felipe" supply of soft water.
438	134.6	July 24, 1939	C,W	S	Do.
439	107	June 24, 1939	--	I	Do.
440	160	do.	C,W	--	Do.
441	150	do.	C,W	S	Do.
442	153.9	do.	C,W	D,S	Do.
443	--	July 26, 1939	--	S	"Pool Spring". Measured flow, one gallon a minute from limestone. Was dry in May, 1939.
445	196.4	do.	C,W	D,S	Reported strong supply of soft water.
446	200	e/	C,W	D,S	Reported strong supply.
447	208.3	Sept. 5, 1939	C,W	D,S	Reported strong supply of soft water.
448	--	Apr. 11, 1939	--	--	Measured flow, 250 gallons a minute from four openings in limestone. Temperature, 70° F.
449	150	e/	C,E	D,S	Reported supplies s x families.
450	--	--	--	--	Sample of water from Devils River. See table of chemical analyses.
451	450	e/	C,W	D,S	Reported strong supply. Oil test. See log.
452	287.4	July 20, 1939	C,W	D,S	Reported strong supply of hard water.
453	420	e/	C,W	D,S	Reported strong supply of soft water.
454	83.1	July 20, 1939	C,W	D,S	Do.
455	--	--	--	S	"Castle Canyon Spring". Temperature, 78° F.
456	109.9	July 24, 1939	C,W	D,S	Reported strong supply.
458	--	July 20, 1939	--	S	Measured flow, 275 gallons a minute from two open- ings in limestone. Temperature, 74° F.
459	287	do.	C,W	D,S	Reported strong supply of soft water.
460	280	e/	C,W	S	Do.
461	Flows	--	--	--	Reported flow, 4 gallons a minute.

Records of wells and springs in Val Verde County--Continued

No.	Distance from Del Rio	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)	Height of measuring point above ground (ft.) a/
462	6½ miles northwest	J. S. Nixon	--	Hilltop	--	520	3	--
463	7½ miles west	do.	--	River bottom	--	Spring	--	--
465	12 miles northwest	F. Cochran	-- Crystal	Hilltop	1938	450	--	0.5
466	13 miles northwest	do.	--	Hillside	1900	650	6	1
467	15 miles northwest	Holman Est.	--Roberts	Hilltop	1924	451	--	0.8
d/468	15½ miles northwest	do.	E. T. Williams	Flat	1927	2,965	--	--
d/469	18 miles northwest	do.	-- Mills	--	1937	451	--	--
d/470	20 miles northwest	do.	-- Danials	Bottom of hill	1939	438	--	--
471	18½ miles northwest	S.P.R. R.	S. P. R. R.	Flat	1900	525	--	--
d/472	19½ miles northwest	Homer Holman	--	do.	1909	380	--	--
473	20 miles northwest	R. Gillis	--	do.	--	--	--	0.8
474	21 miles northwest	P. H. McNutt	--	Hilltop	1938	650	--	1
475	22 miles northwest	do.	--	Hillside	--	640	--	1
476	23 miles northwest	do.	--	Bottom of hill	1931	690	--	1.5
477	27 miles northwest	Kelley Est.	T. Crawford	Hilltop	1936	835	--	--
478	do.	Humphrey & Kelly	-- Edwards	Flat	1905	410	--	--
479	do.	Mrs. R. L. Fawcett	J. O. Brown	Hilltop	1924	750	--	--
d/480	do.	W. E. Carson	--	Flat	1924	700	--	--
d/481	do.	-- Robinson	--	Hilltop	--	600	--	1
d/482	26 miles northwest	do.	--	Hillside	--	450	--	0.8
483	25 miles northwest	J. T. Mayfield	--Burchard	do.	1919	580	--	2
484	23 miles northwest	J. F. Grant	--Danials	Hilltop	1930	500	--	0.7
485	do.	do.	--	Bottom of draw	--	Spring	--	--

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

b/ B, bucket, C, cylinder; W, windmill; G, gasoline; E, electric; H, hand; number indicate horsepower.

No.	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Remarks
462	Flows	--	--	D,S	Reported flow, one gallon a minute. Sulphur taste and odor.
463	--	Apr. 10, 1939	--	S,I	Measured flow, 450 gallons a minute from one opening in limestone.
465	242.4	Aug. 1, 1939	C,W	S	Reported strong supply of soft water.
466	19.8	do.	C,W	D,S	Do.
467	237.0	do.	C,W	S	Do.
468	--	--	--	--	Oil test. See log.
469	240	e/	C,W	S	Reported strong supply.
470	225	e/	C,W	S	Do.
471	250	e/	C,W	D,S	Do.
472	280	e/	C,W	D,S	Do.
473	182.5	July 24, 1939	C,W	D,S	Do.
474	137.8	do.	C,W	S	Do.
475	229.5	do.	C,W	S	Do.
476	313.9	do.	C,W	S	Do.
477	200	e/	C,W	D,S	Do.
478	230	e/	C,W	--	Reported strong supply. Supplies water for Automobile Service Station.
479	300±	e/	C,W	--	Do.
480	160	e/	C,W	P	Reported weak supply.
481	154.3	Sept. 7, 1939	C,W	S	Reported strong supply.
482	154.5	do.	C,W	S	Reported weak supply.
483	188.2	Apr. 2, 1939	C,W	D,S	Reported strong supply of soft water.
484	198.8	do.	C,W	D,S	Do.
485	--	--	--	S	"Goodenough Spring". Measured average flow, 100,000 gallons a minute from one opening at base of limestone cliff.

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

Table of Drillers' Logs, Val Verde County, Texas

Driller's log of well 2 [illegible]

Iko Kampman, trustee, Bossett Ranch, 25 miles northwest of Langtry.

	Thickness (feet)	Depth (feet)
White lime	125	125
Yellow lime	245	370
Blue lime	25	395
Sandy gray lime	20	415
Blue lime	10	425
Sandy gray lime	25	450
Gray lime	55	505
Brown lime	30	535
Gray lime	10	545
Brown lime	20	565
Gray lime	15	580
Brown lime	20	600
Gray lime	59	659
Blue lime	16	675
Shale, lime and shells	10	685
Blue shale	2	687
Water sand	3	690
Blue shale	7	697
Broken lime	3	700
Blue shale	14	714
Broken lime	6	720
Gray lime	6	726
Sandy shale	21	747
Blue shale	5	752
Gray lime	5	757
Blue shale	18	775
White lime	5	780
Blue shale and shells	10	790
Red rock	5	795
Gray lime	8	803
Red rock	7	810
Lime	2	812
Red rock	8	820
Gray lime	5	825
Lime	10	835
Gray lime	5	840
Blue shale	12	852
Gray lime	5	857
Blue shale	13	870
Gray lime	2	872
Blue shale	26	898
Lime	2	900
Blue shale	15	915
Sandy shale	10	925
Shale	30	955
Lime	5	960
Gray lime	22	982
Blue shale	6	988
Gray lime	47	1035
Dark shale	3	1038
Gray lime	17	1055
Brown lime	15	1070

Driller's logs of well 2--Continued

	Thickness (feet)	Depth (feet)
Gray shale	5	1075
Brown lime	9	1084
Blue shale	4	1088
Gray lime	37	1125
Blue shale	35	1160
Yellow clay	10	1170
Yellow shale	50	1220
Yellow slate	20	1240
Blue shale	438	1678
Brown lime	10	1688
Blue shale	317	2005
Blue shale and shells	5	2010
Blue shale	360	2370
Blue shale and shells	30	2400
Blue shale	820	3220
Blue shale and shells	15	3235
Blue shale	110	3345
Gray shale	45	3390
Blue shale	170	3560
Black shale	200	3760
Blue shale	250	4010
TOTAL DEPTH		4010

CASING RECORD: 1097 feet of 12½-inch; 1763 feet of 10-inch; 2791 feet of 8¼-inch, and 3800 feet of 6-5/8-inch casing.

Driller's log of well 13

Mills Ranch tract, 29 miles north of Langtry.

	Thickness (feet)	Depth (feet)
White limestone	140	140
Gray lime	15	155
Very hard gray lime	25	180
Edwards lime	75	255
Hard sand	10	265
Slate	10	275
Hard Edwards lime	18	293
Slate	2	295
Edwards lime	13	308
Slate	2	310
Edwards lime	33	343
Sandy lime	4	347
Edwards lime	47	394
Sandy lime	6	400
Edwards lime	125	525
Soft bluish sand	55	580
Sandy shale	195	775
Gray lime	31	806
Broken lime and slate	12	818
Slate	282	1100
Gray lime	60	1160
Slate	25	1185
Gray lime	100	1285

(Continued on next page)

Table of Drillers' Logs, Val Verde County-Continued

Driller's log of well 13-Continued

	Thickness (feet)	Depth (feet)
Slate	110	1395
Sandy shale	35	1430
Slate	595	2025
Sandy hard shells	75	2100
Salt water	20	2395
Brown sand	35	2430
Black lime	11	2441
Hard brown sand	5	2446
Hard gray lime	2	2448
Slate and shale	34	2482
Hard lime	7	2489
Black slate	9	2498
TOTAL DEPTH		6790

CASING RECORD: 423 feet of 15½-inch; 1029 feet of 12½-inch; 1989 feet of 10-inch; and 2507 feet of 8¼-inch casing.

Driller's log of well 58

French Ingram tract, 7 miles north of Langtry, drilled by Phantom Oil Company.

Surface soil	7	7
Brown lime	13	20
Broken lime	120	140
Lime	10	150
Sandy broken lime	65	215
Flint	2	217
Broken lime	51	268
Water sand	30	298
Water lime	17	315
Broken lime	50	365
Gray lime	130	495
Brown lime	35	530
Gray lime	250	780
Blue shale	3	783
Gray lime	5	788
Blue shale	2	790
Gray lime	30	820
Blue shale	5	825
Broken lime and water sand	15	840
Gray lime	130	970
Blue shale	15	985
Gray lime	30	1015
Blue shale and lime	30	1045
Gray lime	20	1065
Blue shale	5	1070
Gray lime	145	1215
Broken lime	20	1235
Brown lime	110	1345
Broken brown lime	70	1415
Brown lime	25	1440
Broken lime	40	1480
Gray lime	35	1515
Blue shale	10	1525

Driller's log of well 58-Continued

	Thickness (feet)	Depth (feet)
Sandy gray lime	10	1535
Gray lime	15	1550
Sandy gray lime	12	1562
Gray water sand	13	1575
Gray lime	3	1578
Blue shale	12	1590
Red shale	5	1595
Sandy red shale	8	1603
Red rock	7	1610
Sandy red shale	6	1616
Gray lime	9	1625
Broken lime	45	1670
Lime	10	1680
Black lime	7	1687
Black shale	18	1705
Black lime	48	1753
Gray lime	9	1762
Black lime	13	1775
Sandy gray lime	15	1790
Black shale	2	1792
Black lime	61	1853
Sandy black lime	22	1875
Black lime and broken shale	55	1930
Black broken lime	25	1955
Black shale and lime	43	1998
Sandy black lime	3	2001
TOTAL DEPTH		3001

CASING RECORD: 785 feet of 15½-inch; 1678 feet of 12½-inch; 2541 feet of 10-inch and 275 feet of 8-inch casing.

Driller's log of well 214

Whitehead and Wardlow tract, 46 miles north of Del Rio.

Lime	270	270
Brown lime and slate	10	280
Sand	6	286
Lime and white slate	454	740
Sandy shale	55	795
Green shale	15	810
Sand and shale	90	900
Water gravel	10	910
Blue shale	10	920
Red rock	45	965
Blue shale	35	1000
Lime	20	1020
Shale and shell	50	1070
Gray shale	650	1720
Shale and shell	40	1760
White shale	40	1800
TOTAL DEPTH		3503

CASING RECORD: 1560 feet of 10-inch, and 2565 feet of 8¼-inch casing.

Table of Drillers' Logs, Val Verde County--Continued

Driller's log of well 215

Whitehead and Wardlow tract, 46 miles north of Del Rio.

	Thickness (feet)	Depth (feet)
Lime	190	190
Blue shale	100	290
Lime and shale	6	296
Sand	5	301
Lime and shale	9	310
TOTAL DEPTH		310

CASING RECORD: 2-inch tubing to bottom.

Driller's log of well 216

W. E. Whitehead tract, 45½ miles north of Del Rio. Driller: Magnolia Petroleum Company.

	Thickness (feet)	Depth (feet)
Gravel	35	35
Hard brown lime	100	135
Soft brown shale	22	157
Brown lime	21	178
Hard gray lime	42	220
Blue shale	28	248
Hard green lime	22	270
Blue shale	46	316
Hard gray lime	24	340
Blue shale and shells	72	412
Hard gray lime	26	438
Blue shale	8	446
Lime shells	147	593
Blue shale	7	600
Gray lime	95	695
Blue shale	20	715
Gray sand	70	785
Hard gray lime	25	810
Sandy shale, water	15	825
Hard white lime	5	830
Blue shale	17	847
Sulphur water		850
Gray sand	22	869
Soft gravel	4	873
Red rock	73	946
Black slate	28	974
Sand	584	1558
Gray sand	17	1575
Blue shale and shells	78	1653
Gray shale and shells	170	1823
Blue shale and shells	42	1865
Black slate and shells	73	1938
Blue shale and shells	87	2025
Brown shale and shells	75	2100
TOTAL DEPTH		6725

CASING RECORD: 35 feet of 15½-inch; 195 feet of 12½-inch; 914 feet of 10-inch; 2204 feet of 8¼ inch; 3525 feet of 6-5/8-inch, and 4343 feet of 5-3/16-inch casing.

Driller's log of well 305

Abb Rose tract, -- miles -- of Del Rio, Drilled by Fouslend Oil Company.

	Thickness (feet)	Depth (feet)
White lime	115	115
Yellow lime	30	145
White lime	20	165
Yellow lime	110	275
Gray lime	115	390
White lime	20	410
Sandy yellow lime	10	420
White lime	37	457
Gray lime	113	570
Soft mud	4	574
Yellow lime	26	600
White lime	35	635
Gray lime	25	660
Sandy lime, water	5	665
White lime	20	685
Hard sand	5	690
River sand	3	693
Water sand	9	702
Hard dark sand	13	715
Dark river sand	5	720
Sandy lime	5	725
Hard blue lime	100	825
Blue shale	30	855
Broken lime	10	865
White shale	5	870
Blue shale	30	900
Gray lime	40	940
Blue shale	30	970
Brown shale	10	980
Blue shale	20	1000
Green slate	20	1020
Gray lime	55	1075
Dark lime	65	1140
White shale	10	1150
Blue slate	10	1160
Blue lime	30	1190
Gray lime	85	1275
Blue slate	10	1285
Gray lime	25	1310
Blue slate	10	1320
Gray lime	20	1340
Blue shale	5	1345
Black shale	5	1350
Gray lime	65	1415
Hard blue lime	5	1420
Blue slate	8	1428
Brown water sand	37	1465
Blue shale	10	1475
Gray lime	5	1480
Blue shale	5	1485
Gray lime	10	1495

(Continued on next page)

	Thickness (feet)	Depth (feet)
Driller's log of well 305-Continued		
Gray slate	5	1500
Gray lime	15	1515
Brown sand	5	1520
Gray lime and water	57	1577
Hard gray lime	13	1590
Dark lime	17	1607
White lime	33	1640
Sandy blue lime	10	1650
White lime	20	1670
Sandy blue lime	5	1675
White water sand	20	1695
Blue shale	5	1700
Hard white lime	5	1705
Sandy white lime; water	15	1720
White lime	90	1810
Red shale	13	1823
White sand	2	1825
Red shale	10	1835
White water sand	15	1850
Red shale	20	1870
Sandy white lime	3	1873
Blue shale	7	1880
Red shale	55	1935
White lime	20	1955
Red shale	5	1960
Blue shale	5	1965
Red shale	15	1980
Blue shale	30	2010
TOTAL DEPTH		2928

CASING RECORD: 690 feet of 12½-inch; 1607 feet of 10-inch; 1975 feet of 8¼-inch, and 1739 feet of 6-inch casing. All casing pulled except 205 feet of 6-inch.

Driller's log of well 321

J. E. Sellers tract -- miles -- of Del Rio. Drilled by Douglas Oil Company.

White lime	73	73
Sandy brown lime	27	100
White lime	40	140
Yellow lime	25	165
White lime	50	215
Yellow lime	20	235
White lime	30	265
Yellow lime and water	20	285
White lime	4	289
Yellow lime and water	11	300
Yellow lime	100	400
Black lime	5	405
Yellow lime	15	420
White lime	45	465
Gray lime	25	490
White lime	15	505
Gray lime	60	565
Yellow lime	40	605
Gray lime	20	625
Yellow lime	40	665
Gray lime	115	780
Gray shale	75	855
Lime	15	870
Shale	5	875
Lime	5	880
Gray shale	38	918
Gray lime	7	925
Blue shale	10	935
Gray shale	55	990
Gray lime	60	1050
White lime	493	1543
Sand and water	22	1565
Gray lime	220	1785
Sand and water	15	1800
Sandy lime and shale	71	1871
Blue shale	294	2165
Black lime	310	2475
Gray lime	25	2500
Black lime	212	2712
Black shale	28	2740
Black lime	80	2820
Hard white lime	10	2830
Black lime	100	2930
Sandy lime and water	10	2940
TOTAL DEPTH		4192

CASING RECORD: 956 feet of 12½-inch; 2071 feet of 10-inch; 2431 feet of 8¼-inch, and 3140 feet of 6½-inch casing.

Driller's log of well 358

Bluff Creek Ranch Company tract --miles -- of Del Rio. Drilled by W. H. Bowers.

Buda lime	7	7
Del Rio clay	128	135
Slate	5	140
Blue lime	50	190
Shale	20	210
Lime	190	400
Soft shale	45	445
Gray lime	395	840
Sand and water	5	845
White lime	330	1175
Light-blue shale	75	1250
Hard brown lime	20	1270
Blue slate	20	1290
White lime	140	1430
Light-brown shale	15	1445

(Continued on next page)

Table of Drillers' Logs, Val Verde County-Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 358-- Continued		
White lime	55	1500
Brown lime	20	1520
Soft brown shale	20	1540
Sandy shale	10	1550
Hard dark lime	30	1580
Shale and lime	100	1680
Hard blue lime	30	1710
Sandy hard lime	20	1730
Hard blue lime	10	1740
Hard lime and slate	20	1760
Hard sand	20	1780
Blue lime	20	1800
Gray shale	25	1825
White lime	20	1845
Blue lime	5	1850
White lime	50	1900
Hard sand	5	1905
Sand and water	75	1980
White shale	10	1990
Sandy lime	10	2000
Brown and blue lime	130	2130
White water sand	20	2150
Blue slate	30	2180
TOTAL DEPTH		5430

CASING RECORD: 850 feet of 12½-inch; 2371 feet of 8¼-inch, and 3000 feet of 6-5/8-inch casing.

Driller's log of well 360

B. S. Harrison Estate, -- miles -- of Del Rio. Drilled by the Plateau Oil Company.

Gray lime	15	15
Yellow clay	10	25
Blue clay	235	260
White lime	405	665
Black lime, sulphur water	135	800
Hard black lime	40	840
Hard brown lime	35	875
Black lime	15	890
Black and gray lime	20	910
Gray lime	395	1305
Gray lime with soft streaks	57	1362
Gray lime	248	1610
White gypsum and blue slate	15	1625
Broken lime	5	1630
Gray lime	90	1720
Brown lime	10	1730
Gray lime	35	1765
Gray lime and shells	70	1835
Gray lime	155	1990
Sandy lime	35	2025
Dark lime	25	2050
Hard gray lime	40	2090

	Thickness (feet)	Depth (feet)
Driller's log of well 360-Continued		
Gray lime	90	2180
Hard gray lime	20	2200
Gray lime	175	2375
Hard gray lime	65	2440
Gray lime	50	2490
Water sand	30	2520
Dark gray lime	20	2540
Water sand	50	2590
Hard sand	30	2620
Gray lime	10	2630
Black lime	15	2645
Slate	15	2660
Lime and slate	28	2688
Sand	3	2691
Sand and water	24	2715
Slate	50	2765
Sandy shale	5	2770
Gray sand	50	2820
Gray lime	15	2835
Sandy lime	20	2855
Hard red lime	39	2894
Sandy red lime	81	2975
Hard red lime	20	2995
Fine water sand	5	3000
Sand and fresh water	20	3020
Sand	15	3035
Lime	45	3080
TOTAL DEPTH		3507

CASING RECORDS: 1730 feet of 10-inch; 2460 feet of 8¼-inch, and 3130 feet of 6-5/8-inch casing.

Driller's log of well 426

W. S. Stevenson Estate, -- miles -- of Del Rio. Drilled by the Transcontinental Oil Company.

Clay	5	5
Soft white lime	25	30
Gravel	10	40
Broken white lime	60	100
Water	10	110
White lime and water	135	245
Gray lime	65	310
White lime	136	446
Sandy lime	5	449
Hard gray lime	66	515
Sulphur water	2	517
Gray lime	38	555
Brown shale and shells	20	575
White lime	125	700
Sand and water	20	720
White clay	170	890
Broken lime and shale	310	1200

(Continued on next page)

Table of Drillers' Logs, Val Verde County-Continued

	Thickness (feet)	Depth (feet)
Driller's Log of well 426-Continued		
Hard white lime	360	1560
Blue shale	20	1580
Shell and shale	20	1600
White lime	110	1710
Sandy lime	25	1735
Black lime and water	15	1750
Gray lime	140	1890
Sand and water	25	1915
Sandy lime	20	1935
Water sand	10	1945
White lime	5	1950
Sandy white lime	20	1970
Black lime	10	1980
Brown lime	30	2010
Gray lime	35	2045
White lime	5	2050
Sandy lime	35	2085
Sand and water	86	2171
Blue shale	5	2176
Sandy lime	12	2188
Gray lime	27	2215
Brown lime	25	2238
Sand and water	24	2262
Sandy gray lime	58	2320
Granite	10	2330
Blue shale	5	2335
Gray lime	3	2338
Dry sand	9	2347
Sandy gray lime	13	2360
Granite	5	2365
Blue shale	10	2375
Coarse lime	10	2385
Sandy brown lime	10	2395
Gumbo and red rock	5	2400
Sandy brown lime	5	2405
Dry sand	7	2412
Pinkish lime	3	2415
Gray lime	25	2440
White lime	20	2460
Sandy gray lime	10	2470
Sand and water	10	2480
Hard gray lime	65	2545
Black lime	15	2559
TOTAL DEPTH		4500

CASING RECORD: 555 feet of 15½-inch; 890 feet of 12½-inch; 2195 feet of 10-inch; 2550 feet of 8¼-inch; 3455 feet of 6-5/8-inch, and 4150 feet of 5-3/16-inch casing.

Driller's log of well 451

Sellers tract, --miles -- of Del Rio.
Drilled by S. A. McCaskey.

White lime	80	80
Yellow lime	15	95
White lime	155	250
Lime	75	325
Sandy lime, hole full of water	7	332
Lime	193	525
Sandy lime	40	565
White lime	15	580
Lime	45	625
Broken lime and gypsum	5	630
Lime	95	725
Broken lime	15	725
Gray lime	15	755
Black lime	15	770
Lime	15	785
Broken lime	10	795
Gray lime	15	810
Broken lime	10	820
Lime	10	830
Shale	10	840
Sandy shale	10	850
White lime	20	870
Shale	65	935
Blue shale	25	960
Lime	5	965
Shale	105	1070
Lime	15	1085
Shale	25	1110
Lime	65	1175
Shale	10	1185
Lime	305	1490
Blue shale	35	1525
Lime	75	1600
Broken lime	25	1625
Sandy lime	45	1670
Lime	50	1720
Sand, hole full of water	5	1725
Sand	70	1795
Blue lime	10	1805
Lime	35	1840
Sandy lime	10	1850
Sand and water	15	1865
TOTAL DEPTH		3502

CASING RECORD: 353 feet of 15½-inch; 1025 feet of 12½-inch; 1870 feet of 10-inch; 2470 feet of 8¼-inch, and 3163 feet of 6-5/8-inch casing.

Table of Drillers' Logs, Val Verde County--Continued

Driller's log of well 468

W. T. O. Holman Estate, -- miles -- of Del Rio. E. T. Williams, driller.

	Thickness (feet)	Depth (feet)
Dark-gray limestone	1690	1690
Water	30	1720
Light-gray lime	20	1740
Medium gray lime	35	1775
Light-gray sand, water	10	1785
Brownish-gray sand	5	1790
Sandy dark-gray lime	10	1800
Sandy gray lime	15	1815
Medium gray lime	25	1840
Dark-gray lime and shale	30	1870

Driller's log of well 468--Continued

	Thickness (feet)	Depth (feet)
Dark-gray lime	15	1885
Sandy gray lime	25	1910
Fine sandy dark-gray lime	20	1930
Dark-gray lime	5	1935
Sandy dark-gray lime	20	1955
Dark gray lime	30	1985
Dark-gray sand	10	1995
Dark-gray lime	10	2005
TOTAL DEPTH		2965

CASING RECORD: 500 feet of 12½-inch 805 feet of 10-inch; 2250 feet of 8¼-inch, and 2820 feet of 6-5/8 inch casing.

Logs of test wells drilled by W. P. A. labor in Val Verde County, Texas
Samples examined and classified by J. M. Frazier
Project Superintendent

	Thickness (feet)	Depth (feet)
Well 1		
Level, B. Phillips tract, in Osmen Canyon, 22 miles northwest of Langtry.		
Surface soil	1	1
Sandy rock	1	2
Sandy rock and clay	1	3
Clay and rock	2	5
April 19, 1939.		
Well 38		
River bottom, F. Everett tract, 100 yards west of ranch house. 21 miles north of Langtry.		
Surface soil	1	1
Sand and loam	3	4
May 15, 1939		
Well 51		
River bottom, J. Cox tract, in mouth of Goat Canyon, 13 miles north of Langtry.		
Surface sand and soil	1	1
Sand	7	8
April 26, 1939		
Well 61		
Level, Southern Pacific R. R. tract, at Pumpville Station 13 miles northwest of Langtry.		
Surface soil	1	1
Sand and rock	1	2
April 18, 1939.		
Well 67		
Level, Texas Highway Department tract, in front of the Roy Bean Saloon, in Langtry.		
Surface soil	1	1
Sand and chalk	1	2
Sand and rock	1	3
April 17, 1939.		
Well 71		
River bottom, John Ingram tract, west side of Pecos River, 8 miles northeast of Langtry.		
Surface soil	2	2
Coarse sand	1	3
Sand	3	6
Fine sand	1	7
Fine sand and loam	2	9
Sand and clay	2	11
Well 71--Continued		
Coarse sand and clay	1	12
Sand and gravel	2	14
May 23, 1939.		
Well 119		
River bottom, C. B. Hudspeth tract, west side of highway 163, 22 miles north of Comstock.		
Gravel and surface soil	1	1
Loam	1	2
Loam and gravel	1	3
Sand and loam	8	11
Sand	1	12
Sand and gravel	1	13
June 15, 1939.		
Well 148		
Level, B. E. Wilson tract, 1.4 miles north of Juno Post Office, 35 miles north of Comstock.		
Surface soil	2	2
May 31, 1939.		
Well 161		
Level, J. C. Taylor tract, east side of Sonora road, 35 miles north of Comstock.		
Surface sand	1	1
Sand and rock	2	3
Sandy rock	1	4
May 30, 1939.		
Well 201		
Level, F. H. Thitehead tract, 50 miles north of Del Rio.		
Rock and sand	1	1
Rock and clay	1	2
August 16, 1939.		
Well 225		
Level, John Galloway tract, east side of highway 277, 42 miles north of Del Rio.		
Surface soil	1	1
Surface soil and rock	1	2
August 22, 1939.		
Well 228		
Level, John Galloway tract, east side of highway 277 on Mailtrail Creek, 42 miles north of Del Rio.		
Surface soil	2	2

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 228--Continued		
Loam and chalk	1	3
Chalk, sand and clay	3	6
Clay and rock	1	7
August 8, 1939.		

Well 230

Level, John Galloway tract, east side of highway 277 in front of Vinagarone filling station, 41 miles north of Del Rio.

Surface soil	1	1
Loam and rock	2	3
Sand and rock	1	4
August 9, 1939		

Well 242

Level, J. E. Quigg tract, 5 miles northwest of Loma Alta, 42 miles north of Del Rio.

Surface soil	1	1
Clay and sand	1	2
Clay, sand and chalk	3	5
Clay and chalk	3	8
Clay, chalk and rock	2	10
August 10, 1939.		

Well 243

Level, D. Harrison tract, 4 miles northwest of Loma Alta, 43 miles north of Del Rio.

Surface loam	1	1
Sand and rock	1	2
August 24, 1939.		

Well 254

Level, W. Fawcett tract, 41 miles north of Del Rio.

Surface soil and rock	1	1
Sand and rock	1	2
August 23, 1939.		

Well 295

Level, Robert Miers tract, west side highway 277, 35 miles north of Del Rio.

Surface soil and rock	1	1
Loam and rock	1	2
Loam and sand rock	1	3
August 14, 1939		

Well 308

Hillside, H. Miers tract, northeast corner junction of Sonora and Rock Springs roads, 25-3/4 miles north of Del Rio.

Surface sand	2	2
Clay and sand	1	3
Clay	3	6
Clay and sand	1	7
Clay	2	9
August 15, 1939.		

Well 354

Level, B. Lewis tract, 15 miles northeast of Del Rio.

Surface soil	2	2
Sand, clay and rock	1	3
Sand, chalk and rock	1	4
April 3, 1939.		

Well 355

Level, B. Lewis tract, 13 miles northeast of Del Rio.

Soil and clay	2	2
Caliche	2	4
April 3, 1939.		

Well 357

Level, L. Rust tract, west side of Hamilton Road on Mesquite flat, 9½ miles northeast of Del Rio.

Dark loam	2	2
Light loam and rock	2	4
April 3, 1939.		

Well 359

Level, Southern Pacific R. R. Tract, at Johnston's Loading pens, 8 miles east of Del Rio.

Surface soil	1	1
Soil and caliche	2	3
Caliche	11	14
Caliche and rock	1	15
March 31, 1939.		

Well 363

Creek bottom, F. Herbst tract, 11 miles east of Del Rio.

Surface soil	1	1
Clay rock	1	2
March 31, 1939.		

Well 366

Level, State Highway Department tract, east side of highway 85, at Seatosa Creek crossing, 10 miles southeast of Del Rio.

Surface soil and sand	2	2
Sand and chalk	1	3
Sand and rock	1	4
March 30, 1939.		

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

	Thickness (feet)	Depth (feet)
Well 367		
Creek bottom, State Highway Department tract, west side of highway 85, in Sycamore Creek roadside park, 11 miles southeast of Del Rio.		
Surface sand	3	3
Sand	4	7
Sand and rock	1	8
March 30, 1939.		
Well 401		
Level, J. Yoac tract, east side of highway 85, 5½ miles southeast of Del Rio.		
Surface soil and loam	1	1
Gravel, clay and rock	1	2
March -- 1939.		
Well 405		
Level, Val Verde County tract, east side of Hamilton road 50 yards south of culvert, 5 miles east of Del Rio.		
Surface loam	4	4
Clay	2	6
Clay and limestone	1	7
April 3, 1939.		
Well 406		
Level, State Highway Department tract, south side of Highway 90, 3-3/4 miles east of Del Rio.		
Surface soil	2	2
Soil and clay	1	3
Clay	1	4
Sand, clay and chalk	2	6
Sand and chalk	3	9
March 31, 1939.		
Well 409		
Level, south side of Val Verde County road, 2 miles east of Del Rio.		
Surface soil	1	1
Clay and sand	3	4
Rock	2	6
April 12, 1939.		
Well 410		
Level, on old San Antonio road, 1½ miles southeast of Del Rio.		
Surface soil	1	1
Sand and clay	1	2
Clay and rock	1	3
Clay, rock and sand	1	4
April 12, 1939.		

	Thickness (feet)	Depth (feet)
Well 411		
Level, T. Vosquez tract, 500 feet east of highway 90, 2 miles southeast of Del Rio.		
Surface soil	2	2
Clay, sand and chalk	2	4
Clay and sand	2	6
Clay, sand and rock	2	8
April 12, 1939.		
Well 412		
Level, Texas Highway Department tract, east side of highway 85, 2-3/4 miles southeast of Del Rio.		
Surface soil	2	2
Soil and sandy clay	2	4
March 30, 1939.		
Well 416		
River bottom, F. L. Childs tract, on bank of the Rio Grande, 2½ miles south of Del Rio.		
Surface sands	2	2
River sand	7	9
Sand and gravel	2	11
April 13, 1939.		
Well 417		
Level, Jim White tract, south side of county road, 2½ miles southwest of Del Rio.		
Surface clay and sand	2	2
Sand	1	3
Struck water at 2 feet. Water level, 1.7 feet below top of ground, 1 hour after hole completed.		
March 29, 1939.		
Well 420		
River bottom, Fred Hill tract, west side of county road on bank of Rio Grande, 3 miles southwest of Del Rio.		
Top Soil	1	1
Surface sand	1	2
Sand	1	3
Sand and gravel	1	4
Struck water at 4 feet. Water level, 3.9 feet below top of ground, 1 hour after hole completed.		
March 28, 1939.		
Well 422		
Level, Visente De Balia tract, south side of county road, 2-3/4 miles southwest of Del Rio.		

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 422-Continued		
Brown clay	2	2
Light clay	1	3
White clay	1	4
Struck water at 3 feet. Water level, 2.7 feet below top of ground, 1 hour after hole completed.		
March 29, 1939.		
Well 423		
Level, Newton Briggs tract, east of Southern Pacific R. R., 3 miles west of Del Rio.		
Surface sand	2	2
Sand and clay	2	4
Clay, chalk and sand	1	5
Sand and clay	2	7
Clay and chalk	1	8
Coarse sand and clay	1	9
Sandy clay	2	11
Sand and clay	1	12
River sand	1	13
March 29, 1939.		
Well 424		
Creek bottom, Newton Briggs tract, at mouth of Salt Creek, 4 miles west of Del Rio.		
Fine sand	5	5
April 13, 1939.		
Well 425		
Hillside, Newton Briggs tract, in center of 500 acre pasture north of Briggs Ranch House, 3 miles west of Del Rio.		
Surface soil	3	3
Sandy rock	2	5
April -- 1939.		
Well 428		
Level, W. S. Stevenson tract, 4 miles northwest of Del Rio.		
Surface soil andsand	1	1
Clay and sand	1	2
Clay, sand and chalk	1	3
Clay and gravel	1	4
April 6, 1939.		
Well 429		
Hillside, F. Cantu tract, at head of Cinegas Creek, 3 miles west of Del Rio.		
Surface soil	1	1
Clay	2	3
Clay and loam	1	4
Clay	1	5
Clay and sand	1	6
Struck water at 4 feet. Water level, 3.9 feet below top of ground, 1 hour after hole completed.		
April 6, 1939.		
Well 434		
Level, Jap Lowe tract, $\frac{1}{4}$ mile north of city water tanks, $1\frac{1}{2}$ miles north of Del Rio.		
Surface soil	1	1
Caliche	3	4
April 4, 1939.		
Well 437		
Level, Francisco Cantu tract, side of highway 277, 3 miles north of Del Rio.		
Surface soil	2	2
Clay, sand and caliche	3	5
Sand and caliche	5	10
Sand, caliche and clay rock	2	12
April 4, 1939.		
Well 444		
Level, Judge G. C. Pool tract, side of highway 277 at San Pedro Creek crossing, 9 miles north of Del Rio.		
Surface loam	1	1
Sand and gravel	1	2
Sand, gravel and rock	1	3
April 11, 1939.		
Well 457		
River bottom, Central Power and Light Company tract, at Devils River station on Southern Pacific R. R., $11\frac{1}{2}$ miles north of Del Rio.		
Surface soil	2	2
River loam	1	3
Coarse sand	1	4
Gravel	1	5
Struck water at $4\frac{1}{2}$ feet. Water level, 4.5 feet below top of ground 1 hour after hole completed.		
April 5, 1939.		
Well 464		
Level, J. S. Nixon tract, east side of Southern Pacific R. R. at McKees siding, $7\frac{1}{2}$ miles west of Del Rio.		
Surface soil	2	2
Sand	2	4
Sand and gravel	2	6
Sand and rock	1	7
April 10, 1939.		

Partial analyses of water from wells in Val Verde County, Texas

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
XV-1	B.S.Harrison	60	July 27, 1939	411	149	5	5	427	14	28	b/	-	393
XV-2	Otto Koog	135	do.	718	100	57	74	244	133	226	b/	1.5	500
XV-3	Pedro Martinez	56	do.	330	81	12	26	250	36	42	b/	-	253
8	Son Chapman	510	Sept. 5, 1939	207	26	28	15	207	15	21	b/	-	182
10	J. B. Malone	Spring	May 17, 1939	205	--	--	--	195	13	17	b/	-	-
15	Bunger Bros.	75	May 9, 1939	217	18	20	39	159	16	46	b/	0.7	127
18	N. J. Wardlow	280	May 3, 1939	276	76	20	5	311	10	12	b/	0.4	272
c/20	Bob Cauthorn	430	May 10, 1939	233	49	21	14	244	a/	20	b/	0.4	208
21	Ed Arledge	200	May 3, 1939	244	56	20	12	256	12	18	b/	-	222
22	do.	300	do.	1,426	52	43	414	500	405	265	b/	-	306
23	do.	300	May 9, 1939	1,032	46	28	297	317	261	242	b/	1.6	232
24	H. J. Y. Mills	69	May 10, 1939	303	83	14	14	256	25	34	b/	0.3	263
25	G. R. Baker	80	do.	279	56	13	26	244	14	34	b/	0.2	216
c/27	H. V. L. Mills	Spring	May 18, 1939	274	76	19	3	268	15	21	b/	0.6	267
30	Walter Babb	215	May 2, 1939	1,294	147	46	243	165	387	390	b/	-	559
31	Ed Arledge	250	Apr. 19, 1939	219	--	--	--	220	12	14	b/	-	-
32	do.	233	do.	239	72	12	5	244	11	19	b/	-	227
33	Walter Babb	Spring	May 10, 1939	208	31	19	23	189	16	26	b/	0.6	157
34	F. Everett	Spring	do.	215	--	--	--	189	16	24	b/	-	-
35	Mrs. F. Everett	Spring	May 8, 1939	251	71	15	4	250	12	16	b/	0.4	239
36	F. Everett	Spring	May 15, 1939	273	--	--	--	268	10	18	b/	-	-
37	do.	Spring	do.	259	60	21	12	268	12	22	b/	0.4	238
40	J. F. Humphrey	Spring	May 16, 1939	206	--	--	--	207	10	14	b/	-	-
41	Murrah Ranch	--	May 4, 1939	257	56	20	16	232	16	35	b/	-	222
c/42	William Lawson	900	May 3, 1939	291	50	21	33	220	25	52	b/	2.0	213
43	Lucius Hines	560	do.	229	49	17	17	220	15	23	b/	-	190
44	Levi H ines	Spring	Apr. 25, 1939	914	103	38	174	220	221	270	b/	-	413
48	J. Cox	Spring	do.	1,530	162	56	303	226	428	470	b/	-	635

a/ Sulfate less than 10 parts per million.
b/ Nitrate less than 20 parts per million.
c/ Analyses of selected wells are given in milligrams equivalents per liter on page 50.

Partial analyses of water from wells in Val Verde County -- Continued
(Results are in parts per million)

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
49	J. Cox	Spring	Apr. 26, 1939	573	79	25	96	195	111	166	b/	-	300
50	do.	Spring	Apr. 25, 1939	770	-	-	-	214	166	230	b/	-	-
c/ 52	do.	520	Apr. 27, 1939	233	34	32	12	214	20	28	b/	2.0	215
55	do.	500	Apr. 19, 1939	472	89	25	50	250	85	100	b/	-	325
56	French Ingram	Spring	May 2, 1939	247	50	20	17	207	19	39	b/	-	207
60	S. P. R.R.	1,000	Apr. 18, 1939	304	82	20	5/	232	70	16	b/	1.0	237
63	Fermin Aguirre	300	do.	292	80	20	2	262	41	20	b/	-	282
64	J. H. Fisher	885	do.	447	103	32	13	293	114	39	b/	1.6	390
66	S. P. R.R.	Spring	do.	346	80	20	22	232	44	66	b/	0.7	282
70	John Ingram	Spring	May 23, 1939	316	81	19	13	268	26	45	b/	-	282
72	H. Martin	565	July 21, 1939	2,093	253	75	373	256	660	605	b/	0.8	941
c/ 74	Dr. U. E. Ross	1,213	May 5, 1939	320	58	23	33	226	44	45	b/	6.2	239
77	Mrs. E. P. Bell	Spring	do.	240	-	-	-	207	13	33	b/	-	-
78	do.	Spring	Apr. 20, 1939	317	79	10	29	226	15	73	b/	-	241
79	Mrs. F. E. Bell	Spring	May 25, 1939	254	75	13	5	256	17	18	b/	-	243
81	do.	Spring	do.	274	26	7	76	256	14	25	b/	0.6	95
87	A. A. Baker	1,070	June 15, 1939	372	74	31	20	275	77	32	b/	2.7	314
c/ 89	Tom Bright	550	Aug. 29, 1939	191	64	6	4	214	a/	11	b/	0.1	183
90	J. W. Bright	337	do.	203	54	13	9	232	a/	12	b/	-	188
92	A. A. Baker	1,050	June 15, 1939	181	25	14	28	133	10	14	b/	0.3	119
94	Prosser & Walker	550	Sept. 6, 1939	231	72	14	5/	256	a/	11	b/	1.1	239
c/100	H. Martin	480	June 16, 1939	243	69	14	7	244	12	20	b/	1.1	229
104	Tom Everett	400	May 3, 1939	414	82	30	36	317	26	84	b/	-	328
106	J. T. Mayfield	430	Sept. 6, 1939	236	70	14	2	256	a/	13	b/	0.3	234
120	C. B. Hudspeth	Spring	June 14, 1939	248	72	11	10	275	10	10	b/	0.3	227
121	do.	Spring	do.	274	81	14	8	305	11	10	b/	0.3	259
122	H. E. Guinn	800	Sept. 12, 1939	292	74	26	5/	262	36	23	b/	2.4	291
c/123	do.	445	do.	222	73	11	5/	214	13	13	b/	0.4	227
126	Bob Cauthorn	700	do.	511	97	28	56	250	60	145	b/	2.3	357
127	do.	670	do.	506	96	33	47	256	64	138	b/	2.2	375
128	Fred Erwood	526	May 10, 1939	203	49	12	13	207	a/	12	b/	-	173
c/130	Ira M. Carson	300	do.	213	57	15	8	238	a/	13	b/	0.4	204
132	W. W. West	350	do.	196	52	10	9	195	a/	9	b/	-	171

a/ Sulfate less than 10 parts per million.
b/ Nitrate less than 20 parts per million.
c/ Analyses of selected wells are given in milligrams equivalents per liter on page 50.

Partial analyses of water from wells in Val Verde County -- Continued

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
134	Masey West	130	May 31, 1939	213	43	20	7	220	10	10	b/	-	202
135	do.	130	do.	175	40	13	11	183	10	11	b/	-	153
136	J.C.Mayfield, Jr.	125	do.	178	40	11	14	183	11	12	b/	-	147
137	C. B. Hudspeth	Spring	June 14, 1939	241	63	14	13	262	10	12	b/	-	214
138	do.	Spring	June 13, 1939	274	-	-	-	293	11	12	b/	-	-
139	do.	Spring	do.	252	70	13	5	281	10	10	b/	0.3	243
c/140	Mrs. J. Jarrett	125	June 15, 1939	294	74	13	24	305	a/	20	b/	0.2	238
141	T. J. Jarrett	90	do.	255	55	15	26	281	10	11	b/	-	199
142	J.C.Mayfield, Jr.	79	do.	163	28	13	19	177	10	6	b/	-	123
143	H. V. Morris	35	do.	241	72	11	7	268	10	9	b/	-	227
144	V. Cauthorn	325	do.	175	37	14	13	189	a/	10	b/	0.3	149
145	R. G. Nance	75	May 31, 1939	257	63	15	18	281	11	12	b/	0.3	219
146	do.	Spring	do.	279	-	-	-	293	13	13	b/	-	-
147	B. E. Wilson	Spring	May 30, 1939	302	85	14	13	317	13	12	b/	-	269
150	do.	130	do.	229	65	14	6	256	a/	9	b/	-	219
151	do.	216	May 31, 1939	229	37	16	32	244	11	13	b/	-	160
c/152	do.	220	do.	188	37	15	14	177	10	15	b/	0.4	154
154	C. B. Hudspeth	308	do.	256	71	15	9	281	10	13	b/	-	239
155	do.	216	do.	229	43	22	11	250	a/	15	b/	-	213
157	Mrs.B.Glasscock	95	May 30, 1939	222	50	15	18	244	a/	11	b/	-	184
158	T. L. Drisdale	90	do.	266	66	17	16	299	a/	11	b/	0.2	236
159	J. O. Taylor	100	do.	211	53	13	12	226	a/	14	b/	0.2	188
c/162	do.	120	do.	276	69	21	11	311	10	12	b/	0.6	258
c/164	George Whitehead	390	Aug. 24, 1939	260	72	20	3	299	a/	14	b/	0.1	262
203	F. H. Whitehead	300	Aug. 16, 1939	123	19	12	13	125	a/	14	b/	-	93
206	do.	360	do.	229	30	26	22	183	16	45	b/	-	181
208	Topsy Whitehead	350	do.	129	28	9	11	134	a/	11	b/	-	105
210	Chas. Whitehead	450	do.	235	57	12	19	250	11	13	b/	-	193
212	do.	240	do.	192	45	20	3	214	a/	13	b/	0.2	192
213	Whitehead & Wardlow	240	do.	225	48	26	4	256	a/	11	b/	-	226
217	H. Galloway	305	Aug. 22, 1939	233	71	10	3	238	a/	10	b/	0.2	221
222	Whitehead & Wardlow	300	Aug. 8, 1939	229	55	13	14	226	a/	11	b/	0.2	193
224	I. E. Bode	286	Aug. 22, 1939	226	68	14	5/	244	a/	11	b/	-	229
c/227	John Galloway	300	Aug. 8, 1939	247	45	29	5	220	a/	20	32	0.7	233

a/ Sulfate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 50.

Partial analyses of water from wells in Val Verde County -- Continued

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
229	John Galloway	600	Aug. 8, 1939	492	64	57	28	268	181	26	b/	4.0	395
231	Emery Davis	260	do.	188	47	13	8	195	10	14	b/	0.2	173
239	J. E. Quigg	324	Aug. 10, 1939	190	40	24	/5	214	a/	11	b/	0.6	200
244	D. Harrison	266	do.	210	-	-	-	232	a/	10	b/	-	-
246	do.	230	do.	217	53	25	/5	256	a/	9	b/	0.5	235
c/247	Felix Harrison	434	Aug. 23, 1939	162	22	23	10	177	a/	14	b/	0.6	149
251	G. Whitehead	139	June 23, 1939	223	-	-	-	232	10	12	b/	-	-
c/252	W. Fawcett	250	Aug. 23, 1939	247	67	18	6	287	a/	12	b/	0.3	241
253	do.	243	do.	257	73	17	6	293	a/	16	b/	-	250
257	E. K. Fawcett	270	do.	231	56	23	2	256	a/	13	b/	-	234
258	do.	201	June 20, 1939	253	73	16	2	268	a/	12	b/	0.2	250
259	do.	Spring	June 22, 1939	248	73	14	6	281	a/	9	b/	0.4	239
265	do.	Spring	June 21, 1939	251	-	-	-	274	a/	11	b/	-	-
268	do.	Spring	June 20, 1939	245	73	14	3	268	a/	10	b/	0.2	239
271	do.	Spring	June 21, 1939	236	-	-	-	256	a/	12	b/	-	-
275	do.	Spring	June 20, 1939	244	73	14	4	268	a/	13	b/	0.4	239
284	A. Madison	Spring	June 27, 1939	237	68	11	9	256	a/	10	b/	-	217
294	Bob Miers	320	Aug. 14, 1939	147	44	9	1	153	a/	12	b/	-	145
296	do.	309	do.	207	-	-	-	195	17	15	b/	-	-
c/297	F. L. Davis	355	Aug. 7, 1939	264	54	30	4	250	40	12	b/	1.1	259
298	do.	390	Aug. 14, 1939	226	47	27	2	226	23	14	b/	0.3	227
c/300	Chris Hutto	650	Aug. 17, 1939	200	36	22	12	214	12	13	b/	0.4	179
301	Chris & Carl Hutto	365	do.	190	43	21	3	220	a/	10	b/	-	193
302	Carl Hutto	400	do.	150	32	14	7	159	a/	10	b/	-	139
303	Ace Bricker	500	do.	203	60	10	7	232	a/	9	b/	0.2	191
304	C. T. Couples	600	do.	233	50	13	15	207	17	39	b/	-	201
306	J. Carruthers	600	Aug. 15, 1939	210	64	7	9	226	a/	11	b/	-	190
307	H. Miers	690	June 29, 1939	179	42	19	2	201	a/	12	b/	0.4	182
c/309	do.	600	Aug. 15, 1939	181	34	24	4	207	a/	13	b/	0.5	185
311	do.	700	June 29, 1939	185	47	16	2	207	a/	9	b/	-	185
312	A. Madison	700	do.	210	58	13	7	232	a/	12	b/	0.3	198
313	Tom Bright	Spring	June 28, 1939	234	-	-	-	256	a/	10	b/	0.2	-
316	R. Gillis	Spring	July 18, 1939	231	65	12	8	244	a/	11	b/	0.2	213

a/ Sulfate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 50.

Partial analyses of water from wells in Val Verde County -- Continued

Results are in parts per million

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
317	L. L. Hinds	Spring	July 19, 1939	238	-	-	-	250	a/	13	b/	-	-
326	J. C. Mayfield	Spring	July 11, 1939	203	-	-	-	220	a/	10	b/	-	-
332	R. Cauthorn	Spring	July 12, 1939	206	52	11	13	220	a/	12	b/	-	177
333	do.	Spring	do.	229	63	16	3	250	a/	12	b/	-	225
336	do.	Spring	July 13, 1939	230	-	-	-	244	a/	12	b/	-	-
342	do.	Spring	do.	237	43	11	32	256	a/	12	b/	0.3	167
345	Sam Smith	Spring	July 11, 1939	209	60	11	7	232	a/	11	b/	-	197
346	do.	Spring	do.	206	67	7	5	220	12	8	b/	-	194
347	-- Harkwood	600	Sept. 5, 1939	204	54	12	11	232	a/	9	b/	0.2	182
c/352	B. Lewis	430	Apr. 3, 1939	211	64	10	5	226	a/	12	b/	0.1	201
353	do.	19	do.	327	-	-	-	299	25	30	b/	-	-
356	L. Rust	140	do.	240	69	11	10	256	15	9	b/	0.1	217
360	B. S. Harrison	2,507	July 27, 1939	2,723	585	117	86	256	1,726	81	b/	2.4	1,942
362	F. W. Herbst	280	Mar. 31, 1939	1,667	102	99	377	1,092	534	13	b/	4.5	664
c/364	do.	17	July 31, 1939	281	68	7	21	207	12	11	60	-	200
365	do.	100	do.	546	52	10	133	238	181	53	b/	0.7	171
369	Jim White	18	July 28, 1939	281	89	12	2	287	20	13	b/	-	273
c/403	C. H. Adams	500	July 27, 1939	341	62	30	26	305	48	25	b/	0.8	279
404	E. L. Heart	160	do.	532	130	30	26	329	36	130	b/	-	449
c/407	John Green	145	do.	394	81	44	8	354	48	37	b/	2.2	382
c/413	S. H . Barton	360	July 31, 1939	8,253	436	182	2,024	329	4,657	790	b/	2.2	1,840
418	F. L. Childs	51	Apr. 13, 1939	239	75	10	4	256	13	11	b/	0.4	231
421	N. Briggs	8	Mar. 29, 1939	426	113	19	14	305	112	18	b/	-	362
422	W.P.A. test hole	4	do.	558	75	36	77	342	161	41	b/	-	338
c/426	W.S.Stevenson	4,500	Apr. 10, 1939	2,318	631	29	33	220	1,494	21	b/	1.8	1,698
427	do.	520	Apr. 6, 1939	2,337	630	27	40	183	1,531	19	b/	-	1,686
429	W.P.A. test hole	6	do.	314	90	10	17	317	20	14	b/	-	269
430	F. Cantu	20	do.	283	86	9	11	281	14	16	b/	0.4	250
431	do.	Spring	do.	238	-	-	-	244	11	14	b/	0.1	-
c/433	City of Del Rio	Spring	Mar. 31, 1939	220	66	7	11	238	a/	10	b/	-	195
435	Jap Lowe	Spring	Apr. 4, 1939	167	44	6	14	174	a/	8	b/	-	134
438	W. S. Stephenson	480	July 24, 1939	236	93	11	3	281	12	29	b/	0.4	277
440	C. L. Kelley	554	do.	217	64	7	11	220	10	17	b/	-	190
442	F. Greenwood	500	do.	224	72	7	5	220	14	13	b/	0.5	210
443	G. C. Pool	Spring	July 26, 1939	138	32	7	11	123	a/	14	b/	0.3	110

Partial analyses of water from wells in Val Verde County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total hardness as $CaCO_3$ (calc.)
c/445	G. C. Pool	220	July 26, 1939	406	104	24	9	287	101	24	b/	2.5	360
446	H. Hiers	500	Sept. 5, 1939	217	71	11	<5	220	12	10	b/	0.2	222
447	G. H. Parker	480	do.	251	83	12	<5	244	13	17	b/	0.5	258
448	C. P. & L. Co.	Spring	Apr. 11, 1939	249	74	16	2	281	a/	10	b/	0.2	250
449	do.	240	do.	275	78	15	10	299	13	12	b/	-	254
450	do.	Spring	do.	188	51	13	4	207	a/	9	b/	0.2	183
452	Sellers Bros.	450	July 20, 1939	319	111	5	4	305	14	24	b/	-	298
453	do.	620	do.	311	83	18	8	256	56	13	b/	1.6	281
c/454	R. Sellers	100	do.	350	110	9	13	317	26	36	b/	0.2	310
456	F. Kirtchgraber	600	July 24, 1939	762	144	40	64	305	274	89	b/	1.0	525
458	J. Jones	Spring	July 20, 1939	221	67	11	4	238	a/	12	b/	0.1	212
459	do.	540	do.	179	58	6	2	146	14	27	b/	-	169
462	J. S. Nixon	520	Apr. 10, 1939	2,188	610	27	9	134	1,456	20	b/	-	1,636
463	do.	Spring	do.	311	98	9	9	139	101	11	b/	-	255
465	F. Cochran	450	Aug. 1, 1939	193	48	9	14	165	20	21	b/	-	155
466	do.	650	do.	251	74	10	11	262	11	16	b/	0.4	226
467	Holman Estate	451	do.	231	80	6	2	244	10	13	b/	0.4	224
471	S. P. R.R.	525	do.	231	66	15	3	232	16	17	b/	-	224
473	R. Gillis	-	July 24, 1939	394	108	15	20	293	48	59	b/	-	329
c/474	F. H. McNutt	650	do.	230	65	13	6	238	11	13	b/	0.6	218
475	do.	640	do.	333	83	11	32	250	26	63	b/	-	252
476	do.	690	do.	242	70	15	5	262	10	13	b/	-	234
477	Kelley state	935	June 15, 1939	367	79	24	23	220	69	62	b/	2.1	295
478	Humphrey & Kelly	400	May 5, 1939	270	77	10	12	244	26	25	b/	0.8	236
c/479	Mrs. R. L. Fawcett	750	May 8, 1939	276	45	29	16	183	51	42	b/	2.5	233
483	J. T. Mayfield	530	Apr. 12, 1939	252	69	13	11	262	15	15	b/	-	213
484	J. F. Grant	500	do.	352	80	18	24	232	67	49	b/	0.7	276
485	do.	Spring	do.	240	73	12	2	244	22	10	b/	0.4	233

a/ Sulfate less than 10 parts per million.

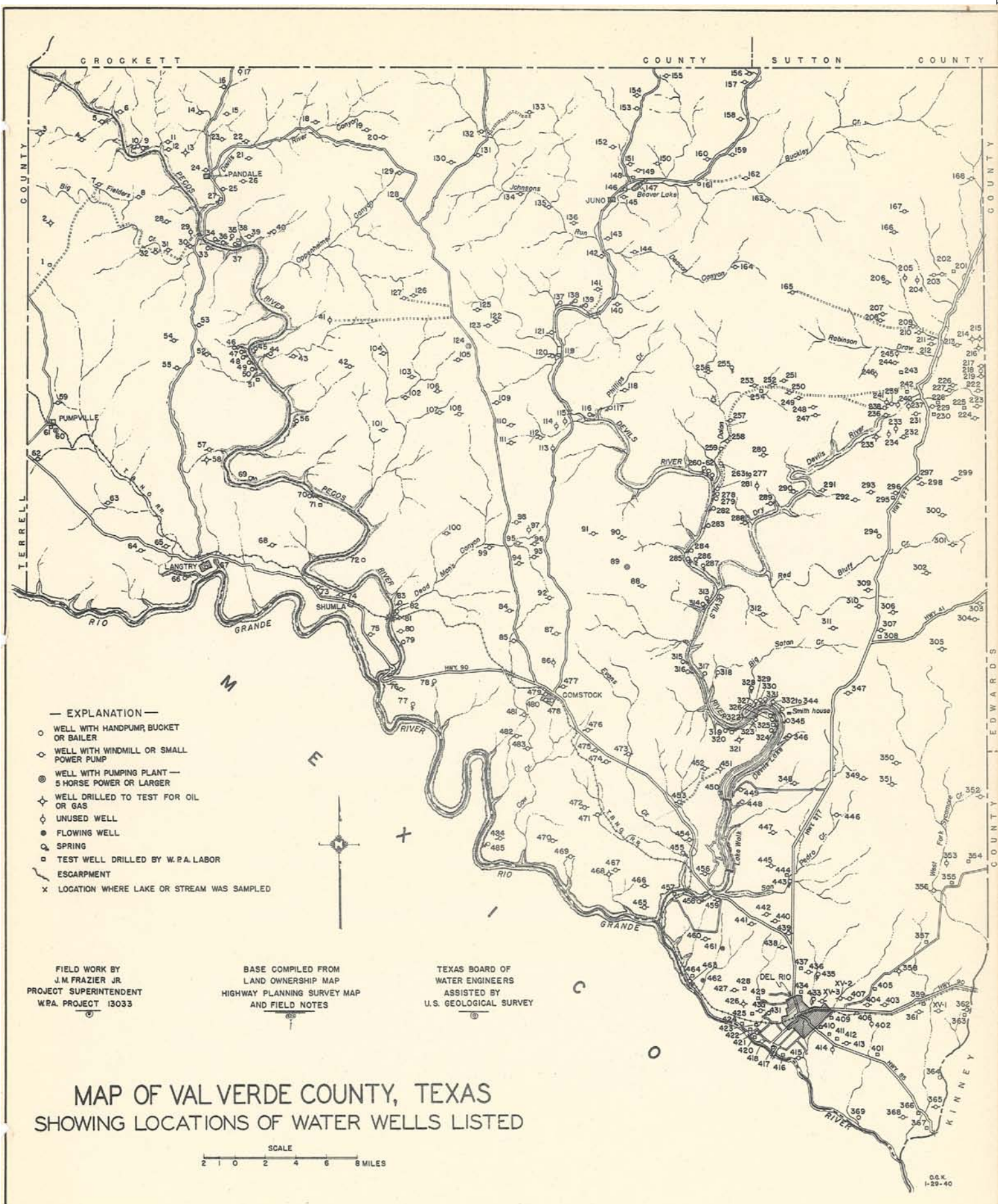
b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 50.

Chemical analyses--Continued

Results are in milligrams equivalents per liter

Well	Owner	Depth of well (ft.)	Date of collection	Total hardness as $CaCO_3$ (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na + K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Fluoride (F)	Total dissolved solids (calc.)
20	Bob Cauthorn	430	May 10, 1939	4.16	2.44	1.72	0.59	4.00	0.19	0.56	-	0.02	9.50
27	H. V. L. Mills	Spring	May 13, 1939	5.34	3.30	1.54	0.12	4.40	0.31	0.59	0.13	0.03	10.92
42	William Lawson	900	May 3, 1939	4.26	2.50	1.76	1.44	3.60	0.52	1.47	-	0.11	11.40
52	J. Cox	520	Apr. 27, 1939	4.30	1.68	2.62	0.52	3.50	0.42	0.79	-	0.11	9.64
74	Dr. U. E. Ross	1,213	May 5, 1939	4.78	2.92	1.86	1.44	3.70	0.92	1.27	-	0.33	14.44
89	Tom Bright	550	Aug. 29, 1939	3.66	3.20	0.46	0.17	3.50	0.02	0.31	-	0.01	7.66
100	H. Martin	480	June 16, 1939	4.58	3.44	1.14	0.29	4.00	0.25	0.56	-	0.06	9.74
123	H. E. Guinn	445	Sept. 12, 1939	4.54	3.64	0.90	0.00?	3.50	0.27	0.37	0.11	0.02	8.81
130	Ira M. Carson	300	May 10, 1939	4.08	2.86	1.22	0.35	3.90	0.16	0.37	-	0.02	8.36
140	Mrs. J. Garrett	125	June 15, 1939	4.76	3.70	1.06	1.05	3.00	0.17	0.56	0.08	0.01	11.62
152	B. E. Wilson	220	May 31, 1939	3.08	1.84	1.24	0.60	2.90	0.21	0.42	0.15	0.02	7.36
162	J. O. Taylor	120	May 30, 1939	5.16	3.46	1.70	0.49	5.10	0.21	0.34	-	0.03	11.30
164	George Whitehead	390	Aug. 24, 1939	5.24	3.53	1.66	0.14	4.90	0.08	0.40	-	0.01	10.76
227	John Galloway	300	Aug. 8, 1939	4.66	2.26	2.40	0.21	3.60	0.15	0.56	0.52	0.04	9.74
247	Felix Harrison	434	Aug. 23, 1939	2.98	1.12	1.36	0.44	2.90	0.12	0.40	-	0.03	6.34
252	W. Fawcett	250	do.	4.82	3.36	1.46	0.28	4.70	0.06	0.34	-	0.02	10.20
297	F. L. Davis	355	Aug. 7, 1939	5.18	2.68	2.50	0.16	4.10	0.84	0.34	-	0.06	10.68
300	Chris Hutto	650	Aug. 17, 1939	3.58	1.78	1.80	0.54	3.50	0.25	0.37	-	0.02	8.24
309	H. Miers	600	Aug. 15, 1939	3.70	1.70	2.00	0.16	3.40	0.06	0.37	-	0.03	7.72
352	B. Lewis	430	Apr. 3, 1939	4.02	3.22	0.80	0.21	3.70	0.19	0.34	-	0.05	8.46
364	F. W. Herbst	17	July 31, 1939	4.00	3.40	0.60	0.93	3.40	0.25	0.31	0.97	-	9.86
403	C. H. Adams	500	July 27, 1939	5.58	3.08	2.50	1.14	5.00	1.01	0.71	-	0.04	13.44
407	John Green	145	do.	7.64	4.04	3.60	0.33	5.30	1.01	1.40	-	0.12	15.94
413	S. H. Barton	360	July 31, 1939	36.30	21.30	15.00	88.02	5.40	97.02	22.28	-	0.12	249.64
426	W. S. Stevenson	4,500	Apr. 10, 1939	33.96	31.56	2.40	1.44	3.60	31.12	0.59	-	0.09	70.80
433	City of Del Rio	Spring	Mar. 31, 1939	3.90	3.30	0.60	0.46	3.90	0.19	0.27	-	-	8.72
445	G. C. Pool	220	July 26, 1939	7.20	5.20	2.00	0.41	4.70	2.10	0.68	-	0.13	15.22
454	R. Sellers	100	July 20, 1939	6.20	5.50	0.70	0.57	5.20	0.55	1.02	-	0.01	13.54
474	P. H. McNutt	650	July 24, 1939	4.36	3.26	1.10	0.23	3.90	0.23	0.51	-	0.03	9.23
479	Mrs. R. L. Fawcett	750	May 8, 1939	4.66	2.24	2.42	0.71	3.00	1.05	1.19	-	0.13	10.74



MAP OF VAL VERDE COUNTY, TEXAS
SHOWING LOCATIONS OF WATER WELLS LISTED