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ARMSTRONG COUNTY, TEXAS

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

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Work Projects Administration Project 14788

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Analyses made and report mimeographed by
WORK PROJECTS ADMINISTRATION
Project 10443

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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.

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Austin, Texas
September 20, 1940

ARMSTRONG COUNTY, TEXAS

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Introduction

by

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This publication consists of an assemblage of data obtained in the course of a survey in Armstrong County, Texas, consisting of records of 268 wells, 93 test wells, 12 springs and 163 chemical analyses of water from springs and wells. These basic data contribute to the general fund of information needed in the study of the ground-water resources of the Texas High Plains now being carried on by the Texas State Board of Water Engineers in cooperation with the United States Geological Survey.

The survey was started on December 21, 1939, and completed on April 17, 1940, as Project No. 14788 of the Work Projects Administration, with J. C. Dalgarn as project superintendent, under the technical supervision of W. L. Broadhurst, geologist, and C. R. Follett, engineer of the State Board of Water Engineers.

The analyses were made by chemists employed on Work Projects Administration Project No. 10443 under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, University of Texas, and E. W. Lohr, Chemist of the Quality of Water Division of the Federal Geological Survey. The Bureau of Industrial Chemistry furnished laboratory space and equipment. The analyses in this release are tabulated in parts per million. A number of these analyses are also given in milligram equivalents per liter for the convenience of those who prefer this form of expressing the quality of water.

This release was typed by typists employed on Work Projects Administration Project No. 10443.

The records serve as a guide to land owners, well drillers and others who need information regarding wells, the depth to ground water in different parts of the county, and the quality and chemical character of water yielded by the 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 Federal Geological Survey. The purpose of this investigation is to determine the distribution and extent of the available ground-water supplies, and the safe yield of the underground reservoirs.

Records of wells and springs in Armstrong County, Texas
(All wells are drilled unless otherwise noted in "Remarks" column)

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 4	In Washburn	63, SW $\frac{1}{4}$	H. & G. N. blk. B4	H. L. Sterling	E. D. Watson	--	200	--
5	do.	--	--	R. J. Thompson	B. Oats	1909	202	4
6	do.	63, SW $\frac{1}{4}$	H. & G. N. blk. B4	H. E. White	A. L. Slay	--	195	4
7	12 miles west	103, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	Jeff Thompson	1919	190	4
8	11 $\frac{1}{2}$ miles west	104, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Mrs. Mary Hibbits	E. D. Watson	1912	184	4
9	11 $\frac{3}{4}$ miles west	138, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	H. E. White	do.	1916	150	--
d/ 10	10 $\frac{1}{2}$ miles west	96, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	C. W. Whittington	A. L. Slay	1914	--	--
11	do.	105, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	C. P. Benson	Jeff Thompson	1908	179	--
12	10 miles west	136, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Great Southern Life Ins. Co.	E. D. Watson	1912	201	4
13	9 miles west	135, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Lee V. Patterson	A. L. Slay	1914	153	4
d/ 17	8 miles northwest	68, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Winoski Savings Bank	--	--	--	--
18	7 $\frac{1}{2}$ miles northwest	69, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	R. S. White	E. D. Watson	1936	202	4
19	7 miles northwest	92, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	B. C. Wooldridge	do.	1908	201	4
d/ 20	7 $\frac{1}{4}$ miles northwest	93, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Maude Campbell	do.	1900	--	4
21	6 $\frac{1}{2}$ miles northwest	109, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Campbell & Beasley	do.	1914	156	6
d/ 26	7 miles northwest	108, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	O. L. Hill	A. L. Slay	1916	--	4
d/ 27	7 $\frac{3}{4}$ miles northwest	108, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Kansas City Life Ins. Co.	E. D. Watson	1904	142	4
d/ 28	7 $\frac{1}{4}$ miles west	108, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	C. H. Dunn	do.	1920	200	4
29	7 miles west	133, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mrs. A. O. McCall	--	--	164	4
d/ 30	6 $\frac{1}{4}$ miles west	132, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	John Campbell Est.	--	--	--	--
31	5 $\frac{3}{4}$ miles west	149, SW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Ruby Gunter	E. D. Watson	1912	200	4
32	5 $\frac{1}{4}$ miles west	172, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Nettie Hubbard	A. L. Slay	--	204	4
33	5 $\frac{3}{4}$ miles west	189, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Jessie Watson	--	--	164	4

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

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

See "Logs of W. P. A. test wells" for all records of test wells
(Chemical analyses of water from these wells and springs are in the table of analyses)

No.	Height of measuring point above ground (ft.) <u>a/</u>	Water level		Pump and power <u>b/</u>	Use of water <u>c/</u>	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
4	--	180	<u>e/</u>	C,W	D	Gentle slope	Reported good water from sand and gravel at 190 to 200 feet.
5	0.8	179.8	Feb. 7, 1940	C,W	D	do.	Cased with 20 feet of galvanized casing at top. Water reported from porous sandstone and gravel at 180
6	0.4	183.3	do.	C,W	D	do.	Casing to bottom. to 190 feet. Water reported from fine sand at
7	0	170.2	Mar. 29, 1940	C,W	D,S	do.	Steel casing to 185 to 192 feet. bottom. Water reported from fine
8	0	172.2	do.	C,W	D,S	do.	Steel casing to bottom. sand. Reported strong supply of water
9	0	137.8	do.	C,W	D,S	do.	Water reported from from fine sand. fine sand and gravel.
10	--	--	--	C,W	D,S	do.	
11	0	163.1	Mar. 29, 1940	C,W	D,S	do.	Reported strong supply of water. Not cased.
12	1.5	188.1	do.	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
13	1.2	140.7	do.	C,W	S	do.	Water reported from sand.
17	--	--	--	C,W	--	do.	
18	0	188.3	Mar. 28, 1940	C,W	S	do.	Galvanized iron casing to bottom.
19	0	187.2	do.	C,W	D,S	do.	Steel casing to bottom.
20	--	--	--	C,W	S	do.	60 feet of casing at top.
21	1.6	140.6	Mar. 28, 1940	C,W	S	do.	Casing to bottom.
26	--	--	--	C,W	D,S	do.	Reported strong supply of water.
27	--	--	--	C,W	D,S	do.	90 feet of steel casing at top.
28	--	185	<u>e/</u>	C,W	D,S	do.	
29	0	154.2	Mar. 29, 1940	C,W	D,S	do.	Steel casing to bottom, Water reported from fine sand.
30	--	--	--	C,W	D,S	do.	Reported caved at 27 feet.
31	0.5	187	Mar. 29, 1940	C,W	D,S	do.	Steel casing to bottom. Water reported from fine sand.
32	0	188.2	do.	C,W	D,S	do.	Steel casing to bottom.
33	0.3	145.5	Mar. 7, 1940	C,W	D,S	do.	

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
34	6 $\frac{3}{4}$ miles west	173, SE $\frac{1}{4}$ SW $\frac{1}{4}$	H. & G. N. blk. B4	W. E. Robinson	--	--	165	4
37	7 $\frac{3}{4}$ miles west	187, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Robinson Bros.	E. D. Watson	1908	193	4
d/ 38	7 $\frac{1}{2}$ miles west	147, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Idell Durrett	--	--	--	--
d/ 39	7 $\frac{3}{4}$ miles west	134, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. R. McCuistian	--	--	180	4
40	8 $\frac{1}{2}$ miles west	135, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	E. J. Goodin	--	1917	154	4
41	do.	146, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Susie H. Heaston	E. D. Watson	1912	209	4
42	9 $\frac{1}{2}$ miles west	145, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Mrs. C. E. Hair	do.	1918	198	--
43	9 $\frac{1}{4}$ miles west	176, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Mrs. M. Culver	--	--	218	6
44	11 $\frac{3}{4}$ miles west	178, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. M. Bryant	A. L. Slay	1927	186	4
47	8 miles west	227, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	T. J. Campbell	--	--	129	4
51	8 $\frac{1}{2}$ miles southwest	268, cen.	do.	J. G. Noel	--	1900	179	4 $\frac{1}{2}$
54	9 $\frac{1}{2}$ miles southwest	294, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	R. J. Jones	Josh. King	1889	200	4
55	9 miles southwest	293, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Laura Brian	--	--	224	4
56	9 $\frac{3}{4}$ miles southwest	308, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	W. R. Wilson	--	--	190	4
d/ 57	15 $\frac{1}{4}$ miles southwest	3, SE $\frac{1}{4}$ SE $\frac{1}{4}$	B. S. & F. blk. 10	E. D. Harrell Est.	--	--	207	4
58	do.	do.	do.	do.	--	--	217	4
59	16 $\frac{1}{2}$ miles southwest	2, NW $\frac{1}{4}$ SW $\frac{1}{4}$	blk. 42	do.	--	--	110	4
d/ 60	do.	2, SW $\frac{1}{4}$	do.	do.	--	--	Spring	--
d/ 61	12 $\frac{3}{4}$ miles southwest	4, NW $\frac{1}{4}$	I. R. R. blk. 1	J. B. Wright	--	--	Spring	--
d/ 64	11 $\frac{3}{4}$ miles southwest	8, NE $\frac{1}{4}$	B. S. & F. blk. 5	Jennie Ransom	--	--	Spring	--
d/ 65	10 miles southwest	4, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mae H. Kerrick	E. D. Watson	1912	204	4
66	8 $\frac{3}{4}$ miles southwest	3, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	J. R. McNeal Est.	do.	1912	207	4
1/ 67	7 $\frac{1}{2}$ miles southwest	311, NW $\frac{1}{4}$ NW $\frac{1}{4}$	H. & G. N. blk. B4	John C. Baker	Frank Raef	1914	191	4
d/ 68	9 $\frac{1}{4}$ miles south	4, SE $\frac{1}{4}$ NE $\frac{1}{4}$	B. S. & F. blk. 5	Mrs. B. Jones	E. D. Watson	1914	210	4

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
34	1.8	155.9	Mar. 4, 1940	C,W	D,S	Gentle slope	Steel casing to bottom. Water reported from fine red sand and gravel at 160 to 165 feet.
37	--	165	Mar. 7, 1940	C,W	D,S	do.	
38	--	--	--	N	None	--	
39	--	175	e/	C,W	D,S	Gentle slope	Reported strong supply of good water from fine sand.
40	0	134.5	Mar. 29, 1940	C,W	D,S	do.	Galvanized iron casing to bottom. Reported strong supply of water.
41	1.1	196.2	do.	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water from
42	0	191.1	do.	C,W	D,S	do.	Not cased. Reported strong supply of water from sand and gravel.
43	0.3	153.3	Mar. 7, 1940	C,W	D,S	do.	
44	0.2	175.4	do.	C,W	D,S	do.	70 feet of casing at top. Reported water from coarse sand at 175
47	1.4	103.3	Mar. 9, 1940	C,W	S	In draw	60 feet of galvanized iron casing at top. to 186 feet.
51	--	190	e/	C,W	D,S	Gentle slope	Water reported from fine sand.
54	--	175	e/	C,W, G, $\frac{1}{2}$	D,S	do.	150 feet of casing at top. Reported strong supply of water from sand.
55	--	195	e/	C,W	S	do.	195 feet of steel casing at rock top. Water reported from sand.
56	--	180	e/	C,W	D,S	do.	180 feet at 195 feet to 225 feet. of casing at top.
57	0.5	194.9	Mar. 7, 1940	C,W	S	do.	Reported good water.
58	1.0	195.5	do.	C,W	S	Edge of canyon	
59	0.2	83.8	do.	C,W	D	do.	Water reported from sand and gravel.
60	--	--	--	--	--	Canyon	Reported flow, 25 gallons a minute from sandstone and clay contact. Known as "Harrell Springs."
61	--	--	--	--	--	do.	Reported flow, 10 gallons a minute from seeps in canyon wall. Known as
64	--	--	--	--	--	do.	Seeps in creek "Dry Creek Spring." bed. Known as "Ransom Spring." Supplies water for 100 to 200 head
65	--	195	e/	C,W	S	Gentle slope	Reported strong supply of good water. of stock.
66	1.5	186	Apr. 2, 1940	C,W	D,S	do.	Galvanized iron casing to bottom. Reported strong supply of water.
67	0.5	181.2	do.	C,W	D,S	do.	Steel casing to bottom.
68	--	200	e/	C,W	D,S	do.	

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/ 69	9 miles south	12, NW $\frac{1}{4}$ NW $\frac{1}{4}$	B. S. & F. blk. 4	Amy Barnett Est.	E. D. Watson	--	--	--
d/ 70	9 $\frac{1}{2}$ miles south	15, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	W. L. McClure	do.	1927	220	4
d/ 71	9 $\frac{3}{4}$ miles south	14, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	A. C. Doyle	J. P. Miles	1890	211	4
72	10 $\frac{1}{4}$ miles south	14, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	R. C. Garrison	Bose Oates	1906	260	4
74	11 $\frac{1}{4}$ miles south	12, SE $\frac{1}{4}$	B. S. & F. blk. 5	Mrs. M. J. Lutrell	--	--	Spring	--
d/ 75	do.	6, NE $\frac{1}{4}$ NW $\frac{1}{4}$	blk. Z-6	Garin & Rutherford	E. D. Watson	1908	124	4
76	do.	--	--	Hugh Reed Est.	--	--	Spring	--
d/ 78	13 $\frac{1}{4}$ miles south	5, NW $\frac{1}{4}$ NE $\frac{1}{4}$	D. S. & E. R. blk. E-3	Oscar Bagwell	Bose Oates	1921	271	4
81	11 $\frac{1}{2}$ miles south	9, SE $\frac{1}{4}$ NW $\frac{1}{4}$	T. W. N. G. R.R. blk. 1	Mrs. Ida Dye	E. D. Watson	1900	279	4
83	do.	2, NE $\frac{1}{4}$ NE $\frac{1}{4}$	blk. Z-6	G. T. Bagwell	--	1885	172	--
d/ 84	11 $\frac{1}{4}$ miles south	1, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	W. O. Kitzler	--	--	--	--
d/ 85	10 $\frac{3}{4}$ miles south	1, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	A. C. Bagwell	Bose Oates	1914	140	4
86	10 $\frac{1}{4}$ miles south	16, SW $\frac{1}{4}$ SW $\frac{1}{4}$	B. S. & F. blk. 4	Eugene Woods	A. L. Slay	1909	190	6
87	10 miles south	15, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	O. L. Brunson	E. D. Watson	1913	190	4
d/ 88	9 $\frac{1}{4}$ miles south	do.	do.	Lake View School	do.	1915	--	--
d/ 89	8 $\frac{3}{4}$ miles south	9, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	J. B. Cope	--	--	--	4
d/ 90	do.	10, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. F. Taylor	--	--	180	4
91	8 $\frac{1}{2}$ miles south	10, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Thompson Bros.	A. L. Slay	1931	194	4
d/ 92	7 $\frac{3}{4}$ miles south	4, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	W. S. Hawes	--	--	--	--
d/ 93	7 miles south	314, NE $\frac{1}{4}$ SE $\frac{1}{4}$	H. & G. N. blk. B-4	J. C. Eubanks	A. L. Slay	1907	205	4
94	6 $\frac{1}{2}$ miles south	314, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	G. M. Day	do.	1909	217	4
95	6 $\frac{1}{2}$ miles south	315, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	R. C. Benton Est.	E. D. Watson	1914	179	4
d/ 96	6 miles south	286, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. T. Campbell	Johnnie Miles	1905	160	5
100	5 $\frac{1}{4}$ miles south	275, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	G. A. Corbin	E. D. Watson	1911	182	4
101	5 $\frac{1}{2}$ miles south	287, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Clarence Patterson	A. L. Slay	1912	183	4

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
69	--	--	--	C,W	--	Gentle slope	
70	0.6	196.5	Apr. 2, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of good water.
71	1.3	193.3	do.	C,W	D,S	do.	Do.
72	0	185.3	do.	C,W	D,S	do.	80 feet of steel casing at top. Reported strong supply of water.
74	--	--	--	--	S	Valley	Reported flow, 7 gallons a minute from sandstone and gravel. Known
75	1.6	103.2	Apr. 2, 1940	C,W	D,S	Edge of canyon	Steel casing as "Lutrell Spring." to bottom. Reported strong supply
76	--	--	--	--	S	Canyon	Reported flow, 15 of good water. gallons a minute from seeps in sandstone at contact with red clay and blue shale. Known as "Dripping
78	--	271	e/	C,W	D,S	--	Steel casing to bottom. "Springs." Reported weak supply of good water.
81	0.3	270.4	Apr. 1, 1940	C,W	D,S	Flat	Steel casing to bottom.
83	0	161.1	do.	C,W	D,S	do.	Not cased.
84	--	--	--	C,W	D,S	Gentle slope	
85	--	--	--	C,W	D,S	do.	Reported weak supply of good water. Caved at 140 feet.
86	1.0	179.3	Apr. 1, 1940	C,W	D,S	do.	Reported strong supply of water.
87	0	178.2	do.	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
88	--	--	--	C,W	P	do.	Reported strong supply of good water.
89	--	--	--	C,W	D,S	do.	Reported good water.
90	--	--	--	C,W	D,S	do.	Steel casing to bottom. Reported good water.
91	0	177.4	Apr. 1, 1940	C,W	D	do.	20 feet of steel casing at top. Supplies water for filling station
92	--	--	--	C,W	None	--	and store.
93	--	195	e/	C,W	D,S	Gentle slope	Steel casing to bottom. Reported good water. Supplies water for 200
94	0	203.4	Apr. 1, 1940	C,W	D,S	do.	head of stock.
95	0.6	171.2	do.	C,W	D,S	do.	Steel casing to bottom.
96	--	150	e/	C,W	S	do.	20 feet of casing at top. Reported water from fine sand.
100	1.6	172.4	Apr. 1, 1940	C,W	S	do.	Reported strong supply of water.
101	0	175.4	do.	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/102	4 $\frac{1}{2}$ miles south	274, SW $\frac{1}{4}$ NE $\frac{1}{4}$	H. & G. N. blk. B-4	Roy Hukill	E. D. Watson	1909	--	4
103	5 miles south	275, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	G. A. Corbin	do.	1910	199	4
104	4 $\frac{1}{2}$ miles south	275, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Clarence Patterson	do.	1909	188	4
d/105	4 $\frac{1}{4}$ miles south	273, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	R. H. Rutherford	Bose Oates	1900	201	4
d/106	5 miles south	272, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	E. D. Ford	E. D. Watson	1909	204	4
d/107	do.	do.	do.	do.	--	--	--	-4
108	5 $\frac{1}{2}$ miles southwest	271, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	C. B. Hunter	Frank Raef	1912	184	4
d/109	6 miles southwest	271, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	R. C. McElroy	do.	1909	200	4
d/110	6 $\frac{1}{2}$ miles southwest	271, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	R. M. Hunter	E. D. Watson	1912	199	4
d/111	6 $\frac{3}{4}$ miles southwest	290, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	H. B. McGowman	do.	1914	198	4
112	5 $\frac{3}{4}$ miles southwest	251, SE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Mrs. J. D. Woodburn	Frank Raef	1912	220	4
d/113	5 $\frac{1}{4}$ miles southwest	250, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Mrs. C. C. Smotherman	E. D. Watson	1915	186	4
114	3 $\frac{3}{4}$ miles south	248, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Mrs. J. E. Hill Est.	Bose Oates	1900	212	4
d/115	4 miles south	247, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	C. M. Hibbitts	J. P. Miles	1900	--	--
d/116	3 $\frac{1}{4}$ miles south	234, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. R. Wilson	E. D. Watson	1912	--	--
117	3 $\frac{3}{4}$ miles south	246, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Mrs. Mildred Doak	do.	1939	105	4
d/118	2 $\frac{1}{2}$ miles south	235, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	E. S. Carr	--	--	--	4
119	1 $\frac{1}{2}$ miles south	195, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	C. C. Hollingsworth	E. D. Watson	1926	214	4
120	do.	207, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	C. M. Byrd	do.	1908	216	4
121	1 $\frac{1}{2}$ miles south	195, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mrs. J. W. Duffell	A. L. Slay	1906	215	4
d/125	In Claude	--	Goodnight Addn. blk. 47	W. H. Giles	J. P. Giles	1903	206	4
126	do.	lot 1	Goodnight Addn. blk. 35	C. C. Cobb	E. D. Watson	1907	215	4
127	do.	do.	Goodnight Addn. blk. 5	Lena Tucker	Bose Oates	1916	221	4
d/128	do.	--	Railroad Addn. blk. 1	Ida E. Dye	E. D. Watson	1909	220	4
129	do.	--	Railroad Addn. SE cor. blk. 41	B. C. Woolridge	do.	1914	207	4
130	do.	lot 1 and 2	Railroad Addn. blk. 58	E. D. Ford	E. D. Watson	1913	191	4

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
102	--	--	--	C,W	D,S	Gentle slope	Reported weak supply of water.
103	0.5	179.6	Apr. 1, 1940	C,W	D,S	--	Steel casing to bottom. Water reported from fine sand and gravel.
104	0	170.2	do.	C,W	D,S	Gentle slope	Galvanized iron casing to bottom. Reported good water.
105	0	196.1	Apr. 2, 1940	C,W	D,S	do.	Steel casing to bottom. Reported good water from weak well.
106	--	--	--	C,W	S	do.	
107	--	--	--	C,W	D,S	do.	60 feet of steel casing at top. Reported caved at 154 feet.
108	0	155.2	Apr. 2, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
109	0	191.2	do.	C,W	D,S	do.	Do.
110	--	--	--	C,W	D,S	do.	100 feet of steel casing at top. Reported good water.
111	4.3	183.7	Apr. 2, 1940	C,W	D,S	--	Galvanized iron casing to bottom. Reported strong supply of good water.
112	0	202.3	do.	C,W	D,S	Gentle slope	Steel casing to bottom. Reported strong supply of water.
113	0	164.7	do.	C,W	D,S	do.	Do.
114	0	187.1	Apr. 1, 1940	C,W	D,S	do.	90 feet of steel casing at top. Reported strong supply of water
115	--	--	--	C,W	D,S	do.	Reported from sand and gravel. good water.
116	--	--	--	C,W	S	do.	Do.
117	0	87.1	Apr. 1, 1940	C,W	S	do.	Steel casing to bottom. Reported strong supply of water from sand.
118	--	--	--	C,W	D,S	do.	Water reported from fine sand.
119	0	190.7	Apr. 1, 1940	C,W	D,S	do.	Steel casing to bottom. Water reported from fine sand.
120	0	198.3	do.	C,W	D,S	do.	Do.
121	0.5	205.1	do.	C,W	D,S,I	do.	Steel casing to bottom. Water reported from fine sand at 210 to
125	0	190.4	Mar. 26, 1940	C,W	D,I	do.	Steel casing to bottom. 215 feet. Reported good water from fine sand.
126	0	196.1	do.	C,W	D	do.	Galvanized iron casing to bottom. Reported good water from fine sand.
127	0	200.5	do.	C,W	D	do.	Do.
128	--	205	e/	C,W	D	do.	Galvanized iron casing to bottom. Reported strong supply of good water
129	0	204.1	Mar. 26, 1940	C,W	D	do.	Galvanized iron casing to bottom. Water reported from fine sand.
130	0	183.5	Jan. 5, 1940	C,W	D	do.	Water reported from fine sand. ed from white sand.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
131	In Claude	--	--	H. H. Kight	A. L. Slay	1914	202	4
132	do.	lot 6	Railroad Addn. blk. 36	Rudolph Campbell	E. D. Watson	1916	196	4
d/133	do.	lot 7	Railroad Addn. blk. 4	M. L. Hughlett	do.	1909	210	4
d/134	do.	--	Railroad Addn. blk. 9	Claude School	do.	1919	195	6
135	do.	lot 3	Railroad Addn. blk. 6	R. L. Bagwell	do.	1915	195	4
d/136	do.	--	--	S. B. Stewart	B. F. Oates	1913	236	4 $\frac{1}{2}$
137	do.	lot 7	Original Townsite blk. 27	City of Claude	D. L. McDonald	1929	452	20
138	do.	lot 13	Original Townsite blk. 16	Warner Est.	E. D. Watson	1911	220	4
d/139	do.	lot 18	do.	A. O. McIntire	--	--	--	--
140	do.	lot 1	Original Townsite blk. 17	W. W. Hood	E. D. Watson	1905	212	4
d/141	do.	lot 7	Original Townsite blk. 12	C. O. Kight	do.	1906	207	4
142	do.	--	--	J. P. Moore	E. R. Raef	1900	206	4
143	do.	--	--	C. D. Eisenhaur	E. D. Watson	1920	190	4
144	do.	lot 4	Railroad Addn. blk. 14	J. F. Wiegman	do.	--	207	5
145	$\frac{1}{2}$ mile north	154, SE $\frac{1}{4}$ SE $\frac{1}{4}$	H. & G. N. blk. B-4	Marcellus Bates	--	--	187	4
146	1 $\frac{1}{4}$ miles west	168, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. K. Hunt	--	--	173	4
147	2 $\frac{1}{4}$ miles west	192, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	H. A. Finley	E. D. Watson	1918	138	4
d/154	4 $\frac{1}{2}$ miles west	190, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	--	--	158	4
155	3 $\frac{1}{2}$ miles west	170, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	John C. Baker	--	--	165	4
156	3 $\frac{1}{2}$ miles west	170, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	John Blocker	A. L. Slay	1908	184	4
157	3 $\frac{1}{2}$ miles west	151, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Federal Farm Mortgage Co.	E. D. Watson	1906	196	4
158	2 $\frac{1}{2}$ miles west	152, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	G. E. Garrett	J. P. Miles	1900	190	4
d/159	1 $\frac{1}{2}$ miles west	153, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	C. E. Deahl	--	--	--	--
160	1 $\frac{1}{2}$ miles northwest	153, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Mrs. Claude Howe	E. D. Watson	1906	185	4

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
131	--	191	e/	C,W	--	Gentle slope	Steel casing to bottom. Water reported from fine white sand.
132	--	184	e/	C,W	D	do.	Galvanized iron casing to bottom. Water reported from fine sand at
133	--	200	e/	C,W	D	do.	Steel casing 186 to 196 feet. to bottom. Reported good water from
134	--	185	e/	C,W	D	--	Galvanized iron casing fine sand. to bottom. Water reported from
135	--	184	e/	C,W	D	--	Do. fine sand.
136	--	187	e/	C,W	D,S	Flat	236 feet of casing set in sand and gravel. Reported strong supply of
137	--	205	e/	T,E, 4	P	do.	Reported 37 feet draw-down after pumping 56 gallons a minute for 1½ hours. Fine white
138	0	205.3	Mar. 26, 1940	C,W	D	do.	Steel sand from 192 to 265 feet. casing to bottom. Water reported
139	--	--	--	--	--	do.	from fine sand.
140	0.5	200.5	Mar. 26, 1940	C,W	D	do.	Water reported from fine sand.
141	--	200	e/	C,W	D	do.	
142	0	195.5	Mar. 26, 1940	C,W	D,I	do.	Galvanized iron casing to bottom. Water reported from fine sand.
143	--	178	e/	C,W	D	do.	Galvanized iron casing to bottom. Coarse sand from 114 to 128 feet. Fine sand from 180 to 188 feet.
144	0.4	200.4	Jan. 11, 1940	C,W	D	do.	Steel casing to bottom. Water reported from fine white sand at 200 to 210 feet.
145	0.4	180.9	Mar. 13, 1940	C,W	D,S	do.	Water reported from fine sand.
146	--	160	e/	C,W	D,S	do.	
147	1.2	111.6	Jan. 13, 1940	C,W	D,S	Rolling	Galvanized iron casing to bottom. Fine red sand from 65 to 72 feet. Water reported from fine yellow
154	0.5	146.0	Mar. 9, 1940	C,W	D,S	Gentle slope	Reported sand at 120 to 131 feet. good water from sand and gravel.
155	0	141.9	Mar. 7, 1940	C,W	D,S	do.	
156	0	171.4	Mar. 29, 1940	C,W	D,S	do.	Steel casing to bottom. Water reported from coarse sand.
157	0	180.2	do.	C,W	D,S	do.	Reported strong supply of water from coarse sand.
158	0	178.1	do.	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
159	--	--	--	N	None	do.	
160	0.9	175.1	Mar. 28, 1940	C,W	D,S	do.	100 feet of galvanized casing at top. Water reported from fine sand.

Records of wells and springs in Armstrong County, Texas

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
161	1 $\frac{3}{4}$ miles northwest	153, NE $\frac{1}{4}$ NE $\frac{1}{4}$	H. & G. N. blk. B-4	Claude Cemetery	E. D. Watson	1912	235	4
d/162	2 $\frac{1}{2}$ miles northwest	128, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Louise Calliham Est.	--	--	--	4
d/163	3 $\frac{3}{4}$ miles northwest	130, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	P. W. Laycock Est.	J. P. Miles	1902	205	4
169	4 $\frac{1}{2}$ miles west	150, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. M. Alexander	A. L. Slay	1900	197	4
170	5 miles northwest	131, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Henry Williams	--	--	178	4
171	5 $\frac{1}{4}$ miles northwest	110, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	South Western Life Ins. Co.	Bose Oates	1900	211	4
d/172	4 $\frac{1}{4}$ miles northwest	111, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Myrtle Wooldridge	--	--	--	--
173	4 miles northwest	130, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Richard Morris	E. D. Watson	1909	206	4
174	3 $\frac{1}{2}$ miles northwest	112, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	R. A. Campbell	J. P. Miles	1889	186	4
d/175	3 $\frac{1}{4}$ miles northwest	113, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	A. H. Gau	E. D. Watson	1912	--	--
176	3 miles northwest	113, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	do.	1909	209	4
177	2 $\frac{1}{2}$ miles north	115, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	E. H. Gooch	Chas. Meaker	1940	265	5 $\frac{1}{2}$
d/178	4 miles north	88, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Kansas City Life Ins. Co.	E. D. Watson	1928	--	4
179	5 miles northwest	90, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mrs. S. J. Bagwell	do.	1909	200	4
d/183	5 $\frac{3}{4}$ miles northwest	71, SW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. H. Gorin	do.	--	--	--
184	5 $\frac{1}{4}$ miles northwest	72, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. H. Gunter	J. P. Miles	1900	228	4
d/185	4 $\frac{3}{4}$ miles northwest	88, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Alliance Life Ins. Co.	--	--	199	4
d/186	4 $\frac{1}{4}$ miles north	74, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	T. A. Veniman	--	--	--	4
203	6 miles northeast	82, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	M. B. Kight	--	--	--	4
206	3 $\frac{1}{2}$ miles northwest	117, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	F. J. Weigman	E. D. Watson	1916	270	5
d/213	3 $\frac{1}{4}$ miles southeast	204, SE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	E. C. Gilbert	do.	--	250	4
d/214	4 miles southeast	203, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Ralph Nickell	Jim Howard	--	246	4
d/220	7 miles southeast	203, SE $\frac{1}{4}$ SW $\frac{1}{4}$	H. & G. N. blk. B-3	Theo Hulett	--	--	245	4
d/221	7 $\frac{1}{4}$ miles southeast	204, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	E. W. Miller	--	--	193	4
230	12 $\frac{1}{2}$ miles southeast	1, NE $\frac{1}{4}$ N $\frac{1}{4}$	T. W. N. G. R.R. blk. 1	J. T. McGehee	--	1938	19	48
d/236	16 $\frac{1}{4}$ miles southeast	71, NW $\frac{1}{4}$ SE $\frac{1}{4}$	H. & G. N. blk. B-3	L. M. Bell Est.	--	1906	200	4

No.	Height of measuring point above ground (ft.)	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
161	0	178.9	Mar. 28, 1940	C,W	I	Gentle slope	Galvanized iron casing to bottom. Water reported from fine sand.
162	--	--	--	C,W	D,S	do.	
163	--	195	e/	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of good water from
169	1.0	184.2	Mar. 29, 1940	C,W	D,S	do.	Galvanized iron casing to bottom. Water reported from fine sand.
170	0	170.5	Mar. 28, 1940	C,W	D,S	do.	Steel casing to bottom. Water reported from fine sand.
171	2.6	193.2	do.	C,W	S	do.	Casing to bottom.
172	--	--	--	N	None	do.	
173	0	193.1	Mar. 28, 1940	C,W	D,S	do.	Galvanized iron casing to bottom.
174	0	176.1	do.	C,W	D,S	do.	Steel casing to bottom. Water reported from fine sand.
175	--	--	--	C,W	S	do.	
176	0	188.3	Mar. 28, 1940	C,W	D,S	do.	Water reported from fine sand.
177	0.5	230.5	Mar. 13, 1940	C,W	D,S	Flat	Water reported from coarse sand.
178	--	--	--	C,W	D,S	Gentle slope	
179	1.5	191.1	Mar. 28, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
183	--	--	--	C,W	S	do.	
184	--	200	e/	C,W	D,S	Flat	200 feet of casing. Supplies water for 350 head of stock, a yard and
185	0.8	184.9	Mar. 27, 1940	N	None	do.	garden.
186	--	--	--	C,W	D,S	do.	Reported well caved at 27 feet.
203	--	--	--	C,W	D,S	do.	Well caved.
206	--	261	e/	C,W	D,S	do.	Water reported from fine sand.
213	--	230	e/	C,W	D,S	Gentle slope	Reported good water.
214	0.8	227.9	Feb. 21, 1940	C,W	S	Flat	Do.
220	1.1	222.8	do.	C,W	S	Slope to draw	Do.
221	0.8	185.8	do.	C,W	D,S	Edge of draw	Do.
230	--	14	e/	C,W	D,S	Creek bank	Dug well. Water reported from sand and gravel.
236	--	170	e/	C,W	D,S	Gentle slope	170 feet of steel casing. Water reported from sand. Supplies water for 20 head of stock.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
240	16 $\frac{1}{2}$ miles east	NW cor. lge. 4	Franklin City School Land	G. G. Strickland	Bill Miller	1936	161	4
241	15 $\frac{1}{2}$ miles east	69, SW $\frac{1}{4}$ SE $\frac{1}{4}$	H. & G. N. blk. B-3	W. S. Bagby	--	--	127	4
242	13 $\frac{1}{2}$ miles east	109, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	W. M. Boston	E. D. Watson	1912	238	4
d/243	12 $\frac{3}{4}$ miles east	114, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	E. E. Burnett	do.	1910	245	4
244	do.	114, SW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	do.	do.	1918	235	4
d/245	In Goodnight	114, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	A. M. Crain	do.	1915	237	4
d/246	do.	114, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Mrs. R. G. Dye James	do.	1909	238	4
247	do.	--	Miller Addn. blk. 27	Mrs. Earl Miller	A. L. Slay	1910	235	4
d/248	do.	--	Miller Addn. blk. 28	S. H. Black	Walter Donnell	1900	248	4
249	do.	141, SW $\frac{1}{4}$ SW $\frac{1}{4}$	H. & G. N. blk. B-3	Davis Burrow	E. D. Watson	1934	239	4
d/250	do.	do.	do.	N. M. Lowler	H. G. Johnson	1935	270	6
251	do.	--	--	Newberry Est.	E. D. Watson	1910	240	4
252	do.	--	blk. 12	E. M. Phillips	do.	1905	240	4
d/253	do.	--	--	Mrs. Lucy Thomas	do.	1910	245	5
d/254	do.	--	blk. 3	G. M. James	do.	1907	245	4
255	do.	141, SW $\frac{1}{4}$ NW $\frac{1}{4}$	H. & G. N. blk. B-3	L. C. Henry	--	--	210	4
d/256	do.	--	C. N. Munn Addn.	Bess Thompson	E. D. Watson	--	250	4
d/257	11 miles southeast	146, SE $\frac{1}{4}$ SW $\frac{1}{4}$	H. & G. N. blk. B-3	J. C. McDowell	--	--	--	4
258	10 $\frac{1}{2}$ miles southeast	146, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mrs. T. B. Miller	Jim Howe	1906	244	5
259	do.	146, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	H. S. Hudson	E. D. Watson	1909	240	4
260	11 miles southeast	140, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. F. Cook	--	--	132	4
261	10 $\frac{3}{4}$ miles east	147, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. A. McMurtry	E. D. Watson	1939	--	--
262	10 $\frac{1}{2}$ miles east	148, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Geo. W. Martin	G. A. Goen	--	176	4
263	12 $\frac{1}{2}$ miles east	115, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	G. A. Blankenship	--	--	--	4
264	12 $\frac{1}{2}$ miles east	116, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	do.	--	1918	--	4
d/265	10 $\frac{1}{4}$ miles east	148, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	W. L. Covington	--	--	137	4

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
240	0.7	94.2	Feb. 23, 1940	C,W	D,S	Gentle slope	Galvanized iron casing to bottom. Water reported from sand and gravel. Other water from clay at 65 feet.
241	0.4	116.6	do.	C,W	D,S	do.	Steel casing to bottom. Water reported from sand and gravel.
242	0	198.3	Apr. 8, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
243	--	199	e/	C,W	D,S	do.	Steel casing to bottom. Reported good water.
244	0	187.3	Apr. 8, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
245	--	210	e/	C,W	D,S	do.	180 feet of steel casing. Reported weak supply of good water.
246	--	200	e/	C,W	D,S	do.	Steel casing to bottom. Reported good water.
247	0	196.1	Apr. 8, 1940	C,W	D	do.	Steel casing to bottom. Reported strong supply of water.
248	--	--	--	C,W	D	do.	Caved at 180 feet.
249	0.6	200.4	Apr. 8, 1940	C,W	D	do.	Steel casing to bottom.
250	--	195	e/	C,W	D,Ind	do.	Steel casing to bottom. Reported strong supply of good water used by filling station and store.
251	1.0	199.3	Apr. 8, 1940	C,W	D,I	do.	Steel casing to bottom.
252	0	199.4	do.	C,W	D	do.	
253	--	195	e/	C,W	D,I	do.	
254	--	--	--	C,W	D	do.	90 feet of steel casing at top. Reported good water.
255	1.0	186.2	Feb. 21, 1940	C,W	D	do.	
256	--	--	--	C,W	D	do.	Steel casing to bottom.
257	--	--	--	C,W	D,S	do.	
258	0	199.1	Apr. 8, 1940	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water.
259	0	197.3	do.	C,W	D,S	do.	
260	2.9	121.7	Mar. 19, 1940	C,W	D,S	In draw	
261	--	--	--	C,W	S	--	
262	1.0	163.2	Mar. 19, 1940	C,W	S	Gentle slope	
263	--	--	--	C,W	S	Edge of draw	
264	--	--	--	C,W	D,S	Gentle slope	Reported strong supply of water.
265	0.6	134.7	Mar. 19, 1940	C,W	D,S	Edge of draw	

Records of wells and springs in Armstrong County--Continued

No.	Distance from Claude	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
266	11 miles east	138, NW $\frac{1}{4}$ SE $\frac{1}{4}$	H. & G. N. blk. B-3	J. J. Ray	--	--	151	--
267	11 $\frac{1}{2}$ miles east	117, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. C. Doneghy	--	--	--	--
268	10 $\frac{1}{2}$ miles east	137, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	A. R. Miller	--	--	--	4
269	9 $\frac{3}{4}$ miles east	150, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	J. M. Thomas Est.	--	--	208	4
270	9 $\frac{1}{2}$ miles east	151, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	Mary C. Bugbee	--	--	133	4
d/271	10 $\frac{1}{2}$ miles east	136, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Joe Miller	--	--	--	4
272	11 miles east	135, SW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Cleve O. Bennett	E. D. Watson	--	135	--
d/273	12 miles east	120, SE $\frac{1}{4}$	do.	T. C. Thornberry	--	--	Spring	--
274	12 $\frac{1}{2}$ miles east	103, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	--	--	78	6
278	11 $\frac{1}{2}$ miles east	121, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. F. Scarbrough	--	--	--	6
279	10 $\frac{1}{2}$ miles east	135, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	C. H. Brown	--	--	94	4
280	12 miles east	121, NE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Knox Robinson	--	--	106	4
281	12 $\frac{1}{2}$ miles east	102, NW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	J. M. Crain	--	--	110	4
282	12 $\frac{3}{4}$ miles east	102, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	E. N. Hudgens	--	--	197	4
283	do.	101, SW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Mrs. C. H. Keeter	--	1919	125	4
284	13 $\frac{1}{2}$ miles east	100, NW $\frac{1}{4}$ SE $\frac{1}{4}$	do.	Deardorf Heirs	--	--	--	4
285	14 miles east	87, NW $\frac{1}{4}$ NW $\frac{1}{4}$	do.	Geo. C. Whatley	--	--	--	--
286	14 $\frac{1}{2}$ miles east	87, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	Geo. Herring Est.	--	1905	325	4
d/287	14 miles east	84, SW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. C. Eschle	--	--	300	4
d/288	15 miles east	86, NE $\frac{1}{4}$ SW $\frac{1}{4}$	do.	do.	Walter Crowell	1907	--	4
d/289	15 $\frac{3}{4}$ miles east	59, SW $\frac{1}{4}$ SW $\frac{1}{4}$	do.	George Eschle	do.	1920	--	4
d/290	15 $\frac{1}{2}$ miles east	85, NE $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. E. Whatley	do.	--	320	4
d/291	16 miles east	60, SE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	J. C. Eschle	do.	--	315	--

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

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

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
266	0	117.9	Mar. 19, 1940	C,W	S	Edge of draw	
267	--	--	--	C,W	S	Hilltop	Reported strong supply of water. Supplies water for 100 head of stock.
268	--	--	--	C,W	S	Head of draw	
269	--	181	e/	C,W	D,S	Gentle slope	
270	2.0	99.9	Mar. 19, 1940	C,W	D,S	In draw	Reported water impounded by small dam.
271	--	--	--	C,W	S	Head of canyon	Reported strong supply of good water. Supplies water for 50 head of stock.
272	1.2	128.3	Mar. 19, 1940	C,W	D,S	--	Supplies water for 30 head of stock.
273	--	--	Mar. 25, 1940	--	S	River bank	Measured flow, 140 gallons a minute from seeps in sand. Known as "Salt
274	0.6	54.3	Mar. 19, 1940	C,W	D,S	Near river	Water reported from Fork Spring". coarse sand.
278	--	--	--	C,W	D,S	Edge of river	Reported strong supply of water.
279	1.0	85.5	Mar. 25, 1940	C,W	D,S	do.	
280	2.6	91.0	do.	C,W	D,S	Edge of draw	Reported strong supply of water. Supplies water for 25 head of stock.
281	1.0	97.2	do.	C,W	D,S	Hilltop	Supplies water for 25 head of stock.
282	1.7	165.3	do.	C,W	D,S,I	Gentle slope	
283	--	110	e/	C,W	D,S,I	do.	Reported strong supply of water.
284	--	--	--	C,W	D,S	do.	
285	--	--	--	C,W	D,S	do.	
286	--	260	e/	C,W	D,S	do.	Steel casing to bottom. Reported strong supply of water. Supplies water for 100 head of stock.
287	--	280	e/	C,W	S	Edge of canyon	20 feet of steel casing at top. Reported good water.
288	--	275	e/	C,W	D,S,I	Gentle slope	Reported good water. Supplies water for yard and garden.
289	--	275	e/	C,W	D,S,I	do.	Do.
290	--	275	e/	C,W	D,S	do.	Reported strong supply of good water.
291	--	275	e/	C,W	D,S,I	do.	Reported good water. Supplies water for yard and garden.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Palo Duro	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
<u>1</u> /300	4½ miles northeast	3, SW½	E. & R. R. sur. blk. G-5	A Ranch	--	--	Spring	--
301	2 miles north	44, NW¼NW¼	blk. W. B.	do.	--	--	121	4
<u>d</u> /304	1½ miles northeast	44, SE½SE½	blk. W	do.	--	--	101	4
305	1½ miles southeast	87, NW¼NW¼	blk. K	do.	--	--	89	6
306	2½ miles east	88, SE½SE½	do.	do.	--	--	51	6
307	4 miles east	116, SE½SE½	blk. G-5	do.	--	--	99	6
<u>d</u> /314	3½ miles southeast	30, SE½	do.	do.	--	--	Spring	--
310	1 mile west	6, SW¼SW¼	blk. K	do.	--	--	150	8
322	5¼ miles northwest	14, NW¼SW¼	T.W.N.G. R.R. blk. C	do.	--	--	127	6
<u>d</u> /325	6½ miles northwest	11, SE½SE½	do.	do.	--	--	132	4
330	9½ miles northwest	14, NE½	D. S. & E. R.R. blk. E-3	Hugh Reed Est.	--	--	Spring	--
<u>d</u> /331	10 miles northwest	8, SE½	do.	do.	--	--	Spring	--
No.	Distance from Wayside	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
<u>d</u> /400	7¾ miles northeast	35, SE½	G.C.& S.F.R.R.	Mattie Hedgecoke	--	--	Spring	--
<u>d</u> /401	5 miles east	11, NW¼	B. S. & F. blk. M-10	do.	--	--	Spring	--
402	3¼ miles east	35, NW¼NW¼	do.	Dan L. Adams	Joe Rogers	1939	95	--
403	4 miles southeast	35, SE½SW¼	do.	Bertha Payne Mahler	--	--	107	--
<u>d</u> /404	4¾ miles southeast	49, NW¼NW¼	do.	Mrs. Annie Heisler Est.	--	1910	120	--
405	3¾ miles southeast	47, NW¼NW¼	do.	Mrs. C. L. Brooks	--	--	109	--
<u>d</u> /406	2¾ miles southeast	46, NW¼NE¼	do.	Lem S. Fisher	--	1910	120	--

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

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

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
300	--	--	--	--	S	Creek bed	Reported flow, 150 gallons a minute from seeps in clay and sand. Water is piped about 1 1/2 miles to stock tanks.
301	2.4	122.4	Feb. 28, 1940	C,W	S	In canyon	Reported water from sandy red clay, unfit for domestic use.
304	--	--	--	C,W	S	River valley	Well caved. Reported water from sandy red clay.
305	2.5	76.1	Feb. 28, 1940	C,W	S	do.	Reported water from sandy red clay, unfit for domestic use. Known as
306	0.9	46.5	do.	C,W	S	do.	Reported "Griffin Pasture Well." water from sandy red clay, unfit for
307	2.2	79.8	do.	C,W	S	Flat	Do. domestic use.
314	--	--	--	--	D,S	In draw	Reported water from seeps in sand and gravel. Could be improved by building a dam. Known as "Battle
320	0.7	142.5	Feb. 29, 1940	C,W	D,S	Hilltop	Steel casing to "Ridge Spring." bottom. Water reported from sand
322	0.7	120.9	do.	C,W	S	Gentle slope	and gravel.
325	--	125	e/	C,W	S	do.	
330	--	--	--	--	S	In draw	Reported flow, 5 gallons a minute from seeps in sandstone. Known as
331	--	--	--	--	S	do.	Reported source of "Baker Spring." water hidden in pool about 12 feet deep. Known as "Cox Spring."
No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
400	--	--	Apr. 9, 1940	--	S	River bottom	Measured flow, 3 gallons a minute from one opening in sand and gravel. Unfit for domestic use. Known as
401	--	--	Apr. 1, 1940	--	D,S	Creek bank	Measured "County Road Spring." flow, 150 gallons a minute from seeps in sandstone and shale. Known
402	0	78.0	Mar. 30, 1940	C,W	D,S	Gentle slope	Re- as "Pleasant Creek Spring." ported strong supply of water
403	0.3	86.5	do.	C,W	D,S	do.	Do. from fine sand.
404	--	100	e/	C,W	D,S	do.	Reported strong supply of water. Caved near surface.
405	0.4	86.3	Mar. 30, 1940	C,W	D,S	do.	Water reported from coarse gravel. Supplies water for 15 to 20 head
406	--	100	e/	C,W	D,S,I	do.	Reported good water of stock. from coarse sand. Well caved at 12 feet. Supplies water for 30 head of stock and garden.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Wayside	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
407	2 miles southeast	37, SW $\frac{1}{2}$ NW $\frac{1}{2}$	B. S. & F. blk. M-10	Floyd Adams	Bill Glover	1928	113	--
d/408	2 $\frac{1}{4}$ miles southeast	37, NW $\frac{1}{2}$ NE $\frac{1}{2}$	do.	Dan L. Adams	--	--	--	--
d/409	1 $\frac{3}{4}$ miles southeast	24, SW $\frac{1}{2}$ SW $\frac{1}{2}$	do.	do.	--	1938	116	--
d/410	1 $\frac{1}{2}$ miles southeast	do.	do.	do.	--	--	160	--
411	1 $\frac{1}{2}$ miles east	do.	do.	do.	--	1938	104	--
412	1 $\frac{3}{4}$ miles east	15, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	G. G. Foster	--	--	110	--
d/413	$\frac{1}{4}$ mile northeast	16, SW $\frac{1}{2}$ SW $\frac{1}{2}$	do.	W. D. McGehee	--	--	102	--
d/414	$\frac{1}{4}$ mile east	do.	do.	W. J. Sluder	--	--	100	--
d/415	$\frac{3}{4}$ mile southeast	23, NW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	W. R. Stockett	W. R. Stockett	1933	122	--
416	do.	23, SW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	do.	do.	1933	130	--
d/417	In Wayside	--	--	Macie Helms	--	--	106	4
418	do.	17, SW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	Geo. Gillen	Travis Gillen	1931	108	4
d/419	do.	17, SE $\frac{1}{2}$ SE $\frac{1}{2}$	do.	Jack G. Foster	Joe Rogers	1938	100	4
420	do.	do.	do.	W. I. Lane	Bill Stutzil	--	101	--
d/421	$\frac{1}{2}$ mile west	17, SW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	Wayside School	--	--	98	6
d/422	$\frac{1}{2}$ mile southwest	22, NE $\frac{1}{2}$ NW $\frac{1}{2}$	do.	W. C. McGehee	--	1900	125	7
423	$\frac{1}{4}$ mile southwest	22, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	Kenneth C. Knox	--	--	100	4
d/424	$\frac{1}{4}$ mile south	do.	do.	Wayside Cemetery	--	--	105	6
d/425	$\frac{1}{2}$ mile southwest	22, NE $\frac{1}{2}$ NW $\frac{1}{2}$	do.	W. C. McGehee	--	1915	125	--
426	1 mile south	22, SW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	M. L. McGehee	--	--	113	--
d/427	1 $\frac{1}{2}$ miles south	39, SW $\frac{1}{2}$ NE $\frac{1}{2}$	do.	do.	--	1933	119	8
d/428	do.	do.	do.	do.	--	1936	172	12
429	2 miles southwest	40, NW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	G. R. McNeal	--	--	122	--
d/431	1 $\frac{3}{4}$ miles southwest	40, NE $\frac{1}{2}$ NW $\frac{1}{2}$	do.	C. E. Helms	Marvin Montgomery	1910	121	--
432	do.	do.	do.	do.	do.	1910	127	--

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
407	0	90.1	Mar. 30, 1940	C,W	D,S	--	Water reported from coarse sand. Supplies water for 40 head of stock.
408	--	--	--	T,G, 22	I	Gentle slope	Reported yield, 600 gallons a minute.
409	0.5	86.5	Mar. 30, 1940	C,W	D,S	do.	Reported strong supply of good water from coarse sand.
410	1.0	83.1	do.	--	None	do.	
411	0	81.1	do.	C,W	D,S,I	do.	Reported strong supply of water from coarse sand. Supplies a pond
412	0.2	80.2	do.	C,W	D,S,I	do.	Water reported 150x40 feet. from coarse sand. Irrigates small
413	0.4	85.7	do.	C,W	D,S	do.	Reported orchard and garden. strong supply of good water from coarse sand. Supplies water for 20
414	--	85	e/	C,W	D,S	do.	Reported good water head of stock. from sand.
415	--	104	e/	C,W	S	do.	Reported strong supply of good water from coarse gravel.
416	--	114	e/	C,W	D,S	do.	Water reported from coarse gravel.
417	0	86.2	Mar. 20, 1940	C,W	D,S	do.	Reported good water from coarse sand at 87 to 100 feet. 100 feet north
418	0	86.5	do.	C,W	D	do.	Water reported from of well 418. coarse sand at 87 to 100 feet.
419	--	85	e/	C,W	D,I	do.	Reported good water from coarse sand.
420	0	86.3	Mar. 30, 1940	C,W	D	do.	
421	0.3	86.4	Mar. 20, 1940	C,W	P	do.	Reported good water from coarse sand.
422	--	90	e/	C,W	D,S	do.	Do.
423	--	85	e/	C,W	D	do.	
424	--	89	e/	C,W	I	do.	
425	--	90	e/	C,W	D,S	do.	Reported strong supply of good water from coarse sand.
426	0	100.7	Mar. 21, 1940	C,W	S	do.	Water reported from coarse sand and gravel.
427	0.6	100.3	Mar. 20, 1940	N	None	do.	Reported coarse sand and gravel at 98 to 120 feet.
428	--	98	e/	T,G, 60	I	--	Reported yield, 700 to 900 gallons a minute. Coarse gravel from 120 to
429	0	99.9	Mar. 21, 1940	C,W	D,S	Gentle slope	Water reported from 172 feet. coarse sand.
431	0.7	98.1	do.	C,W	S	do.	Reported good water from coarse sand and gravel.
432	0.5	103.7	do.	C,W	D	do.	

Records of wells and springs in Armstrong County--Continued

No.	Distance from Wayside	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
d/433	2 $\frac{1}{4}$ miles southwest	40, SW $\frac{1}{2}$ NW $\frac{1}{2}$	B. S. & F. blk. M-10	C. E. Helms	--	1938	146	16
434	2 $\frac{1}{2}$ miles southwest	20, SE $\frac{1}{2}$ SW $\frac{1}{2}$	do.	E. O. Hutton	--	--	--	--
436	1 mile north	3, SW $\frac{1}{2}$ SE $\frac{1}{2}$	do.	J. T. McGehee	J. T. McGehee	1903	77	--
437	1 $\frac{1}{4}$ miles north	do.	do.	do.	Earl Cowan	1918	73	--
438	1 mile north	4, NW $\frac{1}{2}$ SW $\frac{1}{2}$	do.	Ola Rogers	John Stockett	1925	62	--
440	2 $\frac{1}{4}$ miles north	--, NW $\frac{1}{2}$ NW $\frac{1}{2}$	C. H. Record Preemption	H. L. Harrel	--	1900	--	--
d/441	do.	do.	C. H. Record Preemption No. 680	do.	--	--	95	--
442	2 miles north	--	--	Willie Fisher	--	1935	84	--
d/443	do.	--, SW $\frac{1}{2}$ SW $\frac{1}{2}$	J. D. Comer Preemption No. 480	do.	--	1905	97	--
d/444	2 $\frac{1}{4}$ miles northwest	157, SE $\frac{1}{2}$ SE $\frac{1}{2}$	D. S. & F. R. blk. N-10	Emma Rogers	--	--	--	--
446	2 miles northwest	2, SW $\frac{1}{2}$ NE $\frac{1}{2}$	B. S. & F blk. M-10	W. H. Hamblen	--	1900	84	4
447	2 $\frac{1}{2}$ miles northwest	1, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	A. L. Stevens	--	--	96	--
448	3 $\frac{1}{2}$ miles northwest	158, SW $\frac{1}{2}$ NE $\frac{1}{2}$	D. S. & E. R. blk. M-10	Mrs. Allie McNeal	--	--	110	--
449	do.	53, SE $\frac{1}{2}$ SE $\frac{1}{2}$	blk. V. B.	do.	--	--	121	--
450	4 $\frac{3}{4}$ miles northwest	214, NE $\frac{1}{2}$ NE $\frac{1}{2}$	John Gibson blk. M-9	M. L. Wesley	--	--	--	--
451	5 miles northwest	214, SW $\frac{1}{2}$ NW $\frac{1}{2}$	do.	do.	--	--	--	--
452	5 $\frac{1}{2}$ miles northwest	177, NE $\frac{1}{2}$ NE $\frac{1}{2}$	John H. Gibson blk. M-9	Jim Wesley	Bill Stutzil	1900	140	--
453	4 $\frac{3}{4}$ miles northwest	184, NE $\frac{1}{2}$ NE $\frac{1}{2}$	do.	H. B. Wesley	--	--	121	--
454	3 $\frac{1}{2}$ miles west	212, SE $\frac{1}{2}$ SW $\frac{1}{2}$	do.	A. L. Stevens	--	1930	111	--
455	3 $\frac{1}{4}$ miles west	do.	do.	do.	Joe Rogers	1937	110	--
456	2 $\frac{1}{2}$ miles west	19, NE $\frac{1}{2}$ NW $\frac{1}{2}$	B. S. & F. blk. M-10	R. L. Grigsby	--	--	100	--
457	4 $\frac{1}{4}$ miles west	186, NW $\frac{1}{2}$ NE $\frac{1}{2}$	John Gibson blk. M-9	Venella Stone	--	--	123	--

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

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

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
433	0.4	102.4	Mar. 21, 1940	T,G	I	Gentle slope	Reported pumped 700 to 800 gallons a minute for 14 days. Water from
434	--	--	--	C,W	D,S	do.	gravel under sandstone.
436	0.4	67.2	Mar. 21, 1940	C,W	D,S	do.	Water reported from coarse gravel at 68 to 77 feet.
437	0	70.2	do.	C,W	S	do.	Water reported from coarse sand and gravel at 70 to 73 feet. Supplies water for 150 head of cattle.
438	--	54	e/	C,W	D,S	do.	Reported strong supply of water from coarse sand. Supplies water
440	--	--	--	C,W	D,S	do.	Reported for 35 head of stock. strong supply of water from
441	0	73.8	e/	C,W	None	do.	coarse gravel.
442	0	79.7	Mar. 22, 1940	C,W	I	do.	Reported strong supply of water from coarse sand.
443	1.0	81.9	do.	C,W	D,S	do.	Reported good water from coarse sand. Supplies water for 150 head of cattle.
444	--	--	--	C,W	--	do.	
446	0	79.5	Mar. 20, 1940	C,W	D,S	do.	Water reported from coarse sand at 78 to 84 feet. Supplies water
447	0.3	86.6	Mar. 22, 1940	C,H	D	do.	Water reported for 75 head of stock. ed from coarse sand.
448	0.8	83.3	do.	C,W	D,S	do.	Reported strong supply of water from coarse sand.
449	0	106.7	do.	C,W	D,S	Edge of canyon	Supplies water for 100 head of stock.
450	--	--	--	C,W	S	do.	
451	--	--	--	C,W	S	Gentle slope	Well caved.
452	0	133.5	Mar. 18, 1940	C,W	D,S	do.	Water reported from coarse gravel at 135 to 140 feet.
453	0	105.5	Mar. 22, 1940	C,W	S	do.	Water reported from coarse sand.
454	2.3	98.1	do.	C,W	D,S	do.	Do.
455	1.5	96.2	do.	C,W	D,I	do.	Do.
456	--	90	e/	C,W	D,S	do.	Reported strong supply of water from coarse sand.
457	0	95.8	Mar. 22, 1940	C,W	D,S	do.	Do.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Armstrong County--Continued

No.	Distance from Wayside	Section	Block and survey	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)
458	3 $\frac{1}{2}$ miles west	211, NW $\frac{1}{4}$ SW $\frac{1}{4}$	John Gibson blk. M-9	J. P. Patterson	--	1900	108	4
d/459	3 miles west	211, SE $\frac{1}{4}$ SE $\frac{1}{4}$	do.	G. G. Foster	--	--	--	--
460	3 $\frac{1}{4}$ miles west	210, NW $\frac{1}{4}$ NE $\frac{1}{4}$	do.	J. R. Stockett	--	1900	114	--
461	3 $\frac{1}{2}$ miles west	210, NE $\frac{1}{4}$ NW $\frac{1}{4}$	do.	W. R. Franklin	--	1928	109	--
462	1 $\frac{1}{4}$ miles west	21, NW $\frac{1}{4}$ NE $\frac{1}{4}$	B. S. & F. blk. M-10	W. C. McGehee	--	--	83	--

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

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

No.	Height of measuring point above ground (ft.) a/	Water level		Pump and power b/	Use of water c/	Topographic situation	Remarks
		Depth below measuring point (ft.)	Date of measurement				
458	--	--	--	C,W	D,S	Gentle slope	Reported strong supply of water.
459	--	--	--	C,W	S	do.	
460	0.5	95.8	Mar. 22, 1940	C,W	D,S	do.	Reported strong supply of water from coarse sand.
461	--	78	e/	C,W	D,S	do.	Reported strong supply of water from coarse gravel.
462	--	85	e/	C,W	D,S	--	Reported strong supply of water from coarse sand.

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

d/ No water sample collected for analysis.

e/ Water level reported.

Logs of test wells drilled by W. P. A. labor in Armstrong County, Texas

	Thickness (feet)	Depth (feet)
<u>Well 1</u>		
Edge of sink, O. D. Kerr tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 99, H. & G. N. R.R. sur., blk. B-4, $\frac{1}{2}$ mile southwest of Washburn.		
Gray loam, top soil - - -	1	1
Sandy grayish-tan loam - -	6	7
Sandy brownish-colored clay	1	8
Tan sand and clay - - -	4	12
Sandy red clay - - - -	2	14
Caliche - - - - -	2	16
Sandy red clay - - - -	2	18
Caliche - - - - -	2	20
Sandy red clay - - - -	7	27
Caliche - - - - -	4	31
Sandy light-red clay - -	4	35
Sandy light-red clay and caliche - - - - -	2	37
February 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 2</u>		
In sink, O. D. Kerr tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 99, H. & G. N. R.R. sur., blk. B-4, $\frac{1}{2}$ mile southwest of Washburn.		
Dark gumbo, top soil - -	4	4
Gray clay - - - - -	13	17
White sand - - - - -	6	23
Gray clay with rust spots -	6	29
White silica - - - - -	4	33
Red clay - - - - -	7	40
February 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 3</u>		
Edge of sink, O. D. Kerr tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 99, H. & G. N. R.R. sur., blk. B-4, 13 miles west of Claude.		
Gray top soil - - - - -	10	10
Sandy light-colored clay with rust spots - - -	1	11
Light-reddish-colored clay with rust spots - - -	7	18
Greenish-colored clay with rust spots - - - - -	5	23
Reddish-colored clay - -	5	28
Sandy light-colored clay -	8	36
February 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 14</u>		
Edge of sink, C. P. Woody tract, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 95, H. & G. N. R.R. sur., blk. B-4, 10 miles northwest of Claude.		
Dark loam, top soil - - -	2	2
Sandy light-colored caliche	4	6
Sandy light-colored clay and caliche - - - - -	4	10

	Thickness (feet)	Depth (feet)
<u>Well 14--Continued</u>		
Fine-grained red sand and clay - - - - -	4	14
Light-colored sand and caliche - - - - -	4	18
Fine-grained red sand - -	2	20
Light-colored sand and caliche - - - - -	3	23
Fine-grained red sand - -	3	26
Sandy light-colored clay -	2	28
Caliche, rock - - - - -	15	43
Rock - - - - -		43
February 13, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 15</u>		
Edge of sink, C. P. Woody tract, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 95, H. & G. N. R.R. sur., $9\frac{1}{2}$ miles west of Claude.		
Dark gumbo, top soil - -	7	7
Light-gray clay and caliche	7	14
Fine-grained light-colored sand - - - - -	1	15
Fine-grained red sand - -	8	23
Light-colored sand - - -	1	24
Fine-grained red sand - -	9	33
Caliche - - - - -	1	34
Fine-grained red sand - -	2	36
Fine-grained gray sand -	2	38
Fine-grained reddish-tan sand	2	40
February 13, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 16</u>		
Edge of sink, C. P. Woody tract, SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 95, H. & G. N. R.R. sur., blk. B-4, $9\frac{1}{2}$ miles west of Claude.		
Dark gumbo, top soil - -	4	4
Gray clay and caliche - -	7	11
Tan sand and clay mixture	1	12
Fine-grained red sand - -	5	17
Red sand and caliche gravel	2	19
Fine-grained red sand - -	16	35
Light-colored sand and caliche clay - - - -	1	36
February 13, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 22</u>		
In sink, Campbell and Beasley tract, SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 109, H. & G. N. R.R. sur., blk. B-4, $6\frac{1}{2}$ miles northwest of Claude.		
Dark gumbo, top soil - -	5	5
Gray clay - - - - -	5	10
Light-gray clay and caliche with rust spots - - -	6	16
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 22--Continued</u>		
Red and light streaked sandstone - - - - -	2	18
Rock - - - - -		18
January 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 23</u>		
Edge of dry sink, Campbell and Beasley tract, SE cor. NW $\frac{1}{2}$ sec. 109, H. & G. N. R.R. sur., blk. B-4, 6 $\frac{1}{2}$ miles northwest of Claude.		
Dark gumbo, top soil - - -	3	3
Light-gray clay and caliche	2	5
Brownish-colored sand and clay - - - - -	2	7
Bluish-gray sand and clay -	1	8
Reddish-brown sand and caliche gravel - - - -	10	18
Red sand - - - - -	6	24
Rock - - - - -	1	25
January 23, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 24</u>		
In dry sink, Campbell and Beasley tract, SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 109, H. & G. N. R.R. sur., blk. B-4, 6 $\frac{1}{2}$ miles northwest of Claude.		
Gray clay - - - - -	5	5
Gray clay with rust spots -	5	10
Light-gray clay - - - - -	8	18
Rusty gray clay and caliche	3	21
Caliche rock - - - - -	6	27
Rock - - - - -		27
January 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 25</u>		
In dry sink, Campbell and Beasley tract, SW $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 109, H. & G. N. R.R. sur., blk. B-4, 6 $\frac{1}{2}$ miles northwest of Claude.		
Dark gumbo, top soil - - -	5	5
Gray clay - - - - -	14	19
Dark-gray clay with rust spots - - - - -	6	25
Gray clay with rust spots -	9	34
Sandy gray clay mixture -	4	38
January 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 35</u>		
South edge of dry sink, W. E. Robinson tract, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 173, H. & G. N. R.R. sur., blk. B-4, 7 miles west of Claude.		
Gray loam, top soil - - -	3	3
Light-red clay and caliche gravel - - - - -	11	14
Gray clay - - - - -	3	17
Sandy grayish-tan clay - -	3	20

	Thickness (feet)	Depth (feet)
<u>Well 35--Continued</u>		
Bluish-gray clay - - -	6	26
Gray sand and clay - - -	10	36
March 4, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 36</u>		
In dry sink, W. E. Robinson tract, SW $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 173, H. & G. N. R.R. sur., blk. B-4, 7 miles west of Claude.		
Dark gumbo, top soil - - -	8	8
Light-colored caliche with rust spots - - - - -	3	11
Light-colored fine-grained sand - - - - -	2	13
Sandy light-colored clay with rust spots - - - - -	6	19
Gray clay and caliche gravel	8	27
Sandy red clay - - - - -	8	35
Fine-grained light-colored sand - - - - -	2	37
Brown clay with rust spots	2	39
Gray clay with rust spots	2	41
Sandy red and blue streaked clay - - - - -	2	43
March 4, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 45</u>		
In dry sink, Mrs. C. E. Hair tract, SE $\frac{1}{2}$ SW $\frac{1}{2}$ sec. 217, H. & G. N. R.R. sur., blk. B-4, 11 miles west of Claude.		
Dark gumbo, top soil - - -	7	7
Light-colored caliche and sand - - - - -	4	11
Brown clay and caliche -	6	17
Light-red clay and caliche rock - - - - -	2	19
Caliche rock - - - - -		19
March 11, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 46</u>		
In dry sink, E. P. Berry tract, SE $\frac{1}{2}$ SE $\frac{1}{2}$ sec. 259, H. & G. N. R.R. sur., blk. B-4, 13 miles west of Claude.		
Dark gumbo, top soil - - -	6	6
Gray clay - - - - -	6	12
Sandy light-gray clay - -	6	18
Gray clay with rust spots	4	22
Fine-grained light-colored sand - - - - -	1	23
Light-bluish-colored clay	8	31
March 12, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 48</u>		
West side of dry sink, H. A. Finley tract, SE $\frac{1}{2}$ NW $\frac{1}{2}$ sec. 229, H. & G. N. R.R. sur.,		
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 48--Continued</u>		
blk. B-4, 6 $\frac{1}{2}$ miles southwest of Claude.		
Gumbo, top soil - - - -	4	4
Fine-grained light-gray sand	2	6
Gray clay - - - - -	12	18
Sandy gray clay - - - -	3	21
Red clay - - - - -	1	22
Red and blue clay - - -	3	25
Fine-grained white sand and clay - - - - -	2	27
Light-gray clay with rust spots - - - - -	5	32
Fine-grained white sand -	22	54
February 12, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 49</u>		
In dry sink, H. A. Finley tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 229, H. & G. N. R.R. sur., blk. B-4, 6 $\frac{1}{2}$ miles southwest of Claude.		
Slate-colored clay, top soil	4	4
Sandy gray clay - - - -	4	8
Sandy red and gray clay -	7	15
Red clay and sand - - -	2	17
Gray clay with fine-grained sand - - - - -	1	18
Gray clay with rust spots -	9	27
Roddish-colored clay and caliche - - - - -	4	31
February 12, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 50</u>		
In dry sink, H. A. Finley tract, SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 229, H. & G. N. R.R. sur., blk. B-4, 6 $\frac{1}{2}$ miles southwest of Claude.		
Slate-colored clay, top soil	3	3
Gray clay - - - - -	2	5
Light-red clay - - - - -	5	10
Fine-grained sand and clay	8	18
Sandy light-gray clay - -	3	21
Caliche - - - - -	1	22
Red sand and caliche gravel	2	24
Rock - - - - -		24
February 12, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 52</u>		
Edge of dry sink, R. J. Jones tract, NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 294, H. & G. N. R.R. sur., blk. B-4, 9 $\frac{1}{2}$ miles southwest of Claude.		
Dark loam, top soil - - -	1	1
Sandy light-tan clay - -	8	9
Fine-grained brown sand -	3	12
Dark-brown clay - - - -	4	16
Sandy light-red clay and caliche - - - - -	11	27

	Thickness (feet)	Depth (feet)
<u>Well 52--Continued</u>		
Light-colored clay and caliche - - - - -		
	9	36
Caliche and rock - - - -	6	42
Rock - - - - -		42
March 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 53</u>		
In sink, R. J. Jones tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 266, H. & G. N. R.R. sur., blk. B-4, 9 $\frac{1}{2}$ miles southwest of Claude.		
Gray loam, top soil - - -	3	3
Slate-colored clay and caliche - - - - -	11	14
Sandy light-gray clay - -	2	16
Fine-grained light-greenish-gray sand - - - - -	2	18
Yellowish-brown clay - -	3	21
Light-gray clay - - - -	2	23
Fine-grained tan sand - -	1	24
Light-red clay with rust streaks - - - - -	6	30
Light-red clay and caliche	2	32
Fine-grained white silica -	7	39
Silica and clay - - - -	1	40
Caliche - - - - -	2	42
Light-brown clay and caliche	11	53
Caliche rock - - - - -	1	54
Rock - - - - -		54
March 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 79</u>		
In dry sink, Mrs. Ida Dye tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. W. N. G. R.R. sur., blk. 1, 11 $\frac{1}{2}$ miles south of Claude.		
Dark-gray top soil - - -	16	16
Gray clay with rust spots -	12	28
Sandy light-gray clay - -	7	35
Sandy red clay - - - -	12	47
Sandy tan clay with rust spots - - - - -	7	54
Fine-grained light-tan sand	3	57
February 16, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 30</u>		
In dry sink, Mrs. Ida Dye tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. W. N. G. R.R. sur., blk. 1, 11 $\frac{1}{2}$ miles south of Claude.		
Dark loam, top soil - - -	16	16
Gray clay with rust spots -	7	23
Dark-gray clay - - - -	2	25
Sandy tan clay - - - -	3	28
Grayish-tan sand - - - -	4	32
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 80--Continued</u>		
Fine-grained red sand and caliche rock - - - - -	6	38
Rock - - - - -		38
February 16, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 82</u>		
Edge of dry sink, Mrs. Ida Dye tract, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, T. W. N. G. R.R. sur., blk. 1, 11 $\frac{1}{2}$ miles south of Claude.		
Dark loam, top soil - - -	1	1
Sandy light-colored caliche	3	4
Red sand and caliche - -	4	8
Rock - - - - -		8
February 16, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 97</u>		
In dry sink, J. T. Campbell tract, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 286, H. & G. N. R.R. sur., blk. B-4, 6 miles south of Claude.		
Dark top soil - - - - -	7	7
Light-gray clay - - - - -	2	9
Light-gray sand and clay -	3	12
Gray clay with rust spots -	4	16
Brownish-gray clay - - -	8	24
Brownish-gray clay and caliche gravel - - - - -	2	26
Rock - - - - -		26
February 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 98</u>		
In dry sink, J. T. Campbell tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 286, H. & G. N. R.R. sur., blk. B-4, 6 miles south of Claude.		
Gray clay, top soil - - -	8	8
Light-gray clay with rust spots - - - - -	6	14
Gray clay - - - - -	10	24
Sandy light-gray clay - -	6	30
Light-gray clay with rust spots - - - - -	13	43
Sandy light-brown clay - -	3	46
Light-colored fine-grained sand with rust spots - -	4	50
Light-colored sand - - -	5	55
Light-tan sand - - - - -	21	76
February 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 99</u>		
In dry sink, J. T. Campbell tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 286, H. & G. N. R.R. sur., blk. B-4, 5 $\frac{1}{4}$ miles south of Claude.		
Dark top soil - - - - -	5	5
Light-gray clay - - - - -	18	23
Light-colored sandy clay -	2	25

	Thickness (feet)	Depth (feet)
<u>Well 99--Continued</u>		
Light-colored sand - - -	7	32
Light-gray clay with rust spots - - - - -	2	34
Light-colored fine-grained sand - - - - -	15	49
Light-tan sand with rust spots - - - - -	4	53
Light-pink sand - - - - -	8	61
Light-red sand - - - - -	10	71
Light-red sand and caliche gravel - - - - -	7	78
Rock - - - - -		78
February 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 122</u>		
In dry sink, Ida E. Dye tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 194, H. & G. N. R.R. sur., blk. B-4, 1 mile south of Claude.		
Gray gumbo, clay, top soil -	8	8
Sandy reddish-colored clay	4	12
Sandy light-gray clay - -	1	13
Gray clay with rust spots -	7	20
Light-reddish-colored clay and sand, rust spots - -	11	31
Fine-grained red sand - -	23	54
Caliche - - - - -	2	56
Red sand and caliche - -	4	60
Red sand - - - - -	5	65
February 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 123</u>		
In dry sink, Ida E. Dye tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 194, H. & G. N. R.R. sur., blk. B-4, 1 mile south of Claude.		
Clay, top soil - - - - -	5	5
Light-gray clay - - - - -	3	8
Fine-grained tan sand - -	1	9
Sandy light-gray clay - -	1	10
Gray clay with rust spots -	4	14
Bluish-green clay - - -	5	19
Sandy red clay - - - - -	6	25
Fine-grained red sand - -	50	75
February 9, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 124</u>		
In dry sink, Ida E. Dye tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 194, H. & G. N. R.R. sur., blk. B-4, 1 mile south of Claude.		
Dark loam, top soil - - -	1	1
Sandy pink-colored caliche and clay - - - - -	8	9
Rock - - - - -	1	10
Rock - - - - -		10
February 8, 1940.		

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

	Thickness (feet)	Depth (feet)
<u>Well 148</u>		
Slope to sink, H. A. Finley tract, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 192, H. & G. N. R.R. sur., blk. B-4, 2 $\frac{3}{4}$ miles west of Claude.		
Top soil, loam - - - -	5	5
Caliche and gravel - - -	2	7
Fine-grained sand and gravel	2	9
Sandy clay and gravel - -	8	17
Red clay and caliche - -	10	27
Brownish-colored clay - -	14	41
Fine-grained red sand - -	2	43
Fine-grained light-red sand	8	51
Fine-grained red sand - -	3	54
January 31, 1940.		

<u>Well 149</u>		
Edge of dry sink, H. A. Finley tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 192, H. & G. N. R.R. sur., blk. B-4, 2 $\frac{3}{4}$ miles southwest of Claude.		
Dark gumbo, top soil - -	5	5
Bluish-gray clay - - - -	8	13
Sandy red clay - - - -	6	19
Tan-colored sand - - - -	4	23
Reddish-colored clay, some caliche gravel - - - -	19	42
Reddish-colored clay - -	5	47
Fine-grained red sand - -	22	69
Struck water at 42 feet. Water level, 52 feet below ground level, 15 hours after hole completed. January 29, 1940.		

<u>Well 150</u>		
In sink, H. A. Finley tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 192, H. & G. N. R.R. sur., blk. B-4, 2 $\frac{1}{2}$ miles southwest of Claude.		
Dark gumbo, top soil - -	5	5
Gray clay, gravel with rust spots - - - - -	7	12
Light-colored caliche and sand - - - - -	2	14
Light-reddish-colored sand	20	34
Red sand and clay - - -	8	42
Red clay - - - - -	1	43
Struck water at 36 feet. Water level, 35 feet below ground level, 12 hours after hole completed. January 29, 1940.		

<u>Well 151</u>		
In dry sink, H. A. Finley tract, NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 192, H. & G. N. R.R. sur., blk. B-4, 2 $\frac{3}{4}$ miles southwest of Claude.		
Dark-gray clay, top soil -	5	5
Light-gray clay, some rust	5	10
Sandy light-colored clay -	3	13
Reddish-colored clay and caliche - - - - -	5	18

	Thickness (feet)	Depth (feet)
<u>Well 151--Continued</u>		
Fine-grained red sand - -	51	69
January 31, 1940.		

<u>Well 152</u>		
In dry sink, H. A. Finley tract, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 192, H. & G. N. R.R. sur., blk. B-4, 2 $\frac{3}{4}$ miles southwest of Claude.		
Black gumbo - - - - -	8	8
Gray clay - - - - -	6	14
Light-colored caliche and sand - - - - -	4	18
Sandy light-colored clay and caliche - - - - -	8	26
Yellow sand, some clay - -	1	27
Light-red sand - - - - -	5	32
Brick-red sand - - - - -	8	40
Sandy reddish-colored caliche, clay - - - - -	5	45
Red clay and caliche rocks	3	48
January 30, 1940.		

<u>Well 153</u>		
Edge of draw, Addie M. Wilson tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 191, H. & G. N. R.R. sur., blk. B-4, 3 $\frac{1}{2}$ miles west of Claude.		
Dark loam, top soil - - -	5	5
Brown clay - - - - -	5	10
Fine-grained red sand - -	5	15
Sand rock - - - - -	13	28
January 31, 1940.		

<u>Well 164</u>		
In dry sink, Val Laycock tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 130, H. & G. N. R.R. sur., blk. B-4, 3 $\frac{1}{2}$ miles northwest of Claude.		
Black gumbo, top soil - -	5	5
Reddish-colored clay and caliche gravel - - - -	3	8
Sandy grayish-red clay - -	6	14
Sandy red clay and caliche with rust spots - - -	2	16
Sandy light-red clay and caliche gravel - - - -	3	19
Sandy red clay and caliche	3	22
Sandy light-red clay and caliche gravel - - - -	3	25
Reddish-gray clay and gravel	3	28
Sandy red clay and caliche gravel - - - - -	4	32
Brick-red sand - - - - -	3	35
January 14, 1940.		

<u>Well 165</u>		
In dry sink, Val Laycock tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 130, H. & G. N. R.R. sur., blk. B-4,		
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 165--Continued</u>		
3½ miles northwest of Claude.		
Black gumbo, top soil - - -	7	7
Reddish-gray clay - - -	2	9
Gray clay and caliche - - -	2	11
Fine-grained white sand - - -	2	13
Red sand and clay - - -	6	19
Caliche and red clay - - -	1	20
Red clay and sand - - -	3	23
Sandy red clay and caliche - - -	2	25
Red clay and rock gravel - - -	2	27
Rock - - - - -	-	27
January 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 166</u>		
In dry sink, Val Laycock tract, SE¼SE¼ sec. 130, H. & G. N. R.R. sur., blk. B-4, 3½ miles northwest of Claude.		
Black gumbo, top soil - - -	6	6
Sandy red clay, some caliche - - -	4	10
Gray clay - - - - -	1	11
Gray clay with rust spots - - -	4	15
Bluish-gray clay with rust spots - - - - -	4	19
Sandy red clay - - - - -	2	21
Red sand and clay - - - - -	5	26
Light-colored caliche - - - - -	4	30
Red sand and caliche - - - - -	10	40
Red sand - - - - -	2	42
Red sand and caliche - - - - -	1	43
Red sand and white gravel - - -	7	50
Rock - - - - -	-	50
January 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 167</u>		
In dry sink, Val Laycock tract, SE¼SE¼ sec. 130, H. & G. N. R.R. sur., blk. B-4, 3½ miles northwest of Claude.		
Black gumbo, top soil - - -	6	6
Dark-gray clay - - - - -	2	8
Gray clay and caliche with rust spots - - - - -	6	14
Blue clay - - - - -	10	24
Sandy red clay - - - - -	3	27
Caliche - - - - -	4	31
Reddish-colored sand and caliche - - - - -	4	35
Red sand - - - - -	3	38
Red sand and caliche - - - - -	9	47
Light-reddish-colored sand and caliche - - - - -	2	49
Red sand and gravel, some caliche - - - - -	3	52
Rocks - - - - -	-	52
January 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 168</u>		
In dry sink, Blackwood Estate, NE¼NE¼ sec. 151, H. & G. N. R.R. sur., blk. B-4, 3½ miles northwest of Claude.		
Black gumbo, top soil - - -	7	7
Reddish-gray clay - - -	3	10
Gray clay with rust spots - - -	5	15
Gray clay - - - - -	6	21
Red clay and caliche - - -	1	22
Caliche, some clay - - -	1	23
Red sand and caliche - - -	14	37
Light-reddish-colored sand and caliche - - - - -	4	41
Caliche, little sand - - -	3	44
White caliche - - - - -	3	47
Light-reddish-colored sand and caliche - - - - -	7	54
Reddish-tan sand and caliche - - -	1	55
Grayish-tan sand and caliche - - -	9	64
Rock - - - - -	-	64
January 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 180</u>		
Edge of sink, J. H. Corin tract, SE¼SE¼ sec. 70, H. & G. N. R.R. sur., blk. B-4, 6 miles northwest of Claude.		
Dark gumbo, top soil - - -	4	4
Brown clay - - - - -	12	16
Sandy brown clay, rust spots - - -	11	27
February 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 181</u>		
In dry sink, J. H. Gunter tract, SW¼SW¼ sec. 71, H. & G. N. R.R. sur., blk. B-4, 6 miles northwest of Claude.		
Dark gumbo, top soil - - -	6	6
Reddish-brown clay - - -	11	17
Gray clay with rust spots - - -	2	19
Sandy gray clay with rust spots - - - - -	8	27
February 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 182</u>		
In dry sink, J. H. Gunter tract, SW¼SW¼ sec. 71, H. & G. N. R.R. sur., blk. B-4, 6 miles northwest of Claude.		
Dark gumbo, top soil - - -	6	6
Reddish-brown clay - - -	12	18
Gray clay with rust spots - - -	8	26
February 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 200</u>		
In dry sink, J. H. Gunter tract, SW¼SW¼ sec. 75, H. & G. N. R.R. sur., blk. B-4, 4		
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 200--Continued</u>		
miles north of Claude.		
Sandy loam, top soil - - -	2	2
Brown clay and gravel - - -	2	4
Sandy reddish-colored clay	4	8
Gray clay and gravel - - -	5	13
Red and gray clay - - - - -	4	17
Red clay - - - - -	13	30
Gray clay - - - - -	1	31
Sandy red clay and caliche	5	36
February 5, 1940		

	Thickness (feet)	Depth (feet)
<u>Well 201</u>		
In draw, J. H. Gunter tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 75, H. & G. N. R.R. sur., blk. B-4, 4 miles north of Claude.		
Black loam, top soil - - -	1	1
Reddish-colored clay and gravel - - - - -	14	15
Reddish-colored clay - - -	4	19
Sandy red clay and gravel -	9	28
Red clay - - - - -	5	33
Sandy light-red clay - - -	7	40
White caliche - - - - -	1	41
Sandy red clay and caliche	2	43
February 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 202</u>		
In draw, J. H. Gunter tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 85, H. & G. N. R.R. sur., blk. B-4, 4 miles north of Claude.		
Dark loam, top soil - - -	5	5
Light-red clay - - - - -	4	9
Red clay - - - - -	8	17
Sandy red clay - - - - -	9	26
Red clay and caliche - - -	8	34
Caliche - - - - -	3	37
February 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 204</u>		
In dry sink, Pete Funtz tract, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 122, H. & G. N. R.R. sur., blk. B-4, 5 miles northeast of Claude.		
Dark gumbo, top soil - - -	5	5
Brown clay - - - - -	12	17
Sandy tan clay - - - - -	5	22
Sandy brown clay and caliche	4	26
Brown clay and caliche - -	7	33
Reddish-brown clay - - -	7	40
Brown sand - - - - -	3	43
March 15, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 205</u>		
Edge of dry sink, Pete Funtz tract, SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 122, H. & G. N. R.R. sur., blk.		

	Thickness (feet)	Depth (feet)
<u>Well 205--Continued</u>		
B-4, 5 miles northeast of Claude.		
Dark loam, top soil - - -	2	2
Light-brown clay and caliche	5	7
Grayish-brown clay - - -	3	10
Light-brown clay and caliche	6	16
Pink clay and caliche - -	7	23
Reddish-brown clay and caliche - - - - -	3	26
Pink clay and caliche - -	5	31
Caliche rock - - - - -	-	31
March 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 207</u>		
In dry sink, W. H. Stephenson tract, NW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude.		
Light-gray clay - - - - -	5	5
Sandy brown clay and caliche	5	10
Sandy red clay and gravel -	4	14
Sandy light-colored clay and caliche - - - - -	7	21
Sandy light-red clay and caliche - - - - -	4	25
Sandy red clay - - - - -	3	28
Sandy red clay and caliche	4	32
Rock - - - - -	-	32
December 22, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 208</u>		
In dry sink, W. H. Stephenson tract, NW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude.		
Gray clay - - - - -	6	6
Brownish-gray clay - - -	8	14
Sandy gray clay - - - - -	4	18
Gray clay and caliche - -	1	19
Sandy red clay - - - - -	1	20
Sandy white caliche - - -	1	21
Sandy light-red clay - - -	3	24
Caliche, rock - - - - -	5	29
Rock - - - - -	-	29
December 22, 1939.		

	Thickness (feet)	Depth (feet)
<u>Well 209</u>		
In dry sink, W. H. Stephenson tract, NW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude, 300 feet south of well 207.		
Brownish-gray clay - - -	7	7
Brown clay - - - - -	9	16
Gray clay - - - - -	8	24
Caliche and clay - - - - -	4	28
Sandy light-colored clay and caliche - - - - -	5	33

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 209--Continued</u>		
Caliche - - - - -	2	35
Sandy reddish-colored clay and caliche - - - - -	3	38
Sandy red clay and gravel -	4	42
Sandy reddish-colored clay and caliche - - - - -	5	47
Sandy light-reddish-colored caliche - - - - -	5	52
Sandy red caliche - - -	8	60
December 22, 1939.		

<u>Well 210</u>		
In dry sink, W. H. Stephenson tract, NW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude. 300 feet south of well 209.		
Dark gray clay, top soil -	7	7
Brownish-gray clay - - -	5	12
Sandy gray clay - - - -	5	17
Gray clay and caliche - -	1	18
Sandy gray clay - - - -	2	20
Sandy gray clay with iron rust spots - - - - -	1	21
Sandy light-red clay - - -	2	23
Gray clay with rust spots -	5	28
Sandy red clay - - - - -	2	30
Light-gray clay - - - - -	4	34
Sandy reddish-colored clay	2	36
Gray clay and caliche, some rust - - - - -	2	38
Bluish-gray clay, rust spots	2	40
Fine-grained gray sand - -	2	42
Fine-grained reddish-colored sand - - - - -	5	47
December 23, 1939.		

<u>Well 211</u>		
In dry sink, T. A. Cheauveaux tract, SW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude. 750 feet south of well 210.		
Brownish-gray clay - - -	17	17
Gray clay, little caliche -	4	21
Sandy red clay - - - - -	3	24
Gray clay with rust spots -	5	29
Sandy red clay with rust spots - - - - -	1	30
Fine-grained gray sand - -	1	31
Sandy light-gray clay - - -	1	32
Gray clay with rust spots -	2	34
Fine-grained tan sand - - -	1	35
Fine-grained tan sand and gravel - - - - -	3	38
Sandy red clay - - - - -	1	39

	Thickness (feet)	Depth (feet)
<u>Well 211--Continued</u>		
Fine-grained reddish-colored sand - - - - -	6	45
Sandy reddish-colored clay and caliche - - - - -	5	50
January 3, 1940.		

<u>Well 212</u>		
South edge of dry sink, T. A. Cheauveaux tract, SW $\frac{1}{4}$ sec. 165, H. & G. N. R.R. sur., blk. B-4, 1 $\frac{1}{2}$ miles east of Claude. 300 feet south of well 211.		
Brown clay, top soil - - -	2	2
Reddish-brown clay - - -	13	15
Sandy reddish-colored clay	4	19
Brownish-gray clay - - -	3	22
Gray clay with rust spots -	3	25
Sandy red clay with rust spots - - - - -	1	26
January 4, 1940.		

<u>Well 215</u>		
In dry sink, J. P. Reck tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 200, H. & G. N. R.R. sur., blk. B-4, 5 $\frac{1}{4}$ miles east of Claude.		
Black gumbo, top soil - - -	5	5
Reddish-colored clay and caliche - - - - -	18	23
Caliche and red clay - - -	5	28
Red sand - - - - -	25	53
Light-red sand - - - - -	20	73
Gray sand - - - - -	7	80
Rock - - - - -	-	80
January 20, 1940.		

<u>Well 216</u>		
In dry sink, J. P. Reck tract, sec. 200, H. & G. N. R.R. sur., blk. B-4, 5 $\frac{1}{4}$ miles east of Claude. 300 feet east of well 215.		
Black gumbo, top soil - - -	6	6
Reddish-colored clay - - -	5	11
Brown clay - - - - -	20	31
Gray sand and clay - - - -	3	34
Gray sand - - - - -	7	41
Red clay and caliche - - -	10	51
Red and gray sand - - - -	23	74
Gray sand - - - - -	8	82
January 20, 1940.		

<u>Well 217</u>		
East edge of dry sink, J. P. Reck tract, sec. 200, H. & G. N. R.R. sur., blk. B-4, 5 $\frac{1}{4}$ miles east of Claude. 300 feet east of well 216.		

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

	Thickness (feet)	Depth (feet)
<u>Well 217--Continued</u>		
Black gumbo, top soil - -	6	6
Reddish-colored clay - -	4	10
Gray and red clay - - -	18	28
Gray clay and sand - - -	1	29
Gray clay - - - - -	7	36
Black and gray clay, mixed	7	43
January 20, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 218</u>		
In draw, E. T. Hughlett tract, SE $\frac{1}{2}$ NW $\frac{1}{4}$ sec. 203, H. & G. N. R.R. sur., blk. B-3, 7 miles southeast of Claude.		
Sandy gray loam, top soil -	8	8
Sandy gray clay - - - -	6	14
Sandy red clay - - - -	4	18
Fine-grained tan sand - -	4	22
Sandy red clay - - - -	8	30
Fine-grained white sand with rust spots - - - - -	6	36
Bluish-green clay with rust spots - - - - -	2	38
Fine-grained white sand with rust spots - - - - -	3	41
Fine-grained white sand -	4	45
Sandy red clay with rust spots - - - - -	6	51
Sandy red clay - - - -	19	70
Fine-grained red sand - -	3	73
February 22, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 219</u>		
In draw, E. T. Hughlett tract, SE $\frac{1}{2}$ S7 $\frac{1}{2}$ sec. 203, H. & G. N. R.R. sur., blk. B-3, 7 miles southeast of Claude.		
Sandy red loam - - - -	3	3
Sandy red clay and gravel -	21	24
Red clay and caliche gravel	10	34
Caliche rock - - - - -	1	35
Rock - - - - -	-	35
February 22, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 222</u>		
Edge of draw, Alice M. Martin tract, SE $\frac{1}{4}$ S7 $\frac{1}{2}$ sec. 178, H. & G. N. R.R. sur., blk. B-3, 9 miles southeast of Claude.		
Sandy loam - - - - -	3	3
Sandy pink clay and caliche	5	8
Sandy reddish-brown clay -	2	10
Sandy pink clay and caliche	7	17
Fine-grained pink sand - -	2	19
Sandy light-pink clay and caliche - - - - -	10	29
Sandy pink clay with brick-red streaks - - - - -	5	34
March 14, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 223</u>		
Edge of draw, Alice M. Martin tract, SE $\frac{1}{4}$ S7 $\frac{1}{2}$ sec. 178, H. & G. N. R.R. sur., blk. B-3, 9 miles southeast of Claude.		
Sandy loam - - - - -	1	1
Dark-colored clay - - - -	4	5
Dark-colored clay and caliche	2	7
Fine-grained red sand and clay - - - - -	10	17
Red clay - - - - -	5	22
Sandy fine-grained light-red clay - - - - -	3	25
Caliche - - - - -	4	29
Light-red sand and caliche rock - - - - -	1	30
Rock - - - - -	-	30
March 13, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 224</u>		
In dry sink, L. R. Shores tract, SW $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 2, B. S. & F. R.R. sur., 10 $\frac{1}{2}$ miles southeast of Claude.		
Dark clay, top soil - - -	4	4
Light-gray clay - - - -	5	9
Sandy gray clay - - - -	4	13
Gray clay with rust spots -	3	16
Red clay - - - - -	5	21
Sandy red clay - - - -	12	33
Light-tan clay and sand -	4	37
Fine-grained tan sand - -	4	41
Light-colored sand - - -	4	45
Light-colored sand and gravel	4	49
Brown clay - - - - -	3	52
Caliche rock - - - - -	2	54
Rock - - - - -	-	54
March 8, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 225</u>		
In dry sink, L. R. Shores tract, 300 feet south of well 224, 10 $\frac{1}{2}$ miles southeast of Claude.		
Gumbo, top soil - - - -	6	6
Gray clay - - - - -	8	14
Fine-grained yellow sand -	4	18
Red clay with rust spots -	3	21
Sandy red clay - - - -	10	31
Fine-grained red sand and clay - - - - -	4	35
Fine-grained light-red sand	10	45
Tan-colored sand - - - -	7	52
Fine-grained light-red sand	2	54
Rock - - - - -	-	54
March 8, 1940.		

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

	Thickness (feet)	Depth (feet)
<u>Well 226</u>		
Below cap rock, J. T. McGehee tract, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, D. & W. sur., 5 miles southwest of Goodnight, 12 $\frac{1}{4}$ miles southeast of Claude.		
Sandy loam, top soil - - -	2	2
Tan sand and gravel - - -	4	6
Coarse-grained tan sand and gravel - - - - -	2	8
Coarse-grained brown sand and gravel - - - - -	13	21
March 19, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 227</u>		
Below cap rock, J. T. McGehee tract, SW $\frac{1}{4}$ sec. 2, D. & W. sur., 300 yards south of well 226.		
Sandy top soil - - - -	4	4
Fine-grained light-colored sand and gravel - - -	6	10
Fine-grained light-tan sand	3	13
Sand and gravel - - - -	2	15
Sand and caliche rock - -	5	20
Rock - - - - -		20
March 19, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 231</u>		
Near creek, J. T. McGehee tract, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. W. N. G. R.R. sur., blk. 1, 12 $\frac{1}{4}$ miles southeast of Claude.		
Sandy red loam, top soil -	3	3
Fine-grained red sand - -	4	7
Fine-grained brick-red, dry shaley clay - - - - -	3	10
Tan sand and gravel - - -	3	13
Fine-grained brick-red, dry shaley clay - - - - -	1	14
Tan sand and gravel - - -	5	19
Brick-red shale - - - - -	5	24
Rock - - - - -		29
March 8, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 232</u>		
Bottom land, J. T. McGehee tract, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. W. N. G. R.R. sur., blk. 1, 12 $\frac{1}{4}$ miles southeast of Claude.		
Red sand, top soil - - -	1	1
Red sand and gravel - - -	1	2
Tan sand and gravel - - -	2	4
Coarse-grained gray sand -	2	6
Light-colored water-bearing sand and gravel - - - -	2	8
Red shale - - - - -	8	16
March 18, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 234</u>		
Edge of dry sink, Minnie E. Dyer tract, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 72, H. & G. N. R.R. sur., blk. B-3, 15 $\frac{1}{2}$ miles southeast of Claude.		
Brown sand - - - - -	2	2
Reddish-colored sand - -	4	6
Light-gray sand and clay -	4	10
Red clay and shale - - -	2	12
Red clay and caliche - -	3	15
Red sand - - - - -	3	18
Red clay and caliche - -	4	22
Light-red sand and sand rock	1	23
Rock - - - - -		23
March 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 235</u>		
In dry sink, Minnie E. Dyer tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 72, H. & G. N. R.R. sur., blk. B-3, 15 $\frac{1}{2}$ miles southeast of Claude.		
Gray gumbo, top soil - -	7	7
Light-colored caliche - -	2	9
Gray clay - - - - -	8	17
Light-gray clay - - - - -	3	20
Gray clay with rust spots -	2	22
Light-gray clay - - - - -	3	25
Fine-grained tan sand - -	3	28
Fine-grained sand and clay	2	30
Light-colored clear sand -	5	35
Fine-grained tan sand - -	2	37
Fine-grained clear sand -	3	40
Fine-grained brown sand -	3	43
Fine-grained brownish-pink sand - - - - -	3	46
Fine-grained brown sand -	2	48
Pink sand and clay - - -	2	50
Brown sand and gravel - -	4	54
Brown sand - - - - -	3	57
Brown sand and gravel - -	3	60
March 27, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 237</u>		
Head of creek, C. G. Strickland tract, NW cor. Franklin County School land, 4 miles east of Goodnight.		
Sandy loam, top soil - -	10	10
Brown sand - - - - -	5	15
Gray clay and caliche - -	3	18
Tan sand - - - - -	5	23
Light-tan water sand - -	5	28
Struck water at 24 feet. Water level, 24 feet below ground level, 3 hours after hole completed. March 1, 1940.		

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

	Thickness (feet)	Depth (feet)
<u>Well 238</u>		
Head of draw, C. G. Strickland tract, NW cor. of Franklin County School land, 4 miles east of Goodnight.		
Sandy loam, top soil - - -	3	3
Tan sand - - - - -	3	6
Tan sand, clay and caliche	2	8
Brown clay and gravel - -	2	10
Dark-gray clay and caliche	2	12
Sandy tan clay - - - - -	2	14
Struck water at 12 feet. Water level, 12 feet below ground level, 3 hours after hole completed. March 1, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 239</u>		
Edge of draw, C. G. Strickland tract, NW cor. Franklin County School land, 4 miles east of Goodnight.		
Sandy dark-colored loam - -	2	2
Fine-grained tan sand - -	4	6
Fine-grained tan sand with rust spots - - - - -	3	9
Sandy light-tan clay - - -	8	17
Sandy reddish-brown clay -	1	18
March 2, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 275</u>		
River bottom, Cleve O. Bennett tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 135, H. & G. N. R.R. sur., blk. B-3, 11 $\frac{1}{2}$ miles east of Claude.		
Brown sand - - - - -	2	2
Light-gray sand - - - - -	4	6
Brown sand and clay - - -	4	10
Gray sand, water - - - - -	2	12
Sand and caliche - - - - -	3	15
Struck water at 12 feet. Water level, 12 feet below ground level, 2 hours after hole completed. March 25, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 276</u>		
River bottom, Cleve O. Bennett tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 135, H. & G. N. R.R. sur., blk. B-3, 11 $\frac{1}{2}$ miles east of Claude.		
Brown sand - - - - -	1	1
Light-gray sand - - - - -	2	3
Brown sand and caliche - -	4	7
Brown sand and clay - - -	2	9
Light-gray clay and caliche	2	11
Water - - - - -		11
Struck water at 10 $\frac{1}{2}$ feet. Water level, 10 $\frac{1}{2}$ feet below ground level, -- hours after hole completed. March 25, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 277</u>		
River bottom, Cleve O. Bennett tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 135, H. & G. N. R.R. sur., blk. B-3, 11 $\frac{1}{2}$ miles east of Claude.		
Brown sand - - - - -	2	2
Gray sand - - - - -	1	3
Brown sand - - - - -	4	7
Brown sand and clay - - -	2	9
Gray sand and caliche - -	3	12
Brown clay and caliche - -	2	14
Light-gray clay and caliche	7	21
March 25, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 302</u>		
Flat, A. Ranch tract, center sec. 44, blk. W.B., 1 $\frac{1}{2}$ miles northeast of Palo Duro.		
Loam, top soil - - - - -	3	3
Sandy red shale and loam -	2	5
Brown clay and loam - - -	5	10
Red sand and shale - - -	3	13
Red and blue streaked shale	5	18
February 29, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 303</u>		
Flat, A Ranch tract, center sec. 44, blk. W.B., 1 $\frac{1}{2}$ miles northeast of Palo Duro.		
Sandy top loam - - - - -	3	3
Sandy red clay - - - - -	4	7
Red shale - - - - -	4	11
Red shale and gypsum - -	11	22
February 29, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 308</u>		
In draw, A. Ranch tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, blk. G-5, 3 $\frac{1}{2}$ miles southeast of Palo Duro.		
Sandy soil, gravel boulders	1	1
Medium sand, (water at 6.6)	5	6
Red clay - - - - -		6
Water level, 6 $\frac{1}{2}$ feet below ground level, 2 hours after hole completed. March 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 309</u>		
Edge of draw, A. Ranch tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, blk. G.E., 40 feet west of well 308. 3 $\frac{1}{2}$ miles southeast of Palo Duro.		
Sandy soil and gravel boulders - - - - -	1	1
Sand - - - - -	3	4

(Continued on next page)

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

	Thickness (feet)	Depth (feet)
<u>Well 309--Continued</u>		
Water and red clay - - -	1	5
Struck water at 4 feet. Water level, 4 feet below ground level 2½ hours after hole completed. March 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 310</u>		
Side of draw, A. Ranch tract, 33 feet west of well 309, ¾ miles southeast of Palo Duro.		
Sandy top soil - - - -	1	1
Sand and water - - - -	9	10
Coarse-grained sand, gravel, and red clay - - - -	3	13
Struck water at 10 feet. Water level, 10 feet below ground level, 1½ hours after hole completed. March 8, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 311</u>		
Head of draw, A. Ranch tract, SE¼SE¼ sec. 30, blk. G.E., ¾ miles southeast of Claude.		
Sandstone - - - - -	1	1
Sand and gravel - - - -	5	6
Water - - - - -		6
Struck water at 6 feet. Water level, 6 feet below ground level, 1 hour after hole completed. March 5, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 312</u>		
In draw, A. Ranch tract, 60 feet northeast of well 211, ¾ miles southeast of Palo Duro.		
Sandy soil and gravel - -	2	2
Sandstone - - - - -	1	3
Sand - - - - -	7	10
Sandstone - - - - -	1	11
Red shale - - - - -	1	12
Elevation 94 feet. Water level, 94 feet below ground level, 2 hours after hole completed. March 6, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 313</u>		
In draw, A. Ranch tract, 50 feet north of well 311, ¾ miles southwest of Palo Duro.		
Sandstone - - - - -	1	1
Sand - - - - -	7	8
Sandstone and sand - - -	2	10
March 6, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 315</u>		
Hilltop, A. Ranch tract, 100 feet east of well 311, ¾ miles east of Palo Duro.		
Sandy red top soil - - -	2	2
Red clay - - - - -	9	11

	Thickness (feet)	Depth (feet)
<u>Well 315--Continued</u>		
Tan-colored sand and gravel	1	12
Sandstone - - - - -		12
March 16, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 316</u>		
Hillside, A. Ranch tract, NW¼NW¼ sec. 23, A & G sur., blk. 5, ¾ miles southeast of Palo Duro.		
Sandy red loam - - - - -	1	1
Sandy red shale, loam and gravel - - - - -	3	4
Sandy red shale and rock -	1	5
Rock - - - - -		5
March 6, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 317</u>		
Hillside, A. Ranch tract, NW¼NW¼ sec. 27, A & G sur., Blk. G-5, 4 miles southeast of Palo Duro.		
Dark loam, top soil - - -	3	3
Rusty brown sand - - - -	2	5
Red shale - - - - -	3	8
Rock - - - - -		8
March 7, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 323</u>		
In sink, A. Ranch tract, NE¼NE¼ sec. 13, T. W. N. G. R.R. sur., blk. C, 6¼ miles northwest of Palo Duro.		
Slate-colored clay - - - -	6	6
Gray clay - - - - -	6	12
Bluish-gray clay - - - -	9	21
Caliche - - - - -	7	28
Sandy brown clay - - - -	5	33
Light-reddish-brown clay and sand - - - - -	3	36
March 2, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 324</u>		
In sink, A. Ranch tract, SE¼SE¼ sec. 11, T. W. N. G. R.R. sur., blk. C, 6¼ miles northwest of Palo Duro.		
Dark-gray gumbo - - - -	4	4
Gray clay - - - - -	3	7
Silica - - - - -	8	15
Rock - - - - -		15
March 2, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 430</u>		
In sink, C. E. Helms tract, SW¼NE¼ sec. 40, B. S. & F. R.R. sur., blk. M-10, 2 miles southwest of Wayside.		
Dark gumbo, top soil - - -	6	6
(Continued on next page)		

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

	Thickness (feet)	Depth (feet)
<u>Well 430--Continued</u>		
Gray clay - - - - -	5	11
Gray clay with rust spots -	3	14
Pink clay - - - - -	3	17
Grayish-tan clay - - - - -	4	21
Pink clay - - - - -	5	26
Sandy tan clay - - - - -	10	36
Pink clay - - - - -	5	41
Red and gray-streaked clay	5	46
Sandy red clay - - - - -	7	53
Caliche - - - - -	1	54
Caliche rock - - - - -	2	56
Rock - - - - -		58
March 20, 1940.		

<u>Well 435</u>		
In dry sink, E. O. Hutton tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 20, B. S. & F. R.R. sur., blk. M-10, 2 miles west of Wayside.		
Gumbo, top soil - - - - -	5	5
Gray clay - - - - -	7	12
Light-gray clay - - - - -	4	16
Red clay with rust spots -	2	18
Caliche - - - - -	6	24
Fine-grained sand and clay	9	33
Rock - - - - -	6	39
March 20, 1940.		

	Thickness (feet)	Depth (feet)
<u>Well 439</u>		
Gentle slope, J. T. McGehee tract, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, B. S. & F. R.R. sur., blk. M-10, 1 $\frac{1}{2}$ miles north of Wayside.		
Brown loam, top soil - -	2	2
Sandy dark-brown clay - -	3	5
Sandy pink clay and caliche	2	7
Sandy pinkish-brown clay -	7	14
Pink clay and caliche - -	4	18
Brick-red clay - - - - -	11	29
Pink clay and caliche - -	5	34
Caliche rock - - - - -	2	36
Rock - - - - -		36
March 21, 1940.		

<u>Well 445</u>		
In dry sink, Emma and Guy Rogers tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 157, D. & S. E. R.R. surv., blk. M-10, 2 miles northwest of Wayside.		
Black gumbo, top soil - -	11	11
Pink clay - - - - -	3	14
Rock - - - - -	1	15
March 20, 1940.		

Partial analyses of water from wells and springs in Armstrong County, Texas

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
c/ 5	R. J. Thompson	202	Feb. 7, 1940	368	55	38	31	317	73	13	b/	2.1	293
6	H. E. White	193	do.	380	57	37	34	305	79	21	b/	1.7	293
7	do.	190	Mar. 29, 1940	307	-	-	-	317	13	18	b/	-	-
8	Mrs. Mary Hibbits	184	do.	262	-	-	-	256	20	15	b/	-	-
9	H. E. White	150	do.	300	45	38	20	329	15	17	b/	-	269
c/11	C. P. Benson	179	do.	255	32	36	20	281	10	16	b/	2.7	227
12	Great Southern Life Ins. Co.	201	do.	291	-	-	-	329	a/	8	b/	-	-
13	Lee V. Patterson	153	do.	291	-	-	-	329	a/	7	b/	-	-
18	R. S. White	202	Mar. 28, 1940	276	41	23	35	268	27	18	b/	-	199
19	B. C. Wooldridge	201	do.	218	36	25	16	244	12	9	b/	-	190
21	Campbell & Beasley	156	do.	319	-	-	-	305	31	16	b/	-	-
29	Mrs. A. O. McCall	164	Mar. 29, 1940	245	-	-	-	256	16	8	b/	-	-
31	Ruby Gunter	200	do.	-	-	-	-	-	51	27	b/	-	-
32	Nettie Hubbard	204	do.	291	30	30	43	293	31	13	b/	-	198
33	Jessie Watson	164	Mar. 7, 1940	303	50	28	29	281	34	24	b/	-	237
c/34	W. E. Robinson	165	Mar. 4, 1940	299	38	35	33	329	22	8	b/	1.4	236
37	Robinson Brothers	193	Mar. 7, 1940	279	-	-	-	275	28	9	b/	-	-
40	E. J. Goodin	154	Mar. 29, 1940	311	51	41	16	366	10	13	b/	-	295
41	Susie H. Heaston	209	do.	281	40	35	23	317	18	9	b/	-	241
42	Mrs. C. E. Hair	198	do.	310	-	-	-	305	27	14	b/	-	-
43	Mrs. M. Culver	218	Mar. 7, 1940	277	42	23	34	268	30	16	b/	-	199
c/44	J. M. Bryant	186	do.	281	45	26	30	293	20	14	b/	1.7	221
47	T. J. Campbell	129	Mar. 9, 1940	233	28	40	7	256	14	18	b/	0.3	235
51	J. G. Noel	179	do.	330	30	28	64	348	22	13	b/	2.1	192
54	R. J. Jones	200	do.	286	-	-	-	256	37	15	b/	-	-
55	Laura Brian	224	do.	315	34	32	46	305	30	20	b/	2.6	215

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

Partial analyses of water from wells and springs in Armstrong County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
56	W. R. Wilson	190	Mar. 9, 1940	295	-	-	-	268	30	21	b/	-	-
58	E.D.Harrel Estate	217	Mar. 7, 1940	313	39	37	31	299	42	14	b/	2.9	248
c/ 59	do.	110	Mar. 1, 1940	307	45	31	32	293	30	22	b/	2.7	239
66	J.R.McNeal Estate	207	Apr. 2, 1940	308	36	27	48	293	24	29	b/	-	202
72	R. C. Garrison	260	do.	383	23	15	110	342	41	26	b/	-	119
74	Mrs.M.J.Lutrell	Spring	Mar. 12, 1940	227	-	-	-	238	a/	14	b/	-	-
76	Hugh Reed Estate	Spring	Mar. 11, 1940	293	-	-	-	287	16	16	b/	-	-
c/ 81	Mrs. Ida Dye	279	Apr. 1, 1940	264	16	10	79	268	16	9	b/	1.5	81
83	G. T. Bagwell	172	do.	232	-	-	-	244	a/	12	b/	-	-
86	Eugene Woods	190	do.	258	40	25	26	244	26	21	b/	-	200
87	O. L. Brunson	190	do.	252	-	-	-	232	24	18	b/	-	-
91	Thompson Brothers	194	do.	325	31	31	54	293	22	38	b/	-	204
94	G. M. Day	217	do.	339	-	-	-	293	39	28	b/	-	-
95	R.C.Benton Estate	179	do.	313	40	25	50	305	24	24	b/	-	200
100	G. A. Corbin	182	do.	286	-	-	-	268	28	17	b/	-	-
101	Clarence Patterson	183	do.	307	-	-	-	293	25	20	b/	-	-
c/ 103	G. A. Corbin	199	do.	284	56	20	28	281	27	14	b/	1.7	222
104	Clarence Patterson	188	do.	197	-	-	-	195	16	9	b/	-	-
108	C. B. Hunter	184	Apr. 2, 1940	275	-	-	-	268	20	17	b/	-	-
112	Mrs.J.D.Woodburn	220	do.	283	42	27	32	293	20	18	b/	-	217
114	Mrs.J.F.Hill Estate	212	Apr. 1, 1940	284	-	-	-	305	11	12	b/	-	-
117	Mrs.Mildred Doak	105	do.	247	40	21	29	268	14	11	b/	-	188
119	C.C.Hollingsworth	214	do.	312	-	-	-	305	29	13	b/	-	-
120	C. M. Byrd	216	do.	288	41	38	18	305	29	12	b/	-	259
121	Mrs.J.W. Duffell	215	do.	257	50	27	11	256	26	17	b/	-	237
126	C. C. Cobb	215	Mar. 26, 1940	323	-	-	-	293	41	16	b/	-	-
127	Lena Tucker	221	do.	311	-	-	-	281	43	13	b/	-	-
129	B. C. Wooldridge	207	do.	322	-	-	-	293	37	19	b/	-	-
c/ 130	E. D. Ford	191	Jan. 5, 1940	300	41	31	33	281	36	18	b/	3.2	229
131	H. H. Kight	202	Feb. 3, 1940	156	22	12	23	140	20	7	b/	2.5	102
132	Rudolph Campbell	196	Jan. 3, 1940	287	35	38	23	268	36	20	b/	2.8	243
135	R. L. Bagwell	195	do.	285	34	35	26	281	36	16	b/	-	232

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

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

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
c/137	City of Claude	452	Jan. 2, 1940	319	38	36	35	287	52	13	b/	3.6	242
138	Warner Estate	220	Mar. 26, 1940	307	9	32	69	305	31	16	b/	-	155
140	W. W. Hood	212	do.	291	30	35	36	281	35	14	b/	2.9	216
142	J. P. Moore	206	do.	288	31	38	28	293	33	14	b/	-	234
c/143	C. D. Eisenhaur	190	Feb. 3, 1940	283	30	35	31	275	36	13	b/	3.2	222
c/144	J. F. Wiegman	207	Jan. 11, 1940	307	42	36	27	293	44	11	b/	3.4	252
145	Marcellus Bates	187	Mar. 13, 1940	325	-	-	-	317	13	30	b/	-	-
146	J. K. Hunt	173	Mar. 7, 1940	268	31	39	17	275	30	15	b/	-	239
147	H. A. Finley	138	Jan. 30, 1940	254	46	29	12	262	19	14	b/	-	233
149	W. P. A. Test	69	Jan. 29, 1940	353	61	41	20	372	34	12	b/	2.0	320
155	John C. Baker	165	Mar. 7, 1940	298	-	-	-	275	36	14	b/	-	-
156	John Blocker	184	Mar. 29, 1940	304	34	28	47	317	29	10	b/	-	202
157	Federal Farm Mortgage Co.	196	do.	314	40	29	42	305	37	16	b/	-	220
158	G. E. Garrett	190	do.	334	-	-	-	305	37	20	b/	-	-
160	Mrs. Claude Howe	185	Mar. 28, 1940	263	40	36	10	244	31	26	b/	-	247
161	Claude Cemetery	235	do.	286	29	39	28	293	27	19	b/	-	234
c/169	J. M. Alexander	197	Mar. 29, 1940	294	44	25	33	232	53	24	b/	1.4	210
170	Henry Williams	178	Mar. 28, 1940	288	-	-	-	293	25	8	b/	-	-
171	Southwestern Life Ins. Co.	211	do.	292	-	-	-	268	35	14	b/	-	-
173	Richard Morris	206	do.	275	28	36	29	281	33	11	b/	-	217
174	R. A. Campbell	186	do.	331	38	45	23	268	49	36	b/	2.7	283
176	A. H. Gau	209	do.	290	34	42	20	293	29	21	b/	-	256
c/177	E. A. Gooch	265	Mar. 13, 1940	404	41	45	57	403	34	24	b/	4.8	288
179	Mrs. S. J. Bagwell	200	Mar. 28, 1940	258	21	32	36	268	25	12	b/	-	185
184	J. H. Gunter	228	Mar. 27, 1940	335	57	23	37	220	51	56	b/	2.5	239
203	M. B. Kight	-	Mar. 13, 1940	272	47	24	26	275	15	14	b/	1.6	214
c/206	F. J. Weigman	270	do.	258	39	25	27	238	32	14	b/	4.4	200
230	J. T. McGehee	19	Feb. 14, 1940	274	56	23	19	281	24	14	b/	-	234
237	W. P. A. Test	28	Mar. 1, 1940	271	90	7	7	305	14	3	b/	0.3	254
240	do.	161	Feb. 23, 1940	242	68	13	9	238	a/	26	b/	0.9	223

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

Partial analyses of water from wells and springs in Armstrong County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
241	W. S. Bagby	127	Feb. 23, 1940	333	99	10	14	220	10	92	b/	-	291
242	W. M. Boston	238	Apr. 8, 1940	227	-	-	-	244	a/	13	b/	-	-
244	E. E. Burnett	235	do.	279	55	19	27	268	27	19	b/	-	217
247	Mrs. Earl Miller	235	do.	228	51	15	19	244	a/	17	b/	-	189
249	Davis Burrow	239	do.	214	52	17	9	244	a/	11	b/	-	201
251	Newberry Estate	240	do.	242	53	21	13	256	15	14	b/	-	218
c/252	F. M. Phillips	240	do.	241	44	20	23	244	15	18	b/	0.6	192
255	L. C. Henry	210	Feb. 21, 1940	149	26	13	14	146	14	10	b/	-	118
258	Mrs. T.B. Miller	244	Apr. 8, 1940	239	52	16	21	256	10	14	b/	-	195
259	H. S. Hudson	240	do.	227	-	-	-	244	a/	13	b/	-	-
260	J. F. Cook	132	Mar. 19, 1940	180	50	11	6	195	a/	14	b/	0.6	172
261	J. A. McMurty	-	do.	220	-	-	-	232	10	10	b/	-	-
c/262	Geo. W. Martin	176	do.	261	61	14	19	171	25	57	b/	0.8	208
263	G. A. Blankenship	-	do.	249	-	-	-	214	16	33	b/	-	-
264	do.	-	do.	159	-	-	-	183	a/	5	b/	-	-
266	J. J. Ray	151	do.	256	51	12	34	232	14	16	b/	-	178
267	J. C. Doneghy	-	do.	241	-	-	-	195	24	30	b/	-	-
268	A. R. Miller	-	do.	239	-	-	-	244	14	12	b/	-	-
269	J.M. Thomas Estate	208	do.	-	-	-	-	-	11	17	b/	-	-
c/270	Mary C. Bugbee	133	do.	200	36	17	20	220	a/	10	b/	0.8	161
272	Cleve O. Bennett	135	do.	253	69	12	10	207	28	32	b/	-	223
274	T. C. Thornberry	78	do.	-	-	-	-	-	11	11	b/	-	-
275	W. P. A. Test	15	Mar. 25, 1940	270	63	15	23	275	14	19	b/	0.8	219
c/278	J. F. Scarbrough	-	do.	562	95	38	57	317	125	91	b/	0.4	394
279	C. H. Brown	94	do.	159	37	12	9	183	a/	5	b/	-	143
280	Knox Robinson	106	do.	261	47	12	37	244	a/	15	21	-	168
281	J. M. Crain	110	do.	230	-	-	-	232	12	15	b/	-	-
282	E. N. Hudgens	197	do.	190	33	15	20	171	20	17	b/	0.9	144
283	Mrs. C. H. Keeter	125	do.	224	46	17	19	244	12	10	b/	-	186
284	Deardorf Heirs	-	do.	259	-	-	-	250	25	12	b/	-	-
285	Geo. C. Whatley	-	do.	221	-	-	-	232	12	9	b/	-	-
c/286	Geo. Herring Estate	325	do.	276	56	17	31	305	10	11	b/	0.8	211

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

Partial analyses of water from wells and springs in Armstrong County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
301	A. Ranch	121	Feb. 28, 1940	3,424	602	248	65	134	2,421	22	b/	-	2,522
305	do.	89	Feb. 27, 1940	2,507	-	-	-	159	1,614	58	b/	-	-
306	do.	51	do.	2,237	461	105	66	159	1,506	21	b/	0	1,584
307	do.	99	Feb. 26, 1940	2,726	589	103	87	146	1,850	25	b/	0	1,894
320	do.	150	Feb. 29, 1940	232	-	-	-	244	13	9	b/	-	-
322	do.	127	do.	206	48	13	14	195	15	20	b/	-	173
330	Hugh Reed Estate Spring		Mar. 11, 1940	293	38	20	52	305	15	18	b/	-	177
c/402	Dan L. Adams	95	Mar. 30, 1940	262	66	10	25	281	14	8	b/	1.3	206
403	Bertha Payne Mohler	107	do.	266	57	23	13	268	29	12	b/	-	239
405	Mrs. C.L. Brooks	109	do.	265	53	22	18	256	33	13	b/	-	224
407	Floyd Adams	113	do.	273	-	-	-	244	35	15	b/	-	-
411	Dan L. Adams	104	do.	235	34	25	23	232	27	12	b/	-	185
c/412	G. G. Foster	110	do.	318	-	-	-	281	43	14	b/	2.4	-
416	W. R. Stockrett	130	Mar. 20, 1940	308	51	21	53	293	26	9	b/	2.0	170
418	Geo. Gillen	108	do.	257	-	-	-	250	28	8	b/	-	-
420	W. I. Lane	101	do.	286	60	20	21	250	36	26	b/	-	232
423	Kenneth C. Knox	100	do.	273	62	21	15	281	26	9	b/	2.2	243
426	M. L. McGehee	113	Mar. 21, 1940	286	-	-	-	262	28	20	b/	-	-
429	G. R. McNeal	122	do.	284	36	34	26	287	37	10	b/	-	231
c/432	C. E. Helms	127	do.	289	45	24	33	250	53	8	b/	3.4	210
434	E. O. Hutton	-	Mar. 20, 1940	320	-	-	-	262	53	19	b/	-	-
436	J. T. McGehee	77	Mar. 21, 1940	247	-	-	-	268	10	8	b/	-	-
437	do.	73	do.	258	-	-	-	281	14	5	b/	-	-
438	Ola Rogers	62	Mar. 22, 1940	263	-	-	-	268	15	14	b/	-	-
440	H. L. Harrel	-	do.	250	-	-	-	262	15	9	b/	-	-
c/442	Willis Fisher	84	do.	298	38	18	54	262	39	18	b/	2.2	171
446	W. H. Hamblen	84	Mar. 20, 1940	301	61	26	19	293	32	17	b/	2.1	261
447	A. L. Stevens	96	Mar. 22, 1940	260	46	20	28	256	26	14	b/	-	197
448	Mrs. Allie McNeal	110	do.	270	44	20	35	256	23	20	b/	2.1	192
449	do.	121	do.	249	45	21	23	238	24	19	b/	-	198

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

Partial analyses of water from wells and springs in Armstrong County--Continued

Results are in parts per million.

Well	Owner	Depth of well (ft.)	Date of collection	Total dissolved solids (calc.)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulphate (SO ₄)	Chloride (Cl)	Nitrate (NO ₃)	Fluoride (F)	Total hardness as CaCO ₃ (calc.)
450	M. L. Wesley	-	Mar. 22, 1940	241	-	-	-	220	25	16	b/	-	-
451	do.	-	do.	242	-	-	-	256	12	9	b/	-	-
452	Jim Wesley	140	Mar. 18, 1940	260	21	12	66	238	26	18	b/	-	103
453	H. B. Wesley	121	Mar. 22, 1940	239	39	22	22	214	26	25	b/	-	189
454	A. L. Stevens	111	do.	278	45	23	30	256	31	23	b/	-	209
455	do.	110	do.	261	-	-	-	232	29	19	b/	-	-
c/456	R. L. Grigsby	100	do.	254	41	24	25	238	29	16	b/	2.4	200
457	Venella Stone	123	do.	270	-	-	-	244	27	20	b/	-	-
458	J. P. Patterson	108	do.	274	-	-	-	244	26	24	b/	-	-
c/460	J. R. Stockett	114	do.	276	58	26	13	268	25	20	b/	1.7	251
461	W. R. Franklin	109	do.	-	-	-	-	-	45	20	b/	-	-
462	W. C. McGehee	83	Mar. 20, 1940	256	53	17	24	250	26	11	b/	2.1	200

a/ Sulphate less than 10 parts per million.

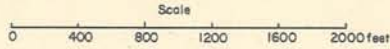
b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligrams equivalents per liter on page 46.

Chemical analyses--Continued
Results are in milligrams equivalents per liter

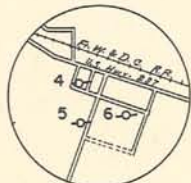
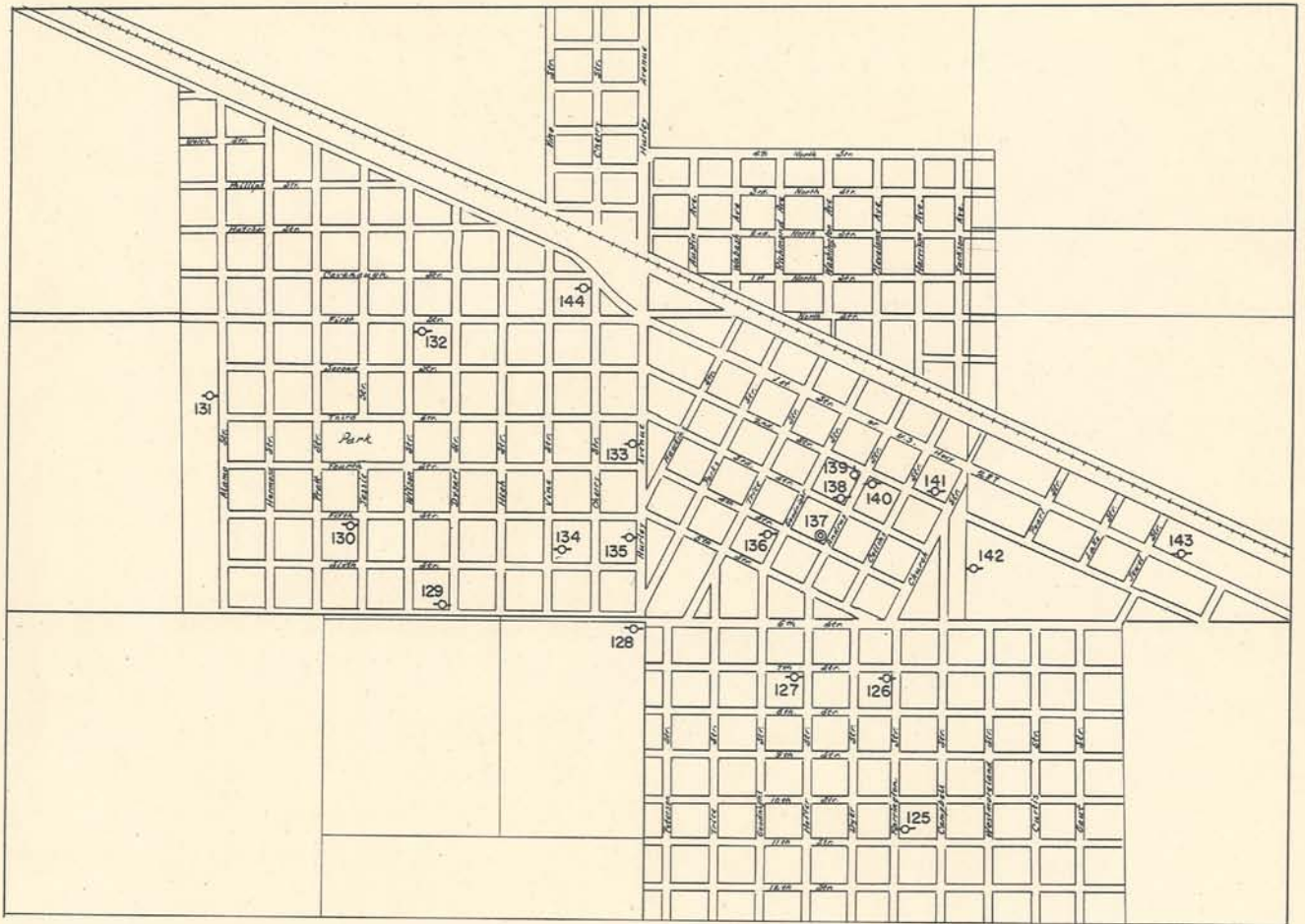
Well	Owner	Depth of well (ft.)	Date of collection	Total hardness as CaCO ₃	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na / K) (calc.)	Bicarbonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Total dissolved solids (calc.)
5	R. J. Thompson	202	Feb. 7, 1940	5.86	2.74	3.12	1.34	5.20	1.51	0.37	0.11	-	14.40
11	C. P. Benson	179	Mar. 29, 1940	4.54	1.60	2.94	0.86	4.60	0.20	0.45	0.14	-	10.80
34	W. E. Robinson	165	Mar. 4, 1940	4.72	1.90	2.82	1.43	5.40	0.45	0.23	0.07	-	12.30
44	J. M. Bryant	186	Mar. 7, 1940	4.42	2.26	2.16	1.29	4.80	0.42	0.40	0.09	-	11.42
59	E. D. Harrel Estate	110	Mar. 1, 1940	4.78	2.24	2.54	1.40	4.80	0.61	0.62	0.14	-	12.36
81	Mrs. Ida Dye	279	Apr. 1, 1940	1.62	0.80	0.82	3.44	4.40	0.33	0.25	0.08	-	10.12
103	G. A. Corbin	199	do.	4.44	2.82	1.62	1.20	4.60	0.57	0.40	0.07	-	11.28
130	E. D. Ford	191	Jan. 5, 1940	4.58	2.06	2.52	1.44	4.60	0.73	0.51	0.17	-	12.04
137	City of Claude	452	Jan. 2, 1940	4.84	1.88	2.96	1.50	4.70	1.08	0.37	0.19	-	12.68
143	C. D. Eisenhaur	190	Feb. 3, 1940	4.44	1.52	2.92	1.34	4.50	0.73	0.37	0.17	-	11.56
144	J. F. Wiegman	207	Jan. 11, 1940	5.04	2.08	2.96	1.17	4.80	0.92	0.31	0.18	-	12.42
169	J. M. Alexander	197	Mar. 29, 1940	4.20	2.18	2.02	1.45	3.80	1.09	0.68	0.07	-	11.30
177	E. A. Gooch	265	Mar. 13, 1940	5.76	2.04	3.72	2.47	6.60	0.69	0.68	0.25	-	16.46
206	F. J. Wiegman	270	do.	4.00	1.96	2.04	1.19	3.90	0.65	0.40	0.23	-	10.38
252	F. M. Phillips	240	Apr. 8, 1940	3.84	2.22	1.62	1.01	4.00	0.31	0.51	0.03	-	9.70
262	Geo. W. Martin	176	Mar. 19, 1940	4.16	3.04	1.12	0.82	2.80	0.52	1.61	0.04	-	9.96
270	Mary C. Bugbee	135	do.	3.22	1.80	1.42	0.87	3.60	0.17	0.28	0.04	-	8.18
278	J. F. Scarbrough	-	Mar. 25, 1940	7.88	4.74	3.14	2.49	5.20	2.60	2.57	0.02	-	20.74
286	Geo. Herring Estate	325	do.	4.22	2.80	1.42	1.34	5.00	0.21	0.31	0.04	-	11.12
402	Dan L. Adams	95	Mar. 30, 1940	4.12	3.30	0.82	1.07	4.60	0.29	0.23	0.07	-	10.38
412	G. G. Foster	110	do.	-	-	-	-	4.60	0.89	0.40	0.13	-	-
432	C. E. Helms	127	Mar. 21, 1940	4.20	2.24	1.96	1.42	4.10	1.10	0.23	0.18	-	11.24
442	Willis Fisher	84	Mar. 22, 1940	3.42	1.90	1.52	2.33	4.30	0.82	0.51	0.12	-	11.50
456	R. L. Grigsby	100	do.	4.00	2.06	1.94	1.09	3.90	0.61	0.45	0.13	-	10.18
460	J. R. Sockett	114	do.	5.02	2.90	2.12	0.55	4.40	0.52	0.56	0.09	-	11.14

MAP OF CLAUDE, TEXAS

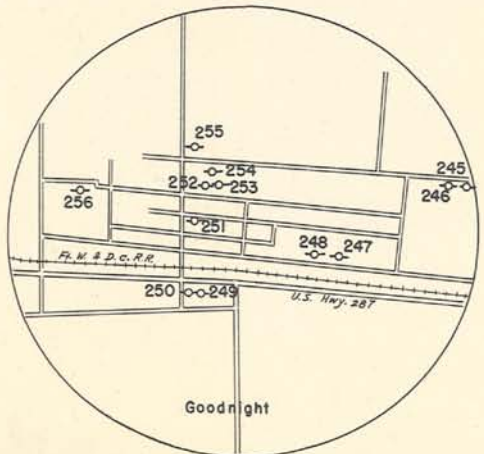


— EXPLANATION —

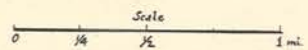
- WELL WITH WINDMILL OR SMALL POWER PUMP
- ⊙ WELL WITH PUMPING PLANT —
5 HORSE POWER OR LARGER
- ◇ UNUSED WELL



Washburn



Goodnight



— EXPLANATION —

- WELL WITH HAND PUMP, BUCKET OR BAILER
- ◇ WELL WITH WINDMILL OR SMALL POWER PUMP
- ⊙ WELL WITH PUMPING PLANT— 5 HORSE POWER OR LARGER
- ◇ UNUSED WELL
- TEST WELL DRILLED BY W.P.A. LABOR
- SPRING
- SINK
- ESCARPMENT

MAP OF ARMSTRONG COUNTY, TEXAS

SHOWING WATER WELLS AND SPRINGS

SCALE
0 1 2 3 4 5 6 MILES

N

FIELD WORK BY
J. C. DALGARN
PROJECT SUPERINTENDENT
W.P.A. PROJECT 14788

BASE COMPILED FROM
LAND OWNERSHIP MAP
HIGHWAY PLANNING SURVEY MAP
AND FIELD NOTES

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

