Please do not destroy or throw away this publication. If you have no further use for it, write to the State Board of Water Engineers, Austin, requesting return postage.

* * *

TEXAS

* * *

STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman
A. H. Dunlap, Member
J. W. Pritchett, Member

* * *

RANDALL COUNTY, TEXAS

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

* * *

WORKS PROGRESS ADMINISTRATION

GROUND-WATER SURVEY

PROJECT 5674

W. G. Christian and L. C. Smyers,
Project Superintendents

* * *

Analyses made, data assembled and report mimeographed by
WORKS PROGRESS ADMINISTRATION
PROJECT 6507-5112

* * *

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

* * *

Austin, Texas
Feb. 2, 1938

RANDALL COUNTY

* * *

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

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

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

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

The field work in Randall County was started on April 11, 1937, and completed September 4, 1937. This work was done as Project 5674 of Administrative Field office 16 of the Works Progress Administration, Amarillo, Texas. W. G. Christian and L. C. Smyers, geologists, were project superintendents. Mr. Christian left the project in July to accept other employment and Mr. Smyers completed the project. Both Mr. Christian and Mr. Smyers should be given credit for their interest in the work and for the many extra hours they spent on the project. The Amarillo office of the Works Progress Administration made this work possible by their constant help and cooperation. The Randall County Commissioners' Court cooperated by furnishing transportation for the workers during the project.

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

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

Records of wells and springs in Randall 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 Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
1	13⅓ miles north	41, NE¼NE¼	B.S.& F. blk. 9	Mrs. -- O'brion	--	Upland flat	--	150	--
2	13 miles north	62, NW¼SE¼	do.	John Menke	Joe Conner	Flat	1923	183	5
d/ 2a	12⅓ miles north	29, NE¼NW¼	do.	City of Amarillo	--	--	1931	289	--
d/ 2b	do.	do.	do.	do.	--	--	1931	267	18
d/ 2c	do.	do.	do.	do.	--	--	1931	260	--
d/ 2d	12 miles north	29, SE¼NW¼	do.	do.	--	--	1931	270	--
d/ 2e	do.	do.	do.	do.	--	--	1931	270	--
d/ 3	do.	40, NW¼SE¼	do.	Mrs. Florence Vassett	--	Flat	1910	200	5
d/ 7	14⅓ miles north	172, NW¼NE¼	A.B.& M. blk. 2	Stanley Polland	--	do.	1912	300	--
d/ 8	13½ miles northeast	141, SW¼SW¼	do.	-- Nunn	--	--	--	203	4½
9	12½ miles northeast	150, SE¼NE¼	do.	R. T. Beaman	--	--	--	187	6
15	15 miles northeast	7, SE¼SE¼	I. &G.N. blk. 8	E. Garrison	--	Flat	--	224	4
17	18 miles northeast	55, NW¼	A.B.& M. blk. 2	L. H. Koenig	--	do.	1919	275	4
d/ 18	18⅓ miles northeast	54, SW¼NW¼	do.	C. B. King	--	do.	1925	220	6
d/ 23	17 miles east	3, NE¼NE¼	I. &G.N. blk. 6	Charlie Erwin	--	do.	--	225	4
d/ 24	16 miles east	4, NW¼NE¼	do.	J. N. Vernon	--	do.	--	238	6
d/ 27	16½ miles east	130, SE¼SW¼	do.	State Parks Board	--	Side of Canyon	--	Spring	--
d/ 32	13 miles east	101, NW¼NW¼	do.	do.	D. L. McDonald	Flat	1933	160	6
33	11½ miles east	103, NE¼NE¼	do.	C. F. Marshall	--	--	--	91	--
d/ 34	10½ miles southeast	202, NE¼NE¼	do.	D. P. Ross	--	Upland flat	--	127	--
d/ 35	10 miles southeast	170, SE¼SE¼	do.	R. L. McSpadden	--	do.	--	150	--
36	8 miles southeast	172, SE¼SE¼	do.	S. B. Orton	Jim Ham	do.	--	148	5
d/ 37	7½ miles east	140, SE¼SE¼	do.	S. M. Jay	--	do.	--	--	--
38	7 miles east	140, NW¼NE¼	do.	W. J. Olver	--	--	--	171	--

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

b/ C, cylinder; E, electric; G, gasoline engine; W, windmill; Cf, centrifugal; T, turbine; number indicates horsepower.

Records obtained by W. G. Christian and L. C. Smyers, Project Superintendents
(Chemical analyses of water from these wells and springs are in the table of analyses.)

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
1	--	--	--	C,W	D,S	Weak supply.
2	0.8	154.5	Aug. 17, 1937	C,W	D,S	183 feet iron casing. Owner reports well sanded up in spring of 1937. Weak supply.
2a	--	163	e/	--	P	Strong supply.
2b	--	--	--	-,E, 75	P	Do.
2c	--	163	e/	--	P	Do.
2d	--	163	e/	--	P	Do.
2e	--	162	e/	--	P	Do.
3	--	--	--	C,W	D,S	
7	0.5	207.8	Aug. 6, 1937	None	N	
8	0	189.8	May 21, 1937	C,W	D,S	Strong supply.
9	0.3	180	e/	C,W	D,S	187 feet wrought iron casing. Strong supply.
15	0.5	211.5	July 28, 1937	C,W	D,S	Temperature, 58° F.
17	0.7	195.5	do.	C,W	D,S	Strong supply.
18	0.5	214.4	do.	C,W	D,S	12 feet of 6-inch steel casing at top; 40 feet of 6-inch steel casing near bottom; 10 feet of 4-inch casing at bottom. Owner reports water from sand, 205 to 220 feet.
23	--	--	--	C,W	D	
24	1.5	215.4	July 28, 1937	C,W	D,S	Strong supply.
27	--	Flows	May 11, 1937	None	D	Reported flow, 6 gallons a minute from sandstone.
32	--	--	--	C,G,3	P	154 feet wrought iron casing. Measured yield, 4 gallons a minute.
33	0.3	84.2	May 8, 1937	C,W	S	Strong supply.
34	0.5	105.5	June 9, 1937	C,W	D,S	
35	--	--	--	C,W	--	
36	1.7	131.7	May 12, 1937	C,W	D,S	
37	--	--	--	C,W	D,S	
38	0.2	149	May 21, 1937	C,W	D	Strong supply.

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

Records of wells and springs in Randall County--Continued

No.	Distance from Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 41	8 miles east	75, NE¼NW¼	I. &G.N. blk. 6	R. S. Macfadden	--	--	--	152	4½
42	do.	54, SE¼SW¼	do.	R. P. Boehning	--	--	--	176	--
d/ 43	7½ miles northeast	44, SE¼SE¼	do.	Ben W. Moore	--	Upland flat	--	181	6
d/ 48	7 miles northeast	20, SW¼NW¼	do.	E. S. Burgess	--	--	--	146	4½
d/ 49	6 miles northeast	18, SE¼SE¼	do.	do.	--	Flat	--	160	6
51	7 miles northeast	44, SW¼SW¼	do.	W. F. Boehning	--	Upland flat	--	180	4¼
52	5½ miles northeast	53, NW¼SW¼	do.	Carl Overton	--	do.	--	180	4½
d/ 53	do.	52, SW¼SW¼	do.	T. C. Jennings	-- Hall	Flat	1909	181	--
d/ 55	6 miles east	77, SE¼SE¼	do.	J. E. Albers	--	Upland flat	1926	180	--
57	5½ miles east	109, NW¼NE¼	do.	do.	--	do.	1914	171	4
58	do.	84, SE¼SW¼	do.	do.	-- Wyatt	do.	1914	185	4
d/ 61	5½ miles southeast	147, NW¼NE¼	do.	S. L. Lewis	--	Flat	--	144	6
65	3½ miles southeast	144, SW¼SE¼	do.	L. H. Crawford	--	--	--	39	--
d/ 68	do.	143, NW¼NW¼	do.	W. A. Mac Spadden	--	Upland flat	--	95	--
69	3¼ miles east	114, NW¼SW¼	do.	J. P. Hicks	Leo McDade	do.	1924	90	6
d/ 71	2½ miles east	112, NE¼SW¼	do.	L. Thomas	--	Valley flat	--	24	8
72	3 miles east	111, NW¼NW¼	do.	-- Loan Co.	--	Upland flat	--	58	--
d/ 74	4 miles east	83, SW¼SW¼	do.	C. E. Osgood	--	do.	--	150	4½
d/ 76	4¾ miles north	33, NW¼SW¼	T.T.R.R. blk. 1	C. H. Ray	--	do.	--	115	5
d/ 77	5½ miles north	33, NW¼NW¼	do.	J. C. Pipkin	--	--	--	73	6
d/ 78	6 miles north	63, NW¼NW¼	do.	J. E. Dickinson	--	Upland flat	1908	149	--
d/ 79	do.	61, SE¼NE¼	do.	J. B. Latham	-- Munsey	do.	1892	148	--
d/ 80	3½ miles north	31, SW¼SW¼	do.	-- Oferell	--	do.	--	112	--
81	3 miles northwest	5, NW¼NE¼	H. &G.N. blk.B-5	G. W. Cox	--	do.	--	150	--
82	do.	5, NW¼SE¼	do.	do.	W. N. Cox	Slope	--	25	4
d/ 83	do.	5, SW¼SE¼	do.	do.	--	Flat	1930	21	--
84	2⅔ miles northwest	5, NE¼SE¼	do.	do.	--	Slope	--	37	5

W. G. Christian and L. C. Smyers, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
41	1	145.8	May 20, 1937	C,W	N	
42	--	--	--	C,W	D,S	Strong supply.
43	0.2	168	May 20, 1937	C,W	N	181 feet wrought iron casing.
48	1.7	136.4	Apr. 24, 1937	C,W	D,S	
49	--	--	--	C,W	D,S	
51	0.2	172	May 2, 1937	C,W	D,S	180 feet wrought iron casing. Measured yield, 2 gallons a minute.
52	1	131.9	May 20, 1937	C,W	N	
53	1	167	Apr. 24, 1937	C,W	D,S	Strong supply.
55	--	--	--	C,W	S	
57	--	--	--	C,W	D,S	
58	--	--	--	C,W	D,S	130 feet wrought iron casing.
61	1	132.1	Apr. 21, 1937	C,W	D,S	Measured 85 feet drawdown after pumping 3 gallons a minute for ½ hour.
65	1.5	32.6	Apr. 19, 1937	C,W	D,S	Strong supply.
68	--	--	--	C,W	D,S	
69	1	45	e/	C,W	D,S	90 feet wrought iron casing. Measured yield, 1.7 gallons a minute.
71	0	14.5	May 8, 1937	C,W	I	Strong supply.
72	--	--	--	C,W	D,S	
74	--	--	--	C,W	D,S	140 feet steel casing. Strong supply.
76	1	107.8	June 11, 1937	None	N	
77	--	--	--	C,W	N	
78	0.3	136.8	June 11, 1937	C,W	D,S	Measured yield, 7½ gallons a minute.
79	--	131	e/	C,W	D,S	Strong supply.
80	0.1	100.3	June 11, 1937	None	N	
81	--	--	--	C,W	I	
82	2	21.8	May 7, 1937	C,W	D	25 feet wrought iron casing. Strong supply.
83	0.4	17	May 1, 1937	C,W	I	Measured yield, 6 gallons a minute.
84	2	36.8	May 7, 1937	C,W	D,S	Strong supply.

Records of wells and springs in Randall County--Continued

No.	Distance from Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 85	1¾ miles northwest	29, NE¼NE¼	H. &G.N. blk.B-5	-- Myers	--	Upland flat	--	114	4
86	¾ miles northwest	30, SE¼SW¼	do.	J. G. Ford	--	do.	--	320	8
88	1½ miles north	2, SW¼SW¼	do.	Phyllis I. Stanfield	--	do.	--	--	--
d/ 89	1½ miles northeast	31, NE¼NE¼	do.	R. G. Oldham	--	--	--	251	4½
d/ 91	1¼ miles northeast	32, SW¼SW¼	do.	J. M. Reeves	--	Flat	--	28	--
d/95a	In Canyon	34, NE¼NE¼	do.	C. M. Dowlen	C. M. Dowlen	Upland flat	--	75	--
96	do.	35, NE¼NE¼	do.	City of Canyon	Omer Kersey	do.	1930	488	12½
97	do.	do.	do.	do.	do.	do.	1930	490	12½
d/ 98	do.	do.	do.	West Texas Utilities Co.	--	do.	1927	490	12½
100	½ mile south	63, NW¼NW¼	do.	J. N. Sea	--	do.	--	52	6
d/103	1¼ miles southeast	64, NW¼NW¼	do.	W. H. Bush Estate	--	Creek bank	--	--	--
d/106	2¼ miles southeast	65, SW¼NW¼	do.	J. L. Ballengee	--	Flat	--	60	--
110	1½ miles south	66, NW¼NW¼	do.	Price Brothers	--	Upland flat	--	75	4
d/111	2½ miles southwest	68, SE¼NE¼	do.	I. S. Mullins	--	--	--	--	4½
112	2 miles south	67, SW¼NE¼	do.	A. B. Heynes	--	--	--	83	10
113	3 miles southeast	96, NE¼NW¼	do.	J. R. Hicks	--	Upland flat	--	--	--
d/114	3¾ miles south	97, NW¼NW¼	do.	C. M. Dowlen	--	--	--	125	--
d/115	3½ miles south	98, NW¼NW¼	do.	J. B. Lipe	--	--	--	73	--
116	4⅓ miles south	126, NE¼NW¼	do.	Melton Dooley	--	--	--	40	10
d/117	4¾ miles south	128, NE¼NW¼	do.	do.	--	--	--	52	14
d/118	6½ miles south	130, SE¼SE¼	do.	M. O. Slack	-- Redfern	--	1903	142	--
d/119	5⅓ miles south	131, NW¼NW¼	do.	Mrs. -- Young	-- Lovejoy	--	1918	93	5½
d/120	6 miles south	133, NE¼NE¼	do.	State Life Insurance Co.	--	--	--	59	--
d/121	6 miles southwest	123, NW¼NW¼	do.	John Knight	--	--	--	120	--
122	5 miles southwest	124, NE¼NE¼	do.	Tim Bible	--	Upland flat	--	103	5
d/125	3⅓ miles west	38, NW¼SE¼	do.	L. A. Darnell	--	--	1935	28	--

W. G. Christian and L. C. Smyers, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
85	--	--	--	C,W	D,S	
86	--	--	--	C,W	D,S	320 feet casing.
88	--	--	--	C,W	D,S	Strong supply.
89	4	154.7	May 6, 1937	C,W	D,S	Measured 61 feet drawdown after pumping 25 gallons a minute for 55 minutes.
91	0.4	22.5	do.	C,W	D	Weak supply.
95a	--	--	--	C,W	I	Strong supply.
96	--	338	e/	T,E, 40	P	Reported altitude, 3,551.3 feet. See log.
97	--	--	--	T,E, 40	P	428 feet wrought iron casing. Water reported in white sand, 335 to 350 feet, 425 to 440 feet.
98	--	251	e/	T,E, 40	P,Ind	Reported yield, 185 gallons a minute. See log.
100	0.3	50.5	May 14, 1937	C,W	D,S	
103	0.7	8.8	June 14, 1937	None	N	
106	--	--	--	C,W	--	
110	0.7	52.9	Apr. 15, 1937	C,W	D,S	Strong supply.
111	--	--	--	C,W	D,S	
112	--	--	--	C,W	D,S	
113	--	--	--	C,W	I	Strong supply.
114	--	--	--	C,W	D,S	Do.
115	--	67.3	Apr. 15, 1937	C,W	D,S	
116	0	37.6	May 7, 1937	None	N	
117	1	40.1	June 18, 1937	--	S	Reported unfit for domestic use.
118	1.5	134.5	June 3, 1937	C,W	D,S	Strong supply.
119	0	86.8 87.7	June 2, 1937 June 24, 1937	None	N	
120	--	--	--	C,W	N	Dry well.
121	--	--	--	C,W	D,S	
122	0.3	90.3	May 7, 1937	C,W	D,S	
125	--	16	e/	C,W	S	

Records of wells and springs in Randall County--Continued

No.	Distance from Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
126	3¾ miles west	59, SE¼NW¼	H. &G.N. blk. B-5	Fay McIntire Estate	--	Slope	--	25	7
d/128	4 miles west	39, SE¼SE¼	do.	--	--	--	--	40	--
d/130	5 miles west	71, NW¼NW¼	do.	J. M. Carruth	--	Small Canyon	--	Spring	--
132	6 miles west	56, NE¼SE¼	do.	Bill Black	--	--	--	121	6
d/135	5½ miles west	25, SW¼SE¼	do.	Mrs. Lena Tucek	--	Upland flat	--	103	--
136	6½ miles west	41, NW¼NE¼	do.	-- Baber	--	do.	--	134	4½
d/137	6 miles northwest	8, SE¼NE¼	T.T.R.R. blk. 1	Ray Metcalf	--	do.	--	128	--
d/138	do.	25, SE¼SE¼	do.	-- Ward	-- Brazil	--	--	145	--
d/139	6½ miles northwest	do.	do.	do.	do.	--	--	197	--
d/140	do.	25, NE¼	do.	do.	do.	--	--	167	--
d/141	do.	25, NE¼NE¼	do.	do.	--	--	--	117	--
d/142	do.	do.	do.	do.	-- Brazil	--	--	158	--
d/143	do.	do.	do.	do.	do.	--	--	110	--
d/144	7 miles northwest	40, SE¼SW¼	do.	do.	do.	--	--	140	--
d/145	8 miles northwest	23, SE¼SE¼	do.	do.	do.	--	--	140	--
d/146	do.	41, NE¼NE¼	do.	do.	do.	--	--	134	--
147	10 miles northwest	170, NE¼NW¼	B.S.& F. blk. 9	-- Belles	Leo McDade	--	--	190	--
d/149	12 miles northwest	10, SE¼SE¼	B.S.& F. blk. 11	Jesse Pierce	--Terrentine	--	--	216	--
d/150	14 miles northwest	55, NW¼NW¼	B.S.& F. blk. 7	L. A. Pierce	-- Brazil	--	--	238	--
d/152	14⅓ miles northwest	54, NW¼	do.	do.	do.	--	--	245	--
d/153	13⅓ miles northwest	55, SW¼SW¼	do.	do.	--Terrentine	--	--	250	--
d/154	14 miles northwest	50 SW¼SW¼	T.T.R.R. blk. 1	do.	-- Brazil	--	--	154	--
d/155	13 miles northwest	51, SW¼SW¼	do.	do.	do.	--	--	151	--
156	do.	46, NW¼NW¼	do.	California Life Insurance Co.	--	Upland flat	--	118	5
157	12⅓ miles northwest	51, SE¼SE¼	do.	L. A. Pierce	--Terrentine	--	--	234	--
d/158	11⅓ miles northwest	45, NE¼NE¼	do.	T. B. Slaughter	do.	--	--	215	--
d/159	10 miles northwest	21, NE¼NE¼	do.	-- Word	do.	--	--	155	--

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
126	2	9.8	May 14, 1937	C,W	D	Strong supply.
128	--	--	--	None	N	
130	--	Flows	June 15, 1937	None	S	
132	2	114.7	May 14, 1937	C,W	I	Measured yield, 3 gallons a minute. Irrigates small garden.
135	0	65.5	June 29, 1937	C,W	D,S	Strong supply.
136	--	--	May 31, 1937	C,W	D,S	134 feet wrought iron casing. Pumping level, 110.6 feet.
137	0	103.1	June 16, 1937	C,W	D,S	
138	--	65	e/	--	--	Drilled as test well 30. See log.
139	--	78	e/	--	--	Drilled as test well 32. See log.
140	--	91	e/	--	--	Drilled as test well 31. See log.
141	--	18	e/	--	--	Drilled as test well 34. See log.
142	--	35	e/	--	--	Drilled as test well 35. See log.
143	--	12	e/	--	--	Drilled as test well 29. See log.
144	--	32	e/	--	--	Drilled as test well 36. See log.
145	--	81	e/	--	--	Drilled as test well 33. See log.
146	--	52	e/	--	--	Drilled as test well 37. See log.
147	--	135	e/	--	--	Drilled as test well 1. See log.
149	--	118	e/	--	--	Drilled as test well 12. See log.
150	--	118	e/	--	--	Drilled as test well 25. See log.
152	--	111	e/	--	--	Drilled as test well 23. See log.
153	--	115	e/	--	--	Drilled as test well 24. See log.
154	--	105	e/	--	--	Drilled as test well 4. See log.
155	--	60	e/	--	--	Drilled as test well 17. See log.
156	0.5	99.8	May 18, 1937	C,W	D,S	
157	--	110	e/	--	--	Drilled as test well 3. See log.
158	--	108	e/	--	--	Drilled as test well 16. See log.
159	--	94	e/	--	--	Drilled as test well 26. See log.

Records of wells and springs in Randall County--Continued

No.	Distance from Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/161	9½ miles west	12, NE¼NE¼	T.T.R.R. blk. 1	-- Word	-- Brazil	--	--	95	--
d/162	12 miles west	19, center	do.	T. B. Slaughter	do.	--	--	173	--
d/163	12½ miles west	19, SW¼SW¼	do.	do.	do.	--	--	91	--
d/164	11½ miles west	14, SE¼SE¼	do.	do.	--Terrentine	--	--	211	--
d/165	13 miles west	17, SE¼SE¼	H. &G.N. blk.B-5	J. C. Coker	-- Owen	--	--	188	--
167	9 miles west	43, SW¼SW¼	do.	Mrs. Louise Simms	--	Upland flat	--	120	--
d/168	9½ miles west	76, NW¼NE¼	do.	Santa Fe R. R. Co.	--	do.	--	158	6
170	10 miles west	85, NW¼NW¼	do.	Henry Battenhorst	--	do.	--	--	--
d/172	10½ miles west	108, SW¼NW¼	do.	H. B. Conner	--	do.	--	--	--
d/173	11½ miles southwest	116, NE¼	do.	--	--	--	--	Spring	--
d/176	16½ miles southwest	279, NE¼NE¼	S.K.& K. blk. M-6	Walter Graham	--	--	--	410	4
177	do.	238, NW¼	do.	do.	--	Flat	--	400	6
178	15½ miles southwest	202, NW¼SE¼	do.	J. L. Sullivan	-- McDade	do.	--	145	5
d/179	17 miles southwest	237, SE¼NE¼	do.	Walter Graham	--	do.	--	200	5
d/180	14½ miles southwest	162, SE¼SW¼	do.	Fred Collier	--	do.	--	174	4
d/181	14½ miles south	159, SE¼SW¼	do.	--	--	do.	--	225	4
d/182	11½ miles south	78, NE¼NE¼	T.T.R.R. blk.K-14	P. T. Doss	Jim Ham	do.	--	182	5
d/183	9½ miles south	17, SE¼SE¼	J G blk.2z	--	--	do.	--	160	--
184	10½ miles south	26, SE¼SE¼	do.	Mrs. -- Cook	--	Upland flat	--	112	5
d/185	15 miles south	44, SW¼SE¼	S.K.& K. blk. M-6	Ed Jones	Ed Jones	do.	1917	193	6
d/186	15½ miles south	4, SW¼SE¼	do.	N. Grimes	do.	do.	--	151	--
187	do.	59, SW¼SW¼	A.B.& M. blk. M-8	J. W. Stubblefield	--	do.	--	134	6
189	16 miles south	92, SW¼SE¼	do.	Embry Finley	--	do.	--	123	6
d/190	14 miles south	57, SW¼SW¼	do.	G. R. Forbus	--	do.	1926	97	--
d/194	9½ miles south	3, SW¼SE¼	do.	P. V. Winstead	--	--	--	149	4½
195	7½ miles southeast	50, SW¼NW¼	do.	Chas. J. Beckman	--	Upland flat	--	89	--
196	8½ miles southeast	205, SW¼SE¼	I. &G.N. blk. 6	Jasper Jennings	--	do.	--	160	--

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
161	--	13	e/	--	--	Drilled as test well 28. See log.
162	--	60	e/	--	--	Drilled as test well 10. See log.
163	--	14	e/	--	--	Drilled as test well 15. See log.
164	--	98	e/	--	--	Drilled as test well 27. See log.
165	--	84	e/	--	--	Drilled as test well 18. See log.
167	--	--	--	C,W	D,S	Strong supply.
168	1.2	107.5	May 13, 1937	C,W	D,Ind	
170	--	--	--	C,W	D,S	Weak supply.
172	--	--	--	C,W	D,S	
173	--	Flows	Aug. 21, 1937	None	S	Estimated flow, $\frac{1}{4}$ gallon a minute.
176	--	--	--	C,W	S	Supplies 200 head of stock.
177	--	--	--	C,W	S	Estimated yield, 4 gallons a minute.
178	0	130.6	Aug. 18, 1937	C,W	D,S	Iron casing, 110 to 130 feet. Tenant reports sand, 110 to 130 feet. Pumping level, 137.8 feet.
179	--	--	--	C,W	D,S	Estimated yield, 8 gallons a minute.
180	0.2	155.5	Aug. 18, 1937	None	N	
181	1.3	214.5	do.	C,W	D,S	Estimated yield, 2 gallons a minute.
182	2	175.1	May 7, 1937	C,W	D,S	
183	1.5	153.1	do.	C,W	D,S	
184	1	94.5	do.	C,W	D	112 feet wrought iron casing.
185	1	145.9	May 26, 1937	C,W	D,S	10 feet wrought iron casing.
186	0.5	127.4	do.	C,W	D,S	
187	--	108.9	do.	C,W	D,S	
189	0.5	94	May 19, 1937	C,W	D,S	
190	--	45	e/	C,W	D,S	
194	0.5	137.8	Apr. 21, 1937	C,W	D	15 feet wrought iron casing. Irrigates small garden.
195	0.5	72.3	May 31, 1937	C,W	D,S	Strong supply.
196	1	151.9	June 1, 1937	C,W	D,S	Do.

Records of wells and springs in Randall County--Continued

No.	Distance from Canyon	Section	Survey and Block	Owner	Driller	Topographic situation	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/197	9⅓ miles southeast	1, NW¼NW¼	J. H. G. blk. M-9	R. B. Gist	--	Upland flat	--	185	--
198	11 miles southeast	37, NW¼NW¼	do.	E. W. Miller	--	do.	--	150	5
199	11⅓ miles southeast	3, SW¼SW¼	do.	R. B. Gist	--	do.	1917	152	--
199a	do.	96, NW¼NW¼	A.B.& M. blk. M-8	Walter Darlington	--	do.	--	157	--
199b	12⅔ miles southeast	96, SE¼SW¼	do.	do.	--	do.	--	141	8
202	18 miles southeast	45, SE¼SE¼	J. H. G. blk.M-9	Elmer Bauer	--	--	--	140	6
d/203	19 miles southeast	100, NW¼NW¼	do.	L. E. F. Johnson	--	--	1907	100	--
204	20 miles southeast	117, SE¼SW¼	do.	J. A. Tibbets	--	--	--	120	6
d/205	18⅓ miles southeast	101, NE¼SW¼	do.	Travis Gilliam	Peerless Co.	Flat	1935	196	16
d/206	15 miles southeast	68, NE¼SW¼	do.	W. Fowler	--	do.	1926	124	4
d/207	16 miles southeast	77, SW¼SW¼	do.	George Schaeffer	Bill Glover	do.	1930	142	--
d/208	19 miles southeast	139, NE¼NE¼	do.	Lester Bryan	Lester Bryan	do.	1932	142	--
d/209	20 miles southeast	151, SW¼SW¼	do.	E. W. Schaeffer	--	do.	1915	107	--
210	21 miles southeast	152, NE¼SE¼	do.	Mrs. Allie Buzbee	-- Glover	Upland flat	1935	--	--

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

b/ C, cylinder; E, electric; G, gasoline engine; W, windmill; Cf, centrifugal; T, turbine; number indicates horsepower.

W. G. Christian and L. C. Smyers, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water Level: Depth below measuring point (feet)	Water Level: Date of measurement	Pump and power b/	Use of water c/	Remarks
197	--	--	--	C,W	D,S	
198	--	--	--	C,W	D,S	20 feet wrought iron casing.
199	--	--	--	C,W	D,S	Estimated yield, 5 gallons a minute.
199a	1	134.6	June 1, 1937	C,W	D,S	Strong supply.
199b	1	123.6	do.	C,W	D,S	Do.
202	--	116.4	May 31, 1937	C,W	D,S	Estimated yield, 3 gallons a minute.
203	0	91.5	Aug. 20, 1937	C,W	D,S	
204	2	86.6	May 19, 1937	C,W	D,S	10 feet of 6-inch wrought iron casing.
205	1	--	Aug. 20, 1937	Cf,20	I	Reported yield, 600 gallons a minute. Pumping level, 148 feet. Owner reports test well 26 feet southwest. Struck water at 80 feet and 120 feet.
206	0.3	--	do.	C,W	D,S	Galvanized iron casing. Pumping level, 122.3 feet. Estimated yield, 3 gallons a minute.
207	0	123.1	do.	C,W	D,S,I	Irrigates ¼-acre garden, 25 trees and lawn.
208	1	124.2	do.	C,W	D,S	Owner reports water in sandy clay and sand rock, 120 to 142 feet.
209	0.3	91.4	do.	C,W	D,S	Strong supply.
210	0	75.8	May 19, 1937	C,W	D,S	Pumping level, 80.12 feet. Measured yield, 3½ gallons a minute.

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

Table of Drillers' Logs, Randall County, Texas

Driller's log of well 96

City of Canyon. In Canyon.

	Thickness (feet)	Depth (feet)
Surface materials	3	3
Gypsum	62	65
Pink shale	19	84
Gypsum	3	87
Red sandy shale	38	125
Brown shale	20	145
Blue sandy shale	53	198
Red shale	34	232
Blue shale	13	245
Pink sandy shale	20	265
Light-brown shale	72	337
White water sand	20	357
Red shale	6	363
Hard sandy shale	30	393
Brown shale	17	410
White water sand	33	443
Blue shale	3	446
Water sand	29	485
Blue sandy shale	3½	488½
TOTAL DEPTH		488½

CASING RECORD: 125 feet 15½-inch casing. 493 feet 12½-inch casing.

Driller's log of well 98

West Texas Utilities Co. In Canyon.

	Thickness (feet)	Depth (feet)
Surface materials	5	5
Pink clay	10	15
Caliche and lime rock	30	45
Caliche, lime and sand	10	55
Red and gray sand and caliche	10	65
White shale	25	90
Red shale	25	115
Brown shale	45	160
Blue shale	30	190
Red shale	105	295
Brown shale	33	328
White sandstone	23	350
Red shale	34	384
Gray sandstone and little red shale	30	414
Blue shale	3	417
Gray sandstone	23	440
Red shale and gray sandstone	16	456
White sandstone	29	485
Red shale	5½	490½
TOTAL DEPTH		490½

CASING RECORD: 102 feet 15½-inch casing; 399 feet 8-inch column pipe; 490½ feet 12½-inch casing.

Driller's log of well 138

-- Word test well No. 30. 6 miles northwest of Canyon.

	Thickness (feet)	Depth (feet)
Surface materials	3	3

Driller's log of well 138--Continued

	Thickness (feet)	Depth (feet)
White clay	9	12
Red clay, sand and rock	6	18
Clay, sand and white rock	6	24
Hard white rock	2	26
Red packed sand	10	36
White rock and sand	11	47
Red sand and rock	13	60
Packed sand	4	64
Loose water sand	7	71
Red packed sand, rock, and clay	8	79
Packed sand and clay	39	118
Blue clay	4	122
Red clay	3	125
TOTAL DEPTH		145

Driller's log of well 139

-- Word test well No. 32. 6½ miles northwest of Canyon.

	Thickness (feet)	Depth (feet)
Red clay	3	3
White rock	10	13
White sand and rock	5	18
Hard white rock	17	35
Red sand and rock	7	42
Light-red sand rock	3	45
Loose yellow sand	5	50
Red sand	15	65
White sand and rock	11	76
Hard, red water sand	7	83
Soft sand and rock, water	8	91
Hard, red packed sand, water	29	120
Hard, reddish packed sand, water	20	140
Light-red packed sand, water	10	150
Hard, red packed sand, water	14	164
Hard packed sand and clay	33	197
TOTAL DEPTH		197

Driller's log of well 140

-- Word test well No. 31, 6½ miles northwest of Canyon.

	Thickness (feet)	Depth (feet)
Surface materials	4	4
Red clay	10	14
Light-red clay	3	17
White rock and clay	13	30
Red sand	4	34
Red sand and white rock	25	59
Red sand and clay	4	63
White sand and clay	6	69
Red sand	16	85
Hard gray sand	6	91
Hard gray sand, water	3	94
Loose sand, water	22	116
Red sand and rock	4	120
Reddish sand, water	43	163
Clay and sand	4	167
TOTAL DEPTH		167

Table of Drillers' Logs, Randall County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 141		
-- Word test well No. 34. 6½ miles northwest of Canyon.		
Black sandy materials- - - -	4	4
Sandy clay- - - - - - - - - -	26	30
Hard gray sand, clay and rock, water- - - - - - - - - - - -	14	44
Hard gray sand, water- - - -	10	54
Red sand and rock- - - - - -	10	64
Hard packed sand, little water- - - - - - - - - - - -	53	117
TOTAL DEPTH- - - - - - - - -		117
Driller's log of well 142		
-- Word test well No. 35. 6½ miles northwest of Canyon.		
Red surface materials- - - -	12	12
Red sandy clay- - - - - - - -	6	18
Loose sand and rock- - - - -	4	22
Red sand and rock- - - - - -	13	35
Hard red sand and rock, water- - - - - - - - - - - -	11	46
Loose red sand and rock, water- - - - - - - - - - - -	11	57
Loose red sand, water- - - -	12	69
Tight red sand- - - - - - - -	11	80
Red sand, clay and rock, tight- - - - - - - - - - - -	38	110
Tight red sand- - - - - - - -	11	121
Hard gray packed sand- - - -	11	132
Blue clay- - - - - - - - - -	9	141
TOTAL DEPTH- - - - - - - - -		158
Driller's log of well 143		
-- Word test well No. 29. 6½ miles northwest of Canyon.		
Sandy clay materials- - - - -	12	12
Red sand and mud- - - - - - -	5	17
Packed sand and rock, water-	28	45
Loose water sand- - - - - - -	19	64
Red packed sand, water- - - -	16	80
Gray packed sand, water- - -	10	90
Red packed sand, water- - - -	5	95
Gray packed sand, water- - -	14	109
Loose water sand- - - - - - -	1	110
TOTAL DEPTH- - - - - - - - -		110
Driller's log of well 144		
-- Word test well No. 36. 7 miles northwest of Canyon.		
Dark-colored sandy surface materials- - - - - - - - - -	14	14
Light-colored sand and clay-	4	18
White rock and sand- - - - -	14	32
White rock and water sand- -	16	48
Red packed sand, water- - -	34	82
Hard red packed sand- - - -	26	108
Hard packed sand- - - - - -	17	125
Red sandy clay- - - - - - - -	8	133
Red clay- - - - - - - - - - -	7	140
TOTAL DEPTH- - - - - - - - -		140
Driller's log of well 145		
-- Word test well No. 33. 8 miles northwest of Canyon.		
Surface materials- - - - - -	3	3
Red clay- - - - - - - - - - -	9	12
White rock and sand- - - - -	6	18
Red clay- - - - - - - - - - -	4	22
Red sand and rock- - - - - -	8	30
White rock and clay- - - - -	9	39
Soft rock and sand- - - - - -	8	47
Sand and clay- - - - - - - -	8	55
Soft sand rock- - - - - - - -	15	70
Hard red sand- - - - - - - -	7	77
Sand and clay- - - - - - - -	4	81
Loose red sand and rock, water- - - - - - - - - - - -	15	96
White rock, clay and sand -	22	118
Soft sand and clay- - - - -	4	122
Reddish clay- - - - - - - - -	3	125
Yellowish clay- - - - - - - -	10	135
Red clay- - - - - - - - - - -	5	140
TOTAL DEPTH- - - - - - - - -		140
Driller's log of well 146		
-- Word test well No. 37. 8 miles northwest of Canyon.		
Red sandy materials- - - - -	12	12
Black sandy clay- - - - - - -	6	18
White rock and sand- - - - -	7	25
Red sandy clay- - - - - - - -	13	38
Light-red sandy clay, water	14	52
Light-red sand and clay - -	30	82
Soft red sand, water- - - -	11	93
Hard red sand- - - - - - - -	21	114
Blue clay- - - - - - - - - -	16	130
Red clay- - - - - - - - - - -	4	134
TOTAL DEPTH- - - - - - - - -		134
Driller's log of well 147		
-- Belles test well No. 1. 10 miles northwest of Canyon.		
Surface materials- - - - - -	5	5
Chalky materials- - - - - - -	15	20
Lime, sand, rock and clay -	100	120
Red packed sand- - - - - - -	11	131
Hard red sand rock- - - - -	4	135
Tight sand, little water- -	10	145
Reddish sandy clay- - - - -	30	175
Blue clay- - - - - - - - - -	5	180
Red clay- - - - - - - - - - -	10	190
TOTAL DEPTH- - - - - - - - -		190

Table of Drillers' Logs, Randall County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 149		
Jesse Pierce test well No. 12. 12 miles northwest of Canyon.		
Surface materials	4	4
Yellowish clay	36	40
White rock, hard and soft layers	35	75
White rock, clay and sand	25	100
Hard white rock	3	103
White rock, clay and sand	15	118
Reddish sand, water	18	136
Hard sand rock, water	4	140
Packed sand, little clay, water	10	150
Reddish sand, water	25	175
Soft sand, loose, water	8	183
Loose soft sand, honeycomb sand rock, sand pebbles, water, soft	31	214
Hard boulder	2	216
TOTAL DEPTH		216
Driller's log of well 150		
L. A. Pierce test well No. 25. 14 miles northwest of Canyon.		
Surface materials	3	3
Yellowish clay	57	60
Red clay and rock	10	70
Hard white rock	2	72
White clay and rock	46	118
Packed sand, water	22	140
Clay and packed sand	10	150
Packed sand, water	15	165
Packed sand and sand pebbles, water	17	182
Loose soft sand, water	18	200
Packed sand and sand pebbles, water	4	204
Packed sand, water	18	222
Packed sand, little clay, water	16	238
TOTAL DEPTH		238
Driller's log of well 152		
L. A. Pierce test well No. 23. 14½ miles northwest of Canyon.		
Surface materials	3	3
Reddish clay	49	52
White clay	19	71
White rock	6	77
Red sand	30	107
Honeycomb lime rock	4	111
Honeycomb lime rock, water	3	114
Loose soft sand, water	4	118
Packed sand, sand pebbles and light-brown clay balls	64	182
Loose soft sand, water	6	188
Packed sand, little clay	50	238
White clayey sand	4	242
Loose soft red sand, water	3	245
TOTAL DEPTH		245
Driller's log of well 153		
L. A. Pierce test well No. 24. 13½ miles northwest of Canyon.		
Surface materials	4	4
Yellowish clay	36	40
Soft white rock	55	95
Yellow clay, sand white rock	17	112
Honeycomb lime rock and sand	3	115
Honeycomb lime rock, water	5	120
Loose soft sand, water	7	127
Packed sand and lime rock, water	13	140
Clayey sand, water	10	150
Loose soft sand, water	11	161
Packed sand and white rock, water	4	165
Packed sand and sand pebbles, water	27	192
Loose soft sand, water	38	230
Clay and packed sand	3	233
Packed sand and gravel, water	5	238
Red clay	12	250
TOTAL DEPTH		250
Driller's log of well 154		
L. A. Pierce test well No. 4. 14 miles northwest of Canyon.		
Surface materials	3	3
Chalky materials	12	15
Yellowish clay	13	28
Reddish clay	10	38
Grayish clay	20	58
Hard rock	3	61
Soft reddish clay	4	65
Hard rock	3	68
Soft white clay	22	90
Red packed sand	10	100
Hard rock	5	105
Honeycomb rock, porous lime, little sand, little water	22	127
Packed sand	15	142
Blue clay	12	154
TOTAL DEPTH		154

Table of Drillers' Logs, Randall County--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 155		
L. A. Pierce test well No. 17. 13 miles northwest of Canyon.		
Surface materials- - - - - -	2	2
Chalky materials- - - - - -	10	12
Hard white rock- - - - - - -	10	22
Packed sand- - - - - - - - -	10	32
Sand and clay- - - - - - - -	20	52
Sand and small boulders- - -	8	60
Tight sand and sand pebbles, water- - - - - - - - - - -	33	93
Yellow clay- - - - - - - - -	12	105
White clay and sand- - - - -	46	151
TOTAL DEPTH- - - - - - - - -		151
Driller's log of well 157		
L. A. Pierce test well No. 3. 12½ miles northwest of Canyon.		
Surface materials- - - - - -	3	3
Chalky materials - - - - - -	2	5
Lime, sand rock and clay - -	52	57
Packed sand- - - - - - - - -	3	60
Lime rock- - - - - - - - - -	4	64
Packed sand and clay - - - -	16	80
Lime rock- - - - - - - - - -	4	84
Packed sand and clay - - - -	18	102
Soft sand and sand pebbles, water- - - - - - - - - - -	8	110
Sandy clay- - - - - - - - - -	30	140
No record - - - - - - - - - -	10	150
Soft caving sand, water- - -	14	164
Sandy clay- - - - - - - - - -	22	186
Soft sand and sand pebbles -	10	196
No record- - - - - - - - - -	19	215
Soft caving sand, water- - -	5	220
Soft sand and pebbles, water	7	227
Sandy clay- - - - - - - - - -	7	234
Driller's log of well 158		
-- Slaughter test well No. 16. 11⅕ miles northwest of Canyon.		
Surface materials- - - - - -	4	4
Yellowish clay- - - - - - - -	31	35
White rock- - - - - - - - - -	25	60
White rock and clay- - - - -	15	75
Hard rock- - - - - - - - - -	28	103
Soft white rock- - - - - - -	21	124
Packed sand- - - - - - - - -	10	134
Reddish sand and sand pebbles, water- - - - - - - - - - -	25	159
Coarse sand, water - - - - -	6	165
Packed sand, little clay - -	12	177
Loose soft sand and sand pebbles, water - - - - - -	64	241
TOTAL DEPTH- - - - - - - - -		241
Driller's log of well 159		
-- Word test well No. 26. 10 miles northwest of Canyon.		
Surface materials- - - - - -	3	3
Reddish clay- - - - - - - - -	32	35
Soft white rock- - - - - - -	15	50
Packed sand and clay - - - -	32	82
Honeycomb lime rock- - - - -	12	94
Honeycomb lime rock, water -	4	98
Packed sand, water- - - - - -	17	115
Loose soft sand- - - - - - -	24	139
Hard clay- - - - - - - - - -	4	143
TOTAL DEPTH- - - - - - - - -		153
Driller's log of well 161		
-- Word test well No. 28. 9½ miles west of Canyon.		
Black sand and mud- - - - - -	13	13
Mud- - - - - - - - - - - - - -	5	18
White rock and sand, water -	21	39
Clayey sand- - - - - - - - -	15	54
Packed sand and rock, water	21	75
Packed sand, water- - - - - -	20	95
TOTAL DEPTH- - - - - - - - -		95
Driller's log of well 162		
T. B. Slaughter test well No. 10. 12 miles west of Canyon.		
Surface materials- - - - - -	2	2
Reddish clay- - - - - - - - -	24	26
Sand- - - - - - - - - - - - -	2	28
Hard white rock- - - - - - -	2	30
Yellowish clay- - - - - - - -	10	40
White rock- - - - - - - - - -	2	42
Packed sand- - - - - - - - -	18	60
Tight packed sand, water- -	18	78
Soft sand and sand rock, water- - - - - - - - - - -	31	109
Sand and sand pebbles, water	15	124
Sand and sand rock, water- -	10	134
Loose soft sand, water- - -	14	148
Sand and sand pebbles, water	4	152
Loose soft sand, water- - - -	18	170
Hard packed sand and clay- -	3	173
TOTAL DEPTH- - - - - - - - -		173
Driller's log of well 163		
-- Slaughter test well No. 15. 12½ miles west of Canyon.		
Black soil- - - - - - - - - -	14	14
Sand and gravel, water- - -	3	17
Blue mud- - - - - - - - - - -	13	30
Sand and gravel, water- - -	10	40
Honeycomb sand rock and loose sand- - - - - - - -	51	91
TOTAL DEPTH- - - - - - - - -		91

Table of Drillers' Logs, Randall County--Continued

Driller's log of well 164

-- Slaughter test well No. 27. 11½ miles west of Canyon.

	Thickness (feet)	Depth (feet)
Surface materials- - - - - -	3	3
Yellowish clay- - - - - - -	39	42
Soft white rock- - - - - - -	30	72
Packed sand and white rock -	26	98
Honeycomb sand rock and sand, water- - - - - - - - - - -	22	120
Clayey sand and lime rock- -	7	127
Honeycomb sand rock, lime and sand, water- - - - - - - -	41	168
Hard packed sand, water- - -	10	178
Loose soft sand, water - - -	12	190
Clay and packed sand- - - -	6	196
Loose soft sand, water- - -	15	211
TOTAL DEPTH- - - - - - - - -		211

Driller's log of well 165

J. C. Coker test well No. 18. 13 miles west of Canyon.

	Thickness (feet)	Depth (feet)
Surface materials- - - - - -	4	4
Chalky materials - - - - - -	15	19
Reddish clay- - - - - - - - -	65	84
Loose sand, honeycomb rock, sand pebbles, water- - - -	96	180
Soapstone- - - - - - - - - -	8	188
TOTAL DEPTH- - - - - - - - -		188

Logs of test wells drilled by W. P. A. labor in Randall County, Texas
Samples examined and classified by W. G. Christian and L. G. Smyers,
Project Superintendents

	Thickness (feet)	Depth (feet)
Well 4		
Upland flat, NW¼NW¼ sec. 34, blk. 9, B. S. & F. survey, 7½ miles north of Canyon.		
Sandy clay	3	3
Tan sandy clay with caliche	1	4
Reddish-brown sand	1	5
Brown sandy clay	1	6
Caliche with some clay	4	10
Red clay with caliche	5	15
Brown sandy clay	1	16
Fine-grained brown sand	4	20
Struck rock at 20 feet.		
No water sample collected. July 7,1937.		
Well 5		
Upland flat, SE¼SE¼ sec. 33, blk. 9, B. S. & F. survey, 8½ miles north of Canyon.		
Sandy surface materials	2	2
Dark-brown silty clay	2	4
Reddish-brown clay	1	5
Caliche and sand	1	6
Light-brown sandy clay	1	7
Brown sand	1	8
Tan sandy clay with caliche	1	9
Reddish-brown sand	2	11
Caliche	2	13
Tan sandy clay with caliche	2	15
Brown sandy clay	22	37
Struck rock at 37 feet.		
No water sample collected. July 7,1937		
Well 6		
Flat, NW¼ sec. 4, blk. 9, B. S. & F. survey, 10½ miles north of Canyon.		
Dark-colored waxy surface materials	4	4
Caliche and clay	4	8
Red clay	13	21
No water sample collected. Aug. 16,1937.		
Well 10		
Upland flat, NW¼NW¼ sec. 146, blk. 2, A. B. & M. survey, 10½ miles northeast of Canyon.		
Silty surface materials	2	2
Caliche and pink clay	1	3
Tan clay with caliche	4	7
Reddish-brown clay with trace of caliche	1	8
Light-brown clay with caliche	5	13
Light-tan clay	1	14
Well 10 Continued		
Reddish-brown clay with caliche	8	22
Struck rock at 22 feet.		
No water sample collected. July 1,1937.		
Well 11		
Upland flat, SW¼SW¼NW¼ sec. 146, blk. 2, A. B. & M. survey, 10 miles northeast of Canyon.		
Surface materials	1	1
Sandy clay	1	2
Brown sandy clay	1	3
Tan clay with caliche	3	6
Clay with some caliche	5	11
Reddish-brown clay with caliche	3	14
Tan clay with caliche	2	16
Light-brown clay with some caliche	5	21
Reddish-brown clay	6	27
Reddish-brown clay with some caliche	9	36
Struck rock at 36 feet.		
No water sample collected. June 28, 1937.		
Well 12		
Flat, northwest corner sec. 115, blk. 2, A. B. & M. survey, 11 miles northeast of Canyon.		
Brown sandy surface materials	2	2
Caliche	8	10
Light-brown sandy clay and caliche	15	25
Tight red clay	7	32
No water sample collected. July 20,1937.		
Well 13		
Flat, southwest corner sec. 113, blk. 2, A. B. & M. survey, 12 miles northeast of Canyon.		
Surface materials	3	3
Brown sandy clay	8	11
Caliche	4	15
Brown sandy clay and caliche	5	20
No water sample collected. July 20, 1937.		

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

	Thickness (feet)	Depth (feet)
Well 14		
Flat, southwest corner sec. 84, blk. 2, A. B. & M. survey, 12½ miles northeast of Canyon.		
Brown sandy loam- - - - - -	3	3
Brown clay and some caliche- - - - - - - - - - - -	25	28
No water sample collected. July 20,1937.		
Well 16		
Flat, NW¼NW¼ sec. 17, blk. 8, I. & G. N. R.R. Co. survey, 16 miles northeast of Canyon.		
Dark-brown top soil- - - -	2	2
Brown clay- - - - - - - - -	2	4
Sandy caliche clay- - - -	10	14
Light-brown clay- - - - -	3	17
No water sample collected. Aug. 2,1937.		
Well 19		
Flat, SE¼SE¼ sec. 23, blk. 8, I. & G. N. R.R. Co. survey, 19½ miles northeast of Canyon.		
Surface materials- - - - -	4	4
Caliche materials- - - - -	3	7
Light-brown caliche clay-	11	18
No water sample collected. Aug. 8, 1937.		
Well 20		
Flat, NE¼NW¼ sec. 15, blk. 8, I. & G. N. R.R. Co. survey, 18 miles northeast of Canyon.		
Gray sandy clay- - - - - -	4	4
Caliche clay- - - - - - -	10	14
Gray clay- - - - - - - -	9	23
No water sample collected. Aug.6, 1937.		
Well 21		
Flat, southeast corner sec. 15, blk. 8, I. & G. N. R.R. Co. survey, 18 miles northeast of Canyon.		
Dark-brown surface materials- - - - - - - - - - - -	3	3
Brown clay- - - - - - - - -	2	5
Light-brown caliche and clay- - - - - - - - - -	13	18
Brown sandy clay- - - - --	13	31
No water sample collected. July 28,1937.		
Well 22		
Flat, northwest corner sec. 2, blk. 6, I. & G. N. R.R. Co. survey, 17½ miles east of Canyon.		
Surface materials- - - - -	4	4
Light-brown caliche clay- -	6	10
Brown sandy clay- - - -	10	20
Rock- - - - - - - - - -	1	21
No water sample collected. July 28,1937.		
Well 25		
Flat, northwest corner sec. 4, blk. 6, I. & G. N. R.R. Co. survey, 15½ miles east of Canyon.		
Dark-brown surface materials- - - - - - - - - -	3	3
Caliche- - - - - - - - - -	7	10
Brown sandy clay- - - -	5	15
Red sandy clay- - - - -	30	45
No water sample collected. July 28,1937.		
Well 26		
Flat, southeast corner sec. 29, blk. 6, I. & G. N. R.R. Co. survey, 15½ miles east of Canyon.		
Dark-brown surface materials- - - - - - - - - -	3	3
Brown sandy clay- - - - -	12	15
No water sample collected. July 28,1937.		
Well 28		
Floor of canyon, SW¼NW¼NE¼ sec. 164, blk. 6, I. & G. N. R.R. Co survey, 15 miles east of Canyon.		
Sand and gravel- - - - -	5	5
Red shale- - - - - - - -	31	36
Struck rock at 36 feet.		
No water sample collected. Apr. 27,1937.		
Well 29		
In canyon, SE¼NW¼ sec. 164, blk. 6, I. & G. N. R.R. Co. survey, 14½ miles east of Canyon.		
Sandy surface materials, gravel, and caliche- - - - - -	21	21
Dark-brown shale- - - -	4	25
Brown shale and gravel- -	4	29
Light-brown shale- - - -	7	36
Struck rock at 36 feet.		
No water sample collected. Apr. 26,1937.		
Well 30		
Upland flat, SW¼NE¼ sec. 165, blk. 6, I. & G. N. R.R. Co. survey, 14 miles east of Canyon.		
Brown clay material- - -	5	5
Brown sandy clay- - - - -	26	31
Brown sand- - - - - - -	10	41
Struck rock at 41 feet.		
No water sample collected. Apr.27,1937.		

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

	Thickness (feet)	Depth (feet)
Well 31		
Upland flat, NE¼SW¼ sec. 165, blk. 6, I. & G. N. R.R. Co. survey, 14 miles east of Canyon.		
Dark-colored clay material-	5	5
Brown shale- - - - - - - -	8	13
Light-brown sand- - - - -	8	21
Struck rock at 21 feet.		
No water sample collected. Apr. 30,1937.		
Well 39		
Flat, NW¼NW¼ sec. 106, blk. 6, I. & G. N. R.R. Co. survey, 8½ miles east of Canyon.		
Brown surface materials- - -	1	1
Red clay- - - - - - - - - -	4	5
Caliche, clay and caliche rock- - - - - - - - - - - -	13	18
No water sample collected. Aug.17,1937.		
Well 40		
Upland flat, NW¼NW¼ sec. 86, blk. 6, I. & G. N. R.R. Co. survey, 7 miles east of Canyon.		
Silty clay materials- - - -	3	3
Caliche materials- - - - -	3	6
Light-brown sandy clay with some caliche- - - - - -	4	10
Tan clay and caliche- - -	2	12
Brown sandy clay and caliche- - - - - - - - - - -	2	14
Reddish-brown clay and caliche- - - - - - - - -	6	20
Struck rock at 20 feet.		
No water sample collected. June 29,1937.		
Well 44		
In draw, north side of Palo Duro Creek, SE¼NW¼SW¼ sec. 11, blk. B, I.&G.N. R.R. Co. survey, 9½ miles northeast of Canyon.		
Sand and gravel- - - - - - -	2	2
Reddish-brown sand- - - - -	9	11
Yellow sand- - - - - - - -	6	17
Struck rock at 17 feet.		
No water sample collected. June 28,1937.		
Well 45		
Upland flat, north side Palo Duro Creek, SW¼SW¼ sec. 11, blk. 6, I. & G. N. R.R. Co. survey, 9 miles northeast of Canyon.		
Sandy surface materials- -	2	2
Light-brown clay- - - - - -	1	3
Dark-brown clay- - - - - -	4	7
Well 45 continued		
Light-brown clay- - - -	1	8
Sand and caliche- - - -	6	14
Gray clay- - - - - - - -	2	16
Sand and caliche- - - -	3	19
Struck rock at 19 feet.		
No water sample collected. June 28, 1937.		
Well 46		
In Canyon, SW¼NW¼SW¼ sec. 11, blk. 6, I. & G. N. Ry. Co. survey, 9 miles northeast of Canyon.		
Sandy- - - - - - - - - -	3	3
Fine-grained light-brown sand- - - - - - - - - -	1	4
Grayish-brown clay with sand- - - - - - - - - -	4	8
Sand with some caliche-	4	12
Gray clay with sand- -	4	16
Light-gray sand- - - -	2	18
Fine-grained gray sand-	2	20
Light-gray sandy clay- -	1	21
Dark-gray sand with clay- - - - - - - - - -	2	23
Dark-gray sand- - - - -	4	27
Struck rock at 27 feet.		
No water sample collected. June 28, 1937.		
Well 47		
Valley flat, NW¼SW¼SW¼ sec. 11, blk. 6, I. & G. N. R.R. Co. survey, 9 miles northeast of Canyon.		
Sandy surface materials-	4	4
Brown sand and gravel- -	2	6
Fine-grained reddish-brown sand- - - - - - - - - - -	3	9
Struck rock at 9 feet.		
No water sample collected. June 28, 1937.		
Well 50		
Creek bank, south side of bridge in SE¼SE¼ sec. 46, blk. 6, I. & G. N. R.R. Co. survey, 6 miles northeast of Canyon.		
Dark-colored sandy surface materials- - - - - - -	4	4
Dark-colored sandy clay materials- - - - - - -	4	8
Sand- - - - - - - - - -	10	18
Struck rock at 18 feet.		
No water sample collected. May 18,1937.		

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

	Thickness (feet)	Depth (feet)
Well 54		
Upland flat, SE¼SW¼ sec. 76, blk. 6, I. & G. N. R.R. Co. survey, 6⅓ miles east of Canyon.		
Surface clay materials	3	3
Sandy caliche	4	7
Brown sandy clay	10	17
Light-colored sandy clay and caliche	4	21
Struck rock at 21 feet.		
No water sample collected. May 17,1937.		
Well 56		
Flat, NE¼ sec. 109, blk. 6, I. & G. N. R.R. Co. survey, 6 miles east of Canyon.		
Brown surface materials	2	2
Red clay	2	4
Brown sandy clay	9	13
Caliche, clay and caliche rock	5	18
No water sample collected. Aug. 16,1937.		
Well 59		
Flat, SW¼SE¼ sec. 83, blk. 6, I. & G. N. R.R. Co. survey, 4¾ miles east of Canyon.		
Dark-brown surface materials	3	3
Caliche and clay	8	11
Brown sandy clay	7	18
No water sample collected. Aug. 16,1937.		
Well 60		
Upland flat, NE¼NW¼ sec. 148, blk. 6, I. & G. N. R.R. Co. survey, 6 miles southeast of Canyon.		
Dark-colored surface materials	5	5
Brown sandy materials	4	9
Sandy clay and caliche	3	12
Light-brown sand	5	17
Medium-grained brown sand	9	26
Brown sandy clay and caliche	2	28
Fine-grained brown sand	18	46
Caving at 46 feet.		
No water sample collected. May 17, 1937.		
Well 62		
Flat, SW¼SW¼SW¼ sec. 142, blk. 6, I. & G. N. R.R. Co. survey, 4¾ miles southeast of Canyon.		
Brown clay and caliche	2	3
Sandy caliche	2	5
Light-colored sandy caliche	2	7
Brown sand	5	12
Sand and caliche	5	17
Brown sand	4	21
White sand	1	22
Struck rock at 22 feet.		
No water sample collected. Apr. 21, 1937.		
Well 63		
Rolling land, SW¼SW¼SE¼ sec. 143, blk. 6, I. & G. N. R.R. Co. survey, 4¼ miles southeast of Canyon.		
Surface materials	1	1
Sandy materials	3	4
Sandy clay	9	13
Sand	2	15
Sandy materials	5	20
Sand and caliche	1	21
Caliche	1	22
Sand and caliche	1	23
Caliche	4	27
Struck rock at 27 feet.		
No water sample collected. Apr. 20,1937.		
Well 64		
Upland flat, NE¼NE¼ sec. 145, blk. 6, I. & G. N. R.R. Co. survey, 3¾ miles southeast of Canyon.		
Black surface materials	1	1
Light-colored sandy materials	2	3
Brown sandy clay	10	13
Sandy materials	1	14
Light-colored sandy clay	11	25
White sand	4	29
Light-colored sand and caliche	11	40
Brown sand	6	46
White sand	8	54
Struck water at 52 feet.		
Struck rock at 54 feet.		
Water level, 51.5 feet below top of ground, ¼ hour after hole completed.		
No water sample collected. Apr. 15,1937.		
Well 66		
In draw, SE¼SW¼ sec. 144, blk. 6, I. & G. N. R.R. Co. survey, 3⅓ miles southeast of Canyon.		
Black surface materials	5	5
Sandy materials	3	8
Brown clay	7	15
Caliche and brown clay	5	20

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 66 continued		
Light-colored clay and caliche	1	21
Fine-grained gray sand	4	25
Fine-grained sand	5	30
Light-colored sand and clay	5	35
Light-brown sandy clay	5	40
Sand and caliche	10	50
Light-colored sand	5	55

Struck water at 18 feet.
Struck rock at 55 feet.
Water level, 16.8 feet below top of ground, 36 hours after hole completed.
No water sample collected. Apr. 16, 1937.

Well 67

In draw, NE¼NE¼SE¼ sec. 144, blk. 6, I. & G. N. R.R. Co. survey, 3⅓ miles southeast of Canyon.

Dark-colored surface materials	4	4
Sandy caliche	3	7
Sand	8	15
Yellow clay	9	24
Sand and caliche	6	30
Brown sand and clay	10	40
White sand	18	38

Struck water at 36 feet.
Caving at 38 feet.
Water level, 34.3 feet below top of ground, 18 hours after hole completed.
No water sample collected. Apr. 16, 1937.

Well 70

Rolling land, NW¼NW¼ sec. 114, blk. 6, I. & G. N. R.R. Co. survey, 3 miles east of Canyon.

Dark-colored surface materials	1	1
Sandy caliche	2	3
White sand	12	15
Light-colored clay	3	18
Reddish-brown clay	3	21
Brown sandy clay	5	26
Sandy clay and caliche	7	33
Brown sandy clay and caliche	4	37
Light-colored clay and caliche	6	43

Caving at 43 feet.
Water level, 40 feet below top of ground, ½ hour after hole completed.
Water sample collected. May 4, 1937.

	Thickness (feet)	Depth (feet)
Well 73		
Gently rolling land, SE¼ sec. 82, blk. 6, I. & G. N. R.R. Co. survey, 4 miles east of Canyon.		
Brown sandy surface materials	3	3
Caliche and clay	8	11
Brown sandy clay	6	17

No water sample collected. Aug. 16,1937.

Well 75

Upland flat, NW¼NE¼ sec. 82, blk. 6, I. & G. N. R.R. Co. survey, 3¾ miles east of Canyon.

Surface materials	2	2
Caliche	4	6

Struck rock at 6 feet.
No water sample collected. May 14, 1937.

Well 87

Creek bank, NE¼SE¼ sec. 30, blk. B-5, H. & G. N. R.R. Co. survey, ¾ mile north of Canyon.

Sandy surface materials	2	2
Dark-brown sandy clay	2	4
Dark-brown clay	1	5
Yellow sandy clay	5	10
Fine-grained light-colored yellow sand	2	12
Light-brown sandy clay	3	15
Gray sand	1	16
Fine-grained sand	10	26

Struck water at 11 feet.
Struck rock at 26 feet.
Water level, 10 feet below top of ground, ¼ hour after hole completed.
No water sample collected. June 23,1937.

Well 90

Valley flat, SE¼SW¼ sec. 1, blk. B-5, H. & G. N. R.R. Co. survey, 2¼ miles northeast of Canyon.

Light-brown clay	8	8
Gray clay	6	14
Fine-grained brown clayey sand	4	18
Fine-grained light-brown sand	6	24

Struck water at 7 feet.
Caving at 24 feet.
Water level, 4.5 feet below top of ground, 2½ hours after hole completed.
No water sample collected. May 13,1937.

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

	Thickness (feet)	Depth (feet)
Well 92		
Slightly rolling land, SW¼NE¼SW¼ sec. 32, blk. B-5, H. & G. N. R.R. Co. survey, 1¾ miles northeast of Canyon.		
White clay and caliche- - -	3	3
Blue clay- - - - - - - - -	10	13
Light-colored clay- - - -	21	34
Clayey sand- - - - - - -	10	44
Brown clay- - - - - - -	5	49
Struck rock at 49 feet.		
No water sample collected. May 12,1937.		
Well 93		
Flat, SW¼SE¼ sec. 32, blk. B-5, H. & G. N. R.R. Co. survey, 1¾ miles east of Canyon.		
Dark-colored surface materials- - - - - - - - - -	1	1
Clayey sand- - - - - - -	1	2
Light-brown clay and caliche- - - - - - - - -	9	11
Blue clay- - - - - - - - -	9	20
Buff-colored clay- - - - -	9	29
Sandy clay- - - - - - - -	7	36
Reddish-yellow sand- - - -	1	37
Clay and fine-grained sand-	14	51
White sand- - - - - - - -	5	56
Struck water at 46 feet.		
Caving at 56 feet.		
Water level 45 feet below top of ground, 15 minutes after hole completed.		
No water sample collected. May 12,1937.		
Well 94		
Rolling land, SE¼NE¼ sec. 33, blk. B-5, H. & G. N. R.R. Co. survey, 2 miles east of Canyon.		
Clay materials- - - - - -	4	4
Clay and caliche- - - - - -	3	7
Blue clay- - - - - - - - -	6	13
Light-colored clay- - - -	4	17
Sand- - - - - - - - - - -	8	25
White clay and caliche- - -	4	29
Sandy caliche- - - - - - -	15	44
Sandy clay and caliche- -	5	49
White sand- - - - - - - -	11	60
Struck water at 57 feet.		
Caving at 60 feet.		
Water sample collected. May 4, 1937.		
Well 95		
Upland flat, 1805 5th. Ave. In Canyon.		
Silty clay materials- - - -	2	2
Dark-brown sandy clay- - - -	1	3
Clay and caliche- - - - - -	6	9

	Thickness (feet)	Depth (feet)
Well 95 continued		
Sandy clay and gravel- -	14	23
Blue clay- - - - - - - - -	6	29
Yellow clayey sand- - -	3	32
Light clayey sand- - - -	12	44
Yellow-colored sandy clay- - - - - - - - -	6	50
Light-gray clay- - - -	1	51
Dark-brown sand- - - - -	9	60
Light-colored sand- - -	2	62
Struck water at 51 feet.		
Struck rock at 62 feet.		
No water sample collected. May 31,1937.		
Well 99		
Valley flat, NE¼NE¼NE¼ sec. 61, blk. B-5, H. & G. N. R.R. Co. survey, 1¼ miles southwest of Canyon.		
Sandy surface materials-	1	1
Brown sandy clay- - - -	1	2
Light-brown sandy clay-	1	3
Fine-grained light-brown sand- - - - - - - - -	6	9
Struck water at 5 feet.		
Caving at 9 feet.		
Water level, 4.9 feet below top of ground, ¼ hour after hole completed.		
No water sample collected. June 23, 1937.		
Well 101		
Flat near creek, NW¼NW¼ sec. 63, blk. B-5, H. & G. N. R.R. Co. survey, ¾ mile south of Canyon.		
Black surface materials-	6	6
Light-brown sand- - - -	2	8
White sand- - - - - - -	5	13
Struck water at 9 feet.		
Caving at 13 feet.		
Water level, 7.9 feet below top of ground, 52 hours after hole completed.		
Water sample collected. Apr. 14, 1937.		
Well 102		
Flat near creek, NW¼NW¼ sec. 63, blk. B-5, H. & G. N. survey, ¾ mile south of Canyon.		
Light-brown clay- - - -	5	5
Dark-colored clay- - -	2	7
Fine-grained sand- - -	6	13
Coarse-grained sand- -	7	20
Struck water at 8 feet.		
Caving at 20 feet.		
Water level, 6.5 feet below top of ground, 48 hours after hole completed.		
No water sample collected. Apr.14,1937.		

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

	Thickness (feet)	Depth (feet)
Well 104		
Rolling land, SE¼NE¼NE¼ sec. 65, blk. B-5, H. & G. N. R.R. Co. survey, 2½ miles southeast of Canyon.		
Dark-colored surface materials-	4	4
Light-colored sandy materials-	4	8
Sandy caliche-	1	9
Sandy materials-	3	12
Sandy clay-	8	20
Fine-grained sandy caliche-	4	24
Sandy clay-	1	25
Light-colored sand and caliche-	7	32
Light-colored sand-	1	33
Struck water at 20 feet.		
Struck rock at 33 feet.		
Water level 19.6 feet below top of ground ¼ hour after hole completed.		
No water sample collected. Apr.14,1937.		
Well 105		
Rolling land, SE¼NW¼ sec. 65, blk. B-5, H. & G. N. R.R. Co. survey, 2½ miles southeast of Canyon.		
Black surface materials-	6	6
Sand-	4	10
Light-colored sandy clay-	5	15
Sand and caliche-	1	16
Sandy clay-	2	18
Sand and clay-	2	20
Clay and caliche-	7	27
Struck water at 17 feet.		
Struck rock at 27 feet.		
Water level 16 feet below top of ground, 45 hours after hole completed.		
No water sample collected. Apr. 13,1937.		
Well 107		
Valley flat, NE¼SW¼NW¼ sec. 65, blk. B-5, H. & G. N. R.R. Co. survey, 2 miles southeast of Canyon.		
Brown clay-	8	8
Light-colored sandy clay-	4	12
Sand and gravel-	1	13
Struck water at 3 feet.		
Struck rock at 13 feet.		
Water level, 1.5 feet below top of ground, 6½ hours after hole completed.		
No water sample collected. Apr. 13,1937.		
Well 108		
Rolling land, SE¼SE¼NW¼ sec. 65, blk. B-5, H. & G. N. R.R. Co. survey, 2¼ miles southeast of Canyon.		
Fine-grained sandy surface materials-	2	2
Light-brown clayey sand-	6	8
Sand and caliche-	3	11
Sandy caliche-	4	15
Coarse-grained white sand and caliche-	8	23
Fine-grained white sand-	5	28
Light-brown sand-	10	38
Struck water at 23 feet.		
Caving at 38 feet.		
Water level, 21.2 feet below top of ground, 1 hour after hole completed.		
Water sample collected. Apr. 13,1937.		
Well 109		
Rolling land, NE¼NE¼NW¼ sec. 66, blk. B-5, H. & G. N. R.R. Co. survey, 1¾ miles south of Canyon.		
Surface materials-	2	2
Brown clay and caliche-	4	6
Light-colored sandy clay-	7	13
Sandy caliche-	7	20
Caliche and sand-	9	29
Sand-	13	42
Struck water at 30 feet.		
Struck rock at 42 feet.		
Water level, 29.5 feet below top of ground, 48 hours after hole completed.		
No water sample collected. Apr. 14,1937.		
Well 123		
Slope, SE¼NW¼ sec. 60, blk. B-5, H. & G. N. R.R. Co. survey, 2½ miles west of Canyon.		
Sandy surface materials-	3	3
Sandy clay-	2	5
Gray sandy clay-	1	6
Light-brown sandy clay-	1	7
Fine-grained light-brown sand-	3	10
Yellow sand-	3	13
Yellow clayey sand-	2	15
Stratified red and light-brown shale-	13	28
Struck water at 11 feet.		
Struck rock at 28 feet.		
Water level, 10.3 feet below top of ground, 120 hours after hole completed.		
No water sample collected. June 18,1937.		

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

	Thickness (feet)	Depth (feet)
Well 124		
Upland flat, SW¼SW¼ sec. 37, blk. B-5, H. & G. N. R.R. Co. survey, 3 miles west of Canyon.		
Sandy surface materials- -	1	1
Caliche materials- - - - -	1	2
Caliche- - - - - - - - - -	7	9
Struck rock at 9 feet.		
No water sample collected. June 18, 1937.		
Well 127		
Upland flat, SW¼SW¼ sec. 38, blk. B-5, H. & G. N. R.R. Co. survey, 4 miles west of Canyon.		
Sandy surface materials- -	2	2
Caliche- - - - - - - - - -	4	6
Brown clay and caliche- -	8	14
Brown sandy clay- - - - -	1	15
Light-brown sand and caliche- - - - - - - -	3	18
Caliche and sandy brown clay- - - - - - - - - -	1	19
Caliche- - - - - - - - -	2	21
Struck rock at 21 feet.		
No water sample collected. June 15,1937.		
Well 129		
Slope, SE¼SW¼ sec. 58, blk. B-5, H. & G. N. R.R. Co. survey, 4¾ miles west of Canyon.		
Sandy clay materials- - -	3	3
Light-brown sandy clay- -	12	15
White sand and clay- - - -	6	21
Red and buff-colored shale-	21	42
Struck water at 15 feet.		
Struck rock at 42 feet.		
No water sample collected. June 17,1937.		
Well 131		
SW¼SW¼ sec. 57, blk. B-5, H. & G. N. R.R. Co. survey, 5⅓ miles west of Canyon.		
Sandy surface material and gravel- - - - - - - - - -	2	2
Sand with some clay- - - -	3	5
Sand and caliche- - - - -	1	6
Brown sand- - - - - - - -	11	17
Brown sandy clay- - - - -	13	30
Struck hard shale at 30 feet.		
Water level, 15.7 feet below top of ground, 6 hours after hole completed.		
No water sample collected. June 18,1937.		

	Thickness (feet)	Depth (feet)
Well 133		
Upland flat, SW¼SW¼ sec. 40, blk. B-5, H. & G. N. R.R. Co. survey, 6 miles west of Canyon.		
Sandy clay materials- -	2	2
Light-brown sandy clay and caliche- - - - - - - -	1	3
Caliche- - - - - - - -	2	5
Light-brown sandy clay and caliche- - - - - - - -	1	6
Brown sandy clay- - - - -	2	8
Brown sandy clay and caliche- - - - - - - -	3	11
Brown sandy clay- - - -	2	13
Brown sand and clay- - -	2	15
Brown sandy clay- - - - -	5	20
Struck rock at 20 feet.		
No water sample collected. June 16,1937.		
Well 134		
Upland flat, SE¼SE¼SE¼ sec. 40, blk. B-5, H. & G. N. R.R. Co. survey, 5 miles west of Canyon.		
Sandy clay materials- - -	2	2
Reddish-brown sandy clay-	2	4
Sandy caliche- - - - - -	3	7
Brown sandy clay and caliche- - - - - - - - -	20	27
Struck rock at 27 feet.		
No water sample collected. June 15,1937.		
Well 148		
Upland flat, SE¼SE¼ sec. 9, blk. 11, B. S. & F. survey, 11 miles northwest of Canyon.		
Sandy surface materials- -	1	1
Caliche- - - - - - - - -	2	3
Clay and caliche- - - -	2	5
Caliche- - - - - - - -	1	6
Reddish clay and caliche-	1	7
Red clay and gravel- - -	3	10
Reddish-yellow clay- - -	3	13
Red clay and caliche- -	3	16
Struck rock at 16 feet.		
No water sample collected. July 1,1937.		
Well 151		
Upland flat, SE¼SE¼SE¼ sec. 53, blk. 7, B. S. & F. survey, 15 miles northwest of Canyon.		
Silty clay materials- - -	4	4
Reddish-yellow clay and caliche- - - - - - - -	9	13

Logs of W. P. A. test wells Randall County--Continued

	Thickness (feet)	Depth (feet)
Well 151 continued		
Brown clay and caliche- -	1	14
Struck rock at 14 feet.		
No water sample collected. July 1, 1937.		

Well 160

Creek terrace, SW¼NW¼ sec. 11, blk. 1, T. T. R.R. Co. survey, 9⅓ miles west of Canyon.

Sandy clay materials- - - -	3	3
Brown sandy clay- - - - - -	1	4
Tan sandy clay- - - - - - -	4	8
Gray clay- - - - - - - - -	2	10
Light-brown clay- - - - -	2	12
Dark-brown clay- - - - - -	1	13
Light-brown sand- - - - -	9	22
Reddish-yellow clay- - - -	3	25

Struck water at 13 feet.
Caving at 25 feet.
Water level, 12.1 feet below top of ground, ¼ hour after hole completed.
No water sample collected. July 1, 1937.

Well 166

Upland flat, NE¼NE¼ sec. 52, blk. B-5, H. & G. N. R.R. Co. survey, 10 miles west of Canyon.

Silty clay materials- - - -	3	3
Caliche- - - - - - - - - -	2	5
Brown sandy clay- - - - -	8	13
Light-brown sandy clay- -	15	28

Struck rock at 28 feet.
No water sample collected. June 19, 1937.

Well 169

Flat, NW¼ sec. 76, blk. B-5, H. & G. N. R.R. Co. survey, 10 miles west of Canyon.

Chocolate-colored materials-	3	3
Brown clay and caliche- - -	13	16
Red clay and caliche- - - -	3	19
Brown clay and caliche- -	10	29
Reddish-brown clay- - - -	4	33

No water sample collected. Aug. 17, 1937.

Well 171

Flat, NE¼SE¼ sec. 82, blk. B-5, I. & G. N. R.R. Co. survey, 12⅔ miles west of Canyon.

Black surface materials- - -	3	3
Light-colored sandy caliche and clay- - - - - - - - -	3	6
Red sandy clay- - - - - -	6	12

No water sample collected. Aug. 21, 1937.

	Thickness (feet)	Depth (feet)
Well 174		
In draw, NW¼ sec. 117, blk. B-5, H. & G. N. R.R. Co. survey, 11 miles southwest of Canyon.		
Black waxy clay- - - - -	1	1
Blue gumbo- - - - - - -	9	10
Gray sandy clay- - - -	7	17
Blue shale- - - - - - -	5	22
Struck water at 7 feet.		
Water level, 4.9 feet below top of ground, 100 hours after hole completed.		
No water sample collected. Aug. 17, 1937.		

Well 175

Rolling land, SW¼NW¼ sec. 57, blk. K-14, T. T. R.R. Co. survey, 12 miles southwest of Canyon.

Gray sandy waxy clay- -	8	8
Fine-grained yellow sand and clay- - - - - - - -	12	20
Fine-grained pink sand- -	2	22
Gray sand and clay- - - -	2	24
Gray sandy waxy clay- - -	5	29
Tight gray sand- - - - -	6	35
Gray sandy waxy clay- - -	1	36
Tight gray sand- - - - -	3	39
Gray sand rock- - - - -	5	44
Gray sand- - - - - - - -	2	46

Water level, 36.6 feet below top of ground, 24 hours after hole completed.
No water sample collected. Aug. 17, 1937.

Well 188

Upland flat, NW¼NE¼ sec. 60, blk. M-8, A. B. & M. survey, 16 miles south of Canyon.

Sandy surface materials- -	3	3
Clay and caliche- - - - -	3	6
Brown clay and caliche- -	9	15

Struck rock at 15 feet.
No water sample collected. May 25, 1937.

Well 191

Upland flat, NW¼NE¼ sec. 44, blk. M-8, A. B. & M. survey, 13 miles south of Canyon.

Sandy clay materials- - -	3	3
Caliche and sandy clay- -	4	7
Brown clay and caliche- -	19	26

Struck rock at 26 feet.
No water sample collected. May 25, 1937.

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

	Thickness (feet)	Depth (feet)
Well 192		
Upland flat, SW¼NE¼ sec. 47, blk. M-8, A. B. & M. survey, 10⅓ miles south of Canyon.		
Dark-colored clay materials	3	3
Light-brown clay and caliche	11	14
Dark-brown clay	11	25
Struck rock at 25 feet.		
No water sample collected. May 26, 1937.		
Well 193		
Upland flat, NW¼NE¼ sec. 4, blk. M-8, A. B. & M. survey, 10 miles south of Canyon.		
Silty clay materials	2	2
Clay and caliche	1	3
Caliche	5	8
Light-brown clay	12	20
Dark-brown clay and caliche	8	28
Struck rock at 28 feet.		
No water sample collected. May 25,1937.		
Well 200		
Upland flat, SE¼SE¼ sec. 96, blk. M-8, A. B. & M. survey, 12⅓ miles southeast of Canyon.		
Dark-colored clay materials	4	4
Caliche	9	13
Brown clay and caliche	6	19
Struck rock at 19 feet.		
No water sample collected. May 26,1937.		
Well 201		
Upland flat, SE¼SE¼ sec. 32, blk. M-9, J. H. G. survey, 14⅓ miles southeast of Canyon.		
Dark-colored clay materials	4	4
Light-brown clay and caliche	5	9
Dark-brown clay and caliche	1	10
Light-brown clay and caliche	2	12
Dark-brown clay and caliche	4	16
Struck rock at 16 feet.		
No water sample collected. June 1,1937.		

Partial analyses of water from wells in Randall County, Texas

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

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calculated)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calculated)
1	Mrs. -- O'Brien	150	June 10, 1937	245	-	-	-	232	29	9	b/	-
2	John Menke	183	Aug. 17, 1937	282	47	29	19	256	47	14	b/	238
9	R. T. Beaman	187	May 21, 1937	273	-	-	-	262	25	14	b/	-
15	E. Garrison	224	July 28, 1937	280	37	38	20	275	39	19	b/	248
17	L. F. Koenig	275	do.	320	44	33	30	256	59	28	b/	245
33	C. F. Marshall	91	May 8, 1937	-	-	-	-	-	15	19	b/	-
36	S. B. Orton	148	May 12, 1937	280	-	-	-	256	25	22	b/	-
38	W. J. Olver	171	May 21, 1937	-	-	-	-	-	190	28	b/	-
42	R. P. Boehning	176	May 20, 1937	284	-	-	-	268	22	21	b/	-
51	W. F. Boehning	180	May 8, 1937	-	-	-	-	-	25	56	b/	-
52	Carl Overton	180	May 20, 1937	274	-	-	-	250	34	13	b/	-
57	J. E. Albers	171	May 8, 1937	311	-	-	-	238	37	41	b/	-
58	do.	185	do.	295	-	-	-	232	29	41	b/	-
65	L. H. Crawford	39	Apr. 19, 1937	362	-	-	-	354	25	23	b/	-
69	J. P. Hicks	90	May 12, 1937	778	-	-	-	256	306	86	b/	-
70	W. P. A. test	43	May 4, 1937	966	-	-	-	366	299	155	b/	-
72	-- Loan Co.	58	May 8, 1937	1,267	-	-	-	323	525	165	b/	-
81	G. W. Cox	150	May 1, 1937	-	-	-	-	-	25	8	b/	-
82	do.	25	May 7, 1937	462	-	-	-	433	48	25	b/	-
84	do.	37	do.	463	58	43	64	464	48	22	b/	321
86	J. G. Ford	320	May 1, 1937	467	-	-	-	354	92	30	b/	-
88	Phillis I. Stanfield	-	do.	425	-	-	-	336	65	37	b/	-
94	W. P. A. test	60	May 4, 1937	189	-	-	-	195	15	5	b/	-
96	City of Canyon	488	Apr. 23, 1937	415	11	5	151	360	51	20	b/	48
97	do.	490	do.	408	11	4	150	354	51	18	b/	42
100	J. N. Sea	52	May 14, 1937	720	-	-	-	427	175	78	b/	-
101	W. P. A. test	13	Apr. 14, 1937	-	-	-	-	-	806	180	41	-
108	do.	38	Apr. 13, 1937	-	-	-	-	-	14	8	b/	-
110	Price Brothers	75	Apr. 15, 1937	318	-	-	-	262	22	46	b/	-
112	A. B. Haynes	83	do.	534	-	-	-	287	84	115	b/	-
113	J. R. Hicks	-	May 1, 1937	333	-	-	-	305	29	27	b/	-

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calculated)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calculated)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calculated)
116	Melton Dooley	40	May 7, 1937	360	-	-	-	384	23	8	b/	-
122	Tim Bible	103	do.	355	-	-	-	256	55	43	b/	-
126	Fay McIntire Est.	25	May 14, 1937	453	-	-	-	342	40	32	50	-
132	Bill Black	121	do.	322	-	-	-	293	40	16	b/	-
136	-- Baber	134	May 31, 1937	-	-	-	-	-	33	16	b/	-
147	-- Belles	190	June 16, 1937	-	-	-	-	-	40	90	b/	-
156	California Life Ins. Co.	118	May 18, 1937	200	-	-	-	195	20	9	b/	-
157	L. A. Pierce	234	June 16, 1937	423	-	-	-	403	44	20	b/	-
167	Mrs. Louise Simms	120	July 1, 1937	280	34	34	25	256	43	18	b/	226
170	Henry Battenhorst	-	June 9, 1937	401	-	-	-	293	55	47	b/	-
177	Walter Graham	410	Aug. 17, 1937	1,930	33	13	661	329	521	540	b/	138
178	J. L. Sullivan	145	Aug. 18, 1937	497	76	49	38	287	97	96	b/	390
184	Mrs. --Cook	112	May 7, 1937	428	-	-	-	403	48	19	b/	-
187	J. W. Stubblefield	134	May 26, 1937	232	-	-	-	171	23	39	b/	-
189	Embry Finley	123	May 19, 1937	288	-	-	-	262	33	17	b/	-
195	Chas. J. Beckman	89	May 31, 1937	330	-	-	-	305	37	18	b/	-
196	Jasper Jennings	160	June 1, 1937	233	-	-	-	214	29	11	b/	-
198	E. W. Miller	150	June 9, 1937	258	-	-	-	268	15	11	b/	-
199	R. B. Gist	152	June 15, 1937	267	-	-	-	244	25	20	b/	-
199A	Walter Darlington	157	June 1, 1937	-	-	-	-	-	20	17	b/	-
199B	do.	141	do.	249	-	-	-	207	37	17	b/	-
202	Elmer Bauer	140	May 31, 1937	324	-	-	-	231	51	14	b/	-
204	J. A. Tibbets	120	May 19, 1937	328	-	-	-	329	33	7	b/	-
210	Mrs. Allie Buzbee	-	do.	-	-	-	-	-	37	12	b/	-

b/ Nitrate less than 20 parts per million.

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

SCALE
0 1 2 3 4 5 6 7 8 MILES

FIELD WORK BY
W. G. CHRISTIAN + L. C. SMYERS
PROJECT SUPERINTENDENTS
W. P. A. PROJECT 5674

BASE COMPILED FROM
LAND OWNERSHIP AND SOIL SURVEY MAPS
AND FIELD NOTES

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

- EXPLANATION -

- WELL WITH HANDPUMP, BUCKET OR BAILER
- WELL WITH WINDMILL OR SMALL POWER PUMP
- WELL WITH PUMPING PLANT - 5 HORSE POWER OR LARGER
- TEST WELL DRILLED BY W. P. A. LABOR
- UNUSED WELL
- SPRING
- ESCARPMENT
- SINKS MAPPED IN FIELD
- EARTHEN TANK OR RESERVOIR
- IMPROVED ROAD
- UNIMPROVED ROAD

N

POTTER COUNTY
AMARILLO
COUNTY
HANEY
THE PALISADES
PALO DURO CLUB
PALO DURO STATE PARK
HWY 217
CANYON
MC SPADDEN LAKE
UMBARGER
LIGHT HOUSE PEAK
BIVINS LAKE
HWY 33
HWY 60
P. & S. F. RR.
Palo Duro Cr.
Tierra Blanca Cr.
North Palo Duro Cr.
COUNTY
DEAF SMITH COUNTY
ARMSTRONG COUNTY
CASTRO COUNTY
SWISHER COUNTY