COLLINGSWORTH COUNTY, TEXAS.

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

STATE BOARD OF WATER ENGINEERS
C. S. Clark, Chairman
A. H. Dunlap, Member
J. W. Pritchett, Member

Works Progress Administration Project 10445

Analyses made and report mimeographed by
WORKS PROGRESS ADMINISTRATION
Project 10443

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

April 1939

COLLINGSWORTH COUNTY, TEXAS

* * *

Introduction

by
Samuel F. Turner
Associate Hydraulic Engineer
United States Department of the Interior
Geological Survey

This publication contains data obtained in the course of a survey in Collingsworth County, Texas, consisting of records of wells and springs, logs of wells and test holes, and analyses of water from wells, springs, and test holes. The locations of all wells, springs, and test holes that are listed are shown on the map in the back of the book.

This survey (project 10445 of Works Progress Administration District 16, Amarillo) was a part of the State-wide inventory of water wells sponsored by the State Board of Water Engineers, in cooperation with the U. S. Department of the Interior, Geological Survey. It was started August 24, 1938 and completed November 14, 1938. C. R. Follett, an engineer, was project superintendent until October 11, 1938, after which Bruce Wilson, a geologist, took over the work. The office of the Works Progress Administration in the Amarillo district gave valuable aid to the project, and the Collingsworth County Commissioners' Court cooperated by furnishing transportation for the workers.

The analyses were made by chemists employed on Works Progress 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 and well drillers who need information regarding wells, the depth to ground water in different parts of the county, and the quantity and quality 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 which is to determine the distribution and extent of the available ground-water supplies.

Records of wells and springs in Collingsworth 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 Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
1	20⅔ miles northwest	blk. 23, sec. 17, NE¼NW¼	M. Huselby	--	--	170	--
2	20 miles northwest	blk. 23, sec. 18, NW¼NW¼	O. G. Stokely	W. Litsfield	1922	113	4½
3	18⅔ miles northwest	blk. 23, sec. 20, NW¼NW¼	H. E. Franks	--	--	--	5
d/ 4	17 miles northwest	blk. 23, sec. 21, NE¼NE¼	E. Exum	--	--	56	5
5	15½ miles northwest	blk. 23, sec. 5, SW¼SW¼	H. G. Young	--	--	136	5½
d/ 6	16 miles northwest	blk. 23, sec. 6, SW¼SE¼	M. T. Powell	--	--	84	5½
d/ 7	18 miles northwest	blk. 23, sec. 8, SW¼SE¼	H. E. Franks	-- Milton, et al	1934	2,525	20
8	19½ miles northwest	blk. 22, sec. 121, SW¼SW¼	Martha Hamilton	--	--	Spring	--
9	19 miles northwest	blk. 22, sec. 114, NE¼NW¼	S. L. Montgomery	--	--	7	36
10	18⅔ miles northwest	blk. 22, sec. 114, NE¼SE¼	L. G. Waldrop	--	--	Spring	--
11	18 miles west	blk. 22, sec. 95, SE¼SE¼	Martha Hamilton	--	--	119	6
d/ 12	17 miles west	blk. 22, sec. 86, NW¼NW¼	do.	Martha Alice Oil Co.	--	810	--
d/ 13	17 miles northwest	blk. 22, sec. 97, NE¼SW¼	do.	Duke & Langford	--	2,616	--
14	14½ miles northwest	blk. 22, sec. 100, NW¼SW¼	J. H. Grogan	--	1934	132	6
15	14 miles northwest	blk. 22, sec. 127, SE¼SW¼	D. D. McDowell	--	--	61	6
16	13 miles northwest	blk. 22, sec. 101, NE¼SW¼	J. H. Grogan	--	--	107	5½
d/ 17	do.	blk. 22, sec. 107, NE¼SW¼	D. D. McDowell	Continental Oil Co. of Texas	--	2,830	20
d/ 18	11½ miles northwest	blk. 22, sec. 105, NE¼NE¼	do.	--	--	120	5½
19	9⅔ miles northwest	blk. 22, sec. 78, SE¼SW¼	L. R. Clay	--	--	56	4½
d/ 20	8⅓ miles west	blk. 22, sec. 52, NW¼NE¼	Mrs. S. L. Coleman	--	--	95	6
d/ 21	11 miles northwest	blk. 22, sec. 81, SE¼SE¼	Maude Stokely	--	--	59	6
22	11½ miles northwest	blk. 22, sec. 81, NW¼SE¼	do.	--	--	Spring	--

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; W, windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

Records obtained by C. R. Follett and Bruce Wilson, 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 (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
1	1.8	128.1	Oct. 7, 1938	C,W	D,S	Top of ridge	Water level measured while pumping about ¼ gallon a minute.
2	2	77.7	do.	C,W	D,S	Hillside	Shut off one hour before making water level measurement.
3	--	--	--	C,W	S	Sand dunes	
4	2.4	55.9	Oct. 7, 1938	C,W	N	do.	
5	0.5	109.7	Nov. 7, 1938	C,W	S	Near draw	Water level measured while pumping.
6	--	--	--	C,W	S	Small valley	Well sealed; prevented measurement of water level.
7	--	--	--	None	N	--	Oil test. Reported altitude, 2,523 feet. See log.
8	--	Flows	--	None	S	Creek bottoms	Reported maintains level of pool in creek bed by seepage.
9	1.4	5.6	Oct. 7, 1938	C,W	S	do.	Dug well. Wood curb and casing.
10	--	Flows	--	None	S	In draw	Estimated yield, 5 gallons a minute from seeps in clay bank of draw.
11	1	49.1	Oct. 7, 1938	C,W	S	Creek bottoms	Water level measured while pumping about 1½ gallons a minute.
12	--	--	--	None	N	--	Oil test.
13	--	--	--	None	N	--	Do.
14	1	80.9	Nov. 7, 1938	C,W	S	Side of draw	Reported will pump air after 6 hours.
15	1	44.8	do.	C,W	S	Near draw	
16	3	87.3	do.	C,W	D,S	Flat	
17	--	--	--	None	N	--	Oil test. Reported altitude, 2,340 feet. See log.
18	1	112.2	Nov. 4, 1938	C,W	S	Near draw	
19	2	48.1	Aug. 25, 1938	C,W	D,S	Near creek	Water level measured while pumping about 1½ gallons a minute.
20	1	93.7	Nov. 4, 1938	C,W	S	Near draw	
21	1	51.3	do.	C,W	S	do.	Water reported slightly mineralized.
22	--	Flows	--	None	S	In draw	Estimated yield, 1 to 2 gallons a minute from seeps at base of sandy conglomerate. Reported does not fail during periods of drought.

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

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 23	12 miles northwest	blk. 22, sec. 75, SE¼NE¼	A. J. Laycock	--	--	22	--
24	11⅓ miles west	blk. 22, sec. 55, NW¼NW¼	E. R. Smith	--	--	22	36
25	10½ miles west	blk. 22, sec. 50, NW¼NE¼	--	--	--	115	6
26	11½ miles west	blk. 22, sec. 56, SE¼SE¼	W. H. Groves	--	--	200+	6
27	12 miles west	blk. 22, sec. 56, NW¼SW¼	-- Beasley	--	--	Spring	--
28	do.	blk. 22, sec. 49, SW¼NW¼	F. N. Field	--	--	Spring	--
d/ 29	13 miles west	blk. 22, sec. 57, SW¼SE¼	-- Beasley	--	1888	150	5½
30	15 miles west	blk. 22, sec. 59, SE¼SW¼	Martha Hamilton	--	--	126	5
31	16 miles west	blk. 22, sec. 60, NE¼NW¼	--	--	--	137	6
32	15½ miles west	blk. 22, sec. 34, NE¼NW¼	Geo. W. Sitter	--	--	Spring	--
33	do.	do.	do.	--	--	120	5
34	11 miles west	blk. 22, sec. 3, NW¼SW¼	Mary Bourland	--	--	48	6
35	10½ miles west	blk. 22, sec. 24, SE¼NW¼	W. W. Breeding	--	--	8	--
36	10 miles west	blk. 22, sec. 29, SE¼SE¼	--	--	--	Spring	--
37	do.	blk. 22, sec. 25, NW¼NW¼	--	--	--	Spring	--
38	do.	do.	--	--	--	Spring	--
51	12 miles northwest	blk. 17, sec. 10, SW¼SW¼	H. Taylor	--	--	75	6
d/ 52	do.	blk. 17, sec. 12, SW¼SE¼	Frank Stafford	--	--	75	6
d/ 53	11 miles northwest	blk. 17, sec. 7, NW¼NW¼	B. B. Guynes	--	--	39	6
54	11½ miles north	blk. 17, sec. 15, NE¼NW¼	J. M. Morgan	--	--	85	6
55	11 miles north	blk. 17, sec. 16, NE¼NE¼	O. T. Nicholson	--	--	63	6
56	do.	blk. 17, sec. 16, NE¼SE¼	do.	--	1923	42	5
57	10½ miles north	blk. 17, sec. 17, NE¼SW¼	W. C. Scruggs	--	--	Spring	--
58	11 miles north	blk. 17, sec. 19, NW¼NE¼	A. S. Martin	-- Brawley	1920	78	6
d/ 59	10 miles north	blk. 17, sec. 19, SE¼SE¼	H. B. Hill	T. F. Hunter	1935	2,300	12

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
23	3	21.6	Nov. 7, 1938	C,W	S	In draw	Rock curb. Water reported slightly mineralized.
24	1.1	19.8	do.	C,W	S	Creek bottoms	Dug well. Concrete curb; no casing.
25	1	96.6	Oct. 25, 1938	C,W	S	Near draw	
26	1.5	120.3	Oct. 7, 1938	C,W	S	Side of ridge	
27	--	Flows	--	None	D	In draw	Estimated yield, 30 gallons a minute from one opening in "Red Beds".
28	--	Flows	--	None	S	Creek bottoms	Estimated yield, 10 gallons a minute from many seeps in "Red Beds" along bank of stream.
29	--	80	e/	C,W	S	Top of ridge	
30	--	108	e/	C,W	S	do.	Water level measured while pumping.
31	1	79.8	Nov. 9, 1938	C,W	S	Near draw	
32	--	Flows	--	None	S	In draw	Slight flow from seeps in gypsum below red sand.
33	2	106.4	Nov. 9, 1938	C,W	S	Near draw	
34	1	44.8	Oct. 17, 1938	C,W	D,S	Valley flat	Water level measured while pumping.
35	0	5.7	Oct. 26, 1938	C,H	S	Creek bottoms	No casing.
36	--	Flows	--	None	S	do.	Estimated yield, about 2 gallons a minute from seeps in red shale.
37	--	Flows	--	None	S	Side of draw	Estimated yield, about 50 gallons a minute from one opening in sand and gravel in east bank of draw.
38	--	Flows	--	None	S	do.	Estimated yield, about 50 gallons a minute from one opening in sand and gravel in west bank of draw.
51	--	35	e/	C,W	D,S	Near draw	Reported strong supply.
52	2	65.1	Nov. 2, 1938	None	N	Valley flat	
53	2	29.5	do.	C,W	D,S	Side of ridge	Galvanized casing.
54	1	67.1	do.	C,W	S	do.	Do.
55	0.6	38.7	Sept.21, 1938	C,W	S	do.	Reported strong supply.
56	3.4	31.9	do.	C,W	D,S	Near draw	Reported formerly used by several families.
57	--	Flows	--	None	S	In draw	Estimated yield, 25 gallons a minute from several openings in sand and gypsum.
58	0	66	Sept.19, 1938	C,W	S	do.	Reported 84 feet steel casing; bottom 6 feet filled.
59	--	--	--	None	N	Side of ridge	Oil test. Reported altitude, 2,283 feet. See log.

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
60	6⅓ miles north	blk. 16, sec. 80, NE¼SW¼	E. Wischkaemper	--	--	Spring	--
61	6 miles north	blk. 16, sec. 61, NW¼NW¼	do.	--	--	Spring	--
62	do.	blk. 16, sec. 61, NE¼NW¼	do.	--	--	Spring	--
63	do.	blk. 16, sec. 61, NW¼NE¼	do.	--	--	Spring	--
d/ 64	4 miles north	blk. 16, sec. 41, SE¼NW¼	do.	--	1926	152	6
d/ 65	4⅓ miles north	blk. 16, sec. 38, NW¼SE¼	do.	--	1937	--	--
d/ 66	do.	blk. 16, sec. 58, NE¼SW¼	do.	--	--	114	--
d/ 67	do.	blk. 16, sec. 58, NE¼SW¼	do.	--	1937	--	--
d/ 68	5 miles north	blk. 16, sec. 58, SW¼NW¼	do.	--	--	164	4½
d/ 69	5⅓ miles north	blk. 16, sec. 64, SE¼NE¼	Maggie Bros.	--	--	130	6
70	4⅔ miles north	blk. 16, sec. 57, SW¼SW¼	E. Wischkaemper	--	1927	164	6
71	5⅔ miles northwest	blk. 16, sec. 47, SE¼NE¼	J. T. Good	--	--	105	5½
72	6 miles northwest	blk. 16, sec. 55, SW¼SW¼	Wellington State Bank	--	1929	65	4½
d/ 73	do.	blk. 16, sec. 55, SW¼NE¼	--	--	--	199	6
74	7 miles northwest	blk. 16, sec. 67, NE¼NE¼	W. S. Sparkman	--	1924	96	--
75	7⅔ miles northwest	blk. 16, sec. 75, SW¼NE¼	--	--	--	Spring	--
77	8⅔ miles northwest	blk. 16, sec. 87, NW¼SE¼	E. Wischkaemper	--	--	Spring	--
d/ 79	9 miles north	blk. 16, sec. 96, NE¼NE¼	C. H. Aldous Est.	Shoup Bros.	1930	5,000	15½
80	9⅓ miles northwest	blk. 16, sec. 93, SE¼SE¼	E. Wischkaemper	--	--	Spring	--
d/ 81	do.	blk. 16, sec. 93, SW¼SE¼	do.	Wischkaemper, et al	--	2,624	--
82	9 miles northwest	blk. 16, sec. 88, SE¼SE¼	Rufus Massey	--	--	Spring	--
d/ 83	11 miles northwest	blk. 16, sec. 91, NE¼SE¼	E. A. Williams	--	--	160	6
84	10⅔ miles northwest	blk. 16, sec. 89, SW¼NW¼	--	--	--	77	6
d/ 85	10 miles northwest	blk. 16, sec. 71, NW¼NE¼	Mery Pollard	--	--	119	6

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
60	--	Flows	--	None	D	Hillside	Estimated yield, 1/8 gallon a minute from gravel. Reported used by about 50 families. Known as "Elm Creek Spring".
61	--	Flows	--	None	S	Canyon floor	Estimated yield, 3 gallons a minute from one opening. Also seeps from gypsum and red and gray shale.
62	--	Flows	--	None	S	do.	Estimated yield, 2 gallons a minute from one opening in sand and gravel. Located 40 feet south of creek.
63	--	Flows	--	None	S	In draw	Estimated yield, about 1½ gallons a minute from seeps in limestone, gypsum and shale.
64	0.9	88.3	Sept.23, 1938	C,W	S	Side of ridge	
65	--	--	--	None	N	Hillside	Oil test.
66	0	103.5	Sept.30, 1938	C,Ng	N	do.	Drilled to supply water for two oil tests.
67	--	--	--	None	N	do.	Oil test.
68	3.4	141.8	Sept.21, 1938	None	N	Sandy ridge	
69	1.6	114.8	Aug. 23, 1938	C,W	S	Gentle slope	Located 15 feet west of U. S. Highway 83.
70	--	--	--	C,W	D,S	Side of ridge	Reported strong supply.
71	0.8	93.2	Oct. 13, 1938	C,W	S	do.	
72	--	--	--	C,W	D,S	Top of ridge	Reported yield, 2/3 gallon a minute.
73	2	72.5	Nov. 2, 1938	C,W	S	Near draw	
74	0.5	88.1	Oct. 13, 1938	C,W	S	Gentle slope	Concrete curb. Reported strong supply.
75	--	Flows	--	None	D	Creek bottoms	Estimated yield, 15 gallons a minute from one opening and several seeps in sandy bank of creek. Located near Elm Creek.
77	--	Flows	--	None	S	do.	Estimated yield, about 75 gallons a minute from seeps in west bank of Elm Creek.
79	--	--	--	None	N	Side of ridge	Oil test. See log.
80	--	Flows	--	None	S	In draw	Estimated yield, 20 gallons a minute from several openings in sandy bank of draw.
81	--	Flows	--	None	N	do.	Flows mixture of gas and water; gas used in neighboring homes for fuel.
82	--	Flows	--	None	S	do.	Estimated yield, about 5 gallons a minute from crack in gypsum rock.
83	--	--	--	C,W	S	Side of ridge	Reported weak supply.
84	2	76.1	Nov. 2, 1938	C,W	S	Gentle slope	
85	3	109.3	Nov. 1?, 1938	C,W	S	Flat	

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
86	8⅔ miles northwest	blk. 16, sec. 51, NE¼NE¼	--	--	--	98	6
87	7 miles northwest	blk. 16, sec. 53, NW¼SW¼	S. E. Yoyles	--	--	Spring	--
88	6½ miles northwest	blk. 16, sec. 53, NE¼SE¼	J. H. Blandford	--	--	67	6
d/ 89	7 miles west	blk. 16, sec. 32, SE¼NW¼	A. F. Wischkaemper	--	--	89	6
90	7½ miles northwest	blk. 16, sec. 50, SE¼SE¼	J. S. Phillips	--	--	125	--
91	7½ miles west	blk. 16, sec. 31, SW¼NE¼	A. J. Shields	--	--	130	6
92	do.	blk. 16, sec. 11, NW¼NE¼	E. L. Rankin	--	--	131	6
93	6½ miles west	blk. 16, sec. 29, SW¼NE¼	H. J. Clark	--	--	Spring	--
d/ 94	6 miles northwest	blk. 16, sec. 33, NE¼NW¼	--	--	--	107	6
d/ 95	5½ miles northwest	blk. 16, sec. 47, SW¼SW¼	John Montgomery	--	--	92	6
d/ 96	4⅝ miles northwest	blk. 16, sec. 35, NW¼NW¼	--	--	--	89	6
d/ 97	4¼ miles northwest	blk. 16, sec. 26, NW¼NW¼	Wellington State Bank	--	--	14+	6
98	4⅝ miles west	blk. 16, sec. 14, SW¼SW¼	C. Clement	--	--	103	6
d/ 99	3⅝ miles west	blk. 16, sec. 6, NW¼NW¼	do.	--	--	133	6
d/100	2½ miles west	blk. 16, sec. 16, SW¼SE¼	G. P. Riley	--	--	144	--
d/101	3 miles northwest	blk. 16, sec. 36, SW¼SE¼	H. S. Cook	--	--	100	6
102	3½ miles northwest	blk. 16, sec. 36, SE¼NE¼	--	--	--	138	6
d/103	3 miles north	blk. 16, sec. 38, NE¼NW¼	S. M. Poteet	--	--	97	--
104	2½ miles north	blk. 16, sec. 39, NW¼SE¼	R. Wischkaemper	I. E. Howard	1923	121	6
d/105	3¼ miles northeast	blk. 16, sec. 40, SW¼NE¼	L. A. & J. W. Sparlin	--	1915	83	6
d/106	1⅝ miles northeast	blk. 16, sec. 21, SE¼SW¼	Mrs. M. E. Rountree	--	--	--	5
d/107	1½ miles northeast	blk. 16, sec. 22, SE¼SE¼	S. A. Lowry	--	--	104	--
d/108	2 miles north	blk. 16, sec. 22 NW¼NW¼	H. C. Bennett	--	--	63+	5
109	⅝ mile northwest	blk. 16, sec. 18, SE¼NW¼	E. G. Morton	--	--	150	6
110	1 mile east	blk. 16, sec. 19, SE¼SE¼	Lee Roark	--	--	161	5

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
86	0	77	Oct. 28, 1938	C,W	S	Gentle slope	
87	--	Flows	--	None	S	In draw	Estimated yield, 50 gallons a minute from bed of sandy draw. Water flows from area about 3 feet square. No failure reported. Used since days
88	1	65.1	Oct. 13, 1938	C,W	S	Flat	Reported strong of early settlers. supply.
89	0.5	84.8	Nov. 10, 1938	None	N	Near draw	Galvanized casing.
90	1	50.8	Oct. 24, 1938	C,W	S	Flat	Reported weak supply.
91	0	100.8	Nov. 4, 1938	C,W	S	Near draw	Do.
92	1	97.6	Oct. 24, 1938	C,W	S	do.	Located near concrete silos.
93	--	Flows	--	None	S	In draw	Estimated yield, 75 gallons a minute from seeps in crevices of gypsum b low red sand.
94	1	106.8	Oct. 25, 1938	None	N	On ridge	
95	0.5	85.5	Oct. 24, 1938	C,W	S	do.	
96	1	70	Oct. 25, 1938	C,H	S	do.	Reported water highly mineralized.
97	--	--	--	None	N	Flat	Obstruction at 14 feet.
98	1	82.4	Oct. 24, 1938	C,W	S	Rolling	
99	0	105.8	Nov. 4, 1938	C,W	N	Flat	
100	0.7	82.9	Aug. 25, 1938	C,W	S	Side of ridge	
101	0.2	88.9	Oct. 13, 1938	None	N	Top of ridge	
102	0	104.4	Oct. 25, 1938	C,W	S	Gentle slope	
103	1.4	92	Sept.30, 1938	C,W	S	Side of ridge	Water reported slightly mineralized. Located just east of power line.
104	--	89	c/	C,W	D,S	Gentle slope	Obstruction in well.
105	0.3	72.3	Sept.30, 1938	None	N	Creek bottoms	
106	--	--	--	None	N	Side of ridge	Obstruction at 5 feet.
107	1	81.4	Sept.10, 1938	C,W	N	Near draw	
108	0.4	63+	Sept.30, 1938	C,W	N	Flat	Obstruction at 63 feet.
109	1	122.4	Oct. 25, 1938	C,W	S	Near draw	Galvanized casing.
110	1.2	113.3	Aug. 27, 1938	C,W	S	Side of ridge	Reported strong supply.

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
151	9 miles north	blk. 16, sec. 91, SW¼NE¼	Annie C. Hughes	--	--	Spring	--
d/153	8 miles northeast	blk. 12, sec. 72, NE¼NW¼	J. Lutes	--	--	93	5
154	do.	blk. 12, sec. 89, SE¼SE¼	R. E. L. Smith	--	--	Spring	--
156	11 miles northeast	blk. 12, sec. 94, NE¼NE¼	G. Bell	--	--	Spring	--
157	11½ miles northeast	blk. 13, sec. 7, SW¼NE¼	do.	--	--	Spring	--
158	do.	blk. 13, sec. 6, SW¼NW¼	do.	--	--	Spring	--
d/159	12 miles northeast	blk. 13, sec. 14, NW¼SE¼	do.	--	1937	2,142	12½
160	12½ miles northeast	blk. 13, sec. 15, SW¼NW¼	do.	--	--	100	6
d/161	12 miles northeast	blk. 13, sec. 15, NW¼SW¼	do.	--	--	Spring	--
d/162	do.	do.	do.	--	--	Spring	--
d/163	do.	blk. 13, sec. 6, NW¼NE¼	do.	--	--	2,216	--
d/164	do.	blk. 13, sec. 5, NE¼SW¼	A. J. Laycock	Gibson Oil Co.	--	2,212	--
d/165	14½ miles northeast	blk. 13, sec. 18, NE¼NW¼	J. N. Hobbs	--	--	35	6
d/166	do.	blk. 13, sec. 2, SW¼NE¼	-- Hunter	--	--	34	--
d/167	13½ miles northeast	blk. 12, sec. 82, SE¼NE¼	--	--	--	Spring	--
168	13 miles northeast	blk. 12, sec. 82, SW¼NE¼	--	--	--	Spring	--
169	12½ miles northeast	blk. 12, sec. 62, SE¼NE¼	S. H. Tittle	--	--	Spring	--
170	11½ miles northeast	blk. 12, sec. 63, SE¼NE¼	L. M. Tittle	--	--	--	--
d/171	12 miles northeast	blk. 12, sec. 79, NW¼SW¼	Annie C. Hughes	--	--	106	6
172	13 miles northeast	blk. 12, sec. 98, SE¼SE¼	A. J. Laycock	--	--	Spring	--
d/173	11½ miles northeast	blk. 12, sec. 78, NW¼NW¼	L. M. Tittle	--	--	Tank	--
174	8½ miles northeast	blk. 12, sec. 45, SW¼NE¼	C. Graves	--	--	100	6
175	10 miles northeast	blk. 12, sec. 65, NE¼SE¼	C. R. Hill Est.	--	--	55	6

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; W, windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
151	--	Flows	--	None	S	In draw	Estimated yield, 1 gallon a minute from seeps in gypsum.
153	0.6	36.7	Sept.22, 1938	C,W	S	Creek bottoms	Reported slightly mineralized. Located near Elm Creek.
154	--	Flows	--	None	S	do.	Estimated yield, 2 gallons a minute from seeps in sand and gravel. Located along Raven Creek.
156	--	Flows	--	None	S	In draw	Estimated yield, ¼ gallon a minute from seep between gypsum and gray
157	--	Flows	--	None	S	do.	Estimated yield, 25 to 35 shale. gallons a minute from seeps along bank of draw from beds of gypsum.
158	--	Flows	--	None	S	Creek bottoms	Estimated yield, 10 gallons a minute from seeps in gypsum and gray shale. Seeps located along both banks of
159	--	--	--	None	N	Near draw	Oil test. See log. stream.
160	--	--	--	C,W	S	do.	Mill pumping when visited, Sept. 21, 1938.
161	--	Flows	--	None	N	In draw	Reported as spring; now dry.
162	--	--	--	None	N	do.	Do.
163	--	--	--	None	N	Gentle slope	Oil test.
164	--	--	--	None	N	--	Do.
165	0.2	34.6	Sept.20, 1938	C,W	N	Creek bottoms	Galvanized casing.
166	1	29.1	do.	C,W	S	do.	Reported strong supply slightly mineralized water.
167	--	Flows	--	None	S	In draw	Estimated yield, 20 gallons a minute from cracks in gypsum rock. Report-
168	--	Flows	--	None	S	do.	Estimated ed supply does not vary. yield, 30 gallons a minute from cracks in gypsum along both sides of
169	--	Flows	--	None	S	Creek bottoms	Estimated yield, about 6 gal- draw. lons a minute from cracks in gypsum
170	--	--	--	C,W	S	In draw	Obstructed. along banks of creek.
171	1.1	91.7	Sept.20, 1938	C,W	N	Valley	Reported slightly mineralized taste.
172	--	Flows	--	None	S	In draw	Estimated yield, 10 gallons a minute from cracks in gypsum along east
173	--	--	--	None	S	do.	Earth tank about one bank of draw. acre in area and 6 feet deep. Formed by dam 75 feet long and 10 feet
174	1	96.5	Sept.10, 1938	C,W	S	Gentle slope	Depth questionable. Located high. near Elm Creek.
175	0.5	39.9	Sept.19, 1938	B,H	S	do.	Located near Elm Creek.

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

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
176	9⅓ miles northeast	blk. 12, sec. 75, NE¼SE¼	H. E. Hill	--	--	95	--
d/178	do.	blk. 12, sec. 75, NE¼NW¼	C. R. Hill Est.	--	--	92	6
179	do.	blk. 12, sec. 86, NW¼SW¼	J. Atkinson	--	--	Spring	--
180	9 miles northeast	blk. 12, sec. 74, SW¼NE¼	S. Wattenburger Est.	--	--	45	60
d/181	7 miles northeast	blk. 12, sec. 47, NE¼NE¼	H. H. Vaughn	--	--	136+	5
d/182	5⅓ miles northeast	blk. 12, sec. 49, NW¼NE¼	R. C. Everett, et al	--	--	87	5
183	6 miles northeast	blk. 12, sec. 69, NW¼SW¼	May Lutes	--	--	Spring	--
184	6⅓ miles northeast	blk. 12, sec. 69, NW¼NW¼	J. Lutes	--	--	Spring	--
d/185a	6⅓ miles north	blk. 12, sec. 70, NW¼NW¼	E. Wischkaemper	--	--	Spring	--
186	6 miles north	blk. 12, sec. 70, SW¼NW¼	do.	--	--	Spring	--
187	do.	do.	do.	--	--	Spring	--
188	5½ miles north	blk. 12, sec. 70, SW¼SW¼	--	--	--	Spring	--
d/190	6 miles northeast	blk. 12, sec. 70, NW¼SE¼	M. F. Tonguett	--	--	125	4
191	5 miles northeast	blk. 12, sec. 51, SW¼NW¼	J. L. Murphy	--	--	Spring	--
d/192	4⅜ miles northeast	blk. 12, sec. 51, SE¼SW¼	do.	--	--	83	5
d/193	5 miles northeast	blk. 12, sec. 51, NE¼SE¼	D. Z. Bryant	--	--	95	6
d/194	4 miles northeast	blk. 12, sec. 31, NE¼SE¼	S. E. Mahaffey	--	1917	91	6
d/195	5 miles northeast	blk. 12, sec. 33, NW¼NW¼	J. M. Self	--	--	68	6
d/196	do.	blk. 12, sec. 33, NE¼SW¼	D. James	Shoup Bros.	1932	50+	12
197	do.	do.	do.	--	--	Spring	--
d/198	4½ miles northeast	blk. 12, sec. 29, NE¼NE¼	Elmer Smith	Elmer Smith	--	44	5
202	3 miles east	blk. 12, sec. 11, NE¼NE¼	A. O. Sweat	--	--	106	6
d/203	2¼ miles east	blk. 12, sec. 11, SW¼SW¼	J. C. Barrow	--	1916	50	6
204	2⅝ miles east	blk. 12, sec. 9, SW¼NE¼	J. Reading	--	--	25	36
205	4 miles east	blk. 12, sec. 9, NE¼NE¼	do.	--	--	35	5

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
176	--	--	--	C,W	S	Gentle slope	Obstructed. Located near Elm Creek.
178	0.9	44.4	Sept.22, 1938	C,H	N	Creek bottoms	Located at vacant house near Crow Creek.
179	--	Flows	--	None	S	do.	Estimated yield, 3 gallons a minute from seeps in red and gray shale.
180	0.4	35.8	Sept.19, 1938	C,W	S	do.	Dug well. Wood curb.
181	0.2	110.9	Sept.10, 1938	None	N	Hilltop	Reported water highly mineralized.
182	0.5	80.9	do.	None	N	Hillside	Galvanized casing.
183	--	Flows	--	None	S	Small canyon	Estimated yield, ½ gallon a minute from seeps in beds of gypsum and red
184	--	Flows	--	None	S	do.	Estimated yield, 2 gallons a minute from seeps in red and gray shale.
185	--	Flows	--	None	S	do.	Estimated yield, 15 gallons a minute from seeps along west bank of shale,
186	--	Flows	--	None	S	Creek bottoms	Estimated yield, about one gallon a minute from seeps along west bank of south fork of small canyon.
187	--	Flows	--	None	S	do.	Estimated yield, 2 gallons a minute from seeps in red and gray shale along east bank of south fork creek.
188	--	Flows	--	None	S	do.	Estimated yield, 15 gallons a minute from cave in gypsum. Located in south bank of south fork of creek.
190	1.7	105.3	Sept.10, 1938	C,W	S	Side of ridge	Water reported highly mineralized.
191	--	Flows	--	None	S	Creek bottoms	Estimated yield, 20 gallons a minute from seeps in gypsum and red and gray
192	0.3	75.1	Sept.23, 1938	None	N	Top of ridge	Water reported highly mineralized. shale.
193	0.8	79.2	Sept.10, 1938	C,W	S	do.	Do.
194	1	72.3	do.	C,W	D,S	do.	Do.
195	0.2	48.5	do.	None	N	Gentle slope	Do.
196	--	--	--	None	N	Flat	Oil test.
197	--	Flows	--	None	N	Creek bottoms	Estimated yield, 300 to 400 gallons a minute from crevices in gypsum, along south bank of Wolf Creek.
198	0.3	41.6	Sept.10, 1938	C,W	S	do.	Reported weak supply.
202	1	86.6	Oct. 19, 1938	C,W	S	Hillside	Reported strong supply.
203	1.9	45.7	Sept.12, 1938	C,W	N	Creek bottoms	Reported well draws water from alluvial material.
204	2.3	19.9	Aug. 27, 1938	C,H	D,S	do.	Dug well. Concrete curb and casing.
205	0	27.8	do.	C,W	S,I	Gentle slope	Irrigates small garden.

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Lutie	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
210	4½ miles east	blk. 12, sec. 13, SE¼NE¼	G. B. Shaw Est.	--	--	Spring	--
211	do.	blk. 12, sec. 13, NE¼NW¼	do.	--	--	Spring	--
212	5 miles east	blk. 12, sec. 13, E side	M. T. Fletcher	--	--	Spring	--
217	do.	blk. 12, sec. 14, NW¼NW¼	R. Cody	--	--	46	6
d/218	6 miles east	blk. 12, sec. 7, NE¼NE¼	W. C. Norman	--	1913	119	4½
219	6 miles northeast	blk. 12, sec. 34, NE¼SW¼	J. I. Ammons	--	--	Spring	--
220	6½ miles east	blk. 12, sec. 35, NW¼SW¼	G. W. Boyd	--	--	Spring	--
d/221	7½ miles east	blk. 12, sec. 25, SE¼SW¼	A. J. Fires	--	--	70	6
222	8 miles east	blk. 12, sec. 16, NE¼NE¼	T. T. Fain	--	--	70	6
d/223	9 miles east	blk. 12, sec. 24, SW¼NE¼	J. C. Doneghy	--	--	Spring	--
224	do.	do.	--	--	--	Spring	--
225	10 miles east	blk. 12, sec. 38, SE¼NW¼	E. T. Walker	--	--	Spring	--
227	11 miles east	blk. 12, sec. 39, SW¼SE¼	A. J. Fires	--	1920	118	--
228	10½ miles east	blk. 12, sec. 39, SW¼SW¼	do.	--	--	Spring	--
229	11 miles east	blk. 12, sec. 20, NW¼NW¼	C. G. Fronterhouse	--	1908	--	6
230	9 miles east	blk. 12, sec. 17, SE¼SE¼	C. Hill	--	--	91	6
231	8 miles east	blk. 12, sec. 17, SE¼SW¼	Street & Reeves	--	1912	54	5

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/251	9½ miles north	blk. 11, sec. 9, NE¼NE¼	R. R. Martin	--	--	45	6

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; W, windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
210	--	Flows	--	None	S	Creek bottoms	Estimated yield, 35 to 45 gallons a minute from seeps extending about ½ mile along bank of creek.
211	--	Flows	--	None	S	do.	Estimated yield, one gallon a minute from one opening and few seeps in "Red Beds" along bank of creek.
212	--	Flows	--	None	S	do.	Estimated yield, 25 to 35 gallons a minute from seeps in banks of creek extending along east side of sec. 13.
217	2	43.6	Oct. 19, 1938	C,W	S	Side of ridge	Reported strong supply.
218	1.1	89.6	Sept.12, 1938	C,W	N	do.	
219	--	Flows	--	None	S	In draw	Estimated yield, 5 gallons a minute from one opening and several seeps in gypsum. Reported draw was dry in 1938 for first time since 1913.
220	--	Flows	--	None	S	do.	Estimated yield, 40 gallons a minute from four openings in gypsum rock.
221	0.5	58.4	Sept.19, 1938	C,W	N	Side of ridge	Galvanized casing. Flows into Wolf Creek.
222	1	60.2	Oct. 27, 1938	C,W	S	do.	
223	--	Flows	--	None	S	In draw	Estimated yield, 20 gallons a minute from seeps in gypsum. Flow from springs 223 and 224 unites and flows
224	--	Flows	--	None	S	do.	Estimated yield, into Wolf Creek. 40 gallons a minute from seeps in
225	--	Flows	--	None	S	Creek bottoms	Estimated yield, 2 to 3 gypsum. gallons a minute from three openings in honeycombed limestone. Reported
227	--	--	--	C,W	S	Gentle slope	has not failed since 1920.
228	--	Flows	--	None	S	Creek bottoms	Estimated yield, 4 to 5 gallons a minute from one opening and few seeps in blue and red shale along creek
229	--	--	--	C,W	D,S	Side of ridge	Reported strong supply. bank.
230	1.8	64.4	Aug. 27, 1938	C,W	S	Gentle slope	
231	1	42.9	Sept.12, 1938	C,W	S	do.	Reported strong supply.

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
251	0	27.3	Aug. 27, 1938	C,W	D,S	Creek bottoms	Galvanized casing.

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

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/252	9 miles north	blk. 11, sec. 90, SE¼SE¼	Guy Bumpass	--	--	176	4½
253	8 miles north	blk. 11, sec. 71, E side	do.	--	--	Spring	--
254	8½ miles northeast	blk. 11, sec. 73, SW¼SE¼	Bob Glenn	--	--	Spring	--
255	9½ miles north	blk. 11, sec. 88, SW¼NW¼	do.	--	--	125	6
d/256	11 miles northeast	blk. 11, sec. 94, NW¼SW¼	J. B. Wellborn	--	--	76	5
257	12 miles northeast	blk. 11, sec. 96, SW¼NW¼	W. E. Johnson	K. McCarty	1928	74	6
d/258	13 miles northeast	blk. 11, sec. 98, NW¼NW¼	Mrs. M. A. Mabry	--	1896	185	6
d/259	12½ miles northeast	blk. 11, sec. 79, SE¼SW¼	Annie C. Hughes	Continental Oil Co.	1926	3,507	15⅝
d/260	12 miles northeast	blk. 11, sec. 97, SW¼SW¼	W. E. Johnson	--	--	49	5
261	11 miles northeast	blk. 11, sec. 86, NW¼SE¼	J. B. Welborn	--	--	Spring	--
262	10 miles northeast	blk. 11, sec. 86, SW¼	J. Atkinson	--	--	Spring	--
d/263	8½ miles northeast	blk. 11, sec. 67, NE¼NW¼	Annie Hughes	--	--	Spring	--
265	6 miles northeast	blk. 11, sec. 52, SW¼SW¼	W. M. Cook Est. & Mrs. T. C. Fuller	--	--	26	6
266	5⅓ miles northeast	blk. 11, sec. 49, SE¼NW¼	W. D. Bailey	--	--	43	4½
267	do.	blk. 11, sec. 49, SE¼SW¼	do.	--	--	45	4½
272	4¼ miles northeast	blk. 11, sec. 30, NE¼NE¼	Bean Hill Public School	--	Old	60	5
273	4 miles northeast	do.	B. Allyneniy	--	--	51	6
274	1½ miles east	blk. 11, sec. 10, SW¼SW¼	E. O. Watson	--	1916	23	6
275	2¼ miles east	blk. 11, sec. 10, SE¼NW¼	do.	City of Wellington	1935	36	2
d/276	do.	do.	do.	do.	1935	36	20
d/277	do.	do.	do.	do.	1932	36	20
d/278	do.	blk. 11, sec. 10, NW¼SE¼	City of Wellington	--	1922	35	240
279	do.	do.	do.	--	1915	35	20

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
252	1.5	40.8	Oct. 12, 1938	None	N	Top of ridge	
253	--	Flows	--	None	S	In draw	Estimated yield, 40 to 50 gallons a minute from crevices in gypsum rock. Flows from east bank of draw along
254	--	Flows	--	None	S	do.	Estimated yield, 30 gallons a minute from large hole in slumped gypsum rock. east side of sec. 71.
255	0.5	96.5	Oct. 19, 1938	C,W	S	do.	Steel casing.
256	0.3	64	do.	C,W	S	Gentle slope	Used slightly. Quality reported poor.
257	1.1	65.1	do.	C,W	S	do.	Reported strong supply from sand.
258	1.8	125.3	Aug. 27, 1938	C,W	D,S	do.	Water reported slightly mineralized.
259	--	--	--	None	N	--	Oil test. See log.
260	-1	36.3	Aug. 27, 1938	C,W	N	Creek bottoms	Galvanized casing.
261	--	Flows	--	None	S	In draw	Estimated yield, 15 gallons a minute from seeps along banks of draw. Flows into Salt Fork of Red River.
262	--	Flows	--	None	S	do.	Estimated yield, 20 gallons a minute from seeps along banks of draw through S½ sec. 86 and all through
263	--	Flows	--	None	S	do.	Estimated yield, 10 gallons a minute from crevices in gypsum. Flows south to Salt Fork at Red River, sec. 75.
265	0.6	20.8	Aug. 31, 1938	C,W	S	River bottoms	Water level measured while mill pumping slowly.
266	3	42.8	do.	C,W	S	Creek bottoms	Do.
267	2	44.6	do.	C,W	D,S	In valley	Do.
272	0.5	45.9	Aug. 31, 1938	C,H	P	Top of ridge	
273	3	37.5	Sept. 1, 1938	C,W	S	Creek bottoms	
274	0.1	12.5	Aug. 31, 1938	C,W	D,S	Flat	Reported strong supply.
275	2	14.2	Oct. 10, 1938	T,E, 3	P	Creek bank	Dug well, gravel-walled. Eight-inch casing. Suction pipe set at 35 feet; one-stage impeller set at 18 feet. Reported yield, 40 gallons a minute.
276	2	12.2	do.	None	N	do.	Dug well, gravel-walled. Eight-inch casing.
277	1	11.4	do.	T,E, 3	P	do.	Dug well; gravel-walled. Eight-inch casing. One-stage pump set at 18 feet. Reported yield, 40 gallons a
278	1.5	7.8	do.	None	N	do.	Dug well. Reported caved around casing from pumping quicksand. minute.
279	4	17.6	do.	G,E, 3	P	do.	Dug well. Concrete curb. Reported yield, 40 gallons a minute.

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
280	2½ miles east	blk. 11, sec. 10, NW¼SE¼	City of Wellington	--	1915	35	2[illegible]
d/281	do.	do.	do.	--	1915	35	2[illegible]
282	do.	blk. 11, sec. 10, SW¼SE¼	do.	City of Wellington	--	2[illegible]	2[illegible]
d/283	do.	do.	do.	do.	1923	35	2[illegible]
285	3½ miles east	blk. 11, sec. 9, SE¼SE¼	M. Winters	--	--	47	--
d/286	4¼ miles east	blk. 11, sec. 8, SW¼SE¼	J. M. Poff	--	--	22	5
288	3 miles northeast	blk. 11, sec. 12, NW¼SW¼	J. C. Donoghy	-- Thompson	1936	34	4½
289	4 miles northeast	blk. 11, sec. 12, NE¼SE¼	Mrs. Ella Ingram	--	--	12	5
d/290	4¼ miles northeast	blk. 11, sec. 13, NE¼SW¼	do.	Citizens Oil & Dev. Co.	--	1,100	--
291	do.	blk. 11, sec. 13, NW¼NW¼	Midway Baptist Church	--	--	23	5
292	5½ miles northeast	blk. 11, sec. 33, SW¼SE¼	Miss D. M. Honard	Ivan Benson	1918	126	4½
293	7 miles northeast	blk. 11, sec. 34, NE¼NE¼	Annie C. Hughes	--	--	104	5
294	6 miles northeast	blk. 11, sec. 27, SE¼NE¼	do.	--	--	98	8
295	6 miles east	blk. 11, sec. 15, SE¼SW¼	do.	--	--	25	7
296	6½ miles east	blk. 11, sec. 5, SW¼NW¼	G. H. Brewer	--	--	31	5
d/297	8½ miles east	blk. 11, sec. 3, NW¼SW¼	Myrtle Downs	--	--	32	6
d/298	do.	do.	do.	--	1936	14	60
299	do.	blk. 11, sec. 17, NE¼SE¼	Annie C. Hughes	--	--	23	6
d/300	9½ miles east	blk. 11, sec. 18, SW¼NE¼	J. H. & J. W. Brock	--	--	35	5
d/351	10½ miles northwest	blk. 15, sec. 72, SW¼SW¼	W. S. Malone	--	--	92	5
352	10 miles northwest	blk. 15, sec. 74, NW¼NW¼	G. C. Wright	--	--	165	5
353	9 miles northwest	blk. 15, sec. 74, NW¼SE¼	S. Bolton	--	1899	56	8
d/360	9 miles north	blk. 15, sec. 85, SW¼SW¼	R. Ledbetter	--	--	61	6
361	11½ miles northwest	blk. 15, sec. 94, NW¼NE¼	W. L. Browning	--	1908	171	6
362	11 miles north	blk. 15, sec. 96, NW¼NW¼	C. Fritts	--	--	98	--
363	10 miles north	blk. 15, sec. 99, NW¼NW¼	R. R. Martin	--	1919	87	6
d/364	9½ miles north	blk. 15, sec. 98, SE¼SE¼	P. E. Starr	--	--	172	5

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
280	4	17.6	Oct. 10, 1938	G,E, 3	P	Creek bank	Dug well. Concrete curb. Reported yield, 40 gallons a minute.
281	0	13.1	do.	Cf,E, 3	P	do.	Dug well. Concrete curb. Reported yield, 35 gallons a minute.
282	--	12	e/	Cf,E, 3	P	do.	Dug well. Equipped with two side-tunnels. Reported yield, 45 gallons a minute. See log.
283	--	12	e/	C,E, 3	P	do.	Dug well. Concrete curb. Reported yield, 45 gallons a minute.
285	0	22.4	Aug. 29, 1938	C,W	D,S	Sandy ridge	
286	2	18.8	Aug. 26, 1938	None	N	Gentle slope	Reported pumped sand before being abandoned.
288	1.8	27.1	Aug. 31, 1938	C,W	D,S	Top of ridge	Perforated steel casing.
289	1.4	9.7	do.	B,H	N	Creek bottoms	
290	--	--	--	None	N	--	Oil test.
291	2.1	13.4	Aug. 30, 1938	C,H	P	Flat	Concrete curb. Reported weak supply.
292	1	59.1	do.	C,W	D,S	Top of ridge	Reported strong supply.
293	3.2	93.1	Sept. 1, 1938	C,W	S	Sandy ridge	Equipped with 6 storage tanks.
294	2.3	53.3	do.	C,W	D,S	do.	Reported weak supply.
295	1	21.4	do.	C,W	S	Flat	Do.
296	1	23.9	Aug. 26, 1938	B,H	D,S	Sand hills	Galvanized casing.
297	1.1	12.6	Oct. 5, 1938	None	N	In draw	Located one foot west of well 298.
298	1.5	12.9	do.	None	N	do.	Dug well. Brick curb and casing.
299	0.8	15.3	Sept. 5, 1938	C,W	S	Creek bank	Estimated yield, ½ gallon a minute.
300	2.3	23.9	Aug. 26, 1938	C,H	N	River bottoms	
351	0.3	46.2	Aug. 25, 1938	C,W	N	Hilltop	
352	0.9	87.6	Sept.14, 1938	C,W	S	Gentle slope	Reported strong supply.
353	3	31.8	do.	C,W	D,S	In valley	Water level measured while mill pumping about one gallon a minute.
360	0.2	51.4	Oct. 11, 1938	C,W	N	Gentle slope	
361	0.2	95.9	do.	C,W	S	Flat	
362	1.2	92.4	do.	C,W	S	Gentle slope	
363	0.1	68.2	do.	C,H	D,S	Side of ridge	
364	0.3	121.4	do.	C,W	S	do.	

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/365	9 miles north	blk. 15, sec. 82, N½N½	B. N. Smith, et al	--	--	114	5
d/366	9½ miles north	blk. 15, sec. 1[illegible], N½SW¼	T. T. Benton Est.	--	--	68	5
367	8 miles north	blk. 15, sec. 79, NE¼SW¼	E. Davidson	--	--	Spring	--
368	7 miles north	blk. 15, sec. 62, N½N½	A. Y. Bell	--	--	35+	6
d/370	8 miles north	blk. 15, sec. 78, SE¼NW¼	E. B. Seale	--	--	102	5
371	8½ miles north	blk. 15, sec. 77, NE¼NW¼	M. Seale	--	--	72	5
372	7 miles north	blk. 15, sec. 64, SW¼NE¼	Reid Scott	--	--	Spring	--
d/373	6½ miles north	blk. 15, sec. 64, SW¼SE¼	R. B. Scott	--	--	--	3½
374	5½ miles north	blk. 15, sec. 44, NE¼NE¼	Cottonwood Public School	--	--	--	4½
375	do.	do.	J. W. Loter	--	--	Spring	--
376	4½ miles north	blk. 15, sec. 43, SW¼SW¼	S. R. Davis	--	1908	50	4½
377	5½ miles north	blk. 15, sec. 42, NW¼NW¼	R. L. Seale	Frank Moore	1926	82	4½
d/378	6 miles north	blk. 15, sec. 59, NE¼SW¼	C. Roberts	do.	1927	95	5
d/379	5½ miles north	blk. 15, sec. 60, NE¼SW¼	C. W. Roberts	United Drilling Co.	--	3,304	--
380	4½ miles north	blk. 15, sec. 39, NE¼NW¼	Mrs. R. Wells	--	--	79	6
384	4½ miles northwest	blk. 15, sec. 37, SW¼SW¼	W. W. Sugg	--	1908	95	5
385	do.	blk. 15, sec. 25, N½N½	M. Godfrey	--	--	68	6
d/386	5½ miles northwest	blk. 15, sec. 34, SE¼SE¼	C. Warwick	--	--	83	5
387	do.	blk. 15, sec. 45, SW¼SW¼	J. E. Aiken	--	--	63	5
388	7 miles northwest	blk. 15, sec. 55, NE¼NE¼	J. W. Thomas	--	1921	125	5
389	8½ miles northwest	blk. 15, sec. 67, SW¼SW¼	T. P. Holley	--	--	113	3½
390	9 miles northwest	blk. 15, sec. 69, SE¼SE¼	W. B. Wilson	--	1907	127	4½
391	10 miles northwest	blk. 15, sec. 70, SE¼SE¼	W. Pirrison	--	1930	160	3½
392	do.	blk. 15, sec. 51, SW¼SW¼	P. S. Darlington	--	--	128	5
d/393	9 miles northwest	blk. 15, sec. 31, N½NE¼	W. Darlington	--	Old	160	4

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; W, windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
365	0.2	49.3	Sept.19, 1938	None	N	Creek bank	Located near dry creek.
366	0.8	53.4	do.	C,W	S	Creek valley	
367	--	Flows	--	None	S	In draw	Estimated yield, 20 gallons a minute from one opening and several seeps in gypsum.
368	--	35+	Oct. 11, 1938	C,W	D,S	Side of ridge	Obstruction at 35 feet.
370	0.6	75.8	do.	None	N	Gentle slope	
371	0.2	68.2	do.	C,W	S	do.	
372	--	Flows	--	None	N	In draw	Estimated yield, 20 gallons a minute from sand in bed of draw.
373	2.2	44.9	Sept.13, 1938	None	N	Gentle slope	Located near small creek.
374	--	--	--	C,W	P	do.	Obstruction in casing.
375	--	Flows	--	None	S	In draw	Estimated yield, 25 gallons a minute from sand in bank of draw. Surrounded by willow trees.
376	0.5	38.6	Sept.13, 1938	C,W	D,S	Gentle slope	Reported strong supply.
377	3	54.3	Aug. 31, 1938	C,H	D,S	do.	Located near small creek.
378	1.5	79.7	do.	None	N	Creek bed	
379	--	--	--	None	N	--	Oil test.
380	1.1	57.7	Aug. 31, 1938	C,W	D,S	Gentle slope	Reported strong supply.
384	--	45	c/	C,W	D,S	do.	
385	0.2	54.4	Sept.17, 1938	C,W	D,S	Flat	
386	0.5	56.9	do.	C,W	N	Sandy ridge	
387	1.3	53.9	do.	C,W	D,S	do.	
388	3	71.8	do.	C,W	D,S	Valley flat	
389	1.2	82.7	Sept.14, 1938	C,W	D,S	Gentle slope	
390	3	80.2	do.	C,W	S	Sandy ridge	Reported water level, 76 feet when drilled.
391	--	145	c/	C,W	D,S	do.	Obstruction at 110 feet.
392	2	93.6	Oct. 17, 1938	C,W	S	Gentle slope	
393	0.4	99.9	Sept.15, 1938	None	N	Flat	

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

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/394	9 miles west	blk. 15, sec. 30, NW¼NW¼	Mrs. W. W. Shields	--	--	139	5
d/395	8 miles northwest	blk. 15, sec. 32, NE¼NE¼	J. W. Gray	--	Cld	29+	4
d/596	7 miles northwest	blk. 15, sec. 47, NW¼SW¼	S. E. Jenkins Est.	--	1929	77+	4⅝
d/597	do.	blk. 15, sec. 48, SE¼SE¼	Lillie Public School	--	--	--	4½
398	7 miles west	blk. 15, sec. 28, SW¼SW¼	Mrs. C. L. Bowen	--	--	139	5
399	8½ miles west	blk. 15, sec. 10, SW¼NW¼	W. W. Neely	--	--	56	5
400	5½ miles west	blk. 15, sec. 8, SE¼SE¼	C. J. Johnson	--	--	98	6
d/401	6 miles west	blk. 15, sec. 13, NW¼SE¼	C. W. Roberts	--	--	--	4⅝
402	5 miles northwest	blk. 15, sec. 27, SE¼SE¼	J. C. Phillips	--	--	163	6
d/403	4½ miles northwest	blk. 15, sec. 15, NE¼NE¼	R. L. Keller	--	Cld	151	5
404	3⅜ miles northwest	blk. 15, sec. 25, SW¼SE¼	E. J. Bartlett	--	--	167	4⅝
405	3½ miles northwest	blk. 15, sec. 5, NE¼NW¼	W. H. Bynum	--	1913	149	6
d/406	2⅜ miles northwest	blk. 15, sec. 5, NE¼NE¼	J. T. Goodnight	--	--	87	6
407	2½ miles west	blk. 15, sec. 5, NE¼SE¼	A. G. Brown	--	--	74	6
408	1⅜ miles west	blk. 15, sec. 4, NE¼SE¼	E. R. Skipper	--	--	--	--
d/409	3½ miles northwest	blk. 15, sec. 24, NW¼SE¼	V. E. Emmert	--	--	61	5
d/410	2½ miles north	blk. 15, sec. 18, NE¼NW¼	L. Smith	--	--	31	5
d/411	do.	blk. 15, sec. 22, SE¼SW¼	C. D. Somerville	--	--	20	5
d/412	do.	do.	do.	--	--	17	5
413	3 miles north	blk. 15, sec. 22, SE¼NE¼	W. J. Baykin	--	--	6	22
414	3 miles northeast	blk. 15, sec. 21, SE¼SE¼	L. E. Blythe	--	1928	53	3⅝
451	19½ miles west	blk. 21, sec. 88, NW¼NW¼	W. H. Gray	Bob Lamberson	1934	97	4
452	19 miles west	blk. 21, sec. 69, SW¼NW¼	J. W. Debo rd	--	--	97	6
453	18 miles west	blk. 21, sec. 61, NW¼NW¼	Ray B. Allen	--	--	139	--
d/454	17 miles west	blk. 21, sec. 71, SW¼SW¼	E. Novotny	--	--	160+	4½
d/455	18 miles west	blk. 21, sec. 87, SE¼NE¼	C. E. Griggs	--	--	175	5

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
394	2	99.7	Oct. 18, 1938	None	N	Hillside	
395	--	29+	Sept.15, 1938	None	N	Sandy ridge	Reported filled with sand above water level.
396	2.3	77+	Sept.13, 1938	None	N	Flat	Do.
397	--	--	--	C,W	N	do.	Do.
398	1	88.9	Oct. 18, 1938	C,W	S	Sand hills	
399	2	29.1	Aug. 26, 1938	C,W	D,S	In valley	
400	0	54.2	Sept.29, 1938	C,W	D,S	Sandy ridge	
401	0.8	136.7	Aug. 26, 1938	None	N	do.	Reported pumps sand.
402	1	106.2	Oct. 18, 1938	C,W	S	Flat	
403	1.8	110.7	Sept.29, 1938	C,W	N	In draw	Steel casing within old galvanized casing.
404	1	96	Aug. 31, 1938	C,W	D,S,P	Gentle slope	Supplies "Cross Roads School".
405	0.5	129.1	Sept.29, 1938	C,H	D,S	Side of ridge	
406	0.8	80.6	do.	None	N	do.	
407	1	66.6	do.	C,W	D,S	Top of ridge	
408	--	--	--	C,W	S	Side of ridge	Obstruction in well.
409	0.3	22.2	Sept.29, 1938	C,W	D,S	In draw	Reported used slightly,
410	2.3	23.1	Aug. 31, 1938	C,W	N	Flat	
411	1.3	10.3	do.	None	N	Side of ridge	Located 2[illegible] feet northwest of well 412.
412	3	12.2	do.	C,H	N	do.	
413	1.3	4.8	Aug. 30, 1938	C,H	N	Gentle slope	Dug well. Cased with open-end steel drums.
414	1.4	28.7	Aug. 31, 1938	C,W	D,S	do.	Steel casing.
451	0.8	58.9	Sept.16, 1938	C,W	D,S	Top of ridge	104 feet of 4-inch steel casing; bottom 15 feet perforated. Reported strong supply from sand and gravel. Reported water level, 51 feet when drilled.
452	1	78.1	Nov. 3, 1938	C,W	S	Side of draw	Water level measured immediately after mill shut off.
453	0	117.1	do.	C,W	S	Side of ridge	
454	--	--	--	None	N	Sandy ridge	Reported filled with sand to above water level.
455	0.4	135.4	Sept.16, 1938	None	N	Sand hill	

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
456	18 miles northwest	blk. 21, sec. 96, SE¼SE¼	Ring Public School	--	--	163	5
d/457	19 miles northwest	blk. 21, sec. 96, SW¼SW¼	J. P. Allen	--	--	200	6
458	18⅓ miles northwest	blk. 21, sec. 112, SW¼SW¼	R. A. Lovelace	--	--	155	4½
d/459	17½ miles northwest	blk. 21, sec. 98, SW¼NW¼	J. H. Grigsby	--	--	141	4½
460	15⅓ miles northwest	blk. 21, sec. 100, NW¼NW¼	Mary Bourland	--	--	112	5
461	15 miles northwest	blk. 21, sec. 108, SE¼NW¼	Smith Bros.	--	--	121	5½
d/462	13½ miles northwest	blk. 21, sec. 102, NE¼NW¼	H. E. Bell	F. J. Downey, Dixon, et al	1930	2,498	20
463	do.	blk. 21, sec. 106, NW¼SW¼	--	--	--	96	6
464	12½ miles northwest	blk. 21, sec. 105, SW¼SW¼	W. Darlington	--	--	164	4½
465	do.	blk. 21, sec. 103, NW¼SW¼	R. H. Templeton	--	1908	140	4½
d/466	12 miles northwest	blk. 21, sec. 81, SE cor. SE¼	do.	--	--	127	5
467	13⅓ miles northwest	blk. 21, sec. 82, SE¼NE¼	--	--	--	129	5
468	15⅓ miles northwest	blk. 21, sec. 84, NW¼NE¼	W. Darlington	--	--	144	5
d/469	15 miles west	blk. 21, sec. 58, SW¼NW¼	W. R. Peggram	--	--	179	3½
d/470	do.	blk. 21, sec. 46, NE¼NE¼	S. T. Smith Est.	--	--	198	4½
d/471	do.	blk. 21, sec. 33, NW¼NE¼	G. B. Reeves	--	--	120	5
d/472	14½ miles west	blk. 21, sec. 47, NE¼NW¼	H. I. Cagle	--	--	15+	4½
473	do.	blk. 21, sec. 47, SE¼SW¼	-- Public School	--	--	147	4½
d/474	13½ miles west	blk. 21, sec. 48, SE¼SW¼	J. M. Peggram	--	--	161	4½
475	12½ miles west	blk. 21, sec. 49, NE¼SW¼	P. E. Starr	Jim Depeau	1918	141	4½
476	13 miles west	blk. 21, sec. 57, SE¼SE¼	H. D. Blevins	--	--	115	5
477	13⅓ miles west	blk. 21, sec. 75, SW¼SW¼	W. N. Sherill	--	--	150	5
478	14 miles northwest	blk. 21, sec. 74, SE¼NE¼	L. D. Morgan	--	--	138	5
479	12½ miles northwest	blk. 21, sec. 76, SW¼SW¼	T. F. Simmons	--	--	129	5
d/480	12 miles west	blk. 21, sec. 50, NE¼NW¼	T. M. Lamb	--	--	138	6
d/481	11½ miles west	blk. 21, sec. 55, SE¼SE¼	S. F. Allred	--	--	62	6
d/482	10⅓ miles northwest	blk. 21, sec. 54, SE¼SE¼	J. C. Doneghy	--	Old	133	9

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
456	0.3	126.2	Sept.16, 1938	C,W	D	Sandy ridge	Not used by school.
457	--	140	e/	C,W	S	do.	Reported struck water in sand at 140 feet, 160 feet and 200 feet.
458	0.5	105.7	Sept.16, 1938	C,W	D,S	do.	
459	0.8	101.3	Sept.28, 1938	C,W	D,S	Creek bottoms	
460	1.3	81.2	do.	C,W	S	Gentle slope	Water level measured while mill pumping slowly.
461	2	112.9	Oct. 17, 1938	C,W	D,S	Hillside	Reported strong supply.
462	--	--	--	None	N	Sandy ridge	Oil test. Reported altitude, 2,276 feet. See log.
463	1	87.1	Oct. 25, 1938	C,W	S	Flat	Steel casing.
464	3	88.4	Sept.15, 1938	C,W	S	Sandy ridge	Reported strong supply.
465	2.3	108.8	do.	C,W	N	do.	Do.
466	0.4	84.8	do.	C,W	N	do.	
467	1.2	102.1	Sept.28, 1938	C,W	D,S	do.	
468	1.7	117.5	do.	C,W	S	do.	
469	2.1	158.2	Sept.16, 1938	C,W	N	do.	Steel casing within 6-inch galvanized casing.
470	1.2	151.1	do.	C,W	N	Flat	
471	1.2	86.5	Sept.28, 1938	C,W	N	Sandy ridge	
472	--	--	--	None	N	Sand dunes	Obstructed at 15 feet.
473	0.5	107.8	Sept. 7, 1938	C,W	D,P	do.	Reported well supplies water for neighbors but not for school.
474	1.1	102.8	Sept.28, 1938	C,W	N	Flat	
475	2.8	72.6	do.	C,W	D,S	Sandy ridge	Steel casing.
476	1.8	82.7	Sept.16, 1938	C,W	D,S,I	do.	Irrigates garden.
477	1.3	66.7	do.	C,W	D,S	Sand dunes	Reported strong supply.
478	1	94.4	Oct. 17, 1938	C,W	D,S	Flat	
479	2	87.4	Sept.16, 1938	C,W	D,S	Sandy ridge	Water level measured while mill pumping slowly.
480	--	--	--	C,W	S	do.	Reported strong supply.
481	1	41.2	Nov. 8, 1938	C,W	S	do.	Galvanized casing.
482	3.7	95.9	Sept.15, 1938	C,W	N	do.	

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/483	10 miles west	blk. 21, sec. 52, NE¼SE¼	W. I. Atkinson	--	--	161	5
484	9⅔ miles west	blk. 21, sec. 26, NE¼NW¼	do.	--	--	158	5
485	10 miles west	blk. 21, sec. 2, NW¼NE¼	Viola M. Reed	--	--	Spring	--
486	10½ miles west	blk. 21, sec. 3, NE¼NE¼	N. T. King	--	1903	135	4
487	do.	blk. 21, sec. 25, NW¼NW¼	Ira Morgan	--	--	102	--
488	11 miles west	blk. 21, sec. 28, SW¼NW¼	C. M. Weaver	--	--	70	5
489	12⅔ miles west	blk. 21, sec. 30, NW¼SW¼	P. E. Starr	--	--	135	5
490	do.	blk. 21, sec. 23, S½SW¼	J. F. White	--	--	--	4⅝
491	13½ miles west	blk. 21, sec. 6, NE¼NE¼	P. E. Starr	--	--	Spring	--
492	14 miles west	blk. 21, sec. 6, SE¼SW¼	do.	--	1923	20	36
501	14⅓ miles west	blk. 19, sec. 94, SE¼NE¼	W. D. Dial	--	--	Spring	--
502	10⅓ miles west	blk. 19, sec. 99, NW¼SW¼	R. V. Sweatt	--	--	77	4½
d/503	9½ miles west	blk. 19, sec. 99, S½NE¼	-- Atkinson	--	--	106	4⅝
504	11 miles west	blk. 19, sec. 59, N½SW¼	Ruth Ellison	--	--	Spring	--
505	10½ miles west	blk. 19, sec. 62, SW¼NW¼	do.	--	--	112	4⅝
506	11 miles west	blk. 19, sec. 78, NW¼SE¼	Noel Gudd	--	1918	66	4⅝
507	12 miles west	blk. 19, sec. 77, N½NE¼	J. W. Stokes	--	--	106	4⅝
508	14⅔ miles west	blk. 19, sec. 86, SW¼SW¼	J. M. Lane	--	--	173	6
d/509	15⅔ miles west	blk. 19, sec. 74, N½SW¼	J. D. Browder	--	--	140	5
510	17 miles west	blk. 19, sec. 48, SW¼SW¼	Ella A. Gibson	--	--	Spring	--
511	17⅓ miles west	blk. 19, sec. 49,	Brookhollow Country Club	--	--	Tank	--
512	18⅔ miles west	blk. 19, sec. 50, NE¼SE¼	W. L. Neel	-- Starnes	--	98	4⅝
d/513	do.	blk. 19, sec. 31, SE¼NE¼	T. J. Dunbar	--	--	32	42
d/514	17⅔ miles southwest	blk. 19, sec. 28, NW¼NE¼	Ella A. Gibson	Columbus Oil & Securities Co.	1920	3,830	20
d/515	14 miles southwest	blk. 19, sec. 36, SE¼SE¼	-- Thorn	--	--	75	4⅝
516	13⅓ miles southwest	blk. 19, sec. 24, SE¼NE¼	J. C. Doneghy	-- Arnold	1935	106	6

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
483	1.2	107.8	Sept.28, 1938	C,W	N	Sand dunes	Steel casing.
484	--	110	e/	C,W	D,S	Sandy ridge	Reported strong supply.
485	--	Flows	--	None	S	In draw	Estimated yield, 10 gallons a minute from two openings in sand. Surround-
486	--	60	e/	C,W	D,S	Top of ridge	Reported strong ed by willow trees. supply.
487	0.7	70.5	Sept. 6, 1938	C,W	D,S,I	do.	Concrete curb. Irrigates garden.
488	1	66.8	Oct. 18, 1938	C,W	D	do.	Water level measured while mill pumping slowly.
489	1	70.3	do.	C,W	S	Gentle slope	
490	--	--	--	C,W	D,S	do.	Obstructed.
491	--	Flows	--	None	S	In draw	Estimated yield, 15 gallons a minute from seeps in "Red Beds" along banks
492	--	--	--	C,W	D,S	do.	Dug well. Concrete curb; of draw. galvanized casing. Reported supplies water for 150 head of cattle.
501	--	Flows	--	None	S	Creek bottoms	Estimated yield, 5 gallons a minute from seeps in sand along bed of creek.
502	2.8	57.1	Sept. 6, 1938	C,W	D,S	Gentle slope	
503	2.2	88.6	Aug. 26, 1938	C,W	D,S	Hilltop	Reported strong supply of slightly mineralized water.
504	--	Flows	--	None	S	Creek bottoms	Slight flow from seeps along north bank of creek. Surrounded by reeds
505	2	88.1	Sept.27, 1938	C,W	S	Gentle slope	and willow trees.
506	1.7	42.9	Sept. 6, 1938	C,W	D,S	do.	Reported strong supply.
507	2.2	92.7	do.	C,W	D,S	do.	
508	0.9	120.4	do.	C,W	D,S	Top of ridge	Reported strong supply.
509	1.1	119.7	Sept. 7, 1938	C,W	N	do.	
510	--	Flows	--	None	N	Creek bottoms	Slight flow from seeps along both banks of south fork of creek.
511	--	--	--	None	P	do.	Earth tanks about 15 acres in area and 40 feet in depth. Formed by earth dam 300 feet long and 50 feet
512	2	60.5	Sept. 7, 1938	C,W	S	--	Reported high. Stocked with fish. strong supply.
513	2.3	30.2	do.	C,W	N	Creek bottoms	Dug well. Brick curb; galvanized casing.
514	--	--	--	None	N	--	Oil test. See log.
515	1	52.9	Sept. 7, 1938	C,W	S	Gentle slope	Water reported slightly mineralized.
516	1.5	56.9	do.	C,W	S	do.	Reported weak supply.

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
517	12 miles southwest	blk. 19, sec. 21, NW¼SW¼	W. M. Stout Est.	-- Horton	--	200	6
551	8 miles west	blk. 19, sec. 90, N½N½	L. W. Hartman	--	--	14	42
552	8⅓ miles west	blk. 14, sec. 71, NE¼SW¼	E. L. Jones	--	Old	55	42
553	8 miles west	blk. 14, sec. 69, NW¼NW¼	do.	--	--	147	6
d/554	6⅔ miles west	blk. 14, sec. 73, N½NW¼	Mrs. E. N. Lewis	--	Old	31	6
557	7⅓ miles west	blk. 14, sec. 89, NW¼NW¼	Buck Creek School	--	--	19	4⅓
558	6½ miles west	blk. 14, sec. 92, SE¼SE¼	B. Aduddell	--	--	34	6
559	do.	do.	do.	--	--	39	5
560	do.	blk. 14, sec. 88, SW¼NW¼	H. Lacy	--	--	Spring	--
d/561	5⅓ miles west	blk. 14, sec. 88, NE¼SE¼	do.	--	--	--	6
562	6 miles southwest	blk. 14, sec. 67, NW¼NW¼	G. F. Wright	-- Moore	1914	70	4⅓
d/563	7½ miles southwest	blk. 14, sec. 52, NE¼NE¼	W. H. Riley	--	--	117	4⅓
564	7 miles southwest	blk. 14, sec. 54, SW¼NW¼	J. Doneghy	A. Thompson	1936	73	6
565	5½ miles southwest	blk. 14, sec. 55, NW¼NW¼	J. D. Sponse	--	--	100	6
571	3⅓ miles southwest	blk. 14, sec. 76, SE¼SE¼	Mrs. M. Yopp	--	--	122	--
572	3 miles west	blk. 14, sec. 85, NE¼NW¼	Mrs. M. W. Hawkins	--	1914	123	4⅓
573	1 mile west	blk. 14, sec. 98, NE¼NW¼	--	--	Old	69	6
d/574	⅔ mile southwest	blk. 14, sec. 82, N½NW¼	A. L. Cochran	--	Old	90	6
575	1⅔ miles southeast	blk. 14, sec. 81, NW¼NE¼	Mrs. D. M. Henrard	--	--	62	5
580	2½ miles south	blk. 14, sec. 79, NE¼SE¼	C. C. Rolls	--	--	84	6
d/581	2⅔ miles south	blk. 14, sec. 61, NW¼NW¼	J. Baumgartner	--	--	83	5
582	4⅓ miles south	blk. 14, sec. 59, N½SW¼	O. E. Seally	--	--	147	--
d/583	5 miles south	blk. 14, sec. 42, NE¼SE¼	J. L. Moody	--	--	50+	5
584	5½ miles south	blk. 14, sec. 42, SW¼SE¼	J. C. Doneghy	--	--	122	4⅓
585	7½ miles south	blk. 14, sec. 21, SE¼SE¼	Mrs. N. Lawrance	--	Old	53	4
d/586	do.	blk. 14, sec. 22, SE¼SW¼	Otto Bueger	--	--	83	6

a/ Measuring point was usually top of casin , top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; , windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
517	--	60	e/	C,W	S	Gentle slope	Reported 35 feet drawdown after pumping several hours.
551	1.5	13.5	Aug. 26, 1938	C,W	D,S	Creek bottoms	Dug well. Cemented rock curb and casing. Water from river sand.
552	2	54.8	Aug. 24, 1938	C,W	S	do.	Dug well. Brick curb and casing. Reported drilled from 55 to 80 feet.
553	1	95.2	Sept.27, 1938	C,W	S	Flat	Galvanized casing.
554	0.4	25.6	Sept.26, 1938	C,W	N	Top of ridge	
557	0.8	19	Aug. 24, 1938	C,W	P	Creek bottoms	Water level measured while mill pumping slowly.
558	1.1	21.1	Oct. 1, 1938	C,H	S	Near draw	
559	2	28.6	do.	B,H	D	Gentle slope	
560	--	Flows	--	None	S	Creek bottoms	Estimated yield, 3 gallons a minute from seeps along east bank of Buck Creek.
561	0.9	48.6	Sept.26, 1938	C,W	N	Side of ridge	
562	2	42.4	do.	C,W	D,S	Sandy slope	Reported strong supply.
563	0.7	91.9	Aug. 24, 1938	C,W	D,S	Gentle slope	Well being cleaned out when visited, Aug. 24, 1938; partially filled with sand.
564	1.2	66.3	Sept.24, 1938	C,W	D,S	Side of ridge	Galvanized casing.
565	1.1	85.8	Aug. 24, 1938	C,W	D,S	Top of ridge	Do.
571	0.9	85.7	do.	C,W	S	Hilltop	Reported strong supply.
572	3.5	99.2	do.	C,W	S	Gentle slope	Do.
573	1.3	48.9	Sept.29, 1938	C,H	S	Top of ridge	Reported used very little. Located at vacant house.
574	1.6	66.7	Aug. 24, 1938	None	N	Flat	
575	1.9	39.4	Sept. 2, 1938	C,W	S	do.	
580	1.9	71.8	Sept. 8, 1938	C,W	S	Gentle slope	
581	1.5	59.9	do.	None	N	do.	
582	0	72.1	Aug. 24, 1938	C,H	S	Top of ridge	Reported used very little.
583	--	50+	Sept. 8, 1938	C,W	N	Hillside	Filled with sand to 50 feet.
584	0.9	67.7	do.	C,W	S	Gentle slope	Water level questionable.
585	4	22.1	Aug. 24, 1938	C,W	S	Creek bottoms	Located 150 feet east of small creek.
586	0.1	49.8	do.	C,W	N	Gentle slope	Located near small creek.

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

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/587	7 miles south	blk. 14, sec. 36, NE¼SE¼	T. Young	--	--	93	4½
d/588	6 miles southwest	blk. 14, sec. 36, NE¼NE¼	H. L. Roy	--	--	92	5
589	do.	blk. 14, sec. 45, NW¼NW¼	J. I. Thomas	--	--	113	5
590	7 miles southwest	blk. 14, sec. 35, NW¼SE¼	H. Fourmentin	--	--	80	4½
d/591	7½ miles southwest	blk. 14, sec. 47, NW¼SW¼	Rebecca Berry	--	--	101	5
592	8½ miles southwest	blk. 14, sec. 27, SW¼NW¼	J. C. Donoghy	--	--	99	4½
d/593	9½ miles southwest	blk. 14, sec. 29, NW¼NE¼	W. M. Stout Est.	Tom Moore	1932	157	5
d/594	10½ miles southwest	blk. 14, sec. 5[illegible], NW¼NW¼	E. N. Dennis	--	--	46	4½
595	do.	blk. 14, sec. 3[illegible], NW¼NW¼	do.	--	--	Spring	--
601	3½ miles east	blk. 10, sec. 92, SE¼SE¼	F. C. Maston	--	--	27	5
d/602	5 miles east	blk. 10, sec. 94, SW¼SE¼	Mrs. Nancy Bowen	--	--	35	--
603	6 miles east	blk. 1[illegible], sec. 95, N½NW¼	J. J. Cook	--	--	23	--
604	8½ miles east	blk. 10, sec. 84, NE¼NE¼	--	--	--	Spring	--
605	do.	blk. 10, sec. 98, SE¼SW¼	Annie C. Hughes	--	--	35	6
d/606	10[illegible] miles east	blk. 10, sec. 62, N½NE¼	J. S. Driskell	--	--	69	4½
d/607	10 miles east	blk. 10, sec. 62, NW¼NW¼	do.	--	--	54+	4½
608	do.	blk. 10, sec. 63, SW¼SE¼	S. C. Kesler	--	1908	75	6
609	8½ miles east	blk. 10, sec. 64, NW¼NE¼	Mrs. W. S. White	--	1904	61	4½
610	7½ miles east	blk. 10, sec. 76, NW¼SE¼	R. H. Templeton	--	--	59	6
611	do.	blk. 10, sec. 65, N½NW¼	J. C. Donoghy	--	--	30	5
612	7½ miles southeast	blk. 10, sec. 56, NW¼NW¼	T. L. Scott	--	--	94	5
613	7 miles southeast	blk. 10, sec. 54, NE¼SE¼	Minnie Box	--	--	64	5
614	6½ miles southeast	blk. 10, sec. 47, N½NW¼	Stansell Est.	Frank Moore	1925	91	6
615	5½ miles southeast	blk. 10, sec. 67, NW¼SW¼	S. J. Glenn	--	--	36	6
d/616	5 miles southeast	blk. 10, sec. 74, SW¼NW¼	A. V. Cocke	--	--	38	5
d/617	3[illegible] miles southeast	blk. 10, sec. 72, SE¼SW¼	R. W. Duke	--	--	54	4½
d/618	4 miles south	blk. 10, sec. 51, NW¼NW¼	Mrs. J. C. Hampton	--	--	74	5

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
587	3.2	71.9	Sept.26, 1938	C,W	N	Gentle slope	Located near small creek.
588	0.8	90.7	do.	C,W	N	Top of ridge	Concrete curb; galvanized casing.
589	2	101.8	Oct. 20, 1938	C,W	S	Flat	
590	3	64.8	Sept.26, 1938	C,W	S	Gentle slope	
591	2	96.4	do.	C,W	N	do.	
592	1	74.1	do.	C,W	S	do.	
593	0.6	130.4	Sept. 6, 1938	C,W	N	Top of ridge	20 feet of steel casing at bottom. Reported partially caved in recently.
594	5.5	21.8	Sept.27, 1938	C,W	S	In draw	Reported used only a little.
595	--	Flows	--	None	S	Creek bank	Slight flow from seeps extending about 5 miles along bank of Salt Creek.
601	1	13.3	Sept. 2, 1938	C,H	S	Flat	
602	0	9.5	do.	None	N	Gentle slope	
603	0.3	19.2	Aug. 26, 1938	C,H	D,S	Flat	Dug well, deepened by drilling. Reported pumps sand.
604	--	Flows	--	None	S	Creek bottoms	Estimated yield, $\frac{1}{2}$ gallon a minute from seeps in banks of creek.
605	1.8	36	Oct. 5, 1938	C,W	S	In draw	Water level measured while pumping slowly.
606	1.3	48.3	do.	C,W	N	Near lake	
607	1	54+	do.	None	N	Flat	Filled with sand to 54 feet.
608	1	61.9	do.	C,W	D,S	do.	
609	0.6	57	Aug. 26, 1938	C,W	D,S	Top of ridge	Drilled to 80 feet; filled with cavings to 61 feet.
610	1.4	43.1	Oct. 5, 1938	C,H	D,S	Flat	
611	1.1	19.2	Aug. 26, 1938	C,W	S	Creek bottoms	
612	1	61.9	Oct. 21, 1938	C,W	S	Flat	
613	1.3	59.8	Sept. 2, 1938	C,H	D,S	Side of ridge	Reported weak supply.
614	0.6	70.5	do.	C,W	D,S	Top of ridge	Water level measured while mill pumping slowly.
615	1	32.2	Oct. 21, 1938	C,W	S	Side of draw	Reported weak supply.
616	0.9	28.9	Aug. 25, 1938	C,W	D,S	Flat	
617	2	35.1	Aug. 26, 1938	C,W	N	Top of ridge	
618	4	55.7	Oct. 21, 1938	C,W	S	Flat	

Records of wells and springs in Collingsworth County--Continued

No.	Distance from Wellington	Block and section	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/619	4½ miles south	blk. 10, sec. 51, NW¼SW¼	J. C. Doneghy	--	--	154	4⅝
620	5 miles southeast	blk. 10, sec. 53, NW¼NW¼	Fresno Public School	--	--	--	--
d/621	5½ miles southeast	blk. 10, sec. 52, NE¼SE¼	L. F. Richerson	--	--	67	4⅝
622	6½ miles southeast	blk. 10, sec. 49, SE¼SE¼	M. F. Weaver	--	--	79	6
623	6 miles south	blk. 10, sec. 31, NW¼NW¼	Jonny Russel	--	--	159	4⅝
624	7 miles south	blk. 10, sec. 30, NE¼NE¼	J. Donnel	--	--	149	6
625	7 miles southeast	blk. 10, sec. 32, SE¼SW¼	J. M. Higgins	--	--	104	6
626	8 miles southeast	blk. 10, sec. 29, SE¼SE¼	L. F. Watts	Tom Moore	1928	197	4⅝
d/627	do.	blk. 10, sec. 28, NE¼NE¼	Fannie Goodnight	--	--	114	4⅝
628	9½ miles southeast	blk. 10, sec. 26, SE¼SW¼	O. J. Street	--	--	71	4⅝
629	8 miles southeast	blk. 10, sec. 34, NE¼NE¼	N. P. Forbis Est.	--	--	86	5
630	9½ miles southeast	blk. 10, sec. 36, SE¼SW¼	E. C. Alexander	--	--	120	5
d/631	10 miles southeast	blk. 10, sec. 36, SE¼SE¼	A. Alexander	--	--	99	6
632	11 miles southeast	blk. 10, sec. 24, SE¼SW¼	W. M. Alexander	--	--	93	6
633	do.	blk. 10, sec. 24, NE¼NE¼	do.	--	--	130	6
d/634	10 miles southeast	blk. 10, sec. 43, NW¼SW¼	H. Hightower	--	--	70	4⅝
635	9½ miles southeast	blk. 10, sec. 58, SW¼SW¼	W. E. Ford	--	--	57	6
d/636	10⅓ miles southeast	blk. 10, sec. 43, SW¼NE¼	O. R. Hickman	A. T. Kates	1933	3,115	--
637	11 miles southeast	blk. 10, sec. 43, SW¼SE¼	W. C. Robinson	W. C. Robinson	1938	14	48
638	do.	do.	do.	do.	1938	34	6
d/639	do.	do.	do.	--	--	33	30
640	11⅔ miles southeast	blk. 10, sec. 60, SW¼SW¼	O. D. Hill	--	--	34	6
641	12 miles southeast	blk. 10, sec. 22, NW¼NE¼	Mrs. M. A. Jameson	-- Long	1915	18	48
642	13⅓ miles southeast	blk. 10, sec. 21, SE¼SE¼	G. Miller	--	Old	60	--

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ C, cylinder; T, turbine; Cf, centrifugal; B, bucket; W, windmill; Ng, natural gas; E, electric; H, hand; number indicates horsepower.

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Height of measuring point above ground (ft.) a/	Water level: Depth below measuring point (ft.)	Water level: Date of measurement	Pump and power b/	Use of water c/	Topographic situation	Remarks
619	0.9	110.2	Sept. 8, 1938	C,W	S	Top of ridge	Reported water slightly mineralized.
620	--	--	--	C,H	P	Flat	
621	0.4	59.2	Sept. 8, 1938	C,W	N	do.	
622	2	68.5	do.	C,W	D,S	Gentle slope	Reported weak supply. Located near creek.
623	1.2	129.9	do.	C,W	S	Top of ridge	
624	2	72.4	Aug. 25, 1938	C,W	S	do.	
625	1	48.6	Oct. 21, 1938	C,W	S	In draw	Mill surrounded by trees.
626	1.6	53.4	Aug. 25, 1938	C,W	D,S	Top of ridge	Reported gypsum 184 to 200 feet, sand and gravel, 200 to 204 feet with stron supply of water; weak supply of soft water cased off at 35 feet.
627	1.3	101.8	Sept. 2, 1938	None	N	Gentle slope	
628	1.4	46.8	do.	C,W	D,S	Creek bottoms	Mill shut off 10 minutes before water level measured.
629	0.9	73.4	do.	C,W	D,S	Near draw	Reported strong supply.
630	0.9	97.8	Aug. 25, 1938	C,W	S	Top of ridge	Reported used very little. Located near vacant house.
631	1	40.8	Sept. 2, 1938	None	N	Gentle slope	
632	0.9	67.3	do.	C,W	S	do.	Water level questionable.
633	1	37.5	Oct. 21, 1938	C,W	S	Flat	
634	0.5	40.1	Aug. 25, 1938	C,W	N	do.	
635	0.5	48.7	Oct. 21, 1938	C,W	D,S	Side of ridge	Reported well about 100 yards southeast yields highly mineralized water.
636	--	--	--	None	N	Top of ridge	Oil test. See log.
637	2	15.3	Oct. 5, 1938	C,H	S	Creek bottoms	Dug well. Reported water level when dug, 9 feet. See log.
638	1	31	do.	B,H	D	Top of ridge	Bored well. Reported weak supply from red sand, 31 to 33 feet. Located 75 feet west of well 639.
639	1.2	32.3	do.	None	N	do.	Dug well. Reported weak supply.
640	1.4	17.5	do.	C,W	D,S	Flat	Supplies 5,000 gallon storage tank.
641	0.5	15.9	Sept. 2, 1938	C,W	S	Creek bank	Dug well. Wood curb and casing.
642	0.4	14.2	do.	C,W	S	Flat	

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

Table of drillers' logs, Collingsworth County, Texas

	Thickness (feet)	Depth (feet)
Driller's log of well 7		
G. P. Milton, et al, H. E. Franks well 1 18 miles northwest of Lutie.		
Light-red sand (4 bbl. water)	40	40
Sand (15 bbl. water)	20	60
Hard-packed sand and gravel	30	90
Hard-packed gravel and gypsum	10	100
Red rock and sand	40	140
Red rock and shale	60	200
Water sand	10	210
Red shale and gypsum	35	245
Gypsum and blue shale	22	267
Gray mud and gypsum	3	270
Hard gypsum	5	275
Red and blue shale	5	280
Hard gypsum	12	292
Red mud	10	302
Gypsum (some salt water, 325 to 342 feet)	38	340
Blue shale	2	342
Hard gypsum	48	390
Red mud	28	418
Hard gypsum	27	445
Brown shale	35	480
Brown shale and sand	35	515
Hard-packed blue shale	35	550
Brown shale	25	575
Salt	85	660
Salt and brown shale	75	735
Salt and shells	440	1175
Gypsum	10	1185
Brown shale and salt	20	1205
Salt and shells	70	1275
Brown salt	105	1380
Shell	20	1400
Blue shale	10	1410
Salt	15	1425
Blue shale	5	1430
Salt	40	1470
Shell	10	1480
Brown shale	35	1515
Shell	5	1520
Blue shale	40	1560
Red salt	15	1575
Blue shale	15	1590
Gray lime	7	1597
Blue shale	33	1630
Lime	5	1635
Blue shale	30	1665
Lime	5	1670
Red shale	65	1735
Gypsum shell	25	1760
Red shale	38	1798
Shells and blue shale	32	1830
Red rock	65	1895
Gypsum	25	1920
Lime and blue shale	175	2095
White lime	60	2155
Blue shale	5	2160
Broken lime	15	2175
Hard gray lime	80	2255
Blue shale	5	2260
Gray lime	115	2375
Red shale	5	2380
Lime shell	3	2383
Red granite wash	62	2445
Granite wash (show of gas)	70	2515
Shell	5	2520
Soft-water sand (rose 150 feet in 10 hours)	5	2525
TOTAL DEPTH		2525
CASING RECORD: 17 feet of 20-inch; 101 feet of 15½-inch; 214 feet of 12½-inch; 678 feet of 10-inch; 1,980 feet of 8-inch and 147 feet of 6-5/8-inch casing.		
Driller's log of well 17		
Continental Oil Company of Texas. D. D. McDowell well 1, 13 miles northwest of Lutie.		
Red mud and sand	100	100
Sand	5	105
Red rock, gypsum shells	50	155
Gypsum	20	175
Red shale	20	195
Lime	5	200
Water sand	15	215
Blue shale	5	220
Red shale	30	250
Red mud	40	290
Blue shale	30	320
Red rock	5	325
Blue shale	15	340
Red rock, salt	400	740
Salt	105	845
Red rock, salt	105	950
Brown shale, salt	215	1165
Gypsum rock	25	1190
Gray shale	5	1195
Gypsum rock	40	1235
Gypsum	55	1290

(Continued on next page)

Table of Drillers' Logs, Collingsworth County, Texas --Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 17--Continued		
Gray mud	5	1295
Lime	20	1315
Blue shale	50	1365
Lime shells	5	1370
Brown shale	5	1375
Red shale	35	1410
Brown shale	50	1460
Shells	5	1465
Blue shale	135	1600
Shell, gypsum	5	1605
Red shale	50	1655
Gray lime	110	1765
Blue shale	15	1780
Gray lime	70	1850
Lime	195	2045
Blue shale	5	2050
Gray lime	30	2080
TOTAL DEPTH		2830

CASING RECORD: 155 feet of 20-inch; 340 feet of 15½-inch; 950 feet of 12½-inch; 1633 feet of 10-inch; 2146 feet of 8¼-inch and 2700 feet of 6-5/8-inch casing.

Driller's log of well 59

T. F. Hunter, H. B. Hill well 1, 10 miles north of Lutie.

Shale and gypsum	40	40
Gypsum	25	65
Gray shale	10	75
Gypsum	20	95
Shale	10	105
Lime	10	115
Red rock and gypsum	61	176
Gray shale	9	185
Red shale	45	230
Gray shale	20	250
Red shale	45	295
Gypsum shell	5	300
Red rock and shale	65	365
Salt and red shale, salt water at 425	70	435
Salt and red rock	70	505
Red rock	30	535
Red rock and gypsum shell	40	575
Red shale	50	625
Salt and red shale	165	790
Cavity	15	805
Red shale and salt	40	845
Red shale	70	915
Salt	45	960
Gray shale	5	965
Salt and gray shale	50	1015
Salt	25	1040
Hard gypsum shell	5	1045
Blue shale	3	1048
Gypsum	7	1055
Salt	25	1080
Gypsum	10	1090
Blue shale	120	1210
Salt	25	1235
Red shale	95	1330
Gypsum	5	1335
Gray shale and gyp shell	20	1355
Gray shale	45	1400
Blue shale	5	1405
Pink shale	50	1455
TOTAL DEPTH		2300

CASING RECORD: 248 feet of 12-inch; 575 feet of 10-inch and 1,529 feet of 8¼-inch casing.

Driller's log of well 79

Shoup Bros., G. H. Aldous Est. well 1, 9 miles north of Lutie.

Sandy red shale	25	25
Gypsum rock	50	75
Brown shale	60	135
Gypsum rock	10	145
Blue shale	10	155
Brown shale	35	190
Red shale	210	400
Red shale and salt	35	435
Gypsum shell, water	7	442
Brown shale	3	445
Red shale and salt	425	870
Brown shale and salt	48	918
Blue shale	7	925
Red shale and salt	35	960
Lime	20	980
Blue shale and salt	30	1010
Lime	19	1029
Blue shale and salt	76	1105
Blue shale	55	1160
Lime	60	1220
Pink shale cave	135	1355
Blue shale cave	20	1375
Pink shale cave	55	1430
Gypsum and broken lime	30	1460
Lime	100	1560
Lime with shale	118	1678
Lime	127	1805
Gray lime	15	1820
Lime, gas	115	1935
Granite wash, show of oil at 2194	260	2195

(Continued on next page)

Table of Drillers' Logs, Collingsworth County, Texas--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 79--Continued		
Granite wash, show of water at 2198	3	2198
Diorite, hole filled with water to 900	202	2400
Granite wash and diorite	125	2525
TOTAL DEPTH		3000
CASING RECORD: 306 feet of 15½-inch; 446 feet of 12½-inch; 1,460 feet of 10-inch; 2,400 feet of 6-5/8-inch and 2,694 feet of 5-3/16-inch casing.		
Driller's log of well 159		
C. & H. Drilling Co., Gideon Bell well 1, 12 miles northeast of Lutie.		
Gypsum and red rock	30	30
Gypsum	45	75
Sand	4	79
Blue shale	9	88
Red rock	12	100
Gypsum	5	105
Red and blue material	35	140
Blue shale	10	150
Red and blue mud	55	205
Blue shale	15	220
Red rock	15	235
Salt and red rock	15	250
Salt	80	330
Salt and red rock, 1 bailer water per hour at 430	275	605
Salt, 5 to 6 bailers water per hour at 740	340	945
Gray salt (hole caving between 810 and 853)	45	990
Salt	20	1010
Gypsum	25	1035
Blue shale	5	1040
Clear salt	10	1050
Salt	45	1095
Blue shale-cave	40	1135
Gypsum shell	5	1140
Blue shale	60	1200
Cave	35	1235
TOTAL DEPTH		2142
CASING RECORD: 80 feet of 12½-inch; 1,007 feet of 10-inch and 1,515 feet of 8¼-inch casing.		
Driller's log of well 259		
Continental Oil Company, W. E. Hughes Estate well 1, 12½ miles northeast of Wellington.		
Red beds	40	40
Gypsum	62	102
Hard gypsum	23	125
Caving shale	7	132
Gypsum	26	158
Blue shale	3	161
Gray shale	4	165
Red cave	5	170
Gypsum	5	175
Red rock	25	200
Red rock - little salt water	30	230
Gray shale	50	280
Red rock	60	340
Conglomerate	14	354
Red rock	11	365
Gypsum	5	370
Blue mud	12	382
Red rock	108	490
Gypsum	5	495
Red rock	140	635
Blue shale and shells	40	675
Red beds	160	835
Mixed red and blue gypsum	40	875
Bedded blue clay	20	895
Mixed red and blue shale	30	925
Red rock	100	1025
Blue shale	5	1030
Broken blue shale	100	1130
Gray shale	5	1135
Gypsum	20	1155
Gray shale	42	1197
Hard gypsum	18	1215
Salt	25	1240
Gypsum	20	1260
Black shale, soft, caving	25	1285
Gray shale	30	1315
Gypsum	10	1325
Gray shale	40	1365
Gray shale and shells	25	1390
Red rock caving	70	1460
Blue and red gypsum salt	10	1470
Shale	20	1490
Shells	1	1491
Red rock	19	1510
TOTAL DEPTH		3507
CASING RECORD: 475 feet of 15½-inch; 1,525 feet of 12½-inch; 2,773 feet of 8¼-inch and 3,473 feet of 6-5/8-inch casing.		

Table of Drillers' Logs, Collingsworth County, Texas--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 282		
Generalized log of City of Wellington wells about 2¼ miles east of Wellington.		
Surface soil	12	12
Sand and gravel with some clay	2	14
Dark-brown honeycombed clay	20	34
Sand and gravel with some clay	2	36
Silky red packed sand	4	40
Driller's log of well 462		
F. J. Downey, Dixon, et al, H. E. Bell well 1, 13⅓ miles northwest of Wellington.		
Quicksand	135	135
Gravel, hole full of water	10	145
Sand	25	170
Red rock	30	200
Quicksand	40	240
Gypsum	20	260
Red rock	40	300
Gypsum	110	410
Red rock	30	440
Sand, hole full of water	30	470
Blue slate	50	520
Gypsum	20	540
Red rock	60	600
Blue slate	40	640
Sand, hole full of water	40	680
Blue slate	15	695
Red rock	10	705
Salt	235	940
Red rock	20	960
Salt	40	1000
Red rock	70	1070
Gypsum	30	1100
Brown shale	45	1145
Lime	40	1185
Red rock	25	1210
Salt	110	1320
Gypsum	35	1355
Blue slate	45	1400
Lime	25	1425
Vari-colored material	35	1460
Lime	40	1500
Slate	60	1560
Gypsum	25	1585
Red rock	35	1620
Gypsum	15	1635
Lime	15	1650
Slate	30	1680
Red rock	10	1690
TOTAL DEPTH		2498
CASING RECORD: 120 feet of 20-inch; 265 feet of 15-inch; 475 feet of 12-inch; 710 feet of 10-inch; 1,965 feet of 6-5/8-inch and 2,498 feet of 5-3/16-inch casing.		
Driller's log of well 514		
Columbus Oil and Securities Co., Ella A. Gibson well 1, 17⅓ miles southwest of Wellington.		
Red rock	50	50
Red formation	25	75
Lime	12	87
Red formation	13	100
Lime and gypsum	5	105
Quicksand	17	122
Lime and gypsum	5	127
Red formation	33	160
Quicksand	12	172
Red beds	58	230
Lime and gypsum	28	258
Hard gypsum	7	265
Red beds	5	270
Brown lime	10	280
Blue shale	15	295
Lime	5	300
Lime and gypsum	10	310
Red rock	8	318
Lime and gypsum	5	323
Broken limestone	17	340
Hard lime	9	349
Blue shale	3	352
White lime	15	367
Brown lime	6	373
Gypsum	3	376
White lime	14	390
Blue shale	5	395
Brown lime	5	400
Hard white lime	8	408
Gypsum, ½ bailer water per hour	2	410
Red mud	10	420
Lime and gypsum	4	424
Red caving formation	2	426
Gypsum	7	433
White lime	9	442
Lime	2	444
Blue shale	4	448
Brown shale	5	453
Lime	19	472
Brown shale	6	478

(Continued on next page)

Table of Drillers' Logs, Collingsworth County, Texas--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 514--Continued		
White lime	17	495
Brown shale	10	505
Chocolate-colored formation	17	522
Lime	10	532
Salt	3	535
Red formation	4	539
Lime	5	544
Rock salt and mixed shale	16	560
Lime	10	570
Shale and salt	18	588
Red shale and salt	12	600
Lime	10	610
Blue shale	5	615
Lime	15	630
Salt and blue shale	10	640
Blue shale	2	642
Water sand, hole full of water	3	645
Salt and sand	11	656
Blue shale	2	658
Brown shale	12	670
Blue shale	10	680
Red shale	15	695
Lime and blue shale alternating	45	740
Pink shale	5	745
Lime and red rock alternating	84	829
Lime and red shale alternating	86	915
Shale	30	945
Lime	5	950
Brown shale	60	1010
Salt and shale	85	1095
Brown shale and salt	50	1145
Sandy lime	5	1150
Brown shale	50	1200
Salt	15	1215
Sand	15	1230
Salt and shale	30	1260
Brown shale	50	1310
Salt and shale	20	1330
Lime	10	1340
Red rock	10	1350
Lime	5	1355
Salt and shale	20	1375
Sandstone	10	1385
Red rock and lime alternating	50	1435
Sandy red shale	10	1445
Red beds	30	1475
Red rock	10	1485
Lime, salt and shale	100	1585
Blue shale	13	1598
Lime	7	1605
Brown shale	5	1610
Lime	5	1615
Blue shale	30	1645
Salt and shale	5	1650
Lime	5	1655
Blue shale	5	1660
Salt and red shale	20	1680
Salt and shale	55	1735
Lime	5	1740
Salt and shale	5	1745
Lime and sandy blue shale	150	1895
Sandy white shale	5	1900
Hard gray lime	10	1910
Blue shale	35	1945
Pink mud	15	1960
Red mud	5	1965
Brown shale	10	1975
Lime	10	1985
Brown shale	15	2000
Red shale	45	2045
Lime and shale	15	2060
Pink shale	10	2070
Lime	25	2095
Blue shale	5	2100
Lime and brown shale alternating	170	2270
Sandy lime	10	2280
Gray lime	30	2310
Lime and blue shale alternating	540	2850
White lime	40	2890
Lime	50	2940
Broken lime	20	2960
Sandy lime; $\frac{1}{3}$ bailer water per hour at 2,970 feet	30	2990
Broken lime	15	3005
Sandy, dark-colored lime; 1 bailer hard water per hour	20	3025
Black lime	10	3035
Hard lime	5	3040
Brown, gray and white lime	65	3105
Sandy lime, 2 bailers water per hour at 3,125 feet	30	3135
Hard, dark-colored lime-	5	3140
Water sand, hole full of water	25	3165
Sandy lime	10	3175
Water sand	20	3195
Gray lime	55	3250

(Continued on next page)

Table of Drillers' Logs, Collingsworth County, Texas--Continued

	Thickness (feet)	Depth (feet)
Driller's log of well 514--Continued		
Blue shale	2	3252
Water sand	43	3295
Sandy lime	5	3300
Blue shale and red rock	10	3310
Sandy lime	5	3315
Water sand	5	3320
Blue, gray and white lime	43	3363
Blue shale	7	3370
Sandy lime	5	3375
Sandy lime, 1,000 feet water in hole	35	3410
Sandy lime	5	3415
Hard gray lime	15	3430
Gray, white and black lime	15	3445
Blue shale	4	3449
Chocolate-colored formation	2	3451
Brown shale, cemented at 3,455 feet	5	3456
Brown shale	5	3461
Shale	55	3516
Hard gray lime	2	3518
Lime	3	3521
Hard black lime	2	3523
Sandy lime, hole caving	1	3524
Water sand, 2,500 feet water in hole	1	3525
Blue shale, 1,500 feet water in hole	2	3527
TOTAL DEPTH		3830

CASING RECORD: 58 feet of 20-inch; 394 feet of 15½-inch; 769 feet of 12½-inch; 1,591 feet of 10-inch and 2,157 feet of 8¼-inch casing.

Driller's log of well 636

A. T. Kates, Hickman well 1, 10½ miles southeast of Wellington.

Red rock	45	45
Water sand	18	63
Red rock	12	75
White sand	5	80
Red rock	17	97
Blue shale	8	105
Red rock	48	153
Gypsum	7	160
Red rock	5	165
Gypsum	5	170
Sand, 1 bailer water per hour	5	175
Blue shale	25	200
Red rock	20	220
Gypsum	10	230
Blue slate	15	245
Gypsum	60	305
Hard shell	5	310
Brown shale	10	320
Gypsum	5	325
Blue shale	15	340
Red rock	20	360
Gypsum	20	380
Lime	5	385
Sand, hole full of water	5	390
Gypsum	20	410
Blue shale	30	440
Brown shale	10	450
Blue shale	10	460
Brown shale	5	465
Gypsum, ½ bailer water per hour	5	470
Red rock and gypsum shells	30	500
Blue shale	5	505
Salt, 1 bailer water per hour	10	515
Blue slate	15	530
Salt	35	565
Blue slate	5	570
Salt	15	585
Brown shale	50	635
Blue slate	5	640
Pink shale	60	700
Red rock	45	745
Gypsum shell	2	747
Red rock	13	760
Gypsum	10	770
Red rock and gypsum shells	80	850
Salt	200	1050
Brown shale and gypsum shells	45	1095
Salt	55	1150
Gypsum	10	1160
Salt	120	1280
Pink slate cake	70	1350
Red rock	15	1365
Gypsum	15	1380
Red rock	15	1395
Brown shale	40	1435
Gypsum	15	1450
Red rock	55	1505
Blue slate	50	1555
TOTAL DEPTH		3115

CASING RECORD: 58 feet of 20-inch; 394 feet of 15½-inch; 769 feet of 12½-inch; 1,591 feet of 10-inch and 2,157 feet of 8¼-inch casing.

Driller's log of well 637

W. C. Robinson tract, 11 miles southeast of Wellington.

Top soil	6	6
Sand and gravel	6	12
Red clay	2	14
TOTAL DEPTH		14

Logs of test wells drilled by W. P. A. labor in Collingsworth County, Texas
Samples examined and classified by
C. R. Follett and Bruce Wilson, Project Superintendents.

	Thickness (feet)	Depth (feet)
Well 70a		
Draw, side of county road, 204 feet south of NW cor. NW¼ sec. 44, blk. 16, 4¼ miles northwest of Lutie.		
Sandy red loam - - - - - -	4	4
Sandy red and gray loam -	6	10
Sandy light-red loam - - -	19	29
Nov. 10, 1938.		
Well 70b		
Draw, side of county road, NW¼NW¼ sec. 44, blk. 16, 4¼ miles northwest of Lutie.		
Sandy brown top soil - - -	1	1
Light-red, fine sandy loam - - - - - - - - - -	9	10
Sandy red and gray loam -	7	17
Nov. 10, 1938.		
Well 70c		
Small draw, side of county road, 307 feet south of 70b, NW¼NW¼ sec. 44, blk. 16, 4¼ miles northwest of Lutie.		
Sandy red loam with light-gray streaks - - - - - -	31	31
Sandy blue-gray loam - - -	2	33
Nov. 10, 1938.		
Well 99a		
Small draw, side of county road, NW¼NW¼ sec. 5, blk. 16, 2¾ miles west of Lutie.		
Sandy brown top soil - - -	2	2
Sandy loam-well packed - -	7	9
Rock - - - - - - - - - - -		9
Nov. 9, 1938.		
Well 99b		
Small draw, side of county road, 204 feet east of 99a, NW¼NW¼ sec. 5, blk. 16, 2¾ miles west of Lutie.		
Sandy brown top soil - - -	6	6
Sandy red clay and loam -	12	18
Rock - - - - - - - - - - -		18
Nov. 9, 1938.		
Well 99c		
Small draw, side of county road, 256 feet east of 99b, NW¼NW¼ sec. 5, blk. 16, 2¾ miles west of Lutie.		
Top soil - - - - - - - - -	3	3
Light red sandy loam - - -	7	10

	Thickness (feet)	Depth (feet)
Well 99c--Continued		
Sandy brown loam and clay - - - - - - - - - -	13	23
Light red sandy clay - - -	5	28
Rock - - - - - - - - - - -		28
Nov. 9, 1938.		
Well 99d		
Small draw, side of county road, 256 feet east of 99c, NW¼NW¼ sec. 5, blk. 16, 2¾ miles west of Lutie.		
Top soil - - - - - - - - -	2	2
Sandy red loam with rock -	5	7
Sand with rock - - - - - -	8	15
Light-red sand with rock -	14	29
Rock - - - - - - - - - - -		29
Nov. 9, 1938.		
Well 192a		
Depression Lake, side of county road, 300 feet east of NW cor. NE¼ sec. 50, blk. 12, 4¾ miles northeast of Lutie.		
Light-brown sandy soil - -	10	10
Sandy gray clay - - - - -	11	21
Red and gray shaly clay -	6	27
Sept. 30, 1938.		
Well 192b		
Depression Lake, side of county road 444 feet east of NW cor. NE¼, sec. 50, blk. 12, 4¾ miles northeast of Lutie.		
Light-brown sandy soil - -	10	10
Sandy gray clay - - - - -	3	13
Sandy pink-colored clay -	4	17
Light-colored sand - - - -	1	18
Sandy grayish-brown clay -	1	19
Sandy red clay - - - - - -	4	23
Red and gray shaly clay, water at 38' - - - - - -	19	42
Sept. 30, 1938.		
Well 192c		
Depression Lake, side of county road 582 feet east of NW cor. NE¼ sec. 50, blk. 12, 4¾ miles northeast of Lutie.		
Light-brown sandy loam - -	8	8
Sandy gray clay - - - - -	3	11
Sandy red clay - - - - -	7	18
Red and gray shaly clay -	6	24
White chalky material - -	2	26
Rock - - - - - - - - - - -		26
Sept. 30, 1938.		

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

	Thickness (feet)	Depth (feet)
Well 199		
High land in creek bend, E. Smith tract, NE¼NE¼ sec. 29, blk. 12, 4½ miles northeast of Lutie.		
Sandy red loam	2	2
Sandy reddish-brown loam	3	5
Silty red sand	4	9
Red and gray shale	1	10
Red sand and gravel, with clay binder	8	18
Red and gray shale	2	20
Sandy red clay	5	25
Red and gray shale	2	27
Sandy red clay and pebbles	4	31
Gray shale	1	32
Sandy dark-red clay	1	33
Soft red clay	4	37
Sept. 12, 1938.		
Well 199a		
High land in creek bend, E. Smith tract, NE¼NE¼ sec. 29, blk. 12, 4½ miles northeast of Lutie.		
Sandy brown top soil	6	6
Sandy red clay	4	10
Sandy pink and gray clay	1	11
Coarse-grained sandy dark-red clay and pea gravel	8	19
Sandy reddish-brown clay	2	21
Sandy red and gray clay and rock	5	26
Sandy red clay with gray spots and rock	16	42
Sept. 10, 1938.		
Well 200		
Bed of Wolf Creek, E. Smith tract, NE¼NE¼ sec. 29, blk. 12, 4½ miles northeast of Lutie.		
Reddish-brown sandy alluvial material	2	2
Red and gray clay	7	9
Red clay	4	13
Pink and gray speckled shale	6	19
Red shale	11	30
Water level, 21.1 feet below top of ground, ¼ hour after hole completed.		
Sept. 12, 1938.		
Well 201		
Side of hill, south of creek, E. Smith tract, NE¼NE¼ sec. 29, blk. 12, 4½ miles northeast of Lutie.		
Silty red sand	6	8
Sandy brown loam	3	11
Reddish-brown sandy loam	6	17
Sandy brown loam	3	20
Silty gray sand	1	21
Red and gray clay and flat rocks	9	30
Gray shale	7	37
Gray, pink and brown shale with black pebbles	6	43
Gray, pink and brown shale with gypsum	4	47
Struck water at 41 ft.		
Water level, 34.4 feet below top of ground, ¼ hour after hole completed.		
Sept. 12, 1938.		
Well 206		
Near draw, side of county road, 0.1 mile east of SW cor. SW¼, sec. 13, blk. 12, 4½ miles east of Lutie.		
Sandy brown top soil	12	12
Gray sand with some clay	2	14
Water bearing sand	2	16
Struck water at 14 ft.		
Water level, 13.4 feet below top of ground, 1 hour after hole completed.		
Oct. 28, 1938.		
Well 207		
Near draw, side of county road, 188 feet east of 206, along south side of sec. 13, blk. 12, 4¼ miles east of Lutie.		
Sandy brown top soil	4	4
Firmly packed sandy loam	13	17
Sandy red clay with water	12	29
Struck water at 12 ft.		
Water level, 11.8 feet below top of ground, 1 hour after hole completed.		
Oct. 28, 1938.		
Well 207a		
Near draw, side of county road, 244 feet east of 207, along south side of sec. 13, blk. 12, 4¼ miles east of Lutie.		
Sandy top soil	5	5
Sandy red loam	11	16
Red and gray clay	4	20
Water level, 15.8 feet below top of ground, 1 hour after hole completed.		
Oct. 28, 1938.		

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

	Thickness (feet)	Depth (feet)
Well 208		
Near draw, side of county road, 0.1 mile north SW cor. SW¼ sec. 13, blk. 12, 4½ miles east of Lutie.		
Sandy brown top soil	6	6
Sandy light-red loam	8	14
Water-bearing sand	9	23
Struck water at 14 ft.		
Water level, 10.9 feet below top of ground, 1 hour after hole completed. Oct. 28, 1938.		
Well 208a		
Near draw, side of county road, 153 feet north of 208, west side of sec. 13, blk. 12, 4½ miles east of Lutie.		
Sandy brown top soil	6	6
Sandy red and gray clay	7	13
Sandy clay with water	11	24
Struck water at 13 ft.		
Water level, 11.4 feet below top of ground, 1 hour after hole completed. Oct. 27, 1938.		
Well 209		
Near draw, side of county road, 102 feet north of 208a, west side sec. 13, blk. 12, 4½ miles east of Lutie.		
Rocky, sandy, top soil	3	3
Sandy red loam	4	7
Water-bearing sand	9	16
Struck water at 8 ft.		
Water level, 5.7 feet below top of ground, 1 hour after hole completed. Oct. 27, 1938.		
Well 209a		
Near draw, side of county road, 184 feet north of 209, west side of sec. 13, blk. 12, 4½ miles east of Lutie.		
Sandy red top soil	3	3
Fine-grained sand	3	6
Sandy loam	4	10
White sand	5	15
Sandy clay	2	17
Coarse-grained sand	8	25
Oct. 27, 1938.		
Well 213		
Near small draw, side of county road, 695 feet north along west side of SW¼SW¼ sec. 14, blk. 12, 5 miles east of Lutie.		
Sandy red top soil	4	4
Sandy red clay	4	8
Well 213--Continued		
Red and gray clay	10	18
Struck water at 13 ft.		
Water level, 12.1 feet below top of ground, 1 hour after hole completed. Oct. 31, 1938.		
Well 214		
Near draw, side of county road, 337 feet north of 213, west side of sec. 14, blk. 12, 5 miles east of Lutie.		
Sandy red clay	7	7
Light-brown clay with red streaks	9	16
Red clay with white streaks	11	27
Rock		27
Struck water at 5 ft.		
Water level, 3.4 feet below top of ground, 1 hour after hole completed. Nov. 1, 1938.		
Well 215		
Near draw, side of county road, 307 feet north of 214, west side of sec. 14, blk. 12, 5 miles east of Lutie.		
Sandy red clay	3	3
Gummy red clay with white streaks	13	16
Reddish-gray clay	9	25
Rock		25
Struck water at 7 ft.		
Water level, 6.7 feet below top of ground, 1 hour after hole completed. Nov. 1, 1938.		
Well 216		
Near draw, side of county road, 189 feet north of 215, west side of sec. 14, blk. 12, 5 miles east of Lutie.		
Sandy brown clay	5	5
Gummy red clay	4	9
Struck water at 5 ft.		
Water level, 4.8 feet below top of ground, 1 hour after hole completed. Nov. 1, 1938.		
Well 268		
Creek bottoms, side of county road, 660 feet north of SE cor. SE¼, along east side of sec. 31, 4¼ miles northeast of Wellington.		
Sandy brown top soil	3	3
Sandy red clay with gray spots	4	7

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 268--Continued		
Fine-grained, silky bright red sand	32	39
Struck water at 23 ft.		
Water level 24.6 feet below top of ground, 4 hours after hole completed.		
Sept. 1, 1938.		

Well 269

Gentle slope, J. C. Alexander tract, 150 feet south of house, in chicken yard, S½SW¼SW¼ sec. 32, blk. 11, 4¼ miles northeast of Wellington.

Sandy brown top soil	3	3
Rusty-red silty sand	1	4
Red, pink and gray silty sand	3	7
Fine-grained silky red and gray sand	4	11
Fine-grained silky red sand, small spots of gray sand	16	27
Calcareous fine-grained white sand	1	28
Fine-grained silky pink sand	4	32
Fine-grained red sand with pea-size brown particles	7	39
Sept. 9, 1938.		

Well 270

Small dry lake, J. C. Alexander tract, 200 feet north of road and due south of house, SW¼SW¼ sec. 32, blk. 11, 4½ miles northeast of Wellington.

Sandy brown loam	2	2
Silty reddish-brown sand	3	5
Fine-grained silty red sand	3	8
Fine-grained silty red sand with sandy gray spots	2	10
Fine-grained silty red and white sand	6	16
Fine-grained silty red sand with sandy gray spots	4	20
Fine-grained silky red sand	10	30
Fine-grained red sand with sandy gray spots	7	37
Struck water at 23 ft.		
Water level, 23.6 feet below top of ground, ¼ hour after hole completed.		
Sept. 9, 1938.		

Well 271

Creek bottoms, side of county road, 720 feet east of NW cor. NW¼, sec. 29, blk. 11, 4¼ miles northeast of Wellington.

Sandy brown top soil	3	3
Fine-grained silty red sand	24	27
Fine-grained silky bright-red sand	6	31
Struck water at 31 feet.		
Water level, 30 feet below top of ground, ¼ hour after hole completed.		
Sept. 1, 1938.		

Well 271a

Side of ridge, side of county road, NE cor. NE¼ sec. 30, blk. 11, 4¼ miles northeast of Wellington.

Sandy brown surface soil	3	3
Silty red sand	6	9
Silty pink-colored sand	7	16
Silty red sand with small gray spots	8	24
Silty red sand	21	45
Fine-grained silky bright-red sand	2	47
Struck water at 46 ft.		
Sept. 1, 1938.		

Well 271b

Bed of small creek, side of county road, 425 feet west along north side of NE¼NE¼, sec. 30, blk. 11, 4½ miles northeast of Wellington.

Sandy brown top soil	4	4
Sandy reddish-brown clay	4	8
Silty red sand with gray spots	24	32
Silty red sand with clay binder	3	35
Gray chalky material with red streaks	1	36
Fine-grained bright-red sand	7	43
Struck water at 39 ft.		
Water level, 36.2 feet below top of ground, ¼ hour after hole completed.		
Sept. 1, 1938.		

Well 271c

Top of ridge, side of County road, 1100 feet west along north side of NE¼NE¼, sec. 30, blk. 11, 4¼ miles northeast of Wellington.

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 271c--Continued		
Silty red top soil	3	3
Silty red sand	7	10
Silty red sand with gray spots	3	13
Silty red sand	23	36
Silky bright-red sand, some clay binder	15	51

Aug. 31, 1938.

Well 284

Creek bottoms, M. Winters tract, 475 feet west and 235 feet north of west end of Highway bridge, SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.

Reddish-brown sandy top soil	6	6
Coarse-grained red sand	1	7
Coarse-grained clean sand	3	10
Sandy reddish-brown clay	14	24
Sandy grayish-brown clay	2	26
Sandy pink-colored clay	3	29
Fine-grained red sand	3	32

Struck water at 7 ft.
Water level, 5.4 feet below top of ground, ¼ hour after hole completed.
Aug. 30, 1938.

Well 284a

Creek bottoms, M. Winters tract, 475 feet west and 115 feet north of west end of Highway bridge, SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.

Coarse-grained sandy top soil	4	4
Silty brown sand	6	10
Coarse-grained red sand	4	14
Sandy reddish-brown clay	14	28
Sandy red clay	5	33
Sandy gray clay	4	37
Fine-grained red sand	1	38

Struck water at 7.5 ft.
Water level, 7.2 feet below top of ground, ¼ hour after hole completed.
Aug. 30, 1938.

Well 284b

Creek bottoms, M. Winters tract, 475 feet west of west end of Highway bridge, SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.

Sandy brown top soil	6	6
Coarse-grained red sand	3	9
Sandy brownish-red clay	6	15
Sandy bright-red clay	2	17
Coarse-grained bright-red sand	7	24

Water level, 7.7 feet below top of ground, ¼ hour after hole completed.
Aug. 30, 1938.

Well 284c

Creek bank, M. Winters tract, 300 feet west of west end of Highway bridge, SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.

Sandy brown top soil	4	4
Coarse-grained silty sand	2	6
Coarse-grained red sand	2	8
Sandy pinkish-brown clay	10	18
Sandy bright-red clay	6	24
Fine bright-red sand	6	30

Struck water at 4 ft.
Water level, 4.2 feet below top of ground, 1 hour after hole completed.
Aug. 30, 1938.

Well 284d

Bed of creek, M. Winters tract, 200 feet west of west end of Highway bridge, south side of SE¼, sec. 9, blk. 11, 3¼ miles east of Wellington.

Clean coarse-grained sand	1	1
Sandy brown top soil	3	4
Coarse-grained silty red sand	1	5
Clean coarse-grained sand	3	8
Sandy pink clay, white streaks	3	11
Sandy red clay	7	18
Sandy bright-red clay	13	31

Water level, 3.7 feet below top of ground, 21 hours after hole completed.
Aug. 30, 1938.

Well 284e

Bed of creek, M. Winters tract, 110 feet west of west end of Highway bridge, south side of SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.

Sandy brown top soil	3	3
Coarse-grained red sand	2	5
Clean coarse-grained sand	5	10
Sandy pinkish-brown streaked clay	6	16
Sandy red clay	3	19

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 284e--Continued		
Sandy bright-red clay - - -	15	34
Struck water at 3 ft.		
Water level, 2.7 feet below top of ground, 21 hours after hole completed.		
Aug. 29, 1938.		
Well 284f		
Creek bed, M. Winters tract, opposite west end Highway bridge, south side of SE¼ sec. 9, blk. 11, 3¼ miles east of Wellington.		
Sandy brown top soil - - -	2	2
Sandy brownish-red clay -	2	4
Coarse-grained red sand -	4	8
Water level, 3.3 feet below top of ground, 4 hours after hole completed.		
Aug. 29, 1938.		
Well 284g		
Creek valley, M. Winters tract, 110 feet east of west end of Highway bridge, south side of SE¼ sec. 9 blk. 11, 3¼ miles east of Wellington.		
Sandy brown top soil - - -	5	5
Sandy red clay - - - - - -	2	7
Coarse-grained red sand -	3	10
Water level, 4.5 feet below top of ground, 4 hours after hole completed.		
Aug. 29, 1938.		
Well 284h		
Creek valley, M. Winters tract, 215 feet east of west end of Highway bridge, south side of SE¼, sec. 9, blk. 11, 3¼ miles east of Wellington.		
Sandy brown top soil - - -	5	5
Reddish-brown sand - - - -	3	8
Sandy reddish-brown clay -	4	12
Gummy black clay - - - - -	12	24
Sandy reddish-brown clay -	3	27
Coarse-grained red sand -	2	29
Sandy reddish-brown clay -	12	41
Sandy bright-red clay - - -	8	49
Struck water at 8 ft.		
Water level, 6.1 feet below top of ground, 4 hours after hole completed.		
Aug. 30, 1938.		
Well 284i		
Creek valley, M. Winters tract, 320 feet east of west end of Highway bridge, south side of SE¼, sec. 9, blk. 11, 3¼ miles east of Wellington.		
Sandy brown top soil - - -	4	4
Gummy brown soil - - - - -	5	9
Sandy red clay - - - - - -	4	13
Red sand, water-bearing - -	3	16
Sandy gray clay - - - - - -	4	20
Sandy bright-red clay - - -	8	28
Struck water at 11 ft.		
Water level, 8.1 feet below top of ground, 3½ hours after hole completed.		
Aug. 29, 1938.		
Well 354		
River valley, Dave Thomas tract, east side of SE¼NE¼ sec. 75, blk. 15, 8½ miles northwest of Wellington.		
Sandy top soil - - - - - -	4	4
Fine-grained water sand -	5	9
Oct. 17, 1938.		
Well 354a		
River valley, Dave Thomas tract, 297 feet north of 354, east side of SE¼NE¼ sec. 75, blk. 15, 8½ miles northwest of Wellington.		
Sandy top soil - - - - - -	1	1
Fine-grained light-red sand	8	9
Oct. 15, 1938.		
Well 355		
River valley, side of county road, south side of SW¼SW¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Sandy brown top soil - - - -	6	6
Red sand with hard rock - -	8	14
Rock - - - - - - - - - - -		14
Oct. 15, 1938.		
Well 355a		
River valley, side of county road, 1,200 east of 355 along south side of SE¼SW¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Sandy light-brown top soil -	5	5
Sandy clay and gravel - - - -	11	16
Red and gray shaly clay - -	11	27
Struck water at 12 ft.		
Water level, 12.3 feet below top of ground, 1 hour after hole completed.		
Oct. 15, 1938.		

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

	Thickness (feet)	Depth (feet)
Well 355b		
River valley, side of county road, 400 feet east of 355a, SE¼SW¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Sandy brown top soil - - -	6	6
Light-red clay and gravel -	7	13
Gummy red clay - - - - - -	14	27
Struck water at 16 ft.		
Water level, 15.4 feet below top of gound, 1 hour after hole completed. Oct. 15, 1938.		
Well 356		
River valley, side of county road, 400 feet east of 355b, SE¼SW¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Sandy top soil - - - - - - -	5	5
Sandy light-red loam - - -	6	11
Gummy light-red clay - - -	14	25
Struck water at 16.7 ft.		
Water level, 16.7 feet below top of ground, 1 hour after hole completed. Oct. 15, 1938.		
Well 357		
River valley, side of county road, 200 feet east of 356, SE¼SW¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Dark-brown top soil - - - -	3	3
Sandy light-red and gravel	12	15
Light-red clay and gravel -	9	24
Struck water at 19.8 feet.		
Water level, 19.8 feet below top of ground, 1 hour after hole completed. Oct. 15, 1938.		
Well 358		
River valley, side of county road, 400 feet east of 357, SE¼SW¼ sec. 85 blk. 15, 9 miles north of Wellington.		
Sandy brown top soil - - -	3	3
Sandy light-brown loam -	9	12
Brown clay and gravel - -	8	20
Gummy light-red clay - -	19	39
Struck water at 19.2 ft.		
Water level, 19.2 feet below top of ground, 1 hour after hole completed. Oct. 15, 1938.		
Well 359		
River valley, side of county road, 400 feet east of 358, SW¼SE¼ sec. 85, blk. 15, 9 miles north of Wellington.		
Sandy dark-brown top soil -	4	4
Sandy light-red loam - - -	15	19
Gummy brown clay - - - -	11	30
Struck water at 20.2 ft.		
Water level, 20.2 feet below top of ground, 1 hour after hole completed. Oct. 14, 1938.		
Well 360a		
River valley, Dave Thomas tract, south side of SW¼SE¼ sec. 86, blk. 15, 9 miles northwest of Wellington.		
Sandy soil - - - - - - - -	8	8
Water sand - - - - - - - -	2	10
Oct. 17, 1938.		
Well 361a		
Level stretch west of draw, side of county road, south side of SE¼SW¼ sec. 95, blk. 15, 10 miles north of Wellington.		
Loose-packed sandy top soil	4	4
Sandy red loam and gravel -	9	13
Oct. 24, 1938.		
Well 361b		
Level stretch west of draw, side of county road, 214 feet east of 361a, south side of sec. 95, blk. 15, 10 miles north of Wellington.		
Sandy brown top soil - - -	4	4
Sandy light-red loam - - -	11	15
Oct. 24, 1938.		
Well 361c		
Level stretch west of draw, side of county road, 179 feet east of 361b, sec. 95, blk. 15, 10 miles north of Wellington.		
Sandy brown top soil - - -	2	2
Sandy red loam - - - - - -	9	11
Oct. 24, 1938.		
Well 366a		
Valley in gypsum hills, side of county road, north side of NW¼NW¼ sec. 80, blk. 15, 8½ miles north of Wellington.		
Gummy brown top soil - - -	6	6
Sandy reddish-brown clay -	26	32
Dark-red and gray clay - -	1	33
Rock - - - - - - - - - -		33
Oct. 12, 1938.		
Well 366b		
Valley in gypsum hills, side of county road, 175 feet west of 366a, north side of NW¼NW¼ sec. 80, blk. 15, 8½ miles north of Wellington.		

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 366b--Continued		
Dark-brown top soil	3	3
Sandy reddish-brown clay	15	18
Light-red clay	15	33
Oct. 12, 1938.		

Well 366c

Valley in gypsum hills, side of county road, 104 feet west of 366b, north side of NW¼NW¼ sec. 80, blk. 15, 8½ miles north of Wellington.

Top soil	2	2
Sandy light-brown clay	14	16
Sandy dark-brown clay	6	22
Reddish-brown clay with chalky rocks	7	29
Oct. 12, 1938.		

Well 374a

Sandy hills, side of county road 528 feet west along south side of SE¼SW¼ sec. 57, blk. 15, 5½ miles north of Wellington.

Sandy top soil	3	3
Fine-grained white sand	10	13
Fine-grained light-red sand	8	21
Oct. 28, 1938.		

Well 374b

Sandy hills, side of county road, 178 feet west of 374a, along south side of sec. 57, blk. 15, 5½ miles north of Wellington.

Light-brown sand	7	7
Fine-grained white sand	8	15
Fine-grained buff-colored sand	15	30
Light-brown sand	6	36
Oct. 28, 1938.		

Well 374c

Sandy hills, side of county road, 255 feet west of 374b, along south side of sec. 57, blk. 15, 5½ miles north of Wellington.

Sandy top soil	3	3
Fine-grained red sand	20	23
Fine-grained white sand	6	29
Oct. 28, 1938.		

Well 381

Small flat drainageway, side of county road, 200 feet south of NE cor. sec. 38, blk. 15, 4¼ miles north of Wellington.

Sandy brown top soil	7	7
Coarse-grained silty sand	4	11
Coarse-grained silty red sand	8	19
Red sand with clay binder	11	30
Coarse-grained pink sand	7	37
Water level, 25.6 feet below top of ground, 17 hours after hole completed.		
Sept. 14, 1938.		

Well 381a

Gentle slope to creek, side of county road, 360 feet east of NW cor. NW¼ sec. 39, blk. 15, 4¼ miles north of Wellington.

Sandy reddish-brown top soil	5	5
Silty red sand	8	13
Coarse-grained sand almost clean	12	25
Coarse-grained silty red sand and gravel	15	40
Sept. 13, 1938.		

Well 382

Gentle slope to creek, side of county road, SE cor. SE¼ sec. 43, blk. 15, 4¼ miles north of Wellington.

Sandy brown top soil	7	7
Coarse-grained silty sand	3	10
Coarse-grained silty red sand	7	17
Coarse-grained silty dark-red sand and gravel	4	21
Red sand with clay binder	8	29
Coarse-grained pink water sand	3	32
Coarse-grained pink sand with chalk spots	3	35
Water level, 29.4 feet below top of ground, 17 hours after hole completed.		
Sept. 13, 1938.		

Well 383

Small dry creek bank, side of county road, 396 feet west of SE cor. SE¼, sec. 43, blk. 15, 4¼ miles north of Wellington.

Coarse-sandy top soil	5	5
Coarse-grained reddish-brown sand	8	13
Red sand with clay binder	7	20
Coarse-grained pink water sand	6	26
Struck water at 20 ft.		
Water level, 17.8 feet below top of ground, 18 hours after hole completed.		
Sept. 13, 1938.		

Well 385a

Creek bed, side of county road, 20 feet north of SE cor. SW¼ sec. 36, blk. 15, 5 miles northwest of Wellington.

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 385a--Continued		
Sandy brown surface soil	7	7
Fine-grained silty pink-colored sand	20	27
Coarse-grained silty pink sand	5	32
Sept. 15, 1938.		

Well 385b

Creek bottoms, 50 feet west of channel, side of county road, 305 feet north of SW cor. SW¼ sec. 36, blk. 15, 5 miles northwest of Wellington.

Sandy brown surface material	7	7
Sandy gray clay	2	9
Silty pink sand	1	10
Coarse-grained silty sand and gravel	2	12
Fine-grained silty pink sand	4	16
Coarse-grained silty red sand	5	21
Fine-grained silty red sand	8	29
Coarse-grained sand	3	32
Struck water at 32 (?) ft.		
Sept. 14, 1938.		

Well 385c

Creek bottoms, west of channel, side of county road, 500 feet north of SW cor. SW¼ sec. 36, blk. 15, 5 miles northwest of Wellington.

Sandy brown surface material	6	6
Red silty sand with chalk spots	2	8
Coarse-grained clean sand	1	9
Coarse-grained silty sand	11	20
Fine-grained silty sand	11	31
Coarse-grained clean sand	3	34
Sept. 14, 1938.		

Well 385d

Between streams at fork, side of county road, 990 feet north of SW cor. SW¼ sec. 36, blk. 15, 5 miles northwest of Wellington.

Sandy brown surface soil	3	3
Silty red sand and rocks	5	8
Sandy reddish-brown clay and rocks	8	16
Silty red sand	3	19
Fine-grained silty pink sand	2	21
Coarse-grained rusty-colored sand	1	22
Coarse-grained silty sand and rocks	1	23
Sept. 15, 1938.		

Well 388a

Sandy hills, side of county road, south side of SW¼SE¼ sec. 73, blk. 15, 9 miles northwest of Wellington.

Sandy brown top soil	4	4
Medium-grained light-red sand	8	12
Fine-grained white sand	4	16
Medium-grained light-red sand	6	22
Fine-grained white sand	2	24
Medium-grained red sand	8	32
Oct. 28, 1938.		

Well 388b

Sandy hills, side of county road, 200 feet west of 388a, south side of section 73, blk. 15, 9 miles northwest of Wellington.

Sandy brown top soil	3	3
Medium-grained red sand	7	10
Coarse-grained light-red sand	6	16
Medium-grained sand	13	29
Oct. 28, 1938.		

Well 388c

Sandy hills, side of county road, 408 feet west of 388b, south side of sec. 73, blk. 15, 9 miles northwest of Wellington.

Sandy top soil	4	4
Light-red sand	6	10
Light-brown sand	6	16
Medium-grained white sand	4	20
Coarse-grained sand	10	30
Oct. 28, 1938.		

Well 398a

Valley flat in sand hills, side of county road, 400 feet east of NW cor. NW¼ sec. 12, blk. 15, 8 miles west of Wellington.

Sandy reddish-brown top soil	4	4
Sandy red clay	7	11
Coarse-grained sand	1	12
Sandy red clay	8	20
Sandy reddish-gray clay	6	26
Gray sand with clay binder	10	36
Sept. 29, 1938.		

Well 398b

Valley flat in sand hills, side of county road, 200 feet east of NW cor. NW¼ sec. 12, blk. 15, 8 miles west of Wellington.

Sandy reddish-brown soil	4	4
Silty red sand	2	6
Sandy red clay	9	15
Sandy gray shale with chalky spots	6	21

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

	Thickness (feet)	Depth (feet)
Well 398b--Continued		
Pink sand	1	22
Gray sand	1	23
White chalk and gray sand	5	28
Red and gray shale	2	30
Sept. 29, 1938.		

Well 398c

Valley flat in sand hills, side of county road, NE cor. NE¼ sec. 11, blk. 15, 8 miles west of Wellington.

Sandy reddish brown top soil	3	3
Silty red sand	2	5
Gray shaly and sand	5	10
Sandy pink clay	4	14
Silty gray sand	2	16
Sandy gray clay and chalk	3	19
Yellow and gray sand with clay binder	2	21
Shaly red clay	12	33
Sandy red clay	18	51
Sept. 28, 1938.		

Well 398d

Side of sandhill ridge, side of county road, 200 feet west of NE cor. NW¼ sec. 11, blk. 15, 8 miles west of Wellington.

Sandy reddish-brown top soil	4	4
Silty red sand	3	7
Sandy pink clay	10	17
Sandy gray clay	2	19
Sandy gray clay and chalk	5	24
Sept. 28, 1938.		

Well 398e

Side of sand hill ridge, side of county road, 680 feet north of NE cor. NE¼ sec. 11, blk. 15, 8 miles west of Wellington.

Sandy reddish-brown top soil	2	2
Silty red sand	2	4
Silty red sand with rusty-colored spots	2	6
Silty red and gray sand	6	12
Silty red sand	4	16
Very sandy pink clay	4	20
Brownish-gray sandy clay with white chalky spots	5	25
Sandy gray clay and chalk	5	30
Sandy gray clay with rusty-colored spots	1	31
Sandy gray and red shaly clay	4	35
Sept. 28, 1938.		

Well 415

Small natural drainageway, side of county road, 0.3 mile west of SE cor. SE¼ sec. 40, blk. 15, 3½ miles north of Wellington.

Coarse-grained silty brown sand	14	14
Silty pink sand	7	21
Fine-grained silky red sand	8	29
Struck water at 22 ft.		
Water level, 29(?)feet below top of ground, 1/6 hour after hole completed.		
Sept. 9, 1938.		

Well 416

Small natural drainageway, side of county road, 0.4 miles west of SE cor. SE¼ sec. 40, blk. 15, 3½ miles north of Wellington.

Silty brown sand	11	11
Silty red sand	10	21
Fine-grained silky red sand	9	30
Water level, 28.3 feet below top of ground, ¼ hour after hole completed.		
Sept. 9, 1938.		

Well 555

Valley of Buck Creek, side of county road, 1,040 feet south of NW cor. NW¼ sec. 89, blk. 14, 7½ miles west of Wellington.

Sandy brown top soil	7	7
Coarse-grained sand and gravel	5	12
Fine-grained silky red sand and rocks	3	15
Sept. 27, 1938.		

Well 555a

Valley of Buck Creek, side of county road, 640 feet south of NW cor. NW¼ sec. 89, blk. 14, 7½ miles west of Wellington.

Sandy reddish-brown surface soil	2	2
Fine-grained silty sand and pebbles	3	5
Coarse-grained clean sand and gravel	10	15
Sandy brown clay and gravel	3	18
Coarse-grained red sand and gravel	2	20
Struck water at 18 ft.		
Water level, 15.7 feet below top of ground, 2½ hours after hole completed.		
Sept. 27, 1938.		

Well 555b

Valley of Buck Creek, side of county road, 440 feet south of NW cor. NW¼ sec. 89, blk. 14, 7½ miles west of Wellington.

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 555b--Continued		
Silty red sand and gravel	4	4
Coarse-grained clean sand and gravel	8	12
Reddish-brown sandy clay	3	15
Coarse-grained sand and gravel with clay binder	2	17
Struck water at 15 ft.		
Water level, 14.4 feet below top of ground, 2 hours after hole completed.		
Sept. 27, 1938.		

Well 555c

Valley of Buck Creek, side of county road, 240 feet south of NW cor. NW¼ sec. 89, blk. 14, 7⅓ miles west of Wellington.

Sandy reddish-brown surface soil	4	4
Silty red sand	7	11
Coarse-grained clean sand	2	13
Struck water at 12 ft.		
Sept. 27, 1938.		

Well 556

Valley of Buck Creek, side of county road, 40 feet south of NW cor. NW¼ sec. 89, blk. 14, 7½ miles west of Wellington.

Sandy reddish-brown surface soil	3	3
Silty coarse-grained sand and gravel	5	8
Sandy reddish-brown soil and gravel	4	12
Coarse-grained sand and gravel	3	15
Struck water at 12 ft.		
Water level, 11.8 feet below top of ground, 2 hours after hole completed.		
Sept. 27, 1938.		

Well 566

South bank of Buck Creek, side of county road, 80 feet south of end of bridge, W ½ sec. 65, blk. 14, 4¾ miles southwest of Wellington.

Silty reddish brown sand	2	2
Coarse-grained clean sand	4	6
Coarse-grained clean sand and gravel	2	8
Struck water at 7.5 ft.		
Water level, 7.4 feet below top of ground, ¼ hour after hole completed.		
Sept. 26, 1938.		

Well 567

Bed of Buck Creek, west side of county road, 564 feet south of north end of bridge, W½ sec. 65, blk. 14, 4¾ miles southwest of Wellington.

Silty red sand	3	3
Sandy black soil	2	5
Coarse-grained sand and gravel (caving)	3	8
Sandy brown soil	3	11
Silty red sand	3	14
Coarse-grained sand and gravel	1	15
Rock		15
Struck water at 4.5 ft.		
Water level, 4.4 feet below top of ground, 3 hours after hole completed.		
Sept. 26, 1938.		

Well 567a

Bed of Buck Creek, west side of county road, 385 feet south of north end of bridge, W½ sec. 65, blk. 14, 4¾ miles southwest of Wellington.

Silty red sand	2	2
Coarse-grained clean sand	3	5
Coarse-grained sand and gravel	2	7
Struck water at 6 ft.		
Sept. 26, 1938.		

Well 568

Bed of Buck Creek, west side of county road, 240 feet south of north end of bridge, W½ sec. 65, blk. 14, 4¾ miles southwest of Wellington.

Silty red sand	2	2
Coarse-grained clean sand	3	5
Coarse-grained clean sand and gravel	2	7
Struck water at 6 ft.		
Water level, 4.9 feet below top of ground, 4 hours after hole completed.		
Sept. 26, 1938.		

Well 569

Bed of Buck Creek, west side of county road, 66 feet south of north end of bridge, W½ sec. 65, blk. 14, 4¾ miles southwest of Wellington.

Silty brownish-red sand	3	3
Coarse-grained clean sand and gravel	5	8

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
Well 569--Continued		
Silty brown sand	2	10
Coarse-grained clean sand	2	12
Struck water at 6 ft.		
Water level, 6.2 feet below top of ground, 4 hours after hole completed.		
Sept. 26, 1938.		
Well 570		
Valley of Buck Creek, east side of county road, 170 feet north of north end of bridge, W½ sec. 65, blk. 14, 4⅖ miles southwest of Wellington.		
Sandy brown top soil	4	4
Silty red sand	2	6
Coarse-grained clean sand	6	12
Struck water at 9.5 ft.		
Water level, 9.3 feet below top of ground, 1/3 hour after hole completed.		
Sept. 26, 1938.		
Well 576		
Valley flat, side of county road, 490 feet west of NE cor. NW¼ sec. 80, blk. 14, 1⅘ miles southeast of Wellington.		
Sandy brown loam	3	3
Red and gray sand with clay binder	13	16
Red sand	3	19
Sandy brown and gray clay	4	23
Fine-grained silky red sand	6	29
Sandy red clay	5	34
Fine-grained silky red sand	1	35
Struck water at 27 ft.		
Water level, 26.6 feet below top of ground, 1/6 hour after hole completed.		
Oct. 11, 1938.		
Well 577		
Valley flat, side of county road, 745 feet west of NE cor. NW¼ sec. 80, blk. 14, 1⅗ miles southeast of Wellington.		
Sandy brown soil	2	2
Sandy reddish-brown soil	5	7
Silty red sand	2	9
Sandy red and gray clay	7	16
Well 577--Continued		
Very sandy red clay	4	20
Fine-grained silky red sand	9	29
Struck water at 26 ft.		
Water level, 26.2 feet below top of ground, 2 hours after hole completed.		
Oct. 11, 1938.		
Well 578		
Valley flat, side of county road, 985 feet west of NE cor. NW¼ sec. 80, blk. 14, 1½ miles southeast of Wellington.		
Sandy brown top soil	5	5
Silty red sand	2	7
Sandy gray and red clay	6	13
Fine-grained silky red sand	19	32
Struck water at 26 ft.		
Water level, 28.1 feet below top of ground, ¼ hour after hole completed.		
Oct. 11, 1938.		
Well 579		
Valley flat, side of county road, 1,440 feet west of NE cor. NW¼ sec. 80, blk. 14, 1⅗ miles southeast of Wellington.		
Sticky brown top soil	7	7
Coarse-grained sand and some gray clay	1	8
Gray and rusty-colored sand with some clay	3	11
Coarse-grained silty white sand	3	14
Very sandy red clay	6	20
Very fine-grained silky red sand	15	35
Struck water at 34 ft.		
Water level, 35.6 feet below top of ground, 3 hours after hole completed.		
Oct. 11, 1938.		

Partial chemical analyses of samples collected from streams in Collingsworth County, Texas

Parts per million

C. R. Follett and Bruce Wilson, Project Superintendents

No.	Name of stream	Distance from Lutie	Location	Estimated flow in gallons a minute	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Total hardness as $CaCO_3$ (calc.)	Nitrate (NO_3)
76	Elm Creek	8 miles northwest	blk. 16, sec. 75, $NE\frac{1}{4}NW\frac{1}{4}$	125	Oct. 13, 1938	868	167	27	78	140	441	86	526	a/
155	-- Creek	8 miles northeast	blk. 12, sec. 73, $NW\frac{1}{4}NW\frac{1}{4}$	40	Sept. 22, 1938	2,869	--	--	--	153	1,882	50	--	a/
185	do.	$6\frac{1}{4}$ miles northeast	blk. 12, sec. 70, $NE\frac{1}{4}NW\frac{1}{4}$	20-30	Sept. 10, 1938	2,552	618	70	50	122	1,714	40	1,832	a/
189	do.	$5\frac{1}{4}$ miles north	blk. 12, sec. 70, $SW\frac{1}{4}SW\frac{1}{4}$	15	Sept. 23, 1938	2,366	--	--	--	134	1,536	51	--	a/

No.	Name of stream	Distance from Wellington	Location	Estimated flow in gallons a minute	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Total hardness as $CaCO_3$ (calc.)	Nitrate (NO_3)
264	Coon Creek	10 miles northeast	blk. 11, sec. 57, $NW\frac{1}{4}NW\frac{1}{4}$	50	Sept. 1, 1938	2,515	619	87	9	128	1,713	24	1,904	a/
287	-- Creek	$4\frac{1}{4}$ miles east	blk. 11, sec. 8, $SW\frac{1}{4}SE\frac{1}{4}$	10	Oct. 5, 1938	1,283	210	59	101	85	847	24	766	a/
301	Salt Fork, Red River	$9\frac{1}{2}$ miles east	blk. 11, sec. 18, $SW\frac{1}{4}NE\frac{1}{4}$	2,500	Aug. 26, 1938	3,192	654	101	189	110	1,954	240	2,052	a/
					Oct. 5, 1938	2,818	598	93	135	85	1,760	190	1,878	a/
369	do.	$6\frac{1}{2}$ miles north	blk. 15, sec. 63, $NE\frac{1}{4}SE\frac{1}{4}$	Flood	Sept. 13, 1938	962	--	--	--	207	464	86	--	a/

a/ Nitrate less than 20 parts per million.

Partial analyses of water from wells in Collingsworth 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 J. A. Harmaza, Martin Wieland, and Jack Ramsey, 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 No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
1	M. Huselby	170	Oct. 7, 1938	199	43	9	22	201	16	9	a/	146	0.3
2	O. G. Stokely	113	do.	295	84	5	22	275	15	12	22	228	-
3	H. E. Franks	-	do.	270	-	-	-	244	24	23	a/	-	-
5	H. G. Young	136	Nov. 7, 1938	316	54	36	19	329	28	17	a/	282	-
8	Martha Hamilton	Spring	Oct. 7, 1938	2,154	449	88	95	275	1,335	52	a/	1,484	-
9	S. L. Montgomery	7	do.	3,374	-	-	-	293	1,958	230	a/	-	-
10	L. G. Waldrop	Spring	Nov. 9, 1938	4,249	624	438	35	427	2,887	55	a/	3,360	-
11	Martha Hamilton	119	Oct. 7, 1938	1,377	267	73	58	165	837	58	a/	965	0.6
14	J. H. Grogan	132	Nov. 7, 1938	2,838	575	121	110	61	1,901	101	a/	1,954	-
15	D. D. McDowell	61	do.	248	-	-	-	183	32	32	a/	-	-
16	J. H. Grogan	107	do.	937	154	43	80	92	554	58	a/	562	0.3
19	L. R. Clay	56	Aug. 25, 1938	1,821	376	68	117	256	855	240	39	1,217	0.3
22	Maude Stokely	Spring	Nov. 4, 1938	414	92	29	7	207	178	6	a/	348	-
24	E. R. Smith	22	Nov. 7, 1938	2,175	-	-	-	207	1,382	30	a/	-	-
25	-	115	Oct. 25, 1938	3,482	642	131	201	165	1,882	465	a/	2,140	-
26	W. H. Groves	200	Oct. 7, 1938	2,911	603	118	108	146	1,976	34	a/	1,992	0.7
27	-- Beasley	Spring	Oct. 26, 1938	272	85	9	3	244	51	3	a/	251	0.2
28	F. N. Field	Spring	do.	3,496	533	188	209	183	2,156	240	a/	2,106	-
30	Martha Hamilton	126	Oct. 7, 1938	1,304	226	104	28	134	806	74	a/	994	-
31	-	137	Nov. 9, 1938	2,451	562	101	20	55	1,721	20	a/	1,822	-
32	George Sitter	Spring	do.	3,279	-	-	-	134	2,195	38	a/	-	-
33	do.	120	do.	2,718	-	-	-	73	1,819	52	a/	-	-
34	Mary Bourland	48	Oct. 17, 1938	286	49	35	10	281	50	4	a/	266	-
35	W. W. Breeding	8	Oct. 26, 1938	5,123	762	338	391	372	2,739	710	a/	3,298	0.3
36	-	Spring	Oct. 7, 1938	5,577	754	122	959	171	2,248	1,410	a/	2,386	-
37	-	Spring	Oct. 5, 1938	3,390	632	86	338	171	1,780	480	a/	1,932	-
38	-	Spring	do.	3,350	-	-	-	189	1,760	445	a/	-	-
51	H. Taylor	75	Nov. 4, 1938	311	23	10	66	220	36	16	52	96	-
54	J. M. Morgan	85	Nov. 2, 1938	506	112	17	44	287	115	47	30	350	-
55	O. T. Nicholson	63	Sept. 21, 1938	1,052	220	33	80	256	461	102	30	685	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
56	O. T. Nicholson	42	Sept.21, 1938	901	168	25	105	293	315	106	38	520	0.2
57	W. C. Scruggs	Spring	Nov. 1, 1938	1,399	330	38	52	171	830	65	a/	984	-
58	A. S. Martin	78	Sept.19, 1938	2,580	628	51	96	268	1,548	97	28	1,782	-
60	E. Wischkaemper	Spring	Sept.10, 1938	188	51	8	5	134	54	3	a/	160	-
61	do.	Spring	Sept.23, 1938	1,674	401	45	43	134	1,074	27	a/	1,188	-
62	do.	Spring	do.	2,560	-	-	-	195	1,641	39	a/	-	-
63	do.	Spring	do.	2,557	-	-	-	159	1,661	37	a/	-	-
70	do.	164	Oct. 24, 1938	273	46	22	30	268	31	12	a/	203	0.4
71	J. T. Good	105	Oct. 13, 1938	1,865	432	63	57	183	1,121	102	a/	1,338	-
72	Wellington State Bank	65	do.	242	75	12	2	244	15	18	a/	237	-
74	W. S. Sparkman	96	do.	1,976	-	-	-	171	1,161	122	a/	-	-
75	-	Spring	Nov. 2, 1938	494	117	19	24	207	178	40	a/	372	0.4
77	E. Wischkaemper	Spring	Nov. 10, 1938	1,162	240	31	83	134	672	70	a/	729	-
80	do.	Spring	Nov. 2, 1938	-	-	-	-	-	178	69	a/	-	-
82	Rufus Massey	Spring	Nov. 10, 1938	456	83	25	30	104	198	48	21	311	-
84	-	77	Nov. 2, 1938	362	67	19	41	220	65	62	a/	247	-
86	-	98	Oct. 28, 1938	903	-	-	-	92	534	39	a/	-	-
87	S. E. Yoyles	Spring	Oct. 24, 1938	2,104	-	-	-	110	1,361	55	a/	-	0.5
88	J. H. Blandford	67	Oct. 13, 1938	1,798	414	53	63	110	1,121	93	a/	1,252	-
90	J. S. Phillips	125	Oct. 24, 1938	5,085	-	-	-	183	2,342	1,020	a/	-	-
91	A. J. Shields	130	Nov. 4, 1938	3,305	626	164	189	128	2,076	268	39	2,242	-
92	E. L. Rankin	131	Oct. 24, 1938	2,938	633	111	108	146	1,862	150	a/	2,038	0.8
93	H. J. Clark	Spring	do.	2,555	-	-	-	207	1,621	56	a/	-	-
98	C. Clement	103	do.	2,849	-	-	-	207	1,786	92	a/	-	-
102	-	138	Oct. 25, 1938	2,917	-	-	-	165	1,882	74	a/	-	-
104	R. Wischkaemper	121	Sept.30, 1938	-	-	-	-	-	250	175	a/	-	-
109	E. G. Morton	150	Oct. 25, 1938	2,785	-	-	-	177	1,766	80	a/	-	-
110	Lee Roark	161	Aug. 27, 1938	2,547	585	79	75	183	1,669	36	a/	1,788	-
151	Annie C. Hughes	Spring	Nov. 1, 1938	2,726	654	82	42	55	1,879	42	a/	1,970	-
154	R. E. L. Smith	Spring	Sept.22, 1938	3,192	614	218	41	311	2,136	30	a/	2,434	-
156	G. Bell	Spring	Sept.21, 1938	2,405	640	43	23	159	1,578	29	a/	1,776	-
157	do.	Spring	do.	2,476	-	-	-	171	1,578	64	a/	-	-
158	do.	Spring	Sept.20, 1938	2,373	-	-	-	146	1,540	28	21	-	-
160	do.	100	Sept.21, 1938	2,488	606	59	72	256	1,555	44	26	1,756	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
168	-	Spring	Oct. 31, 1938	2,525	604	75	57	207	1,642	38	a/	1,816	-
169	S. H. Tittle	Spring	Sept.20, 1938	2,391	-	-	-	171	1,578	10	a/	-	-
170	L. M. Tittle	-	do.	2,354	-	-	-	195	1,517	12	20	-	-
172	A. J. Laycock	Spring	Oct. 31, 1938	2,379	-	-	-	98	1,582	37	a/	-	-
174	C. Graves	100	Sept.10, 1938	2,548	-	-	-	140	1,693	22	a/	-	-
175	C. R. Hill Est.	55	Sept.19, 1938	2,942	-	-	-	110	1,978	20	a/	-	-
176	H. E. Hill	95	do.	2,839	562	147	76	61	1,978	46	a/	2,010	-
179	J. Atkinson	Spring	Sept.22, 1938	2,603	591	98	53	134	1,752	43	a/	1,880	-
180	S. Wattenburger Est.	45	Sept.19, 1938	3,164	608	204	46	183	1,958	106	150	2,356	-
183	May Lutes	Spring	Sept.30, 1938	664	118	35	44	159	365	13	a/	442	0.3
184	J. Lutes	Spring	do.	2,623	-	-	-	171	1,722	28	a/	-	-
185a	E. Wischkaemper	Spring	Sept.22, 1938	2,403	574	65	56	110	1,600	37	a/	1,700	-
186	do.	Spring	Sept.23, 1938	2,563	-	-	-	195	1,641	40	a/	-	-
187	do.	Spring	do.	2,523	-	-	-	183	1,620	38	a/	-	-
188	-	Spring	do.	2,446	-	-	-	171	1,579	44	a/	-	-
191	J. L. Murphy	Spring	Sept.30, 1938	2,400	-	-	-	214	1,519	46	a/	-	-
197	D. James	Spring	Sept. 9, 1938	2,589	623	81	47	220	1,675	40	a/	1,690	0.4
199	W. P. A. test	37	Sept.12, 1938	1,797	436	60	22	171	1,180	10	a/	1,336	-
200	do.	30	do.	255	64	18	9	275	27	2	a/	236	-
201	do.	47	do.	2,505	-	-	-	110	1,683	20	a/	-	0.4
202	A. O. Sweat	106	Sept.19, 1938	2,791	596	123	73	159	1,843	71	a/	1,996	-
204	J. Reading	25	Aug. 27, 1938	294	-	-	-	250	18	6	41	-	-
205	do.	35	do.	2,453	530	101	78	207	1,547	88	a/	1,742	-
206	W. P. A. test	16	Oct. 28, 1938	2,383	542	113	23	220	1,524	73	a/	1,820	-
207	do.	29	do.	2,651	-	-	-	232	1,613	82	36	-	-
208a	do.	24	Oct. 27, 1938	540	144	30	3	348	178	14	a/	484	0.1
209	do.	16	do.	421	-	-	-	317	103	10	a/	-	-
210	G. B. Shaw Est	Spring	Sept. 9, 1938	2,617	-	-	-	195	1,656	66	a/	-	0.4
211	do.	Spring	do.	2,602	-	-	-	207	1,636	66	a/	-	-
212	M. T. Fletcher	Spring	do.	2,587	-	-	-	183	1,656	53	a/	-	-
213	W. P. A. test	18	Oct. 31, 1938	4,210	611	309	226	244	2,880	64	a/	2,800	1.6
214	do.	27	Nov. 1, 1938	3,027	562	210	46	159	2,074	57	a/	2,270	-
215	do.	25	do.	2,779	-	-	-	159	1,805	59	a/	-	-
216	do.	9	do.	2,752	591	138	35	98	1,882	54	a/	2,044	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
217	R. Cody	46	Oct. 19, 1938	2,483	580	106	8	73	1,690	56	a/	1,886	-
219	J. I. Ammons	Spring	Oct. 27, 1938	2,552	576	91	61	98	1,721	55	a/	1,816	0.3
220	G. W. Boyd	Spring	do.	3,633	726	193	101	195	2,391	126	a/	2,610	-
222	T. T. Fain	70	do.	3,055	709	111	88	177	1,681	360	a/	2,228	-
224	-	Spring	do.	1,971	458	82	18	122	1,325	28	a/	1,480	-
225	E. T. Walker	Spring	Sept. 9, 1938	832	206	31	12	207	439	17	25	644	-
227	A. J. Fires	118	Sept.12, 1938	2,505	590	79	58	201	1,653	26	a/	1,798	-
228	do.	Spring	do.	1,065	-	-	-	195	600	20	a/	-	0.4
229	C. G. Fronterhouse	-	do.	296	43	17	38	183	32	21	55	175	-
230	C. Hill	91	Aug. 27, 1938	2,475	-	-	-	165	1,608	21	22	-	-
231	Street & Reeves	54	Sept.12, 1938	2,245	-	-	-	244	1,411	22	a/	-	-
253	Guy Bumpass	Spring	Oct. 12, 1938	2,501	-	-	-	201	1,607	28	a/	-	-
254	Bob Glenn	Spring	Oct. 28, 1938	2,335	578	67	20	67	1,622	15	a/	1,722	-
255	do.	125	Oct. 19, 1938	2,473	600	92	10	159	1,661	21	a/	1,876	0.1
257	W. E. Johnson	74	do.	2,619	599	115	29	220	1,709	45	a/	1,972	-
261	J. B. Welborn	Spring	Oct. 19, 1938	2,602	-	-	-	220	1,681	26	a/	-	-
262	J. Atkinson	Spring	Oct. 12, 1938	2,482	584	86	39	128	1,682	26	a/	1,812	0.2
265	W. M. Cook Est. & Mrs. T. C. Fuller	26	Aug. 31, 1938	2,204	435	109	83	195	1,404	54	23	1,538	-
266	W. D. Bailey	43	do.	2,741	675	87	27	220	1,567	112	165	2,044	-
267	do.	45	do.	464	-	-	-	195	159	43	a/	-	-
268	W. P. A. test	39	Sept. 1, 1938	305	87	14	4	268	27	3	38	274	-
270	do.	37	Sept. 9, 1938	418	119	18	4	357	19	9	67	371	0.2
271-b	do.	43	Sept. 1, 1938	591	100	19	84	275	189	59	a/	327	0
272	Bean Hill Public School	60	Aug. 30, 1938	479	73	16	78	256	130	46	a/	250	0.4
273	B. Allymeniy	51	Sept. 1, 1938	462	92	27	19	183	108	32	94	342	-
274	E. O. Watson	23	Aug. 30, 1938	761	94	46	104	360	106	90	144	423	-
275	do.	36	Oct. 10, 1938	338	40	17	60	232	50	22	35	170	-
279	City of Wellington	35	do.	-	-	-	-	-	54	25	28	-	-
280	do.	35	do.	429	76	17	59	329	50	24	41	260	-
282	do.	20	do.	387	59	18	58	256	61	33	32	221	-
284	W. P. A. test	32	Aug. 30, 1938	714	-	-	-	464	216	18	a/	-	-
284a	do.	38	do.	741	-	-	-	525	189	26	a/	-	1.4
284b	do.	24	do.	602	108	26	80	451	146	20	a/	376	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
284c	W. P. A. test	30	Aug. 30, 1938	813	-	-	-	451	281	29	a/	-	-
284d	do.	31	do.	848	-	-	-	403	339	24	a/	-	-
284e	do.	34	Aug. 29, 1938	878	-	-	-	366	370	22	a/	-	-
284f	do.	8	do.	1,002	-	-	-	433	393	58	a/	-	-
284g	do.	10	do.	1,956	114	47	501	555	839	170	a/	479	-
284h	do.	49	Aug. 30, 1938	1,142	120	40	221	482	324	87	113	464	-
284i	do.	28	Aug. 29, 1938	1,047	155	49	131	390	466	36	a/	590	2.2
285	M. Winters	47	do.	1,123	136	40	109	390	509	31	26	504	-
288	J. C. Doneghy	34	Aug. 31, 1938	487	92	19	40	220	33	36	159	307	-
289	Mrs. Ella Ingram	12	do.	847	190	19	62	256	424	16	a/	552	2.7
291	Midway Baptist Church	23	Aug. 30, 1938	297	77	16	7	244	28	11	38	260	-
292	Mrs. D. M. Henard	126	do.	346	74	19	30	293	65	14	a/	262	-
293	Annie C. Hughes	104	Sept. 1, 1938	517	103	24	41	244	208	18	a/	355	-
294	do.	98	do.	2,166	482	76	66	153	1,444	23	a/	1,517	-
295	do.	25	do.	355	-	-	-	195	17	72	44	-	-
296	G. H. Brewer	31	Aug. 26, 1938	362	-	-	-	305	28	8	45	-	0.4
299	Annie C. Hughes	23	Sept. 5, 1938	3,103	706	79	116	122	2,117	25	a/	2,088	-
352	G. C. Wright	165	Sept.14, 1938	1,903	396	86	63	171	1,238	36	a/	1,344	-
353	S. Bolton	56	do.	406	97	21	16	293	42	14	72	328	-
354	W. P. A. test	9	Oct. 17, 1938	2,868	628	76	151	201	1,740	152	22	1,882	-
355b	do.	27	Oct. 15, 1938	4,588	545	331	374	183	3,184	30	34	2,724	-
356	do.	25	do.	6,437	600	500	690	159	3,975	545	49	3,552	-
357	do.	24	do.	6,118	600	497	596	421	3,896	300	22	3,548	-
358	do.	39	do.	5,680	625	440	515	281	3,520	395	47	3,372	-
359	do.	30	Oct. 14, 1938	4,625	609	409	510	244	3,134	130	a/	3,202	-
361	W. L. Browning	171	Oct. 11, 1938	2,603	592	91	72	171	1,661	100	a/	1,856	0.5
362	C. Fritts	98	do.	2,423	-	-	-	110	1,613	23	a/	-	-
363	R. R. Martin	87	do.	2,047	-	-	-	165	1,344	5	a/	-	-
367	H. Davidson	Spring	Oct. 19, 1938	2,460	600	63	50	122	1,641	34	a/	1,758	-
368	A. Y. Bell	35	Oct. 11, 1938	-	-	-	-	-	1,721	110	23	-	-
371	M. Seale	72	do.	2,371	589	62	37	134	1,551	50	a/	1,728	-
372	Reid Scott	Spring	Oct. 25, 1938	310	60	14	32	195	68	21	a/	208	0.3
374	Cottonwood Public School	-	Sept.13, 1938	440	49	23	74	195	135	47	a/	219	0.3

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
375	J. W. Loter	Spring	Oct. 25, 1938	482	100	24	36	256	160	36	a/	350	-
376	S. R. Davis	50	Sept.13, 1938	560	90	8	108	336	69	78	42	255	-
377	R. L. Seale	82	Aug. 31, 1938	-	-	-	-	-	204	62	a/	-	-
380	Mrs. R. Wells	79	do.	348	66	26	28	311	19	20	36	271	0
381	W. P. A. test	37	Sept.14, 1938	764	152	35	62	531	42	12	200	522	-
382	do.	35	Sept.13, 1938	647	106	27	75	384	42	20	188	376	-
383	do.	26	do.	163	34	8	6	79	15	6	48	115	-
384	W. W. Sugg	95	do.	731	113	29	104	360	170	80	53	403	-
385	M. Godfrey	68	do.	599	52	20	129	336	31	37	165	212	-
387	J. E. Aiken	63	do.	512	-	-	-	348	70	55	32	-	-
388	J. W. Thomas	125	do.	433	80	20	54	329	100	17	a/	282	-
389	T. P. Holley	113	Sept.14, 1938	840	155	38	73	250	364	80	a/	544	0.2
390	W. B. Wilson	127	do.	980	202	44	54	256	508	46	a/	687	-
391	W. Pirrison	160	Sept.15, 1938	-	-	-	-	-	221	132	53	-	-
392	P. S. Darlington	128	Oct. 17, 1938	340	70	29	20	299	38	36	a/	293	-
398	Mrs. C. L. Bowen	139	Oct. 18, 1938	526	125	25	26	281	150	62	a/	416	-
399	W. W. Neely	56	Aug. 26, 1938	245	59	24	19	275	28	22	a/	245	-
400	C. J. Johnson	98	Sept.29, 1938	251	-	-	-	232	12	16	a/	-	-
402	J. C. Phillips	163	Oct. 18, 1938	361	73	31	11	220	108	30	a/	310	-
404	E. J. Bartlett	167	Aug. 31, 1938	290	60	27	13	256	27	37	a/	262	0.4
405	W. H. Bynum	149	Sept.29, 1938	287	64	20	17	268	18	21	a/	242	-
407	A. G. Brown	74	do.	373	82	20	25	262	58	30	29	287	-
408	E. R. Skipper	-	Oct. 11, 1938	2,783	-	-	-	85	1,747	152	a/	-	-
413	W. J. Baykin	6	Aug. 30, 1938	386	-	-	-	268	28	12	81	-	-
414	L. E. Blythe	53	Aug. 31, 1938	332	-	-	-	207	85	24	a/	-	-
415	W. P. A. test	29	Sept. 9, 1938	511	92	62	23	579	31	19	a/	483	-
416	do.	30	do.	533	-	-	-	384	31	38	87	-	-
451	W. H. Gray	97	Sept.16, 1938	1,614	269	106	76	171	1,037	28	a/	1,106	-
452	J. W. Deboard	97	Nov. 8, 1938	268	-	-	-	207	36	30	a/	-	-
453	May B. Allen	139	do.	2,160	459	138	537	122	1,561	48	a/	1,714	-
456	Ring Public School	163	Sept.16, 1938	611	121	38	28	201	282	43	a/	459	-
458	R. A. Lovelace	155	do.	589	137	29	15	122	236	99	a/	463	-
460	Mary Bourland	112	Sept.28, 1938	-	-	-	-	-	492	20	a/	-	-
461	Smith Bros.	121	Oct. 17, 1938	277	-	-	-	293	15	10	a/	-	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
463	-	96	Oct. 25, 1938	322	60	16	36	250	46	13	28	215	0.2
464	W. Darlington	164	Sept.15, 1938	2,284	544	88	15	146	1,548	17	a/	1,724	0.2
465	R. H. Templeton	140	do.	374	76	35	12	281	62	35	a/	331	0.1
467	-	129	Sept.28, 1938	-	-	-	-	-	31	22	28	-	-
468	W. Darlington	144	do.	412	71	29	24	220	31	31	118	298	-
473	-- Public School	147	Sept. 7, 1938	617	116	57	5	116	323	53	a/	525	-
475	P. E. Starr	141	Sept.28, 1938	312	57	29	25	329	23	16	a/	262	0.2
476	H. D. Blevins	115	Sept.16, 1938	295	57	38	3	275	23	39	a/	298	-
477	W. N. Sherill	150	do.	329	61	23	37	360	23	8	a/	249	0.2
478	L. D. Morgan	138	Oct. 17, 1938	219	48	24	4	244	15	8	a/	220	0.2
479	T. F. Simmons	129	Sept.16, 1938	295	63	22	20	293	31	15	a/	249	-
484	W. I. Atkinson	158	Oct. 18, 1938	372	56	6	64	116	161	28	a/	164	0.4
485	Viola M. Reed	Spring	Oct. 20, 1938	-	-	-	-	-	84	45	a/	-	-
486	N. T. King	135	Sept. 6, 1938	396	67	32	36	354	32	18	37	300	0.4
487	Ira Morgan	102	do.	308	-	-	-	305	15	15	a/	-	-
488	C. M. Weaver	70	Oct. 18, 1938	291	-	-	-	275	11	16	a/	-	-
489	P. E. Starr	135	do.	350	67	28	26	329	19	17	31	282	-
490	J. F. White	-	Sept. 6, 1938	359	-	-	-	281	60	28	a/	-	-
491	P. E. Starr	Spring	Oct. 20, 1938	2,453	-	-	-	299	1,481	70	a/	-	-
492	do.	26	Sept. 6, 1938	417	-	-	-	348	68	23	a/	-	-
501	W. D. Dial	Spring	Oct. 20, 1938	2,979	605	160	64	171	2,022	44	a/	2,168	0.8
502	R. V. Sweatt	77	Sept. 6, 1938	369	-	-	-	293	48	28	a/	-	-
504	Ruth Ellison	Spring	do.	3,451	586	250	108	244	2,271	116	a/	2,494	-
505	do.	112	Sept.27, 1938	1,902	-	-	-	220	1,190	16	a/	-	-
506	Noel Gudd	66	Sept. 6, 1938	380	66	30	35	311	44	34	a/	288	-
507	J. W. Stokes	106	do.	454	68	40	42	238	85	102	a/	335	-
508	J. M. Lane	173	do.	239	40	23	21	232	24	17	a/	194	-
510	Ella A. Gibson	Spring	Sept. 7, 1938	8,361	1,067	930	87	183	5,909	268	a/	6,494	0.4
511	Brookhollow Country Club	Tank	do.	823	196	35	-	61	552	9	a/	637	-
512	W. L. Neel	98	do.	2,437	-	-	-	30	1,673	27	a/	-	-
516	J. C. Doneghy	106	do.	3,218	598	165	151	61	2,056	218	a/	2,172	0.2
517	W. M. Stout Est.	200	Sept. 6, 1938	2,980	584	172	95	61	2,013	86	a/	2,166	-
551	L. W. Hartman	14	Aug. 26, 1938	688	120	46	49	311	252	38	30	488	-

a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$ (calc.)	Fluoride (F)
552	E. L. Jones	55	Aug. 24, 1938	518	117	41	12	458	15	16	92	460	0
553	do.	147	Sept.27, 1938	2,707	594	113	63	159	1,805	54	a/	1,950	-
555a	W. P. A. test	20	do.	1,307	230	88	74	299	580	166	22	940	1.4
556	do.	15	do.	1,053	177	70	77	305	395	142	42	728	-
557	Buck Creek School	19	Aug. 24, 1938	699	79	51	93	342	260	31	a/	406	-
558	B. Aduddell	34	Oct. 1, 1938	672	-	-	-	403	141	76	a/	-	-
559	do.	39	do.	592	70	28	107	342	109	71	39	292	0.8
560	H. Lacy	Spring	do.	2,585	-	-	-	171	1,661	59	a/	-	-
562	G. F. Wright	70	Sept.26, 1938	401	-	-	-	287	38	24	56	-	-
564	J. Doneghy	73	Sept.24, 1938	627	111	29	75	293	69	148	51	398	0.1
565	J. D. Spense	100	Aug. 24, 1938	3,208	675	143	134	159	1,710	458	a/	2,273	0
566	W. P. A. test	8	Sept.26, 1938	1,795	263	91	171	207	1,122	46	a/	1,031	-
567	do.	15	do.	2,184	418	142	68	445	1,278	59	a/	1,628	-
568	do.	7	do.	1,987	-	-	-	226	1,219	48	a/	-	-
569	do.	12	do.	2,193	-	-	-	317	1,296	62	a/	-	-
570	do.	12	do.	2,849	-	-	-	348	1,683	83	38	-	-
571	Mrs. M. Yopp	122	Aug. 24, 1938	2,569	545	79	130	195	1,656	57	a/	1,688	-
572	Mrs. M. W. Hawkins	123	do.	2,455	592	71	46	165	1,649	16	a/	1,774	-
573	-	69	Sept.29, 1938	591	-	-	-	281	100	140	a/	-	-
575	Mrs. D. M. Henard	62	Sept. 2, 1938	1,078	164	28	164	275	433	136	a/	527	0.8
576	W. P. A. test	35	Oct. 11, 1938	756	100	20	152	244	143	217	a/	332	2.1
577	do.	29	do.	265	-	-	-	232	19	12	22	-	-
578	do.	32	do.	495	121	10	22	250	19	24	168	346	-
579	do.	35	do.	663	136	23	62	256	205	97	a/	434	1.3
580	C. C. Rolls	84	Sept. 8, 1938	2,753	-	-	-	128	1,794	68	a/	-	-
582	O. E. Seally	147	Aug. 24, 1938	2,081	497	77	33	159	1,271	125	a/	1,558	-
584	J. C. Doneghy	122	Sept. 8, 1938	2,717	615	98	73	171	1,754	93	a/	1,940	-
585	Mrs. N. Lawrence	53	Aug. 24, 1938	3,037	626	173	49	171	1,963	138	a/	2,276	0.5
589	J. I. Thomas	113	Oct. 20, 1938	2,629	619	104	37	207	1,613	138	a/	1,974	-
590	H. Fourmentin	80	Sept.26, 1938	3,365	633	108	284	220	1,862	370	a/	2,026	0.8
592	J. C. Doneghy	99	do.	2,931	-	-	-	207	1,786	148	a/	-	-
595	E. N. Dennis	Spring	Sept.27, 1938	2,742	614	110	61	207	1,803	52	a/	1,988	-
601	F. O. Masten	27	Sept. 2, 1938	3,449	-	-	-	268	2,128	134	a/	-	-
603	J. J. Cook	23	Aug. 26, 1938	227	-	-	-	214	28	8	a/	-	-
604	-	Spring	Oct. 5, 1938	4,637	617	194	594	232	2,593	525	a/	2,340	-

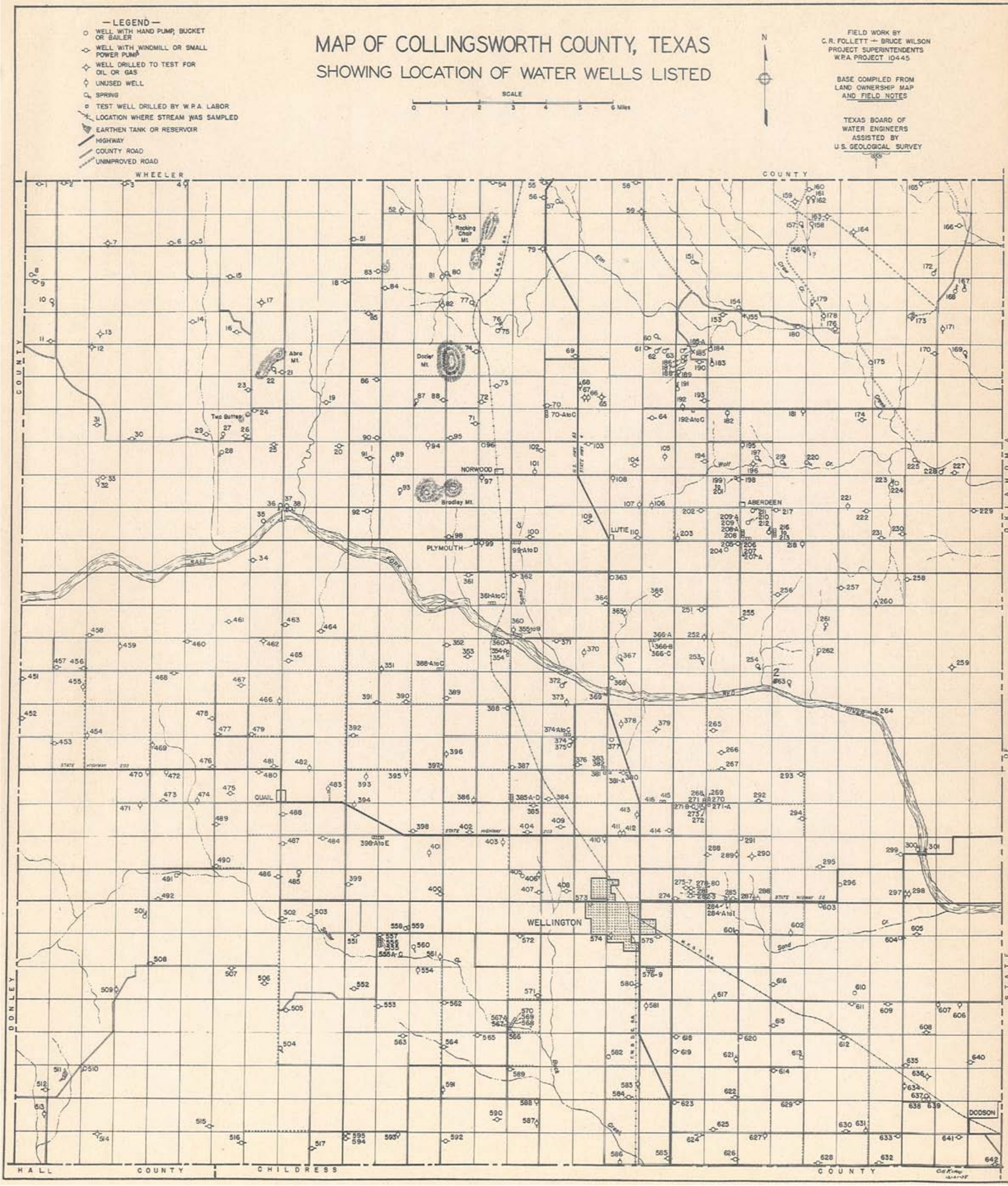
a/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

Well No.	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na + K) (calc.)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Total hardness as $CaCO_3$	Fluoride (F)
605	Annie C. Hughes	35	Oct. 5, 1938	2,414	-	-	-	250	1,492	61	a/	-	-
608	S. C. Kesler	75	do.	607	-	-	-	226	210	68	a/	-	-
609	Mrs. W. S. White	61	Aug. 26, 1938	499	68	5	113	366	73	22	38	193	-
610	R. H. Templeton	59	Oct. 5, 1938	618	107	23	77	244	202	83	a/	364	-
611	J. C. Doneghy	30	Aug. 26, 1938	334	90	18	5	281	12	12	59	296	-
612	T. L. Scott	94	Oct. 21, 1938	2,307	470	116	90	159	1,267	275	a/	1,652	0.3
613	Minnie Box	64	Sept. 2, 1938	529	98	20	56	171	121	102	48	327	-
614	Stansell Est.	91	do.	564	103	29	52	238	190	67	a/	378	0.7
615	S. J. Glenn	36	Oct. 21, 1938	1,510	230	60	173	122	778	198	a/	822	-
620	Fresno Public School	-	Sept. 8, 1938	982	144	33	140	262	464	72	a/	495	-
622	M. F. Weaver	79	do.	367	79	10	39	220	105	26	a/	241	-
623	Jenny Russell	159	do.	2,793	579	98	136	61	1,774	176	a/	1,950	-
624	J. Donnell	149	Aug. 25, 1938	3,319	510	113	372	110	2,015	255	a/	1,740	-
625	J. M. Higgins	104	Oct. 21, 1938	2,509	-	-	-	73	1,632	60	33	-	-
626	L. F. Watts	197	Aug. 25, 1938	3,084	702	70	140	134	1,994	112	a/	2,042	0.7
628	O. J. Street	71	Sept. 2, 1938	335	100	12	64	293	11	16	46	297	0.2
629	N. P. Forbis Est.	86	do.	591	129	26	37	244	210	62	a/	431	-
630	E. C. Alexander	120	Aug. 25, 1938	2,505	-	-	-	116	1,669	29	a/	-	-
632	W. M. Alexander	93	Sept. 2, 1938	3,067	600	149	127	171	1,951	150	a/	2,112	-
633	do.	130	Oct. 21, 1938	3,418	576	217	140	85	2,381	62	a/	2,334	-
635	W. E. Ford	57	do.	-	-	-	-	-	20	18	a/	-	-
637	W. C. Robinson	14	Oct. 5, 1938	3,152	454	145	339	458	1,915	60	a/	1,730	-
638	do.	34	do.	726	113	73	37	390	274	29	a/	580	2.4
640	O. D. Hill	34	do.	511	100	25	40	317	48	20	122	350	-
641	Mrs. M. A. Jameson	18	Sept. 2, 1938	2,805	547	115	175	512	1,673	36	a/	1,840	-
642	G. Miller	60	do.	4,245	655	295	254	140	2,177	630	165	2,852	-

a/ Nitrate less than 20 parts per million.


MAP OF COLLINGSWORTH COUNTY, TEXAS
SHOWING LOCATION OF WATER WELLS LISTED
—LEGEND—
WELL WITH HAND PUMP, BUCKET OR BAILER
WELL WITH WINDMILL OR SMALL POWER PUMP
WELL DRILLED TO TEST FOR OIL OR GAS
UNUSED WELL
SPRING
TEST WELL DRILLED BY W.P.A. LABOR
LOCATION WHERE STREAM WAS SAMPLED
EARTHEN TANK OR RESERVOIR
HIGHWAY
COUNTY ROAD
UNIMPROVED ROAD
SCALE
0 1 2 3 4 5 6 Miles
N
FIELD WORK BY
C. R. FOLLETT — BRUCE WILSON
PROJECT SUPERINTENDENTS
W.P.A. PROJECT 10445
BASE COMPILED FROM
LAND OWNERSHIP MAP
AND FIELD NOTES
TEXAS BOARD OF
WATER ENGINEERS
ASSISTED BY
U.S. GEOLOGICAL SURVEY
WHEELER COUNTY
DONLEY COUNTY
HALL COUNTY
CHILDRESS COUNTY
OKLAHOMA STATE
Rocking Chair Mt.
Abra Mt.
Dozier Mt.
Two Buttes
Bradley Mt.
NORWOOD
PLYMOUTH
LUTIE
ABERDEEN
QUAIL
WELLINGTON
DODSON
SALT FORK
RED RIVER
Elm Cr.
Wolf Cr.
Sandy Cr.
Sand Cr.
Buck Creek
STATE HIGHWAY 203
STATE HIGHWAY 22
U.S. HWY. 83
STATE HWY. 4
F.W. & D.C. R.R.
WEST RR