

TEXAS

STATE BOARD OF WATER ENGINEERS

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HARTLEY COUNTY, TEXAS

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

Work Projects Administration Project 6763

Analyses made and report mimeographed by
WORK PROJECTS ADMINISTRATION
Project 17276

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.

Austin, Texas
July 29, 1938

HARTLEY COUNTY, TEXAS

* * *

Introduction

by

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United States Geological Survey

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

This project was part of a state-wide Work Projects Administration project known as a "State-Wide Inventory of Water Wells," sponsored by the State Board of Water Engineers. The Division of Ground Water of the Geological Survey, United States Department of the Interior, cooperated in the technical direction of the project and the Bureau of Industrial Chemistry of The University of Texas furnished laboratory space and equipment and supervised the chemical analyses.

The analyses were made by chemists employed on Work Projects Administration Project 17276 at Austin, Texas, sponsored by the State Board of Water Engineers. This release was typed and assembled by typists and draftsmen employed on this project.

The field work in Hartley County was started December 20, 1937, and completed April 15, 1938. This work was done as Project 6763 of the Work Projects Administration office at Amarillo, Texas. J. H. Harrison, was project superintendent from the time the project started until February 11, 1938, C. R. Follett, then took over the work and completed the project. The Hartley County Commissioners' Court cooperated by furnishing transportation for the workers during the project.

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

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

| No. | Distance from Middle-water | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------|-------------|---------------------------------|---------------------|-------------|----------------|---------------------|------------------------|
| 1 | 10½ miles northwest | 16, SW¼SW¼ | Capitol Syndicate sur., blk. 11 | -- Beck | -- | -- | -- | -- |
| 2 | 9½ miles northwest | 5, NE¼SE¼ | Capitol Syndicate sur., blk. 14 | do. | -- | -- | -- | 4½ |
| 3 | 8½ miles northwest | 2, NW¼NW¼ | Capitol Syndicate sur., blk. 11 | do. | -- | Old | -- | -- |
| 4 | 7 miles northwest | 25, NE¼SW¼ | Capitol Syndicate sur., blk. 12 | -- | -- | -- | 261 | 3 |
| 5 | 7½ miles north | 23, SE¼NE¼ | do. | -- | -- | Old | -- | 5 |
| 6 | 11½ miles north | 107, NW¼SE¼ | Capitol Syndicate sur., blk. 4 | -- | -- | -- | -- | -- |
| 7 | 13½ miles north | 94, SE¼NE¼ | do. | -- Biggs | -- | Old | 220 | 4 |
| 8 | 14 miles north | 82, SW¼SW¼ | do. | Lon McCrory | -- | 1930 | 280 | 3 |
| 9 | do. | 84, SW¼NW¼ | do. | -- | -- | Old | -- | -- |
| e/ 10 | 13½ miles north | 90, NE¼NE¼ | do. | -- | -- | Old | 205 | 3 |
| 11 | do. | 119, NE¼NE¼ | do. | -- | -- | -- | -- | 5 |
| 12 | 14 miles north | 57, NE¼SE¼ | Brooks & Burleson sur., blk. 2 | E. Guilloud | F. Williams | 1930 | 243 | 3 |
| 13 | 15 miles north | 56, SE¼NE¼ | do. | -- | -- | -- | -- | -- |
| 14 | 15 miles northeast | 55, SW¼SE¼ | do. | Bowling and McCrory | -- | 1920 | 214 | 5 |
| e/ 15 | 14½ miles northeast | 59, NE¼SE¼ | do. | -- Latham | -- | 1934 | 200 | 4 |
| 16 | 15½ miles northeast | 53, SE¼SW¼ | do. | C. O. Barber | F. Reagan | 1934 | 275 | 4 |
| 17 | do. | 60, NE¼NE¼ | do. | -- | -- | Old | -- | -- |
| 18 | 16½ miles northeast | 51, SE¼SW¼ | do. | Roston Simmons | F. Reagan | 1933 | 165 | 3 |
| 19 | 13 miles northeast | 70, SW¼SW¼ | do. | L. McCrory | -- | Old | 165 | 4½ |
| e/ 20 | 12½ miles northeast | 74, SE¼NE¼ | do. | -- | -- | -- | 159 | -- |
| e/ 21 | 11½ miles northeast | 87, SW¼NE¼ | do. | -- | -- | Old | 200 | 3 |
| e/ 22 | 11 miles northeast | 90, NW¼NE¼ | do. | -- | -- | Old | -- | 3 |
| 23 | 14 miles northeast | 77, NW¼NW¼ | do. | Bill Farr | -- | -- | 212 | 3 |
| v/ 24 | 15 miles northeast | 68, NE¼SE¼ | do. | -- | -- | -- | -- | 3 |

a/ Measuring point was top of casing or top of pipe clamp.
 b/ C, cylinder; W, windmill; G, gasoline; E, electric; H, hand; number indicates horsepower.

Records obtained by C. R. Follett and J. H. Harrison, Project Superintendents
(Chemical analyses of water from these wells and springs are in the table of analyses.)

| No. | Height of measuring point above ground (ft.) a/ | Water level | | Pump and power b/ | Use of water c/ | Topographic situation | Remarks |
|-----|---|-----------------------------------|---------------------|-------------------|-----------------|-----------------------|---|
| | | Depth below measuring point (ft.) | Date of measurement | | | | |
| 1 | -- | -- | -- | C,W | S | Sand dunes | Estimated yield, 4 gallons a minute. |
| 2 | -- | -- | -- | C,W | S | Creek bottoms | |
| 3 | -- | -- | -- | C,W | S | Flat | |
| 4 | 2.0 | 199 | Mar. 5, 1938 | C,W | S | -- | Estimated yield, 5 gallons a minute. |
| 5 | -- | -- | -- | C,W | D,S | Flat | Estimated yield, 6 gallons a minute. |
| 6 | -- | -- | -- | C,W | S | -- | Estimated yield, 3 gallons a minute. |
| 7 | -- | 200 | d/ | C,W | D,S | Ridge-top | Lined with 3-inch tubing. |
| 8 | -- | 205 | d/ | C,W | D,S,I | do. | Irrigates small garden. |
| 9 | -- | -- | -- | C,W | D,S | Gentle slope | Steel casing. Estimated yield, 6 gallons a minute. |
| 10 | 1.3 | 199.6 | Mar. 5, 1938 | C,W | S | Flat | Do. |
| 11 | -- | -- | -- | C,W | S | Ridge-top | Do. |
| 12 | -- | 100 | d/ | C,W | S | do. | Reported waters 100 head of cattle. |
| 13 | -- | -- | -- | C,W | S | Gentle slope | Estimated yield, 6 gallons a minute. |
| 14 | 1.5 | 182.9 | Mar. 16, 1938 | C,W | D,S | Ridge-top | Steel casing. Reported waters 300 head of cattle. |
| 15 | -- | -- | -- | C,W | D,S | Gentle slope | Partly filled with sand, Mar. 16, 1938. |
| 16 | -- | 185 | d/ | C,W | D,S,I | do. | Steel casing. Reported water in sand from 185 to 238 feet. |
| 17 | -- | -- | -- | C,W | D,S | Ridge-top | Obstructed at 47 feet. |
| 18 | -- | -- | -- | C,W | D,S | Gentle slope | Steel casing. Estimated yield, 2 gallons a minute. |
| 19 | 3.0 | 149.1 | Apr. 4, 1938 | C,W | D,S | Flat | Do. |
| 20 | 1.0 | 147.1 | do. | None | N | do. | |
| 21 | -- | -- | -- | C,W | S | Gentle slope | Obstructed at 35 feet. |
| 22 | -- | -- | -- | None | N | Sand dunes | Filled with sand to within 5 feet of surface, Apr. 4, 1938. |
| 23 | 0.4 | 168.6 | Apr. 4, 1938 | C,W | D,S | Flat | Steel casing. Estimated yield, 2 gallons a minute. |
| 24 | -- | -- | -- | C,W | N | Gentle slope | |

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

d/ Water level reported.

e/ No water sample collected for analysis.

Records of wells and springs in Hartley County--Continued

| No. | Distance from Middle-water | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------|-------------|--------------------------------|----------------------|-------------|----------------|---------------------|------------------------|
| 25 | 15½ miles northeast | 66, SW¼SE¼ | Brooks & Burleson sur., blk. 2 | D. A. Gustin | -- | 1924 | 205 | 4 |
| e/ 26 | do. | 81, NW¼NW¼ | do. | -- | -- | -- | 188 | 4½ |
| e/ 27 | 16 miles northeast | 86, NW¼NW¼ | H. & T.C. R.R. sur., blk. 48 | -- | -- | -- | -- | 3½ |
| e/ 28 | 17½ miles northeast | 84, SE¼SE¼ | do. | -- | -- | -- | 175 | 4½ |
| 29 | 17 miles northeast | 87, SE¼SE¼ | do. | Pleasant View School | -- | -- | -- | -- |
| 30 | 17½ miles northeast | 113, NE¼SE¼ | do. | Mrs. B. F. Randel | C. Lattimer | 1913 | 200 | 4½ |
| 31 | 15 miles northeast | 146, NE¼NE¼ | do. | -- | -- | -- | 187 | 4½ |
| 32 | 16 miles northeast | 115, NE¼NE¼ | do. | -- | -- | Old | 175 | 4½ |
| 33 | 13½ miles northeast | 98, NE¼NW¼ | Brooks & Burleson sur., blk. 2 | O. H. Finch | E. Pedigro | 1923 | 215 | 4½ |
| 34 | 12½ miles northeast | 94, NW¼SW¼ | do. | Rock Island R.R. | -- | Old | 200 | 6 |
| e/ 35 | 11 miles northeast | 101, NE¼SE¼ | do. | -- Finch | -- | Old | -- | 5 |
| 36 | 9 miles northeast | 104, S¼SE¼ | do. | O. H. Finch | -- | Old | 200 | 6 |
| 37 | do. | 105, NW¼NE¼ | do. | do. | -- | 1930 | 200 | 6 |
| 38 | 10 miles northeast | 3, SE¼NE¼ | do. | do. | -- | Old | 176 | 4½ |
| 39 | 12½ miles northeast | 110, NE¼NE¼ | do. | -- | -- | Old | 200 | 6 |
| e/ 40 | 13½ miles northeast | 4, SE¼NE¼ | T. & N.O. R.R. sur., blk. 1To | -- | -- | -- | 151 | 5 |
| e/ 41 | 14½ miles northeast | 3, NE¼NE¼ | do. | -- | -- | Old | 271 | 4½ |
| e/ 42 | 15½ miles northeast | 145, NE¼SE¼ | H. & T.C. R.R. sur., blk. 48 | -- | -- | Old | -- | 4½ |
| 43 | 16½ miles northeast | 144, SE¼SE¼ | do. | B. F. Williams | -- Wheeler | 1901 | 260 | 4½ |
| 44 | 15½ miles northeast | 1, NW¼NW¼ | T. & N.O. R.R. sur., blk. 1To | -- | -- | -- | -- | -- |
| 45 | 15½ miles east | 10, NW¼NE¼ | do. | Reynolds Cattle Co. | -- | -- | 228 | 4½ |
| 46 | 15 miles east | 11, SE¼SW¼ | do. | do. | -- | -- | 70 | -- |
| 47 | 14½ miles east | 12, SE¼SE¼ | do. | do. | -- | -- | 90/ | -- |
| 49 | 14 miles east | 22, SW¼SE¼ | do. | do. | -- | -- | -- | -- |
| 50 | 13 miles east | 18, SW¼SE¼ | do. | do. | -- | Old | 180 | 5 |
| 51 | 11½ miles east | 15, NW¼SE¼ | do. | do. | -- | -- | -- | -- |
| 52 | 11 miles east | 25, SW¼SE¼ | do. | do. | -- | -- | -- | 5 |

C. R. Follett and J. H. Harrison, Project Superintendents

| 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 | | | | |
| 25 | -- | -- | -- | C,W | D,S | Flat | Steel casing. Estimated yield, 3 gallons a minute. |
| 26 | 0.5 | 179.5 | Mar. 7, 1938 | C,W | D,S | do. | Steel casing. |
| 27 | -- | -- | -- | C,W | -- | do. | Obstructed at 11 feet. |
| 28 | 1.0 | 164.2 | Mar. 1, 1938 | None | N | Ridge-top | |
| 29 | -- | -- | -- | C,W | P | Flat | Estimated yield, 3 gallons a minute. |
| 30 | -- | -- | -- | C,W | D,S,I | do. | Estimated yield, 4 gallons a minute. |
| 31 | -- | 187 | d/ | C,W | D,S,I | Lake-side | Steel casing. |
| 32 | 0.5 | 163.2 | Mar. 1, 1938 | C,W | D,S,I | Gentle slope | Estimated yield, 6 gallons a minute. Irrigates small vegetable garden. |
| 33 | -- | 195 | d/ | C,W | D,S,I | Flat | Steel casing. Reported strong supply. |
| 34 | -- | -- | -- | C,W | D,I | Gentle slope | Estimated yield, 5 gallons a minute. |
| 35 | -- | -- | -- | C,W | S | Creek bottoms | Obstructed at 40 feet. |
| 36 | -- | -- | -- | C,W | S | Sand dunes | Estimated yield, 3 gallons a minute. |
| 37 | -- | -- | -- | C,W | S | do. | Do. |
| 38 | -- | -- | -- | C,W | S | do. | Do. |
| 39 | -- | -- | -- | C,W | S | Gentle slope | Steel casing. Estimated yield, 6 gallons a minute. |
| 40 | 1.0 | 144.4 | Mar. 1, 1938 | C,W | N | Sand dunes | Steel casing. |
| 41 | 0 | 188.5 | do. | None | N | Gentle slope | Do. |
| 42 | -- | -- | -- | None | N | Flat | Obstructed at 19 feet. |
| 43 | -- | 200 | d/ | C,W | D,S | Near canyon | Estimated yield, 3 gallons a minute. |
| 44 | -- | -- | -- | C,W | D,S | Gentle slope | Do. |
| 45 | -- | 168 | d/ | C,W | S | Side of draw | Steel casing. |
| 46 | -- | -- | -- | C,W | D,S | Creek bottoms | Reported strong supply. |
| 47 | -- | -- | -- | C,W | S | Bottom of draw | Estimated yield, 3 gallons a minute. |
| 49 | -- | -- | -- | C,W | S | Side of draw | Do. |
| 50 | -- | -- | -- | C,W | D,S | Gentle slope | Estimated yield, 4 gallons a minute. |
| 51 | -- | -- | -- | C,W | S | Ridge-top | |
| 52 | -- | -- | -- | C,W | S | Gentle slope | Steel casing. Estimated yield, 2 gallons a minute. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Middle-water | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------------|---------------------------------------|---------------------------------|----------------------|---------------|----------------|---------------------|------------------------|
| e/ 53 | 8 miles east | 22, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | T. & N.O. R.R. sur., blk. 11b | Reynolds Cattle Co. | -- | -- | -- | 4 $\frac{1}{2}$ |
| 54 | do. | do. | do. | do. | -- | -- | -- | 6 |
| 55 | 5 $\frac{1}{2}$ miles northeast | 33, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 12 | -- | -- | -- | 300 | 6 |
| e/ 56 | 1 $\frac{1}{4}$ miles northeast | 35, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 13 | -- | -- | Old | 141 | 4 $\frac{1}{2}$ |
| 57 | 3 $\frac{3}{4}$ miles north | 61, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | Doc. Bishop | -- | -- | -- | -- |
| 58 | 4 $\frac{1}{2}$ miles northwest | 59, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | -- | -- | -- |
| 59 | 5 miles northwest | 56, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | O. A. Sage | -- | Old | 240 | 4 |
| 60 | 7 $\frac{1}{2}$ miles northwest | 8, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | Capitol Syndicate sur., blk. 14 | -- Beck | -- | -- | -- | 4 $\frac{1}{2}$ |
| 61 | 6 miles west | 19, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | Old | -- | 4 $\frac{1}{2}$ |
| 62 | 8 $\frac{1}{2}$ miles west | 34, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | Old | -- | 5 |
| 63 | 13 miles west | 37, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 15 | -- | -- | Old | 171 | 4 $\frac{1}{2}$ |
| e/ 64 | 14 miles west | 35, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | -- | 190 | 4 $\frac{1}{2}$ |
| 65 | 9 $\frac{1}{2}$ miles southwest | 26, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 16 | -- | -- | 1930 | 75 | -- |
| e/ 66 | do. | do. | do. | -- | -- | 1930 | -- | -- |
| 67 | 10 miles southwest | 42, SE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | T. P. Concannon Est. | -- | 1915 | 134 | 6 |
| e/ 68 | 13 miles southwest | 55, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | W. M. D. Lee sur., blk. XR | -- | -- | -- | 105 | 6 |
| 69 | do. | 55, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- | -- | -- | 119 | 4 $\frac{1}{2}$ |
| e/ 70 | 14 $\frac{1}{2}$ miles southwest | 58, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | Gus B. Coats | Holmes & Heck | 1927 | 2,990 | 15 $\frac{1}{2}$ |
| e/ 71 | 15 $\frac{1}{2}$ miles southwest | 60, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | -- | -- | -- | 153 | -- |
| 72 | 10 $\frac{1}{2}$ miles southwest | 90, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | Bravo subdivision | Martha Houghton | -- | Old | 147 | 8 |
| 74 | 8 $\frac{1}{2}$ miles south | 3, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | G. & M. sur., blk. LE | do. | -- | -- | 81 | 6 |
| 75 | 5 $\frac{1}{2}$ miles southwest | 8, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | E.L. & R.R. R.R. sur., blk. B-8 | -- | -- | Old | 60 | 5 $\frac{1}{2}$ |
| 76 | 4 miles south | 36, NE $\frac{1}{4}$ SW $\frac{1}{4}$ | G. & M. sur., blk. LE | -- | -- | Old | -- | 5 |
| e/ 77 | 3 $\frac{3}{4}$ miles southwest | 10, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 13 | W. H. Taylor | -- | Old | -- | 5 |
| e/ 78 | do. | 10, NE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | -- | Old | -- | 5 |
| 79 | 4 $\frac{1}{4}$ miles west | 25, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | -- | Old | -- | 5 |
| e/ 80 | 2 $\frac{3}{4}$ miles west | 26, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | Old | 226 | 6 |

C. R. Follett and J. H. Harrison, Project Superintendents

| 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 | | | | |
| 53 | -- | 65 | d/ | None | N | Flat | |
| 54 | -- | -- | -- | C,W | S | do. | Located slightly east of well 53. |
| 55 | -- | -- | -- | C,W | S | Gentle slope | Estimated yield, 4 gallons a minute. |
| 56 | 1.0 | 141.7 | Apr. 13, 1938 | C,W | S | Sand dunes | Filled with sand to water level, Apr. 13, 1938. |
| 57 | -- | -- | -- | C,W | D,S | Ridge-top | Estimated yield, 2 gallons a minute. |
| 58 | -- | -- | -- | C,W | S | -- | Estimated yield, 3 gallons a minute. |
| 59 | -- | 220 | d/ | C,W | D,S | Flat | Do. |
| 60 | -- | -- | -- | C,W | S | Ridge-top | Steel casing. Estimated yield, 6 gallons a minute. |
| 61 | -- | -- | -- | C,W | S | Sand dunes | Do. |
| 62 | -- | -- | -- | C,W | S | Creek bottoms | Obstructed at 11 feet. |
| 63 | 1.0 | 150.1 | Apr. 13, 1938 | C,W | S | do. | Estimated yield, 3 gallons a minute. |
| 64 | 1.0 | 184.1 | do. | C,W | N | Flat | Located in State of New Mexico. |
| 65 | 1.0 | 60.8 | do. | C,W | S | Creek bottoms | Estimated yield, 3 gallons a minute. Drilled to supply oil test. |
| 66 | -- | -- | -- | -- | -- | do. | Oil test. |
| 67 | 0.5 | 126.5 | Jan. 28, 1938 | C,W | D | Ridge-top | Steel casing. |
| 68 | 1.0 | 86.3 | Apr. 13, 1938 | C,W | S | Sink | Located 175 feet south of well 69. |
| 69 | 1.0 | 104.6 | do. | C,W | S | do. | Water level taken while pumping. |
| 70 | -- | -- | -- | None | N | -- | Oil test. Reported altitude, 4,195 feet. See log. |
| 71 | 1.0 | 111.9 | Apr. 13, 1938 | C,W | N | Sand dunes | |
| 72 | 1 | 128.4 | Jan. 27, 1938 | C,W | S | Gentle slope | Supplies earth reservoir and two small metal tanks. |
| 74 | 3 | 67.4 | Jan. 28, 1938 | C,W | S | do. | Reported maintains 20,000 gallon storage tank. |
| 75 | 1.5 | 16.9 | Mar. 15, 1938 | C,W | D,S | Creek bottoms | Steel casing. Estimated yield, 5 gallons a minute. |
| 76 | -- | -- | -- | C,W | S | do. | Do. |
| 77 | -- | -- | -- | C,W | S | Sand dunes | Obstructed at 31 feet. Located 100 feet south of well 78. |
| 78 | -- | -- | -- | C,W | S | do. | Wells 78 and 77 pump into same 2,000 barrel tank. |
| 79 | -- | -- | -- | C,W | S | do. | Steel casing. Estimated yield, 5 gallons a minute. |
| 80 | 2.0 | 220.5 | Mar. 15, 1938 | C,W | S | -- | Steel casing. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Middle-water | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------------|---------------------------------------|----------------------------------|---------------------------|-------------------|----------------|---------------------|------------------------|
| 81 | 1 $\frac{1}{2}$ miles southwest | 21, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 13 | W. H. Taylor | -- | 1930 | 200 | 4 $\frac{1}{2}$ |
| e/ 82 | 1 $\frac{3}{4}$ miles south | 13, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- Eslick, et al. | 1927 | 4,002 | 20 |
| 85 | 8 $\frac{1}{2}$ miles south | Near NE cor. 26, Bravo subd. | League 187 | Martha Houghton | -- | -- | 89 | 6 |
| e/ 86 | 9 miles south | 57, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | E.L. & R.R. R.R. sur., blk. LC-2 | do. | -- | -- | Spring | -- |
| e/ 87 | do. | 56, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | -- | -- | 49 | 8 |
| e/ 88 | 8 $\frac{1}{2}$ miles south | 56, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- | -- | Spring | -- |
| e/ 90 | 12 miles southeast | NW $\frac{1}{4}$ NE $\frac{1}{4}$ | League 210 | do. | -- | -- | 156 | 6 |
| 91 | 11 miles southeast | NW $\frac{1}{4}$ SE $\frac{1}{4}$ | League 202 | do. | -- | -- | 300 | 6 |
| 93 | 13 $\frac{1}{2}$ miles southeast | SE $\frac{1}{4}$ NE $\frac{1}{4}$ | League 210 | Matador Land & Cattle Co. | Ray Mitchell | 1933 | 93 | 6 |
| 94 | 15 miles southeast | NW $\frac{1}{4}$ NE $\frac{1}{4}$ | League 211 | do. | -- | Old | 46 | 4 |
| e/ 97 | 17 miles southeast | 37, NW $\frac{1}{2}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 22 | do. | -- | -- | -- | -- |
| 98 | do. | do. | do. | do. | -- | 1927 | 245 | 8 |
| 99 | 15 miles southeast | 46, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | -- | -- | 183 | 6 |
| 100 | 12 miles east | 18, SE $\frac{1}{4}$ NE $\frac{1}{4}$ | G. & M. sur., blk. LS | Reynolds Cattle Co. | -- | -- | 234 | 5 |
| 101 | 8 $\frac{1}{2}$ miles east | 69, NE $\frac{1}{4}$ SE $\frac{1}{4}$ | G. & M. sur., blk. LE | -- | -- | -- | -- | 4 $\frac{1}{2}$ |
| 102 | 7 $\frac{1}{2}$ miles east | 73, NE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | -- | -- | -- |
| 103 | 11 $\frac{1}{2}$ miles east | 37, SW $\frac{1}{4}$ SW $\frac{1}{2}$ | T. & N.O. R.R. sur., blk. 1Tc | Reynolds Cattle Co. | -- | -- | -- | -- |
| e/104 | 13 miles east | 33, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | Old | -- | 4 $\frac{1}{2}$ |
| 105 | 15 miles east | 31, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | -- | 102 | 6 |
| 106 | 14 $\frac{1}{2}$ miles east | 48, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | -- | -- | -- |
| 107 | 16 miles east | 9, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | G. & M. sur., blk. LS | do. | -- | -- | 110 | 6 |

C. R. Follett and J. H. Harrison, Project Superintendents

| 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 | | | | |
| 81 | -- | 180 | d/ | C,W | D,S | Flat | Reported waters 500 head of stock. |
| 82 | -- | -- | -- | None | N | -- | Oil test. Reported altitude, 4,068 feet. See log. |
| 85 | 1 | 69.9 | Jan. 28, 1938 | C,W | S | Flat | Steel casing. |
| 86 | -- | Flows | Apr. 13, 1938 | None | S | Draw | Reported earth dam stores 2 acre-feet of water from seeps. |
| 87 | 0.9 | 48.1 | Jan. 27, 1938 | C,W | D,S | Flat | Steel casing. Reported strong supply. |
| 88 | -- | Flows | Apr. 13, 1938 | -- | S | Draw | Small earth tank supplied from seeps. Reported slight white deposits at |
| 90 | 1.0 | 141.6 | do. | C,W | S | Flat | Steel casing. <u>edge.</u> |
| 91 | 0.5 | 208.1 | Jan. 27, 1938 | None | N | do. | Reported water tinged with red color. |
| 93 | 2 | 88.7 | Jan. 28, 1938 | C,W | S | Gentle slope | Reported supplies 12,000 gallon tank for stock use. |
| 94 | 2.5 | 33.8 | Jan. 27, 1938 | C,W | D,S | Hilltop | Steel casing. Reported weak supply. |
| 97 | -- | -- | -- | None | N | -- | Oil test. |
| 98 | 1 | 197.1 | Jan. 27, 1938 | C,W | S | Ridge-top | Drilled to supply water for well 97. Reported supplies two 3,000 gallon tanks and one earthen tank. |
| 99 | -- | 149 | d/ | C,W | S | Hill-side | Supplies 40,000 gallon storage tank. Reported periodically fills with |
| 100 | 1.0 | 215.6 | Feb. 26, 1938 | C,W | S | Gentle slope | Estimated yield, 5 gallons a <u>sand</u> minute. |
| 101 | -- | -- | -- | C,W | S | Ridge-top | Steel casing. Estimated yield, 3 gallons a minute. |
| 102 | -- | -- | -- | C,W | S | Gentle slope | Supplies large steel storage tank. |
| 103 | -- | -- | -- | C,W | S | do. | Estimated yield, 4 gallons a minute. |
| 104 | -- | -- | -- | None | N | Flat | Obstructed at 18 feet. |
| 105 | 1.0 | 79.5 | Feb. 14, 1938 | C,W | S | Canyon floor | Steel casing. Estimated yield, 4 gallons a minute. |
| 106 | -- | -- | -- | C,W | S | Gentle slope | Do. |
| 107 | 1.0 | 106.2 | Feb. 25, 1938 | C,W | S | do. | Do. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Hartley | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------------|--|--------------------------------|----------------|----------------|----------------|---------------------|------------------------|
| e/201 | 12 $\frac{1}{2}$ miles northwest | 58, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | H. & T. C. R. R. sur., blk. 48 | -- | -- | -- | -- | 6 |
| e/202 | 10 miles northwest | 67, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | -- | 187 | 4 $\frac{1}{2}$ |
| 203 | 9 miles northwest | 91, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | -- | -- | Old | 183 | 6 |
| 204 | 8 miles north | 78, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | Old | -- | 4 $\frac{1}{2}$ |
| 205 | 10 miles north | 69, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | D. D. Coy | -- | Old | -- | 4 $\frac{1}{2}$ |
| e/206 | 10 $\frac{1}{2}$ miles north | 54, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- Pedagro | -- | Old | -- | 5 $\frac{1}{2}$ |
| 207 | 11 miles north | do. | do. | do. | -- | -- | -- | -- |
| e/208 | do. | 55, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | -- | -- | 1906 | 301 | 4 $\frac{1}{2}$ |
| 209 | do. | 43, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | Hudson's Dairy | -- | -- | 330 | 4 $\frac{1}{2}$ |
| 210 | 12 miles north | 42, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | C. E. Mitchell | C. E. Mitchell | 1906 | 341 | 4 |
| 211 | 12 $\frac{1}{2}$ miles north | 29, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | W. C. Eyre | F. Williams | 1925 | 335 | 4 |
| e/212 | 11 miles north | 44, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | -- | -- | 3 $\frac{1}{2}$ |
| 213 | do. | 46, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- | -- | Old | -- | -- |
| c/214 | 10 $\frac{1}{2}$ miles north | 51, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- | -- | 1929 | 300 $\frac{1}{2}$ | 4 $\frac{1}{2}$ |
| e/216 | 8 $\frac{1}{2}$ miles north | 72, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | Old | 400 | 3 |
| c/217 | do. | 75, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- | -- | 1922 | 350 | 4 $\frac{1}{2}$ |
| 218 | 7 $\frac{1}{2}$ miles north | 95, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | -- McCan | -- | Old | 400 | 4 $\frac{1}{2}$ |
| 219 | 6 miles north | 106, SE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | -- | -- | -- | 300 $\frac{1}{2}$ | 4 |
| e/220 | 5 $\frac{1}{2}$ miles north | 125, NE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | -- | Sam Jameson | 1925 | 400 | 4 |
| 222 | 4 $\frac{1}{2}$ miles north | 126, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | R. J. Merritt | -- | 1929 | 400 $\frac{1}{2}$ | 5 |
| e/223 | 7 miles north | 97, NE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | 1930 | 325 | -- |
| 224 | do. | 98, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | J. W. Webster | -- | Old | 335 | 6 |
| 225 | 6 $\frac{1}{2}$ miles northeast | 100, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | D. A. Artz | E. Pedigo | 1925 | 335 | 6 |
| e/227 | 9 miles northeast | NE $\frac{1}{4}$ NE $\frac{1}{4}$ | Jos. Beaty sur. | -- Wilson Est. | -- | 1908 | 325 | 4 $\frac{1}{2}$ |
| 228 | 10 $\frac{1}{2}$ miles north | 6, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | P. S. sur., blk. A4 | -- | -- | -- | -- | -- |

a/ Measuring point was top of casing or top of pipe clamp.

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

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| 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 | | | | |
| 201 | -- | -- | -- | C,W, G, 1½ | D,S | Gentle slope | Steel casing. |
| 202 | 1.3 | 154.5 | Mar. 13, 1938 | C,W | S | Creek bottoms | Reported used only in summer. |
| 203 | 1.0 | 158.8 | do. | C,W | S | do. | Steel casing. Estimated yield, 3 gallons a minute. |
| 204 | -- | -- | -- | C,W | D,S | Flat | Do. |
| 205 | -- | -- | -- | C,W | D,S | Ridge-top | Estimated yield, 2 gallons a minute. |
| 206 | -- | -- | -- | None | N | Flat | |
| 207 | -- | -- | -- | C,W | D,S | do. | Estimated yield, 2 gallons a minute. |
| 208 | -- | 294 | <u>d/</u> | C,W | D,S | Ridge-top | Estimated yield, 4 gallons a minute. |
| 209 | -- | 290 | <u>d/</u> | C,W | D,S,I | do. | Irrigates small garden. |
| 210 | -- | 281 | <u>d/</u> | C,W | D,S | do. | Reported water in sand from 280 to 311 feet and at 341 feet. |
| 211 | -- | -- | -- | C,W | D,S | Near lake | Reported yield, 3 gallons a minute. |
| 212 | -- | -- | -- | None | N | Gentle slope | Filled with sand to within 19 feet of surface, Mar. 10, 1938. |
| 213 | -- | -- | -- | C,W | D,S | Flat | Estimated yield, 3 gallons a minute. |
| 214 | -- | 300 / | <u>d/</u> | C,W | N | Gentle slope | 300-foot tape would not reach water. |
| 216 | -- | -- | -- | None | N | Near lake | Filled to within 14 feet of surface, Mar. 25, 1938. |
| 217 | -- | 280 | <u>d/</u> | C,W | D,S,I | Gentle slope | Estimated yield, 3 gallons a minute. |
| 218 | -- | -- | -- | C,W | D,S,I | do. | Estimated yield, 2 gallons a minute. |
| 219 | -- | 300 / | Mar. 24, 1938 | C,W | N | Ridge-top | 300-foot tape would not reach water. |
| 220 | -- | 325 | <u>d/</u> | C,W | D,S | Gentle slope | Steel casing. |
| 222 | -- | 330 | <u>d/</u> | C,W | D,S,I | do. | Estimated yield, 3 gallons a minute. |
| 223 | -- | -- | -- | C,W | D,S | -- | |
| 224 | -- | 325 | <u>d/</u> | C,W | D,S | Gentle slope | Estimated yield, 3 gallons a minute. |
| 225 | -- | 328 | <u>d/</u> | C,W | D,S | do. | Do. |
| 227 | -- | -- | -- | C,W, G, 1½ | D,S,I | Ridge-top | Reported yield, 4 gallons a minute. |
| 228 | -- | -- | -- | C,W | D,S,I | Gentle slope | Estimated yield, 3 gallons a minute. |

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

d/ Water level reported.

 / No water sample collected for analysis.

Records of wells and springs in Hartley County--Continued

| No. | Distance from Hartley | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------------|--|------------------------------------|---------------------|---------------|----------------|---------------------|------------------------|
| 229 | 11 miles north | 50, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 48 | -- | -- | -- | -- | 4 $\frac{1}{2}$ |
| 230 | 12 miles northeast | NE $\frac{1}{4}$ NW $\frac{1}{4}$ | P. A. Sublett sur. | J. H. Baskett | -- | -- | 360 | 4 $\frac{1}{2}$ |
| 231 | 13 miles northeast | 4, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | S.P. R.R. sur., blk. 1 | -- Turner Est. | -- | -- | -- | -- |
| 232 | 10 $\frac{1}{2}$ miles northeast | SW $\frac{1}{4}$ SW $\frac{1}{4}$ | John H. Lewis sur. | -- | -- | -- | -- | -- |
| 233 | 11 $\frac{1}{2}$ miles northeast | NW $\frac{1}{4}$ NE $\frac{1}{4}$ | Hrs. of Rob't McKinley sur. | -- McDaniel | -- | 1930 | 320 | 4 $\frac{1}{2}$ |
| e/234 | 12 miles northeast | SE $\frac{1}{4}$ SE $\frac{1}{4}$ | John H. Lewis sur. | -- | -- | -- | 285 | -- |
| 235 | 12 $\frac{1}{2}$ miles northeast | NW $\frac{1}{4}$ SW $\frac{1}{4}$ | Jackson Davis sur. | -- | -- | -- | 297 $\frac{1}{2}$ | 4 $\frac{1}{2}$ |
| 236 | 14 $\frac{1}{2}$ miles northeast | 424, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 44 | Roy Brown | E. Pedigo | 1929 | 265 | 3 |
| e/237 | 14 miles east | 382, NE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | -- | Old | -- | 4 |
| e/238 | 13 miles east | 340, NE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | Mrs. J. H. Johnson | -- | 1936 | 330 | 4 |
| 239 | 11 miles east | 335, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | Old | 320 | 5 |
| 240 | 11 miles northeast | 420, NE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | Old | 269 $\frac{1}{2}$ | 6 |
| 241 | 8 miles northeast | 6, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | P.S. sur., blk. A5 | R. V. Bownds | -- | Old | 367 | 6 |
| 242 | 6 miles northeast | NE $\frac{1}{4}$ NE $\frac{1}{4}$ | J. P. McC. sur. | W. O. Bishop | -- | Old | 400 | 6 $\frac{1}{2}$ |
| 243 | 5 miles east | do. | Francis Jordan sur. | E. A. Reeves | Earl Pedigo | 1927 | 380 | 4 $\frac{1}{2}$ |
| 244 | 6 miles east | SE $\frac{1}{4}$ SW $\frac{1}{4}$ | Horace Hall sur. | -- | -- | -- | -- | 5 |
| e/245 | 2 $\frac{3}{4}$ miles southeast | NE $\frac{1}{4}$ NE $\frac{1}{4}$ | J. A. Brown pre-emption sur. | Federal Land Bank | Chas. Jameson | 1927 | 416 | 4 $\frac{1}{2}$ |
| e/246 | 2 miles southeast | NE $\frac{1}{4}$ NW $\frac{1}{4}$ | M.F.R. sur. | -- | -- | -- | 300 $\frac{1}{2}$ | 6 |
| 247 | 1 $\frac{1}{2}$ miles south | SW $\frac{1}{4}$ SW $\frac{1}{4}$ | C. H. Glass sur. | C. H. Glass | Sam Jameson | 1920 | 400 | 5 |
| 248 | $\frac{1}{2}$ mile southeast | NW $\frac{1}{4}$ NW $\frac{1}{4}$ | E. E. Williams sur. | E. E. Williams | do. | 1921 | 350 | 5 $\frac{1}{2}$ |
| 249 | In Hartley | 23, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | Beaty, Seal & Forwood sur., blk. 2 | E. E. Mitchell | Ray Mitchell | 1930 | 350 | 5 |
| e/250 | 4 $\frac{1}{2}$ miles northwest | 138, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 48 | -- | -- | -- | -- | 4 $\frac{1}{2}$ |
| 251 | 4 $\frac{1}{4}$ miles northwest | 9, SE $\frac{1}{4}$ NE $\frac{1}{4}$ | Beaty, Seal & Forwood sur., blk. 2 | -- | -- | -- | -- | 4 $\frac{1}{2}$ |
| 252 | 4 $\frac{1}{4}$ miles west | 15, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | -- | C. Jameson | 1909 | 310 | 4 $\frac{1}{2}$ |
| 253 | 7 miles west | 4, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | Reynolds Cattle Co. | -- | Old | -- | -- |
| 254 | 7 $\frac{1}{2}$ miles west | 3, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | do. | -- | Old | -- | 4 $\frac{1}{2}$ |
| 255 | 7 miles west | 6, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- | Old | 61 $\frac{1}{2}$ | 4 |

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| 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 | | | | |
| 229 | -- | -- | -- | C,W | D,S,I | Gentle slope | Estimated yield, 3 gallons a minute. |
| 230 | -- | 290/ | d/ | C,W | D,S,I | Flat | Steel casing. Estimated yield, 2 gallons a minute. |
| 231 | -- | -- | -- | C,W | D,S | Gentle slope | |
| 232 | -- | -- | -- | C,W | D,S | Flat | Estimated yield, 5 gallons a minute. |
| 233 | -- | 270 | d/ | C,W | D,S,I | do. | Steel casing. |
| 234 | -- | 270 | d/ | C,W | D,S | do. | |
| 235 | 0.8 | 290.1 | Mar. 11, 1938 | C,W | N | do. | Steel casing. Estimated yield, 3 gallons a minute. |
| 236 | -- | -- | -- | C,W | D,S,I | do. | Do. |
| 237 | -- | -- | -- | C,W | N | Gentle slope | Obstructed at 11 feet. |
| 238 | -- | 290 | d/ | C,W | -- | -- | Estimated yield, 3 gallons a minute from fine-grained sand at 300 to 330 |
| 239 | -- | 280 | d/ | C,W | D,S | Flat | Estimated yield, 3 gallons a minute. [feet.] |
| 240 | -- | -- | -- | C,W | S | Ridge-top | Obstructed at 269 feet. |
| 241 | -- | 337 | d/ | C,W | D,S,I | do. | Estimated yield, 5 gallons a minute. Reported fills with sand in about 10 |
| 242 | -- | -- | -- | C,W | D,S | Flat | Reported will supply 1,000 [years] head of cattle. |
| 243 | -- | -- | -- | C,W | D,S,I | Ridge-top | Steel casing. Reported irrigates 3/4 acre garden and waters 325 head of |
| 244 | -- | -- | -- | C,W | D,S | Gentle slope | Estimated yield, 3 gallons a [steel] minute. |
| 245 | -- | 360 | d/ | C,W | D,S,I | Flat | Steel casing. Reported sands up occasionally; water in quicksand. |
| 246 | -- | 300/ | June 28, 1937 | None | N | Gentle slope | 300-foot tape would not reach water. |
| 247 | -- | 370 | d/ | C,W | D,S,I | Flat | Reported irrigates small garden and orchard and waters 300 head of stock. |
| 248 | -- | -- | -- | C,W | D,S | do. | Reported water in gravel at 344 to 350 feet; waters about 150 head of |
| 249 | -- | 290 | d/ | C,E,5 | P | -- | 10 feet of screen pipe at bot- [stock] tom. Supplies town of Hartley. |
| 250 | -- | 300/ | June 29, 1937 | None | N | Ridge-top | 300-foot tape would not reach water. |
| 251 | -- | -- | -- | C,W | D,S | Flat | Steel casing. Estimated yield, 5 gallons a minute. |
| 252 | -- | 250 | d/ | C,W | D,S | do. | Do. |
| 253 | -- | -- | -- | C,W | S | Valley floor | Estimated yield, 2 gallons a minute. |
| 254 | -- | -- | -- | C,W | N | do. | Obstructed at 49 feet. |
| 255 | -- | -- | -- | C,W | S | do. | Obstructed at 61 feet. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Hartley | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|---------------------------------|---------------------------------------|------------------------------------|------------------------|----------------|----------------|---------------------|------------------------|
| 2/256 | 7 miles west | 5, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | Beaty, Seal & Forwood sur., blk. 2 | Reynolds Cattle Co. | -- | Old | 52 | 4 $\frac{1}{2}$ |
| 257 | 4 miles west | 3, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | Brooks and Burleson sur., blk. 2 | Tom Collins | -- | 1907 | 318 | 4 $\frac{1}{2}$ |
| 2/261 | 7 miles southwest | 22, SE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | Reynolds Cattle Co. | -- | Old | -- | -- |
| 263 | 3 $\frac{3}{4}$ miles southwest | 26, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | Birge-Forbes Land Co. | Chas. Williams | 1890 | 322 | 5 |
| 264 | 8 miles southwest | 1, NE $\frac{1}{4}$ SE $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 49 | Reynolds Cattle Co. | -- | -- | 29 | 6 |
| 269 | 10 miles southwest | 7, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | G. & M. sur., blk. LS | do. | -- | -- | -- | -- |
| 2/270 | 8 $\frac{1}{2}$ miles southwest | 8, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 49 | E. S. Collins | -- | -- | 54 | 4 $\frac{1}{2}$ |
| 2/271 | 9 miles southwest | 8, SE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | do. | -- | 1929 | 52 | 8 |
| 272 | do. | do. | do. | do. | -- | -- | 57 | 5 |
| 2/273 | 9 $\frac{1}{2}$ miles southwest | 2, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | G. & M. sur., blk. LS | do. | -- | -- | -- | 5 |
| 274 | 9 miles southwest | 8, SE $\frac{1}{4}$ NW $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 49 | do. | -- | 1896 | 71 | 22 |
| 276 | 8 $\frac{1}{2}$ miles southwest | 8, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- | 1896 | 86 | 4 $\frac{1}{2}$ |
| 2/277 | do. | 9, NE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | -- | -- | 86 | 6 |
| 278 | 9 miles southwest | 10, NE $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | do. | -- | -- | 45 | 6 |
| 280 | 10 miles southwest | 12, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- | 1922 | 18 | 6 |
| 281 | do. | do. | do. | do. | -- | -- | Spring | -- |
| 283 | 9 $\frac{1}{2}$ miles southwest | 19, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | P.S. sur., blk. CS | Luther Amason | -- | -- | 270 | 6 |
| 2/284 | 7 $\frac{1}{2}$ miles south | 8, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | E. S. Collins | -- | Old | 300 | 6 |
| 285 | 6 $\frac{1}{2}$ miles south | 4, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | J. E. Craighead | -- | 1935 | 136 | 4 $\frac{1}{2}$ |
| 286 | 7 $\frac{1}{2}$ miles south | 58, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | Capitol Syndicate sur., blk. 21 | Capitol Land Syndicate | -- | 1928 | 378 | 6 |
| 287 | 9 miles south | 41, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | G. T. Thomas | Ray Mitchell | 1933 | 325 | 4 $\frac{1}{2}$ |
| 289 | 9 $\frac{1}{2}$ miles southeast | 5, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | W.C. R.R. sur., blk. 4 | O. E. Hines | -- | 1923 | 410 | 6 |
| 290 | 8 miles southeast | 3, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | Waco Mfg. Co. sur., blk. 1 | Geo. Fox Est. | -- Bishop | 1918 | 300 | 4 $\frac{1}{2}$ |
| 291 | 5 $\frac{1}{2}$ miles south | 62, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | Capitol Syndicate sur., blk. 21 | E. M. Lynch | -- Williams | 1923 | 324 | 5 $\frac{1}{2}$ |
| 293 | 4 miles south | SE $\frac{1}{4}$ N $\frac{1}{2}$ | W.E.D. sur. | Mrs. M. E. Tyler | Chas. Jameson | 1933 | 365 | 4 |
| 294 | 6 miles southeast | 10, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | Waco Mfg. Co. sur., blk. 1 | G. N. Bryant | Sam Jameson | -- | 420 | 6 |
| 295 | 8 miles southeast | 20, SW $\frac{1}{4}$ SE $\frac{1}{4}$ | G.H. & H. R.R. sur., blk. 5 | R. P. Bishop | Chas. Jameson | 1931 | 433 | 5 |

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| 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 | | | | |
| 256 | 1.0 | 34.2 | Feb. 28, 1938 | C,W | N | Valley floor | Steel casing. |
| 257 | -- | 298 | d/ | C,W | D,S,I | Flat | Reported irrigates small garden and waters about 20 head of sheep. |
| 261 | -- | 67 | d/ | C,W | S | Valley floor | Estimated yield, 5 gallons a minute. |
| 263 | -- | 262 | d/ | C,W | D,S | Flat | Steel casing. |
| 264 | 1.0 | 28.6 | Feb. 14, 1938 | C,W | S | Creek bottoms | Steel casing. Estimated yield, 5 gallons a minute. |
| 269 | -- | -- | -- | C,W | D,S | Gentle slope | Estimated yield, 3 gallons a minute. |
| 270 | 1.3 | 9.3 | Feb. 15, 1938 | None | N | Creek bottoms | Steel casing. |
| 271 | 2.3 | 8.1 | do. | None | N | do. | Reported flowed when drilled. |
| 272 | 1.0 | 5.3 | Feb. 25, 1938 | C,H | D,S | do. | Steel casing. |
| 273 | -- | -- | -- | C,W | D,S,I | Gentle slope | Obstructed at 40 feet. |
| 274 | -- | Flows | Feb. 25, 1938 | None | -- | Creek bottoms | Galvanized casing. Estimated flow, $\frac{1}{4}$ to $\frac{1}{2}$ gallon a minute. |
| 276 | -- | -- | -- | None | N | do. | Steel casing. Reported has not failed since drilled. |
| 277 | 2.0 | 39.9 | Feb. 15, 1938 | None | N | do. | Steel casing. |
| 278 | -- | -- | -- | C,W | S | do. | Estimated yield, 8 gallons a minute. |
| 280 | -3.0 | 0.1 | Feb. 15, 1938 | C,W | D,S | do. | Estimated yield, 4 gallons a minute from gravel. |
| 281 | -- | Flows | do. | None | S | do. | Reported yield, 12 gallons a minute from 4-foot section of 6-inch pipe |
| 283 | -- | -- | -- | C,W | D,S | Ridge-top | Steel [] in concrete floor and from casing. [] around edges of floor. |
| 284 | 1.5 | 261.9 | Jan. 7, 1938 | C,W | D,S | do. | Do. |
| 285 | 1.5 | 117.9 | do. | C,W | D,S | do. | Reported perched water table. Steel casing. |
| 286 | -- | 362 | d/ | C,W | D | do. | Reported water in quicksand at 353 to 378 feet. |
| 287 | -- | 310 | d/ | C,W | D,S,I | Flat | Reported water in quicksand at 317 to 325 feet. |
| 289 | -- | 370 | d/ | C,W | D,S,I | do. | Steel casing. Reported sands up in about 8 years. Waters $\frac{1}{2}$ acre garden |
| 290 | -- | 275 | d/ | C,W | D,S | do. | Steel casing. [] and 40 head of stock |
| 291 | -- | 294 | d/ | C,W | D,S | Ridge-top | Reported water in red clay from 304 to 324 feet. |
| 293 | -- | 335 | d/ | C,W | D,S | Flat | Reported water in conglomerate and coarse-grained sand. |
| 294 | -- | 373 | d/ | C,W | D,S | do. | Steel casing. Supplies two 7,500 gallon tanks. |
| 295 | -- | 393 | d/ | C,W | D,S | do. | Reported water in quicksand from 425 to 450 feet. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Hartley | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|----------------------------------|--|---------------------------------|---------------------------|--------------------|----------------|---------------------|------------------------|
| 296 | 6 miles southeast | 6, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | G.H. & H. R.R. sur., blk. 5 | Marvin Williams | -- | Old | 447 | 5 $\frac{1}{2}$ |
| 297 | 10 miles east | 252, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 44 | Canadian River Gas Co. | H. H. Heiskell | 1938 | 480 | 8 |
| 299 | 10 miles southeast | 210, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | W. K. Reid | John A. Wiseman | 1904 | 400 | 4 $\frac{1}{2}$ |
| 301 | 12 miles east | 171, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | Robert Wiseman | Chas. Jameson | 1931 | 335 | 4 $\frac{1}{2}$ |
| 302 | 15 $\frac{1}{2}$ miles southeast | 122, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | W. H. Ham | do. | 1920 | 314 | 5 |
| e/303 | 17 miles southeast | 80, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | Marvin Smith | -- | 1895 | 312 | 6 |
| e/304 | 16 miles southeast | 81, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | F. P. Feltz | Dana Oil & Gas Co. | 1930 | 3,827 | 12 $\frac{1}{2}$ |
| e/305 | do. | 81, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | Marvin Smith | -- | 1930 | 4,500 | -- |
| e/306 | do. | 81, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- | 1930 | 300 | 10 |
| e/308 | 13 $\frac{1}{2}$ miles southeast | 86, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | -- | -- | Old | 300 | 4 $\frac{1}{2}$ |
| 309 | 14 miles southeast | 84, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | G. C. Ledbetter | Earl Pedigo | -- | 347 | 6 |
| 312 | 11 miles southeast | 24, NW $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | J. B. Brown | -- | 1905 | 380 | 6 |
| 313 | 12 miles southeast | 3, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | P.S. sur., blk. A6 | R. W. Vincent | -- Williams | 1936 | 412 | 6 |
| 314 | do. | 23, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 21 | J. L. Bivins | -- | -- | 424 | 6 |
| e/315 | 13 $\frac{1}{2}$ miles southeast | 4, NW $\frac{1}{4}$ S $\frac{1}{2}$ | P.S. sur., blk. A6 | R. Queen | -- | Old | 185 | 4 $\frac{1}{2}$ |
| 316 | 14 miles southeast | 13, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 21 | J. Bivins | -- | Old | -- | 4 $\frac{1}{2}$ |
| 318 | 11 miles south | 45, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | P.S. sur., blk. CS | E. S. Collins | -- | Old | 380 | 6 |
| 320 | 12 miles south | 60, SE $\frac{1}{4}$ SE $\frac{1}{4}$ | do. | A. B. Hughes | Sam Jacobs | 1898 | 288 | 6 |
| 324 | 14 miles south | 20, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 49 | C. B. Alford | -- | -- | 39 | 6 |
| e/326 | 14 $\frac{1}{2}$ miles south | 22, SW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | R. M. Stephens | R. M. Stephens | 1937 | 17 | 120 |
| 327 | do. | do. | do. | do. | -- | 1897 | 100 | 5 $\frac{1}{2}$ |
| 328 | 15 miles south | 23, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | Matador Land & Cattle Co. | Ray Mitchell | 1932 | 80 | 6 |
| e/329 | 16 miles south | 20, NE $\frac{1}{4}$ NW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 22 | do. | O. V. Beck | 1936 | 4,605 | -- |
| 331 | 15 $\frac{1}{2}$ miles southwest | 9, NW $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | do. | -- Muncie | 1930 | 158 | -- |
| 332 | 16 miles south | 34, SE $\frac{1}{4}$ SW $\frac{1}{4}$ | H. & T.C. R.R. sur., blk. 49 | -- Cruz | -- | -- | 55 | 4 $\frac{1}{2}$ |
| 333 | 15 miles south | 83, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | P.S. sur., blk. CS | -- Bivins | R. M. Stephens | -- | 88 | 6 |

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| 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 | | | | |
| 296 | -- | 347 | d/ | C,W | D,S,I | Flat | Reported irrigates $\frac{1}{2}$ acre garden and supplies 600 head of cattle. |
| 297 | -- | 315 | d/ | C,G, 40 | D,Ind | do. | Steel casing. Reported water in fine grained sand from 315 to 358 feet. |
| 299 | -- | 325 | d/ | C,W | D,S | do. | Steel casing, screened on See log. end. Reported water in sand from 355 to 400 feet; supplies 250 to 300 |
| 301 | -- | 315 | d/ | C,W | D,S | do. | Reported irrigates head of stock. small garden and supplies 75 to 100 |
| 302 | -- | 299 | d/ | C,W | D,S | do. | Steel casing. Report- head of stock. ed water in sand from 299 to 314 feet; supplies 250 to 300 head of |
| 303 | -- | 295 | d/ | C,W | D,S | do. | Steel casing. Waters about stock. 75 head of stock. |
| 304 | -- | -- | -- | None | N | -- | Oil test. Reported altitude, 3,755 feet. See log. |
| 305 | -- | -- | -- | None | N | Flat | Oil test. |
| 306 | 1.0 | 280.1 | Apr. 5, 1938 | None | N | do. | Drilled to furnish water for oil test. Located 100 feet southwest of well |
| 308 | -- | 300/ | Apr. 12, 1938 | C,W | N | do. | 300-foot tape would not reach 300. water. |
| 309 | -- | 329 | d/ | C,W | D,S,I | do. | Steel casing. Reported irrigates small garden and waters 40 head of |
| 312 | -- | 360 | d/ | C,W | D,S | do. | Steel casing. Reported stock. strong supply. |
| 313 | -- | 396 | d/ | C,W | D,S | do. | Steel casing. Reported weak supply. |
| 314 | -- | 408 | d/ | C,W | D,S | do. | Reported waters 100 head of stock. |
| 315 | 1.2 | 167.3 | Apr. 5, 1938 | C,W | D,S | Draw | Steel casing. |
| 316 | -- | -- | -- | C,W | S | do. | Estimated yield, 3 gallons a minute. |
| 318 | 0.9 | 264.6 | Jan. 7, 1938 | C,W | D,S | Flat | Steel casing. |
| 320 | 1.3 | 256.7 | Jan. 19, 1938 | C,W | D,S | Ridge-top | Reported water in sandstone from 270 to 288 feet; waters 150 to 200 head |
| 324 | 2.4 | 17.5 | do. | C,W | N | Gentle slope | Steel casing. Located at of stock. abandoned school. |
| 326 | 0 | 14.4 | Mar. 4, 1938 | None | N | Creek bottoms | Galvanized casing. Dug for irrigation purposes. See log. |
| 327 | -- | 15 | d/ | C,W | N | do. | Steel casing. |
| 328 | 2 | 27.5 | Jan. 27, 1938 | C,W | S | Ridge-top | Steel casing. Reported waters 600 head of stock. |
| 329 | -- | -- | -- | None | N | -- | Oil test. Reported altitude, 3,538 feet. See log. |
| 331 | 1 | 107.6 | Jan. 19, 1938 | C,W | D,S | Gentle slope | Steel casing. Reported waters 200 to 300 head of cattle. |
| 332 | 2.5 | 17 | Mar. 4, 1938 | C,W | D,S,I | Creek bottoms | Estimated yield, 6 gallons a minute. |
| 333 | -- | -- | -- | C,W | S | Slope | Do. |

Records of wells and springs in Hartley County--Continued

| No. | Distance from Hartley | Section | Survey and block or league | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) |
|-------|-----------------------|------------|---------------------------------|-----------------------------|------------------------|----------------|---------------------|------------------------|
| 335 | 12½ miles south | 73, NW¼SW¼ | P.S. sur., blk. CS | E. S. Collins | -- | -- | 184 | 6 |
| c/337 | 14 miles south | 54, NW¼SE¼ | Capitol Syndicate sur., blk. 21 | Panhandle Power & Light Co. | R. L. Hood | 1910 | 328 | 6 |
| 338 | do. | 34, SW¼NE¼ | do. | F.W.& D.C. R.R. | T. C. Shutt | 1918 | 330 | 10 |
| c/339 | 10½ miles southeast | 25, S½S½ | do. | Belle Burns | J. W. Armstrong | 1910 | 400 | 5½ |
| 341 | 17 miles south | 34, SW¼SE¼ | Capitol Syndicate sur., blk. 20 | J. L. Bivins | -- | Old | 200 | 6 |
| e/342 | 18½ miles southeast | 7, SE¼SE¼ | Capitol Syndicate sur., blk. 21 | do. | -- | Old | 165 | 6 |
| c/343 | 17 miles southeast | 6, SE¼SW¼ | do. | do. | Canadian River Gas Co. | 1929 | -- | -- |
| e/344 | 16½ miles southeast | 6, NW¼NW¼ | do. | do. | do. | 1929 | 4,145 | 24 |
| e/346 | 15½ miles southeast | 10, NE¼NW¼ | do. | do. | -- | Old | 121 | 4½ |
| 348 | 17 miles southeast | 10, SW¼NW¼ | G.& M. sur., blk. 2 | do. | -- | 1928 | 158 | 6 |
| e/349 | do. | do. | do. | do. | Amarillo Drilling Co. | 1928 | -- | -- |
| 350 | 16½ miles southeast | 2, SW¼SW¼ | H.& T.C. R.R. sur., blk. 44 | do. | -- | Old | -- | 4 |
| e/351 | 17 miles southeast | 3, SW¼SW¼ | do. | do. | -- | Old | 166 | 6 |
| c/352 | 18½ miles southeast | 11, SE¼SE¼ | G.& M. sur., blk. 2 | do. | -- | Old | -- | 6 |
| c/353 | do. | 11, SW¼SE¼ | do. | do. | -- | 1937 | 23 | 36 |
| c/354 | 19½ miles southeast | 13, NW¼NE¼ | do. | do. | Canadian River Gas Co. | -- | -- | -- |
| c/355 | 19 miles southeast | 4, SW¼NW¼ | E.L.& R.R. R.R. sur., blk. 2 | do. | do. | 1926 | -- | -- |
| 356 | 19½ miles southeast | 4, SW¼SW¼ | do. | do. | -- | Old | 90 | 4½ |
| 357 | do. | do. | H.& T.C. R.R. sur., blk. 44 | do. | -- | Old | -- | -- |
| 358 | 18½ miles southeast | 5, SE¼SW¼ | do. | Ella M. Barnett | -- | 1918 | 291 | 6 |
| 359 | 20½ miles southeast | 8, SW¼NW¼ | E.L.& R.R. R.R. sur., blk. 2 | J. L. Bivins | -- | Old | -- | -- |
| 360 | 21 miles southeast | 8, NE¼NE¼ | do. | do. | -- | Old | 102 | 6 |

a/ Measuring point was top of casing or top of pipe clamp.

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

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| 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 | | | | |
| 335 | 1.5 | 134.9 | Jan. 20, 1938 | C,W | S | Hill-side | Steel casing. Supplies two 5,000 gallon tanks. |
| 337 | -- | 288 | d/ | C,E,5 | P | Flat | Steel casing. |
| 338 | -- | -- | -- | C,G, 10 | Ind | do. | Reported water in sand from 301 to 328 feet. Located in Channing. See log. |
| 339 | -- | -- | -- | C,W | S | Hill-side | Steel casing. log. |
| 341 | 0.1 | 187.4 | Jan. 14, 1938 | C,W | S | Ridge-top | Do. |
| 342 | 2 | 115.1 | do. | C,W | D,S | Flat | Reported waters 150 to 200 head of stock. |
| 343 | -- | -- | -- | -- | -- | -- | Producing gas well. |
| 344 | -- | -- | -- | -- | -- | -- | Oil test; producing gas. Reported altitude, 3,655 feet. See log. |
| 346 | 1.0 | 108.1 | Apr. 5, 1938 | C,W | S | Near draw | Steel casing. |
| 348 | 0.5 | 147.5 | do. | C,W | S | Ridge-top | Drilled to furnish water for oil test. Estimated yield, 5 gallons a |
| 349 | -- | -- | -- | None | N | do. | Oil test. Located 175 feet northeast of well 348. minute. |
| 350 | -- | -- | -- | C,W | S | Creek bottoms | Steel casing. Obstructed at 16 feet. |
| 351 | 2 | 151.3 | Jan. 20, 1938 | C,W | S | Hill-side | Steel casing. |
| 352 | -- | -- | -- | None | N | Flat | Filled to top. |
| 353 | 1.0 | 21.6 | Apr. 12, 1938 | C,W | S | do. | Dug well. Wood curb and casing. |
| 354 | -- | -- | -- | -- | -- | Slope | Producing gas well. |
| 355 | -- | -- | -- | -- | -- | do. | Do. |
| 356 | 3.0 | 79.9 | Apr. 12, 1938 | C,W | S | do. | Steel casing. Estimated yield, 5 gallons a minute. |
| 357 | -- | -- | -- | C,W | S | Creek bottoms | Obstructed at 43 feet. |
| 358 | 2.5 | 265.7 | Jan. 13, 1938 | C,W | D,S,I | Flat | Reported irrigates 22 shade trees and supplies about 75 head of stock. |
| 359 | -- | -- | -- | C,W | S | do. | Estimated yield, 3 gallons a minute. |
| 360 | 0 | 74.7 | Apr. 12, 1938 | C,W | S | do. | Steel casing. Estimated yield, 2 gallons a minute. |

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

b/ Water level reported.

c/ No water sample collected for analysis.

Table of Drillers' Logs, Hartley County, Texas

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Driller's log of well 70</u> | | |
| Gus B. Coats farm, 14 $\frac{1}{2}$ miles southwest of Middlewater. | | |
| Water sand | 232 | 232 |
| Blue shale | 9 | 241 |
| Water sand | 9 | 250 |
| Brown clay | 20 | 270 |
| Gray shale | 5 | 275 |
| Brown clay | 50 | 325 |
| Red rock | 75 | 400 |
| Yellow clay | 20 | 420 |
| Red shale | 40 | 460 |
| Blue shale | 36 | 496 |
| Red, caving material | 39 | 535 |
| Lime | 10 | 545 |
| Blue shale | 10 | 555 |
| Lime | 10 | 565 |
| Gray water sand | 40 | 605 |
| Red material | 120 | 725 |
| Gypsum | 5 | 730 |
| Red shale | 65 | 795 |
| Packed water sand | 40 | 835 |
| Red shale | 10 | 845 |
| Packed water sand | 25 | 870 |
| Red shale | 10 | 880 |
| Brown lime | 15 | 895 |
| Sand and gypsum | 25 | 920 |
| Red shale | 15 | 935 |
| Sand and gypsum | 175 | 1110 |
| Red shale | 20 | 1130 |
| White sand | 55 | 1185 |
| Red shale | 5 | 1190 |
| Sandy lime | 20 | 1210 |
| Lime | 70 | 1280 |
| Water sand | 110 | 1390 |
| Red rock | 10 | 1400 |
| Red sand | 10 | 1410 |
| Red rock | 100 | 1510 |
| Salt | 5 | 1515 |
| Water sand | 45 | 1560 |
| White lime | 30 | 1590 |
| Red rock | 250 | 1840 |
| Red shale | 65 | 1905 |
| White lime | 10 | 1915 |
| Red shale | 65 | 1980 |
| Salt | 40 | 2020 |
| Gray lime | 25 | 2045 |
| Blue shale | 15 | 2060 |
| Red shale | 70 | 2130 |
| Red water sand | 50 | 2180 |
| Salt | 10 | 2190 |
| Red shale | 30 | 2220 |
| Red sand | 55 | 2275 |
| Red shale | 15 | 2290 |
| Red sand | 75 | 2365 |
| Red shale | 15 | 2380 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Log of well 70--Continued</u> | | |
| Sandy shale | 10 | 2390 |
| Conglomerate | 5 | 2395 |
| Red water sand | 35 | 2430 |
| Red shale | 20 | 2450 |
| Gas sand | 30 | 2480 |
| TOTAL DEPTH | - | 2990 |
| CASING RECORD: 242 feet of 15 $\frac{1}{2}$ -inch, 690 feet of 12 $\frac{1}{2}$ -inch, 1,510 feet of 10-inch, 2,630 feet of 8 $\frac{1}{2}$ -inch, and 2,890 feet of 6 5/8-inch casing. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Driller's log of well 82</u> | | |
| -- Taylor farm, 1 $\frac{3}{4}$ miles south of Middlewater. | | |
| Yellow clay | 50 | 50 |
| Sandy shale | 20 | 70 |
| Yellow clay | 10 | 80 |
| Dry sand | 105 | 185 |
| Sandy clay | 30 | 215 |
| Water sand | 15 | 230 |
| Quicksand | 165 | 395 |
| Sandy lime | 5 | 400 |
| Red rock | 55 | 455 |
| Gypsum | 3 | 458 |
| Red rock | 26 | 484 |
| Lime shell | 6 | 490 |
| Red rock | 230 | 720 |
| Sandy lime | 18 | 738 |
| Red rock | 32 | 770 |
| Lime | 15 | 785 |
| Gray shale | 5 | 790 |
| Lime | 5 | 795 |
| Red rock | 30 | 825 |
| Lime | 7 | 832 |
| Red rock | 158 | 990 |
| Yellow clay | 25 | 1015 |
| Red rock | 65 | 1080 |
| Blue shale | 20 | 1100 |
| Water sand | 25 | 1125 |
| Sandy lime | 55 | 1180 |
| Sandy shale | 28 | 1208 |
| Sharp-grained sand | 32 | 1240 |
| Sand | 52 | 1292 |
| Lime | 23 | 1315 |
| Blue shale | 25 | 1340 |
| Red rock | 55 | 1395 |
| Red shale | 10 | 1405 |
| Sandy red shale | 15 | 1420 |
| Red rock | 180 | 1600 |
| Red sand | 40 | 1640 |
| Red rock | 4 | 1644 |
| Gypsum | 56 | 1700 |
| Dry sand | 5 | 1705 |
| White lime | 90 | 1795 |

(Continued on next page)

Table of Drillers' Logs, Hartley County--Continued

| | Thickness (feet) | Depth (feet) |
|-------------------------------------|---------------------|-----------------|
| <u>Log of well 82--Continued</u> | | |
| Red rock - - - - | 10 | 1805 |
| White lime - - - - | 51 | 1856 |
| Sandy lime - - - - | 36 | 1892 |
| Water sand - - - - | 3 | 1895 |
| Lime- - - - - | 40 | 1935 |
| Sandy shale - - - - | 5 | 1940 |
| Lime- - - - - | 12 | 1952 |
| Black shale - - - - | 3 | 1955 |
| Gypsum and shale - - - - | 5 | 1960 |
| Sandy lime - - - - | 10 | 1970 |
| Lime - - - - - | 10 | 1980 |
| White sand - - - - | 100 | 2080 |
| Red sand - - - - - | 26 | 2106 |
| Red mud - - - - - | 194 | 2300 |
| Red mud, sand and shells - - - - | 340 | 2640 |
| Gypsum, salt and red sand - - - - - | 80 | 2720 |
| Sandy gray lime - - - - | 22 | 2742 |
| Red shale and shells - - - - | 173 | 2915 |
| Red water sand - - - - | 23 | 2938 |
| TOTAL DEPTH - - - - | | 4002 |

Driller's log of well 297
Canadian River Gas Co., 10 miles east of Hartley.

| | | |
|-----------------------------|-----|-----|
| Surface materials- - - - | 3 | 3 |
| Caliche - - - - - | 7 | 10 |
| Red clay - - - - - | 30 | 40 |
| Sandy white clay - - - - | 35 | 75 |
| Sandy clay - - - - - | 195 | 270 |
| Tough clay - - - - - | 6 | 276 |
| Sandy clay - - - - - | 24 | 300 |
| Dry sand- - - - - | 15 | 315 |
| Fine-grained water sand - - | 43 | 358 |
| Yellow clay - - - - - | 15 | 373 |
| Clay and sand- - - - - | 17 | 390 |
| Sand and mud - - - - - | 40 | 430 |
| Fine-grained sand- - - - | 50 | 480 |
| TOTAL DEPTH - - - - - | | 480 |

Driller's log of well 304
F. P. Feltz farm, 16 miles southeast of Hartley.

| | | |
|----------------------------|-----|-----|
| Sandy clay - - - - - | 105 | 105 |
| Quicksand- - - - - | 172 | 277 |
| Sand - - - - - | 4 | 281 |
| Quicksand- - - - - | 34 | 315 |
| Water sand - - - - - | 29 | 344 |
| Sand and clay- - - - - | 115 | 459 |
| Red beds - - - - - | 29 | 488 |
| Sand - - - - - | 53 | 541 |
| Sandy shale and gypsum - - | 24 | 565 |
| Sandy shale - - - - - | 53 | 618 |
| Sand and clay- - - - - | 121 | 739 |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Log of well 304--Continued</u> | | |
| Red Beds - - - - - | 39 | 778 |
| Sand and shale - - - - | 106 | 884 |
| Sand - - - - - | 8 | 892 |
| Sticky shale - - - - - | 38 | 930 |
| Shale and Red Beds - - - - | 44 | 974 |
| Sand - - - - - | 11 | 985 |
| Gypsum - - - - - | 14 | 999 |
| Red and blue shale with gypsum - - - - - | 136 | 1135 |
| Red and blue shale - - - - | 49 | 1184 |
| Sticky shale - - - - - | 28 | 1212 |
| Shale and quicksand - - - - | 86 | 1298 |
| Shale - - - - - | 31 | 1329 |
| Sand and gypsum - - - - - | 6 | 1335 |
| Sticky shale - - - - - | 15 | 1350 |
| Gypsum - - - - - | 14 | 1364 |
| Sandy shale and gypsum - - | 57 | 1421 |
| Gypsum - - - - - | 94 | 1515 |
| Sand and Red Beds- - - - - | 6 | 1521 |
| Gypsum and Red Beds - - - - | 19 | 1540 |
| Gypsum - - - - - | 2 | 1542 |
| Gypsum and Red Beds - - - - | 64 | 1606 |
| Sand and gypsum - - - - - | 5 | 1611 |
| Gypsum - - - - - | 8 | 1619 |
| Gypsum and Red Beds - - - - | 20 | 1639 |
| Gypsum and blue shale- - - - | 23 | 1662 |
| Shale and shells - - - - - | 18 | 1680 |
| Gypsum - - - - - | 4 | 1684 |
| Sand and yellow shale- - - - | 44 | 1728 |
| Sand and Red Beds- - - - - | 22 | 1750 |
| Blue shale - - - - - | 31 | 1781 |
| Sand - - - - - | 46 | 1827 |
| Shale- - - - - | 27 | 1854 |
| Sand - - - - - | 20 | 1874 |
| Blue shale - - - - - | 13 | 1887 |
| Sand - - - - - | 9 | 1896 |
| Sand and gypsum - - - - - | 12 | 1908 |
| Gypsum and salt - - - - - | 4 | 1912 |
| Sand - - - - - | 8 | 1920 |
| Shale- - - - - | 5 | 1925 |
| Shale and salt - - - - - | 11 | 1936 |
| Sand - - - - - | 8 | 1944 |
| Gypsum and shale- - - - - | 13 | 1957 |
| Gypsum, red rock and salt- - | 13 | 1970 |
| Gypsum, red rock and shale | 51 | 2021 |
| Shale and salt - - - - - | 9 | 2030 |
| TOTAL DEPTH - - - - - | | 3677 |

CASING RECORD: 507 feet of 12 $\frac{1}{2}$ -inch, 2,787 feet of 8 $\frac{1}{4}$ -inch, 3,029 feet of 6 5/8 inch and 3,801 feet of 5 3/16-inch casing.

Table of Drillers' Logs, Hartley County--Continued

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Driller's log of well 326</u> | | |
| R. M. Stephens tract, 14½ miles south of Hartley. | | |
| Drift sand - - - - | 2 | 2 |
| Sandy brown loam - - - | 5 | 7 |
| Sand - - - - - | 7 | 14 |
| Water sand and rocks - - | 3 | 17 |
| Clay - - - - - | - | 17 |
| TOTAL DEPTH - - - - - | - | 17 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Driller's log of well 329</u> | | |
| Matador Land & Cattle Co., Ltd., 16 miles southwest of Hartley. | | |
| Surface materials- - - | 100 | 100 |
| Sand and shale- - - - | 175 | 275 |
| Hard sand- - - - - | 5 | 280 |
| Quicksand- - - - - | 90 | 370 |
| Gray shale - - - - - | 126 | 496 |
| Red rock - - - - - | 32 | 528 |
| Shale and shells - - - | 47 | 575 |
| Hard sand- - - - - | 25 | 600 |
| Sandy Red Beds - - - - | 48 | 648 |
| Red Beds - - - - - | 72 | 720 |
| Red Beds and shells - - | 101 | 821 |
| Sandy shale - - - - - | 21 | 842 |
| Red rock - - - - - | 38 | 880 |
| Sandy gypsum - - - - - | 16 | 896 |
| Shale and sandy gypsum | 29 | 925 |
| Shale and hard-packed sandy Red Beds - - - - | 61 | 986 |
| Lime and shale - - - - | 23 | 1014 |
| Broken lime and Red Beds | 42 | 1056 |
| Lime - - - - - | 4 | 1060 |
| Red Beds and lime shells | 102 | 1162 |
| Red Beds - - - - - | 28 | 1190 |
| Sandy shale - - - - - | 32 | 1222 |
| Shale and Red Beds - - | 53 | 1275 |
| Gypsum and Red Beds - - | 145 | 1420 |
| Red Beds and lime - - - | 15 | 1435 |
| Broken lime - - - - - | 13 | 1448 |
| Gypsum and red rock - - | 111 | 1559 |
| Gypsum - - - - - | 97 | 1656 |
| Gypsum and lime - - - - | 24 | 1680 |
| Lime - - - - - | 5 | 1685 |
| Gypsum - - - - - | 25 | 1710 |
| Hard shale and lime - - | 20 | 1730 |
| Gypsum - - - - - | 4 | 1734 |
| Gypsum and lime - - - - | 36 | 1770 |
| Gypsum - - - - - | 15 | 1785 |
| Broken shale and gypsum | 9 | 1794 |
| Anhydrite and salt - - - | 110 | 1904 |
| Gypsum - - - - - | 24 | 1928 |
| Gypsum and Red Beds - - | 48 | 1976 |
| Gypsum - - - - - | 35 | 2009 |
| Gypsum and lime - - - - | 55 | 2064 |

| | Thickness (feet) | Depth (feet) |
|-----------------------------------|---------------------|-----------------|
| <u>Log of well 329--Continued</u> | | |
| Gypsum - - - - - | 14 | 2078 |
| Gypsum and Red Beds - - | 36 | 2114 |
| Lime and Red Beds- - - | 14 | 2128 |
| Gypsum and lime - - - - | 27 | 2155 |
| Gypsum - - - - - | 25 | 2180 |
| Gypsum and Red Beds - - | 59 | 2239 |
| Gypsum - - - - - | 39 | 2278 |
| Gypsum and lime - - - - | 17 | 2295 |
| Red Beds and lime shells | 40 | 2335 |
| Gypsum and red rock - - | 35 | 2370 |
| Gypsum and lime - - - - | 25 | 2395 |
| Hard-packed sand - - - - | 30 | 2425 |
| Gypsum and lime - - - - | 15 | 2440 |
| Hard-packed sandy shale | 18 | 2458 |
| Gypsum and Red Beds - - | 15 | 2473 |
| Hard-packed red sand - - | 15 | 2488 |
| Sandy red rock - - - - | 6 | 2494 |
| TOTAL DEPTH - - - - - | - | 4605 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Driller's log of well 338</u> | | |
| F. W. & D. C. R. R., in Channing, 14 miles south of Hartley. | | |
| Surface materials- - - - | 4 | 4 |
| Yellow clay - - - - - | 8 | 12 |
| Yellow clay and sand - - | 28 | 40 |
| Soft rock- - - - - | 10 | 50 |
| Red clay - - - - - | 15 | 65 |
| Yellow clay and sand - - | 35 | 100 |
| Yellow clay - - - - - | 15 | 115 |
| Sand - - - - - | 55 | 170 |
| Gray sand- - - - - | 20 | 190 |
| Yellow sand and clay - - | 30 | 220 |
| Dry sand - - - - - | 80 | 300 |
| Water sand - - - - - | 28 | 328 |
| Clay and sand- - - - - | 2 | 330 |
| TOTAL DEPTH - - - - - | - | 330 |
| CASING RECORD: 330 feet of 10-inch casing; bottom 20 feet perforated with 3/8-inch holes. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Driller's log of well 344</u> | | |
| Bivins Estate "A", 16½ miles southeast of Hartley. | | |
| Sand - - - - - | 30 | 30 |
| Red rock - - - - - | 20 | 50 |
| Blue mud - - - - - | 70 | 120 |
| Water sand - - - - - | 15 | 135 |
| Blue mud - - - - - | 25 | 160 |
| Yellow shale - - - - - | 40 | 200 |
| Gypsum- - - - - | 6 | 206 |
| White mud- - - - - | 24 | 230 |
| Red rock - - - - - | 85 | 315 |
| Gypsum rock - - - - - | 5 | 320 |
| Brown slate - - - - - | 15 | 335 |
| Gypsum - - - - - | 5 | 340 |
| White mud - - - - - | 10 | 350 |

(Continued on next page)

Table of Drillers' Logs, Hartley County--Continued

| | | | | | Thickness | Depth | | | | | | Thickness | Depth | | |
|-----------------------------------|---|---|---|---|-----------|--------|-----------------------------------|-----------|------|----------|------------------------|-----------|--------|-------------------------|---|
| | | | | | (feet) | (feet) | | | | | | (feet) | (feet) | | |
| <u>Log of well 344--Continued</u> | | | | | | | <u>Log of well 344--Continued</u> | | | | | | | | |
| Brown shale | - | - | - | - | 50 | 400 | Blue shale and lime | - | - | - | - | 25 | 1225 | | |
| Red rock | - | - | - | - | 135 | 535 | Gypsum | - | - | - | - | 60 | 1285 | | |
| Sand | - | - | - | - | 25 | 560 | Sand | - | - | - | - | 5 | 1290 | | |
| Red rock | - | - | - | - | 5 | 565 | Lime | - | - | - | - | 1 | 1291 | | |
| Blue mud | - | - | - | - | 5 | 570 | Sand | - | - | - | - | 11 | 1302 | | |
| Red rock | - | - | - | - | 10 | 580 | Shale and lime | - | - | - | - | 28 | 1330 | | |
| Sand | - | - | - | - | 25 | 605 | Shale and shells | - | - | - | - | 15 | 1345 | | |
| Blue mud | - | - | - | - | 10 | 615 | Lime | - | - | - | - | 5 | 1350 | | |
| Red rock | - | - | - | - | 15 | 630 | Sticky shale | - | - | - | - | 37 | 1387 | | |
| Sand | - | - | - | - | 15 | 645 | Gypsum and lime shells | - | - | - | - | 23 | 1410 | | |
| Blue mud | - | - | - | - | 5 | 650 | Sandy lime | - | - | - | - | 10 | 1420 | | |
| Gypsum | - | - | - | - | 5 | 655 | Blue shale | - | - | - | - | 25 | 1445 | | |
| Sand | - | - | - | - | 15 | 670 | Red Beds | - | - | - | - | 55 | 1500 | | |
| Red rock | - | - | - | - | 100 | 770 | Shale and salt | - | - | - | - | 137 | 1637 | | |
| Gypsum | - | - | - | - | 5 | 775 | Shale | - | - | - | - | 13 | 1650 | | |
| Red rock | - | - | - | - | 20 | 795 | Lime | - | - | - | - | 17 | 1667 | | |
| Gypsum rock | - | - | - | - | 10 | 805 | Shale and lime | - | - | - | - | 50 | 1717 | | |
| Red rock | - | - | - | - | 5 | 810 | TOTAL DEPTH | - | - | - | - | - | 4145 | | |
| Red mud | - | - | - | - | 20 | 830 | CASING RECORD: | 200 | feet | of | 24-inch, | 648 | | | |
| Red rock | - | - | - | - | 40 | 870 | | feet | of | 20-inch, | 973 | feet | of | 15 $\frac{1}{2}$ -inch, | |
| Red sand | - | - | - | - | 30 | 900 | | 2,925 | feet | of | 8 $\frac{1}{2}$ -inch, | 3,585 | feet | of | 6 |
| Sand | - | - | - | - | 55 | 955 | | 5/8-inch, | and | 4,011 | feet | of | 5 | 3/16-inch | |
| Sand and gravel | - | - | - | - | 75 | 1030 | | casing. | | | | | | | |
| Sand, shale and lime shells | - | - | - | - | 29 | 1059 | | | | | | | | | |
| Gypsum and lime | - | - | - | - | 136 | 1195 | | | | | | | | | |
| Red Beds | - | - | - | - | 5 | 1200 | | | | | | | | | |

Logs of test wells drilled by W. F. A. labor in Hartley County, Texas
 Samples examined and classified by C. R. Follett and J. H. Harrison,
 Project Superintendents.

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 48</u> | | |
| Bottom of dry creek, Joe Reynolds tract, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, blk. 1 T $\frac{1}{2}$, T. & N. R. R. survey, 15 miles east of Middlewater. | | |
| Sand - - - - - | 1 | 1 |
| Clay and gravel - - - | 4 | 5 |
| Sandy clay - - - - - | 6 | 11 |
| Sand and red clay- - - | 5 | 16 |
| Red sand - - - - - | 11 | 27 |
| Struck water at 3 feet. Water level, 1.9 feet below top of ground 1 hour after hole completed. Feb. 9, 1938 | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 73</u> | | |
| Lake bottom, side of county road, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 4, blk. LE, G. & M. survey, 8 $\frac{1}{2}$ miles south of Middlewater. | | |
| Top soil - - - - - | 3 | 3 |
| Sandy red clay - - - - | 5 | 8 |
| Sand - - - - - | 2 | 10 |
| Sandy red clay - - - - | 3 | 13 |
| Red clay - - - - - | 4 | 17 |
| Rock - - - - - | | 17 |
| Struck caliche rock. Jan. 26, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 84</u> | | |
| Bottom of dry lake, side of county road, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 7, blk. LE, G. & M. survey, 8 miles south of Middlewater. | | |
| Top soil - - - - - | 6 | 6 |
| Gray clay- - - - - | 2 | 8 |
| Red clay - - - - - | 3 | 11 |
| Gray clay- - - - - | 2 | 13 |
| Red clay - - - - - | 9 | 22 |
| Rock - - - - - | | 22 |
| Jan. 26, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 89</u> | | |
| Gentle slope, side of county road, NW $\frac{1}{4}$ SW $\frac{1}{4}$ league 202, 10 $\frac{1}{2}$ miles south of Middlewater. | | |
| Red clay - - - - - | 10 | 10 |
| Pink clay- - - - - | 3 | 13 |
| Jan. 25, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 92</u> | | |
| Bottom of dry lake, side of county road, NW $\frac{1}{4}$ SE $\frac{1}{4}$ league 202, 11 $\frac{1}{2}$ miles southeast of Middlewater. | | |
| Top soil - - - - - | 1 | 1 |
| Red clay - - - - - | 19 | 20 |
| Caliche - - - - - | 6 | 26 |
| Sandy red clay - - - - | 7 | 33 |
| Sand - - - - - | 3 | 36 |

| | Thickness (feet) | Depth (feet) |
|---------------------------|---------------------|-----------------|
| <u>Well 92--Continued</u> | | |
| Sand and red clay- - - | 4 | 40 |
| Rock - - - - - | | 40 |
| Jan. 25, 1938 | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 95</u> | | |
| Bottom of dry creek, side of county road, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 69, C. S. S. blk. 22, 14 $\frac{1}{2}$ miles southeast of Middlewater. | | |
| Sandy loam- - - - - | 5 | 5 |
| Sand - - - - - | 35 | 40 |
| Quicksand - - - - - | 1 | 41 |
| Sand and clay - - - - - | 11 | 52 |
| Struck water at 41 feet. Water level, 39.7 feet below top of ground 24 hours after hole completed. Jan. 24, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 96</u> | | |
| Canyon floor, side of county road, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 45, C. S. S. blk. 22, 16 $\frac{1}{2}$ miles southeast of Middlewater. | | |
| Top soil- - - - - | 3 | 3 |
| Sand and clay - - - - - | 7 | 10 |
| Sand - - - - - | 7 | 17 |
| Sand and clay - - - - - | 4 | 21 |
| Sand - - - - - | 21 | 42 |
| Sand and clay - - - - - | 5 | 47 |
| Rock - - - - - | | 47 |
| Jan. 24, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 108</u> | | |
| Rolling, side of county road, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 22, C. S. S. blk. 22, 18 miles east of Middlewater. | | |
| Sandy loam - - - - - | 2 | 2 |
| Sandy red clay - - - - | 13 | 15 |
| Sand- - - - - | 7 | 22 |
| Caliche and clay - - - - | 2 | 24 |
| Rock - - - - - | | 24 |
| Jan. 5, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 215</u> | | |
| Bed of dry lake, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 72, blk. 48, H. & T. C. R. R. survey, 9 miles north of Hartley. This log is one of 12 logs shown graphically on group 215 cross sec- tion in back of this report. | | |
| Brown top soil - - - - - | 4 | 4 |
| Roddish-brown sand and clay | 8 | 12 |
| Sandy brown clay - - - - | 13 | 25 |
| Sandy gray clay - - - - - | 2 | 27 |
| Sandy greenish-yellow clay | 2 | 29 |
| Sandy grey clay - - - - - | 8 | 37 |

(Continued on next page)

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

| | Thickness (feet) | Depth (feet) |
|----------------------------|---------------------|-----------------|
| <u>Well 215--Continued</u> | | |
| Sandy yellow clay- - - | 2 | 39 |
| Pink sand and clay - - - | 19 | 58 |
| Red sand and clay- - - | 5 | 63 |
| Sandy red clay- - - - | 3 | 66 |
| Red sand- - - - - | 10 | 76 |
| Red sand and caliche - - - | 4 | 80 |
| Red sand- - - - - | 13 | 93 |
| Mar. 25, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 221</u> | | |
| Bed of dry lake, side of county road, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 125, blk. 48, H. & T. C. R. R. survey, 5 $\frac{1}{2}$ miles north of Hartley. This log is one of 5 logs shown graphically on group 221 cross section in back of this report. | | |
| Reddish-brown top soil - - - | 4 | 4 |
| Silty red sand - - - - | 7 | 11 |
| Red sand with clay and caliche- - - - - | 7 | 18 |
| Pink sand and clay - - - | 4 | 22 |
| Pink sand- - - - - | 6 | 28 |
| Sandy red clay and caliche | 2 | 30 |
| Sandy dark-red clay - - - | 5 | 35 |
| Mar. 12, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 226</u> | | |
| Bed of dry lake, -- Wilson Est., NE $\frac{1}{4}$ SE $\frac{1}{4}$ Jos. Beaty survey, 8 $\frac{1}{2}$ miles northeast of Hartley. This log is one of 5 logs shown graphically on group 226 cross section in back of this report. | | |
| Gummy brown top soil - - - | 4 | 4 |
| Sandy reddish-brown clay - - | 5 | 9 |
| Sandy grayish-red clay - - - | 9 | 18 |
| Sandy blue-brown clay- - - | 5 | 23 |
| Silty pink sand and clay - - | 1 | 24 |
| Sandy pink clay - - - - | 1 | 25 |
| Sandy blue-gray clay - - - | 10 | 35 |
| Gray and greenish-yellow clay - - - - - | 2 | 37 |
| Silty pink sand - - - - | 9 | 46 |
| Mar. 14, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 258</u> | | |
| Creek bottoms, Reynolds Cattle Co. ranch, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, blk. 2, Brooks and Burleson survey, 8 miles west of Hartley. This log is one of 16 logs shown graphically on group 258 cross section in back of this report. | | |
| Coarse-grained sand and gravel - - - - - | 3 | 3 |
| Red sand and clay- - - - | 5 | 8 |
| Coarse-grained clean sand - | 4 | 12 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 258--Continued</u> | | |
| Sandy reddish-brown clay - | 1 | 13 |
| Coarse-grained red water sand - - - - - | 2 | 15 |
| Sandy reddish-brown clay - | 6 | 21 |
| Coarse-grained red water sand - - - - - | 4 | 25 |
| Feb. 28, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 259</u> | | |
| Creek bottoms, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, blk. 2, Brooks and Burleson survey, 7 $\frac{1}{2}$ miles west of Hartley. | | |
| Sandy top soil - - - - - | 2 | 2 |
| Sand- - - - - | 4 | 6 |
| Sandy clay - - - - - | 19 | 25 |
| Sand - - - - - | 16 | 41 |
| Struck water at 8.5 feet. Water level, 7.8 feet below top of ground $\frac{1}{2}$ hour after hole completed. Feb. 8, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 260</u> | | |
| Creek bottoms, Reynolds Cattle Co. ranch, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, blk. 2, Brooks and Burleson survey, 7 $\frac{1}{2}$ miles southwest of Hartley. This log is one of 6 logs shown graphically on group 260 cross section in back of this report. | | |
| Sandy reddish-brown loam - | 8 | 8 |
| Sandy red clay - - - - | 2 | 10 |
| Red sand - - - - - | 1 | 11 |
| Coarse-grained red sand - | 3 | 14 |
| Sandy reddish-brown clay - | 2 | 16 |
| Pink sand- - - - - | 1 | 17 |
| Sandy roddish-brown clay - | 5 | 22 |
| Gray sand- - - - - | 3 | 25 |
| Mar. 7, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 262</u> | | |
| Bottom of dry lake, side of county road, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, blk. 2, Brooks and Burleson survey, 4 $\frac{3}{4}$ miles southwest of Hartley. This log is one of 5 logs shown graphically on group 262 cross section in back of this report. | | |
| Reddish-brown top soil - | 2 | 2 |
| Sandy light-red clay - - - | 7 | 9 |
| Sandy reddish-brown clay - | 10 | 19 |
| Sandy brown clay - - - - | 4 | 23 |
| Sandy reddish-brown clay - | 3 | 26 |
| Red. clay - - - - - | 4 | 30 |
| Mar. 10, 1938. | | |

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

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 265</u> | | |
| Creek bottoms, side of county road, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, blk. 49, H. & T. C. R. R. survey, 8 miles southwest of Hartley. | | |
| Sandy top soil - - - | 8 | 8 |
| Sand - - - - - | 2 | 10 |
| Sand and gravel - - - | 1 | 11 |
| Sandy red clay - - - | 8 | 19 |
| Muddy-colored clay - - - | 4 | 23 |
| Sandy clay - - - - - | 4 | 27 |
| Struck water at 11.5 feet. Water level, 11.4 feet below top of ground 20 hours after hole completed. Feb. 7, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 266</u> | | |
| Creek bottoms, Reynolds Cattle Co. ranch, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, blk. 49, H. & T. C. R. R. survey, 8 miles southwest of Hartley. This log is one of 29 logs shown graphically on group 266 cross section in back of this report. | | |
| Roddish-brown top soil - | 3 | 3 |
| Silty red sand and caliche | 5 | 8 |
| Red sand - - - - - | 9 | 17 |
| Red sand and clay- - - | 5 | 22 |
| Red sand - - - - - | 6 | 28 |
| Feb. 25, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 267</u> | | |
| Creek bottoms, side of county road, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 3, blk. 49, H. & T. C. R. R. survey, 8 miles southwest of Hartley. | | |
| Sandy loam - - - - - | 7 | 7 |
| Sandy clay - - - - - | 4 | 11 |
| Quicksand - - - - - | 4 | 15 |
| Struck water at 12 feet. Feb. 7, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 268</u> | | |
| Gentle slope, side of county road, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, blk. 49, H. & T. C. R. R. survey, 9 miles southwest of Hartley. | | |
| Sandy top soil - - - | 5 | 5 |
| Sandy clay - - - - - | 10 | 15 |
| Gray clay - - - - - | 8 | 23 |
| Sand - - - - - | 9 | 32 |
| Clay - - - - - | 2 | 34 |
| Sand - - - - - | 2 | 36 |
| Clay - - - - - | 2 | 38 |
| Sandy clay - - - - - | 2 | 40 |
| Struck water at 8.5 feet. Water level, 6.1 feet below top of ground 24 hours after hole completed. Feb. 7, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 275</u> | | |
| Canyon floor, E. S. Collin tract, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, blk. 49, H. & T. C. R. R. survey, 8 $\frac{1}{2}$ miles southwest of Hartley. | | |
| Sandy top soil - - - | 1 | 1 |
| Sand- - - - - | 5 | 6 |
| Clay - - - - - | 3 | 9 |
| Quicksand - - - - - | 2 | 11 |
| Struck water at 10.5 feet. Water level, 10.1 feet below top of ground $\frac{1}{2}$ hour after hole completed. Jan. 12, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 279</u> | | |
| Canyon floor, E. S. Collins tract, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, blk. 49, H. & T. C. R. R. survey, 9 $\frac{1}{2}$ miles southwest of Hartley. | | |
| sandy loam - - - - - | 6 | 6 |
| Red sand and clay- - - | 21 | 27 |
| Red clay- - - - - | 16 | 43 |
| Struck water at 34 feet. Water level, 33.1 feet below top of ground $\frac{1}{3}$ hour after hole completed. Jan. 12, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 282</u> | | |
| Canyon floor, E. S. Collins tract, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, blk. 49, H. & T. C. R. R. survey, 10 $\frac{1}{2}$ miles southwest of Hartley. | | |
| Sandy loam - - - - - | 1 | 1 |
| Sand - - - - - | 4 | 5 |
| Sandy red clay - - - | 6 | 11 |
| Quicksand- - - - - | 3 | 14 |
| Sandy red clay - - - | 13 | 27 |
| Clay - - - - - | 3 | 30 |
| Struck water at 12 feet. Water level, 11.2 feet below top of ground 17 hours after hole completed. Jan. 12, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 288</u> | | |
| Bottom of dry lake, side of Highway 5, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, blk. 4, W. C. R. R. survey, 9 $\frac{1}{2}$ miles southeast of Hartley. | | |
| Top soil - - - - - | 2 | 2 |
| Red clay - - - - - | 1 | 3 |
| Sand and clay- - - - - | 5 | 8 |
| Pink clay- - - - - | 8 | 16 |
| Caliche and clay - - - | 2 | 18 |
| Caliche - - - - - | 10 | 28 |
| Rock - - - - - | - | 26 |
| Jan. 13, 1938. | | |

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

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 292</u> | | |
| Bottom of dry lake, side of county road, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 6, blk. A2, 4 $\frac{3}{4}$ miles south of Hartley. | | |
| Clay and caliche - - - | 1 | 1 |
| Sandy red clay - - - | 4 | 5 |
| Caliche - - - - - | 6 | 11 |
| Sandy red clay - - - | 5 | 16 |
| Caliche - - - - - | 1 | 17 |
| Jan. 22, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 298</u> | | |
| Bed of dry lake, side of county road, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21 ⁰ , blk. 44, H. & T. C. R. R. survey, 9 $\frac{1}{2}$ miles east of Hartley. This log is one of 5 logs shown graphically on group 298 cross section in back of this report. | | |
| Sandy brown top soil - - | 2 | 2 |
| Sandy reddish-brown clay - | 7 | 9 |
| Sandy red clay - - - - | 7 | 16 |
| Powdery white caliche- - | 2 | 18 |
| Sandy gray clay - - - - | 5 | 23 |
| Sandy red clay- - - - - | 11 | 34 |
| Caliche rock - - - - - | | 34 |
| April 5, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 300</u> | | |
| Bed of dry lake, T. Collins tract, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 17, blk. 5, G. H. & H. R. R. survey, 10 $\frac{1}{2}$ miles southeast of Hartley. This log is one of 3 logs shown graphically on group 300 cross section in back of this report. | | |
| Sandy brown top soil - - | 3 | 3 |
| Silty red sand and clay - | 5 | 8 |
| Sandy gray clay - - - - | 4 | 12 |
| Sandy red clay - - - - - | 6 | 18 |
| Sandy pink clay - - - - - | 4 | 22 |
| Sandy red clay - - - - - | 8 | 30 |
| Silty red sand and clay - | 9 | 39 |
| April 13, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 307</u> | | |
| Bottom of dry lake, side of county road, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 87, blk. 44, H. & T. C. R. R. survey, 14 $\frac{1}{2}$ miles southeast of Hartley. | | |
| Top soil - - - - - | 1 | 1 |
| Red clay - - - - - | 1 | 2 |
| Pink clay- - - - - | 2 | 4 |
| Caliche and clay - - - - | 9 | 13 |
| Sandy clay - - - - - | 2 | 15 |
| Rock- - - - - | | 15 |
| Dec. 31, 1937. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 310</u> | | |
| Bottom of dry lake, Alfred Bynum tract, NE $\frac{1}{4}$ SE $\frac{1}{4}$ Alford Bynum Preemption survey, 12 $\frac{1}{2}$ miles southeast of Hartley. | | |
| Black top soil - - - - | 5 | 5 |
| Brown clay- - - - - | 2 | 7 |
| Sandy clay- - - - - | 8 | 15 |
| Pink clay - - - - - | 4 | 19 |
| Red clay - - - - - | 15 | 34 |
| Dec. 30, 1937. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 311</u> | | |
| Bottom of dry lake, Alfred Bynum Preemption survey, 12 $\frac{1}{2}$ miles southeast of Hartley. | | |
| Top soil - - - - - | 4 | 4 |
| Pink clay- - - - - | 20 | 24 |
| Gray clay- - - - - | 5 | 29 |
| Sandy red clay - - - - | 5 | 34 |
| Red clay - - - - - | 6 | 40 |
| Dec. 30, 1937. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 317</u> | | |
| Bottom of dry lake, side of county road, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, blk. CS, 10 miles south of Hartley. | | |
| Top soil - - - - - | 2 | 2 |
| Sandy red clay - - - - - | 4 | 6 |
| Caliche - - - - - | 1 | 7 |
| Sandy clay - - - - - | 3 | 10 |
| Caliche - - - - - | 8 | 18 |
| Sandy clay - - - - - | 2 | 20 |
| Caliche - - - - - | 3 | 23 |
| Sandy red clay - - - - - | 4 | 27 |
| Caliche - - - - - | 3 | 30 |
| Stopped in caliche at 30 feet. | | |
| Jan. 11, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 319</u> | | |
| Flat, side of county road, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 45, blk. CS, 11 $\frac{1}{2}$ miles south of Hartley. | | |
| Top soil - - - - - | 1 | 1 |
| Caliche - - - - - | 8 | 9 |
| Sandy red clay - - - - - | 2 | 11 |
| Caliche - - - - - | 23 | 34 |
| Stopped in caliche at 34 feet. | | |
| Jan. 6, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 321</u> | | |
| Ridgetop, side of county road, SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 54, blk. CS, 12 miles south of Hartley. | | |
| Sandy top soil - - - - - | 4 | 4 |
| Sandy clay - - - - - | 3 | 7 |
| White sand and caliche - | 8 | 15 |

(Continued on next page)

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

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 321--Continued</u> | | |
| Sandy clay and caliche - - - | 3 | 18 |
| Stopped in caliche at 18 feet. Jan. 3, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 322</u> | | |
| Creek bottoms, side of county road, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, blk. 49, H. & T. C. R. R. survey, 12 $\frac{1}{2}$ miles south of Hartley. | | |
| Fine-grained sand- - - | 2 | 2 |
| Sandy gray clay - - - | 4 | 6 |
| Gray clay- - - - | 3 | 9 |
| Rock- - - - | - | 9 |
| Struck water at 8 feet. Water level, 7 feet below top of ground 1 hour after hole completed. Jan. 3, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 323</u> | | |
| Creek bottoms, side of county road, SW $\frac{1}{4}$ sec. 19, blk. 49, H. & T. C. R. R. survey, 13 $\frac{1}{2}$ miles southwest of Hartley. | | |
| Sandy loam - - - - | 2 | 2 |
| Clay and caliche - - - | 2 | 4 |
| White clay- - - - | 1 | 5 |
| Yellow clay - - - - | 4 | 9 |
| Gray clay - - - - | 6 | 15 |
| Blue clay and gypsum - - | 10 | 25 |
| Struck water at 10.9 feet. Water level, 9.2 feet below top of ground 5 $\frac{1}{2}$ hours after hole completed. Jan. 4, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 325</u> | | |
| Rolling, side of county road, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, blk. 49, H. & T. C. R. R. survey, 14 miles south of Hartley. | | |
| Fine-grained sand - - - | 2 | 2 |
| Sandy red clay- - - - | 4 | 6 |
| Red clay- - - - | 12 | 18 |
| Sandy clay - - - - | 7 | 25 |
| Sand - - - - | 8 | 33 |
| Blue clay - - - - | 7 | 40 |
| Sand - - - - | 3 | 43 |
| Struck water at 9.8 feet. Water level, 8 feet below top of ground 19 hours after hole completed. Jan. 4, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 330</u> | | |
| Hillside, side of county road, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 20, blk. 22, C. S. S. survey, 16 miles southwest of Hartley. | | |
| Sandy red clay - - - - | 2 | 2 |
| Red clay- - - - | 3 | 5 |
| Sandy clay - - - - | 2 | 7 |
| Struck rock at 7 feet. Jan. 5, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 334</u> | | |
| Creek bottoms, side of county road, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 51, blk. 21, C. S. S. survey, 14 miles south of Hartley. | | |
| Sand and gravel - - - - | 6 | 6 |
| Sand- - - - | 3 | 9 |
| Red sand and gravel - - - | 3 | 12 |
| Sand - - - - | 22 | 34 |
| Sandy red clay - - - - | 3 | 37 |
| Sand - - - - | 6 | 43 |
| Jan. 14, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 336</u> | | |
| Hillside, side of county road, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 72, blk. CS, 13 miles south of Hartley. | | |
| Sandy loam - - - - | 8 | 8 |
| Sand and clay - - - - | 10 | 18 |
| Struck rock at 18 feet. Jan. 3, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 340</u> | | |
| Creek bottoms, side of Highway 5, NW $\frac{1}{4}$ SE $\frac{1}{2}$ sec. 20, blk. 21, C. S. S. survey, 15 miles south of Hartley. | | |
| Sandy loam - - - - | 5 | 5 |
| Gravel - - - - | 2 | 7 |
| Sand and red clay - - - | 20 | 27 |
| Sand - - - - | 13 | 40 |
| Jan. 20, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 347</u> | | |
| Creek bottoms, side of Highway 5, NW $\frac{1}{4}$ NE $\frac{1}{2}$ sec. 5, blk. 21, C. S. S. survey, 16 miles southeast of Hartley. | | |
| Top soil - - - - | 1 | 1 |
| Sandy loam - - - - | 2 | 3 |
| Sand - - - - | 1 | 4 |
| Sand and gravel - - - - | 3 | 7 |
| Jan. 21, 1938. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 345</u> | | |
| Creek bottoms, side of Highway 5, NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9, blk. 21, C. S. S. survey, 16 miles southeast of Hartley. | | |
| Top soil - - - - | 2 | 2 |
| Caliche - - - - | 1 | 3 |
| Red clay - - - - | 4 | 7 |
| Sandy red clay - - - - | 21 | 28 |
| Red clay - - - - | 3 | 31 |
| Sandy red clay - - - - | 16 | 47 |
| Struck water at 6.8 feet. Jan. 20, 1938. | | |

Representative earthen tanks in ~~Hartley~~ County, Texas

| No. | Distance from Middle-water | Section | Survey and block or league | Owner | Topographic situation of tank | Estimated catchment area in acres | Topographic situation of catchment area |
|-----------|-----------------------------|--|------------------------------------|------------------------|-------------------------------|-----------------------------------|---|
| 401 | 11 miles east | 18, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | G. & M. sur., blk. LS | Reynolds Cattle Co. | Gentle slope | 10 | Gentle slope |
| 402 b/ | 15 $\frac{1}{2}$ miles east | 9, SW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | do. | Creek bottoms | -- | -- |
| 403 b/ | 14 miles east | 48, SW $\frac{1}{4}$ NE $\frac{1}{4}$ | T.&N.O.R.R. sur., blk. 1To | do. | -- | -- | Gentle slope |
| 404 b/ | 13 miles east | 39, NW $\frac{1}{4}$ NW $\frac{1}{4}$ | do. | do. | Flat | -- | do. |
| 405 b/ | 13 $\frac{1}{2}$ miles east | 13, NE $\frac{1}{4}$ NE $\frac{1}{4}$ | do. | O. H. Finch | Creek bottoms | 18,000 | Sand dunes |
| 406 b/ | 32 miles east | 14, NE $\frac{1}{4}$ NW $\frac{1}{4}$ | Capitol Syndicate sur., blk. 21 | J. Bivins | In draw | 160 | -- |
| 407 b/ | do. | 4, NW $\frac{1}{4}$ SW $\frac{1}{4}$ | do. | R. Queen | do. | 2,500 | Upland |

a/ S, stock.

C. R. Follett and J. H. Harrison, Project Superintendents
(Chemical analyses of water from these tanks are in the table of analyses.)

| No. | Dam | | | Use S/ / | Remarks |
|-----|------------------|------------------|----------|----------------|---|
| | Length (feet) | Height (feet) | Material | | |
| 401 | 100 | 5 | Earth | S | Supplied from windmill. Water turbid. Vegetation: grass. |
| 402 | 100 | 10 | do. | S | Reported greenish-colored water. |
| 403 | 80 | 4 | do. | S | Water turbid. Vegetation: grass. |
| 404 | 75 | 4 | do. | S | Dry when visited, Feb. 25, 1938. Vegetation: grass. |
| 405 | 110 | 20 | do. | S | Completed, Mar. 1, 1938. Vegetation: buffalo grass. |
| 406 | 150 | 12 | do. | S | Dry when visited, Mar. 5, 1938. Vegetation: buffalo grass. |
| 407 | 200 | 30 | do. | S | Built by Soil Conservation Survey. Dry when visited April 5, 1938. Vegetation: buffalo grass. |

b/ No water sample collected for analysis.

Partial analyses of water from wells in Hartley 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. V. Lohr, Chemists, U. S. Department of the Interior, Geological Survey; by D. F. Riddell, and H. T. Davidson, Chemists; and J. A. Harmaza, Martin Wieland, and Jack Ramsey, Assistant Chemists. Nitrate determined by E. V. Lohr. Results are in parts per million. Well numbers correspond to numbers in table of well records.)

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|----------------------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 1 | -- Beck | - | Mar. 15, 1938 | 291 | - | - | - | 201 | 62 | 24 | b/ | - |
| 2 | do. | - | do. | 429 | 75 | 35 | 33 | 317 | 108 | 22 | b/ | 331 |
| 3 | do. | - | do. | 285 | - | - | - | 207 | 57 | 22 | b/ | - |
| 4 | -- | 209 | Mar. 5, 1938 | 260 | 44 | 23 | 22 | 214 | 46 | 20 | b/ | 204 |
| 5 | -- | - | do. | 269 | - | - | - | 220 | 37 | 23 | b/ | - |
| 6 | -- | - | do. | 298 | - | - | - | 250 | 46 | 18 | b/ | - |
| 7 | -- Pigman | 220 | do. | 191 | 47 | 18 | 12 | 220 | 20 | 11 | b/ | 216 |
| 8 | Lon McCrory | 230 | do. | 236 | 46 | 23 | 12 | 226 | 33 | 11 | b/ | 209 |
| 9 | -- | - | do. | 242 | - | - | - | 226 | 25 | 14 | b/ | - |
| 11 | -- | - | do. | 262 | - | - | - | 238 | 33 | 13 | b/ | - |
| 12 | E. Guilloud | 242 | Mar. 16, 1938 | 262 | 32 | 27 | 31 | 244 | 37 | 15 | b/ | 192 |
| 13 | -- | - | Mar. 5, 1938 | 367 | 61 | 32 | 27 | 226 | 58 | 58 | 20 | 285 |
| 14 | Bowling & McCrory | 214 | Mar. 16, 1938 | 235 | 44 | 23 | 14 | 232 | 29 | 11 | b/ | 204 |
| 16 | C. O. Barber | 238 | do. | 1,131 | 164 | 110 | 37 | 293 | 611 | 25 | 40 | 863 |
| 17 | -- | - | do. | 340 | 43 | 45 | 24 | 329 | 53 | 13 | b/ | 293 |
| 18 | Roston Simmons | 165 | do. | 272 | 30 | 40 | 18 | 262 | 41 | 14 | b/ | 240 |
| 19 | I. McCrory | 165 | Apr. 4, 1938 | 258 | 46 | 27 | 14 | 238 | 37 | 17 | b/ | 227 |
| 23 | Bill Farr | 212 | do. | 262 | 42 | 23 | 27 | 244 | 37 | 13 | b/ | 199 |
| 25 | D. A. Gustin | 205 | do. | 261 | 36 | 44 | - | 232 | 54 | 13 | b/ | 272 |
| 29 | Pleasant View School | - | Mar. 1, 1938 | 442 | 55 | 26 | 78 | 378 | 83 | 14 | b/ | 246 |
| 30 | Mrs. B. F. Randel | 200 | do. | 433 | 31 | 18 | 110 | 317 | 96 | 22 | b/ | 151 |
| 31 | -- | 187 | do. | 318 | 51 | 32 | 24 | 281 | 42 | 15 | b/ | 260 |
| 32 | -- | 175 | do. | 302 | - | - | - | 238 | 59 | 15 | b/ | - |
| 33 | O. H. Finch | 215 | Mar. 7, 1938 | 261 | 46 | 23 | 31 | 232 | 42 | 15 | b/ | 209 |
| 34 | Rock Island R. R. | 200 | Apr. 4, 1938 | 239 | 42 | 27 | 11 | 226 | 33 | 15 | b/ | 217 |
| 36 | O. H. Finch | 200 | do. | 253 | 54 | 21 | 12 | 214 | 33 | 28 | b/ | 223 |
| 37 | do. | 200 | do. | 245 | 46 | 23 | 15 | 220 | 33 | 20 | b/ | 209 |
| 38 | do. | 176 | Mar. 7, 1938 | - | - | - | - | - | 29 | 19 | b/ | - |
| 39 | -- | 200 | do. | 251 | 49 | 18 | 23 | 232 | 29 | 18 | b/ | 196 |
| 43 | B. F. Williams | 260 | Mar. 9, 1938 | 380 | 45 | 25 | 67 | 329 | 66 | 15 | b/ | 215 |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|---------------------------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 44 | -- | - | Mar. 7, 1938 | 292 | 40 | 30 | 27 | 250 | 50 | 12 | b/ | 223 |
| 45 | Reynolds Cattle Co. | 228 | Feb. 14, 1938 | 296 | 49 | 31 | 18 | 256 | 46 | 16 | b/ | 249 |
| 46 | do. | 70 | do. | 255 | - | - | - | 232 | 25 | 11 | b/ | - |
| 47 | do. | 90 | do. | 249 | - | - | - | 207 | 25 | 18 | b/ | - |
| 48 | T. P. A. test | 27 | Feb. 9, 1938 | 313 | 70 | 29 | 1 | 220 | 58 | 30 | b/ | 294 |
| 49 | Reynolds Cattle Co. | - | Feb. 25, 1938 | 285 | - | - | - | 244 | 41 | 17 | b/ | - |
| 50 | do. | 180 | do. | 270 | - | - | - | 244 | 33 | 15 | b/ | - |
| 51 | do. | - | Feb. 26, 1938 | 292 | 50 | 27 | 28 | 317 | 16 | 15 | b/ | 237 |
| 52 | do. | - | do. | 289 | - | - | - | 244 | 37 | 23 | b/ | - |
| 54 | do. | - | do. | 244 | - | - | - | 214 | 29 | 18 | b/ | - |
| 55 | -- | 300 | Mar. 5, 1938 | 235 | 38 | 21 | 24 | 226 | 23 | 18 | b/ | 183 |
| 57 | Doc. Bishop | - | do. | 256 | - | - | - | 214 | 37 | 18 | b/ | - |
| 58 | -- | - | do. | - | - | - | - | - | 42 | 30 | b/ | - |
| 59 | O. A. Sage | 240 | Mar. 15, 1938 | 241 | 29 | 25 | 29 | 220 | 37 | 13 | b/ | 175 |
| 60 | -- Beck | - | do. | 267 | - | - | - | 207 | 42 | 24 | b/ | - |
| 61 | -- | - | do. | 288 | - | - | - | 232 | 46 | 21 | b/ | - |
| 62 | -- | - | Apr. 13, 1938 | 335 | 47 | 49 | 3 | 268 | 19 | 32 | 53 | 320 |
| 63 | -- | 171 | do. | 215 | 34 | 27 | 11 | 220 | 25 | 10 | b/ | 197 |
| 65 | -- | 75 | do. | 350 | 56 | 28 | 30 | 214 | 25 | 53 | 51 | 257 |
| 67 | T. P. Concannon Est. | 134 | Jan. 28, 1938 | 240 | 48 | 15 | 22 | 207 | 36 | 17 | b/ | 184 |
| 69 | -- | 119 | Apr. 13, 1938 | 244 | 37 | 22 | 23 | 207 | 25 | 14 | 21 | 184 |
| 72 | Martha Houghton | 147 | Jan. 27, 1938 | 176 | 33 | 17 | 13 | 183 | 11 | 12 | b/ | 150 |
| 74 | do. | 81 | Jan. 28, 1938 | 233 | - | - | - | 220 | 21 | 15 | b/ | - |
| 75 | -- | 60 | Mar. 15, 1938 | 317 | 60 | 31 | 17 | 293 | 42 | 23 | b/ | 279 |
| 76 | -- | - | do. | 237 | - | - | - | 207 | 33 | 13 | b/ | - |
| 79 | W. H. Taylor | - | do. | 280 | - | - | - | 244 | 42 | 13 | b/ | - |
| 81 | do. | 200 | do. | 269 | 57 | 17 | 23 | 238 | 37 | 18 | b/ | 210 |
| 85 | Martha Houghton | 89 | Jan. 28, 1938 | 236 | 39 | 24 | 20 | 244 | 21 | 12 | b/ | 195 |
| 91 | do. | 300 | Jan. 27, 1938 | 600 | 94 | 50 | 54 | 305 | 117 | 129 | b/ | 441 |
| 93 | Matador Land & Cattle Co. | 93 | Jan. 28, 1938 | 310 | 67 | 25 | 12 | 268 | 32 | 15 | 27 | 270 |
| 94 | do. | 46 | Jan. 27, 1938 | 256 | - | - | - | 232 | 32 | 13 | b/ | - |
| 95 | W. P. A. test | 52 | Jan. 24, 1938 | 171 | 58 | 7 | - | 201 | a/ | 3 | b/ | 174 |
| 98 | Matador Land & Cattle Co. | 245 | Jan. 27, 1938 | 232 | 47 | 17 | 20 | 226 | 25 | 12 | b/ | 185 |

a/Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|---------------------------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 99 | Matador Land & Cattle Co. | 183 | Jan. 27, 1938 | 237 | 42 | 21 | 21 | 244 | 21 | 12 | b/ | 193 |
| 100 | Reynolds Cattle Co. | 234 | Feb. 26, 1938 | 270 | 46 | 27 | 19 | 232 | 42 | 20 | b/ | 227 |
| 101 | -- | - | do. | 248 | 48 | 21 | 17 | 220 | 29 | 25 | b/ | 208 |
| 102 | -- | - | do. | 312 | - | - | - | 281 | 37 | 19 | b/ | - |
| 103 | Reynolds Cattle Co. | - | do. | 276 | - | - | - | 244 | 29 | 22 | b/ | - |
| 105 | do. | 102 | Feb. 14, 1938 | 225 | 30 | 36 | 6 | 232 | 25 | 14 | b/ | 222 |
| 106 | do. | - | Feb. 25, 1938 | 263 | - | - | - | 226 | 31 | 22 | b/ | - |
| 107 | do. | 110 | do. | 248 | 48 | 30 | 6 | 268 | 21 | 11 | b/ | 243 |
| 203 | -- | 183 | Mar. 13, 1938 | 286 | 41 | 29 | 22 | 244 | 25 | 10 | 39 | 223 |
| 204 | -- | - | Mar. 25, 1938 | 284 | - | - | - | 244 | 46 | 12 | b/ | - |
| 205 | D. D. Coy | - | Mar. 23, 1938 | 310 | 50 | 30 | 28 | 305 | 41 | 11 | b/ | 248 |
| 207 | -- Pedagro | - | do. | 278 | - | - | - | 238 | 45 | 12 | b/ | - |
| 209 | Hudson's Dairy | 330 | do. | 328 | 42 | 27 | 42 | 250 | 82 | 12 | b/ | 217 |
| 210 | C. E. Mitchell | 341 | Mar. 23, 1938 | 254 | 32 | 27 | 24 | 226 | 46 | 12 | b/ | 197 |
| 211 | W. C. Eyre | 335 | Mar. 11, 1938 | 253 | 42 | 26 | 19 | 250 | 33 | 10 | b/ | 211 |
| 213 | -- | - | Mar. 21, 1938 | 244 | 48 | 20 | 15 | 220 | 29 | 12 | b/ | 204 |
| 216 | -- McCan | 400 | Mar. 24, 1938 | 274 | 50 | 27 | 15 | 244 | 50 | 12 | b/ | 237 |
| 219 | -- | 300/ | do. | - | - | - | - | - | 50 | 12 | b/ | - |
| 222 | R. J. Merritt | 400/ | do. | 269 | 29 | 25 | 40 | 244 | 42 | 13 | b/ | 175 |
| 224 | J. W. Webster | 335 | Mar. 10, 1938 | 241 | 37 | 25 | 21 | 232 | 33 | 11 | b/ | 195 |
| 225 | D. A. Artz | 335 | Mar. 11, 1938 | 254 | 41 | 25 | 21 | 232 | 41 | 12 | b/ | 205 |
| 228 | -- | - | Mar. 10, 1938 | 259 | - | - | - | 232 | 33 | 14 | b/ | - |
| 229 | -- | - | Mar. 21, 1938 | 252 | 39 | 24 | 22 | 220 | 31 | 14 | b/ | 195 |
| 230 | J. H. Baskett | 360 | do. | 228 | 44 | 21 | 14 | 220 | 26 | 15 | b/ | 193 |
| 231 | -- Turner Est. | - | do. | 197 | - | - | - | 159 | 31 | 15 | b/ | - |
| 232 | -- | - | Mar. 11, 1938 | 245 | 39 | 24 | 20 | 220 | 31 | 13 | b/ | 195 |
| 233 | -- McDaniel | 320 | do. | 217 | 35 | 25 | 14 | 214 | 25 | 13 | b/ | 190 |
| 235 | -- | 297/ | do. | 263 | 54 | 27 | 12 | 293 | 12 | 14 | b/ | 247 |
| 236 | Roy Brown | 265 | do. | 247 | - | - | - | 232 | 27 | 12 | b/ | - |
| 239 | Mrs. J. H. Johnson | 330 | Mar. 14, 1938 | 237 | 39 | 24 | 18 | 220 | 37 | 11 | b/ | 195 |
| 240 | -- | 269/ | Mar. 11, 1938 | 225 | 44 | 25 | 8 | 226 | 27 | 10 | b/ | 210 |
| 241 | R. V. Bownds | 367 | do. | 224 | 34 | 31 | 8 | 226 | 29 | 11 | b/ | 214 |
| 242 | W. O. Bishop | 400 | Mar. 14, 1938 | 264 | 47 | 25 | 17 | 232 | 50 | 11 | b/ | 220 |
| 243 | E. A. Reeves | 380 | Feb. 3, 1938 | 213 | 33 | 27 | 8 | 177 | 46 | 12 | b/ | 192 |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|-----------------------|--------------------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 244 | -- | - | Apr. 11, 1938 | 278 | - | - | - | 256 | 37 | 10 | b/ | - |
| 247 | C. H. Glass | 400 | Feb. 3, 1938 | 294 | 26 | 41 | 32 | 250 | 62 | 10 | b/ | 195 |
| 248 | E. E. Williams | 350 | Feb. 2, 1938 | 296 | 47 | 29 | 26 | 293 | 39 | 11 | b/ | 238 |
| 249 | E. E. Mitchell | 350 | do. | 246 | 33 | 27 | 23 | 226 | 42 | 10 | b/ | 192 |
| 251 | -- | - | Mar. 10, 1938 | 279 | - | - | - | 244 | 41 | 13 | b/ | - |
| 252 | -- | 310 | Mar. 9, 1938 | 448 | 45 | 26 | 78 | 232 | 165 | 20 | b/ | 221 |
| 253 | Reynolds Cattle Co. | - | Feb. 28, 1938 | 268 | 41 | 25 | 26 | 256 | 25 | 8 | b/ | 205 |
| 255 | do. | 61 ¹ / ₂ | do. | 550 | 57 | 52 | 61 | 226 | 187 | 66 | b/ | 357 |
| 257 | Tom Collins | 318 | Feb. 3, 1938 | 329 | 23 | 19 | 77 | 262 | 67 | 14 | b/ | 137 |
| 258-6 | W. P. A. test | 25 | Feb. 28, 1938 | 150 | 25 | 8 | 22 | 140 | 12 | 5 | b/ | 95 |
| 258-7 | do. | 25 | do. | 243 | - | - | - | 244 | 24 | 6 | b/ | - |
| 259 | do. | 41 | Feb. 8, 1938 | 459 | - | - | - | 439 | 42 | 22 | b/ | - |
| 260-6 | do. | 20 | Mar. 7, 1938 | 443 | - | - | - | 390 | 67 | 18 | b/ | - |
| 263 | Birge-Forbes Land Co. | 322 | Feb. 3, 1938 | 387 | 40 | 22 | 77 | 311 | 71 | 14 | b/ | 189 |
| 264 | Reynolds Cattle Co. | 29 | Feb. 14, 1938 | 264 | 42 | 33 | 13 | 256 | 33 | 17 | b/ | 240 |
| 265 | W. P. A. test | 27 | Feb. 7, 1938 | 463 | - | - | - | 464 | 29 | 27 | b/ | - |
| 266-4 | do. | 41 | Feb. 15, 1938 | 304 | - | - | - | 262 | 37 | 23 | b/ | - |
| 266-8 | do. | 28 | Feb. 14, 1938 | 395 | - | - | - | 366 | 42 | 23 | b/ | - |
| 266-9 | do. | 31 | do. | 372 | 56 | 33 | 43 | 360 | 42 | 21 | b/ | 275 |
| 266-10 | do. | 30 | do. | 342 | - | - | - | 293 | 50 | 20 | b/ | - |
| 266-12 | do. | 24 | Feb. 11, 1938 | 360 | - | - | - | 317 | 42 | 26 | b/ | - |
| 266-13 | do. | 39 | do. | 315 | 45 | 27 | 42 | 317 | 29 | 16 | b/ | 222 |
| 266-14 | do. | 34 | do. | 394 | 54 | 35 | 52 | 415 | 34 | 15 | b/ | 282 |
| 266-15 | do. | 16 | Feb. 23, 1938 | 344 | - | - | - | 336 | 29 | 18 | b/ | - |
| 266-16 | do. | 30 | do. | 330 | - | - | - | 317 | 33 | 15 | b/ | - |
| 266-17 | do. | 17 | do. | 376 | - | - | - | 354 | 42 | 17 | b/ | - |
| 266-18 | do. | 33 | do. | 386 | - | - | - | 360 | 42 | 20 | b/ | - |
| 266-23 | do. | 28 | Feb. 25, 1938 | 763 | - | - | - | 549 | 170 | 46 | b/ | - |
| 266-24 | do. | 32 | do. | 298 | - | - | - | 256 | 42 | 18 | b/ | - |
| 268 | do. | 40 | Feb. 7, 1938 | 391 | - | - | - | 366 | 42 | 20 | b/ | - |
| 269 | Reynolds Cattle Co. | - | Feb. 25, 1938 | 299 | - | - | - | 281 | 29 | 18 | b/ | - |
| 272 | E. S. Collins | 57 | do. | 228 | 27 | 18 | 40 | 232 | 12 | 17 | b/ | 141 |
| 274 | do. | 71 | do. | 290 | 45 | 26 | 31 | 281 | 33 | 17 | b/ | 221 |
| 276 | do. | 86 | do. | 277 | 54 | 20 | 26 | 268 | 26 | 19 | b/ | 217 |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|---------------------------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 278 | E. S. Collins | 45 | Feb. 15, 1938 | 268 | 52 | 34 | 5 | 305 | 17 | 10 | b/ | 271 |
| 280 | do. | 18 | do. | 251 | 45 | 28 | 11 | 232 | 37 | 16 | b/ | 227 |
| 281 | do. | Spring | do. | 228 | 37 | 26 | 14 | 220 | 26 | 17 | b/ | 201 |
| 282 | W. P. A. test | 30 | Jan. 12, 1938 | 323 | 53 | 32 | 27 | 317 | 38 | 17 | b/ | 265 |
| 283 | Luther Amason | 270 | Feb. 1, 1938 | 496 | 47 | 35 | 83 | 275 | 158 | 38 | b/ | 262 |
| 285 | J. E. Craighead | 136 | Jan. 7, 1938 | 225 | 57 | 10 | 18 | 232 | 15 | 11 | b/ | 181 |
| 286 | Capitol Land Syndicate | 378 | Feb. 1, 1938 | 236 | 44 | 22 | 15 | 207 | 34 | 19 | b/ | 199 |
| 287 | G. T. Thomas | 325 | do. | 248 | 51 | 21 | 15 | 232 | 27 | 20 | b/ | 213 |
| 289 | O. E. Hines | 410 | Jan. 14, 1938 | 250 | 38 | 23 | 22 | 189 | 50 | 17 | b/ | 189 |
| 290 | Geo. Fox Est. | 300 | Feb. 1, 1938 | 309 | 44 | 26 | 36 | 256 | 54 | 15 | b/ | 216 |
| 291 | E. M. Lynch | 324 | do. | 274 | 42 | 17 | 36 | 207 | 50 | 18 | b/ | 176 |
| 293 | Mrs. M. E. Tyler | 365 | Feb. 2, 1938 | 337 | 56 | 26 | 36 | 305 | 59 | 10 | b/ | 246 |
| 294 | G. N. Bryant | 420 | Feb. 1, 1938 | 313 | 28 | 30 | 46 | 244 | 71 | 10 | b/ | 194 |
| 295 | R. P. Bishop | 433 | Jan. 14, 1938 | 305 | 51 | 26 | 26 | 250 | 67 | 12 | b/ | 236 |
| 296 | Marvin Williams | 447 | Feb. 2, 1938 | 278 | 41 | 28 | 27 | 268 | 42 | 8 | b/ | 217 |
| 297 | Canadian River Gas Co. | 480 | Feb. 3, 1938 | 286 | 49 | 29 | 18 | 268 | 42 | 8 | b/ | 243 |
| 299 | W. K. Reid | 400 | Jan. 14, 1938 | 210 | 34 | 21 | 16 | 195 | 24 | 12 | b/ | 173 |
| 301 | Robert Wiseman | 335 | Feb. 3, 1938 | 213 | - | - | - | 165 | 42 | 12 | b/ | - |
| 302 | W. H. Ham | 314 | do. | 236 | 36 | 26 | 17 | 214 | 42 | 10 | b/ | 196 |
| 309 | G. C. Ledbetter | 347 | Jan. 20, 1938 | 231 | 52 | 19 | 12 | 244 | 10 | 11 | b/ | 207 |
| 312 | J. B. Brown | 380 | Feb. 3, 1938 | 300 | 46 | 30 | 23 | 256 | 54 | 12 | b/ | 239 |
| 313 | R. W. Vincent | 412 | Jan. 14, 1938 | 249 | 38 | 19 | 29 | 195 | 34 | 22 | b/ | 172 |
| 314 | J. L. Bivins | 424 | Feb. 1, 1938 | 220 | - | - | - | 195 | 26 | 15 | b/ | - |
| 316 | J. Bivins | - | Apr. 5, 1938 | 225 | - | - | - | 232 | 15 | 9 | b/ | - |
| 318 | E. S. Collins | 380 | Jan. 7, 1938 | 261 | 38 | 20 | 37 | 256 | 25 | 15 | b/ | 178 |
| 320 | A. B. Hughes | 288 | Jan. 19, 1938 | 253 | 41 | 26 | 20 | 256 | 22 | 12 | b/ | 211 |
| 322 | W. P. A. test | 9 | Jan. 3, 1938 | 1,888 | - | - | - | 305 | 1,132 | 22 | b/ | - |
| 323 | do. | 25 | Jan. 4, 1938 | 6,522 | - | - | - | 220 | 4,447 | 27 | b/ | - |
| 324 | C. B. Alford | 39 | Jan. 19, 1938 | 1,132 | 92 | 117 | 96 | 122 | 705 | 62 | b/ | 713 |
| 325 | W. P. A. test | 43 | Jan. 4, 1938 | 1,481 | 149 | 144 | 32 | 439 | 797 | 43 | b/ | 964 |
| 327 | R. M. Stephens | 100 | Mar. 3, 1938 | 1,717 | 266 | 150 | 49 | 238 | 1,114 | 17 | b/ | 1,283 |
| 328 | Matador Land & Cattle Co. | 80 | Jan. 27, 1938 | 1,241 | 127 | 84 | 186 | 525 | 508 | 74 | b/ | 662 |

a Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

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

Results are in parts per million.

| Well No. | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calculated) | Calcium (Cl) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|---------------------------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 331 | Matador Land & Cattle Co. | 158 | Jan. 19, 1938 | 373 | 38 | 40 | 44 | 293 | 93 | 14 | b/ | 260 |
| 332 | -- Cruz | 55 | Mar. 4, 1938 | 319 | 33 | 26 | 54 | 281 | 50 | 18 | b/ | 191 |
| 333 | -- Bivins' | 88 | Mar. 3, 1938 | 397 | 62 | 53 | 7 | 323 | 109 | 7 | b/ | 372 |
| 335 | E. S. Collins | 184 | Jan. 20, 1938 | 213 | 44 | 14 | 14 | 140 | 38 | 28 | b/ | 169 |
| 338 | F.W. & D.C. R.R. | 330 | Jan. 19, 1938 | 211 | 52 | 17 | 3 | 195 | 20 | 10 | b/ | 200 |
| 341 | J. L. Bivins | 200 | Jan. 14, 1938 | 240 | 50 | 20 | 14 | 226 | 29 | 16 | b/ | 207 |
| 348 | do. | 158 | Apr. 5, 1938 | 224 | 30 | 23 | 26 | 226 | 21 | 13 | b/ | 169 |
| 350 | do. | - | do. | 220 | - | - | - | 207 | 21 | 12 | b/ | - |
| 356 | do. | 90 | Apr. 12, 1938 | 307 | 54 | 27 | 25 | 262 | 41 | 31 | b/ | 247 |
| 357 | do. | - | do. | 254 | - | - | - | 214 | 41 | 13 | b/ | - |
| 358 | Ella M. Barnett | 291 | Jan. 13, 1938 | 193 | 32 | 20 | 16 | 207 | 14 | 9 | b/ | 162 |
| 359 | J. L. Bivins | - | Apr. 12, 1938 | 309 | 33 | 22 | 54 | 244 | 43 | 28 | b/ | 174 |
| 360 | do. | 102 | do. | 321 | 42 | 27 | 41 | 232 | 58 | 39 | b/ | 217 |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

Partial analyses of water from lake in Hartley County, Texas

Results are in parts per million.

| Lake No. | Owner | Date of collection | Total dissolved solids (calculated) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calculated) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Total hardness as CaCO ₃ (calculated) |
|----------|---------------------|--------------------|-------------------------------------|--------------|----------------|--|---------------------------------|-----------------------------|---------------|----------------------------|--|
| 401 | Reynolds Cattle Co. | Feb. 26, 1938 | 280 | 38 | 29 | 32 | 268 | 19 | 30 | a/ | 213 |

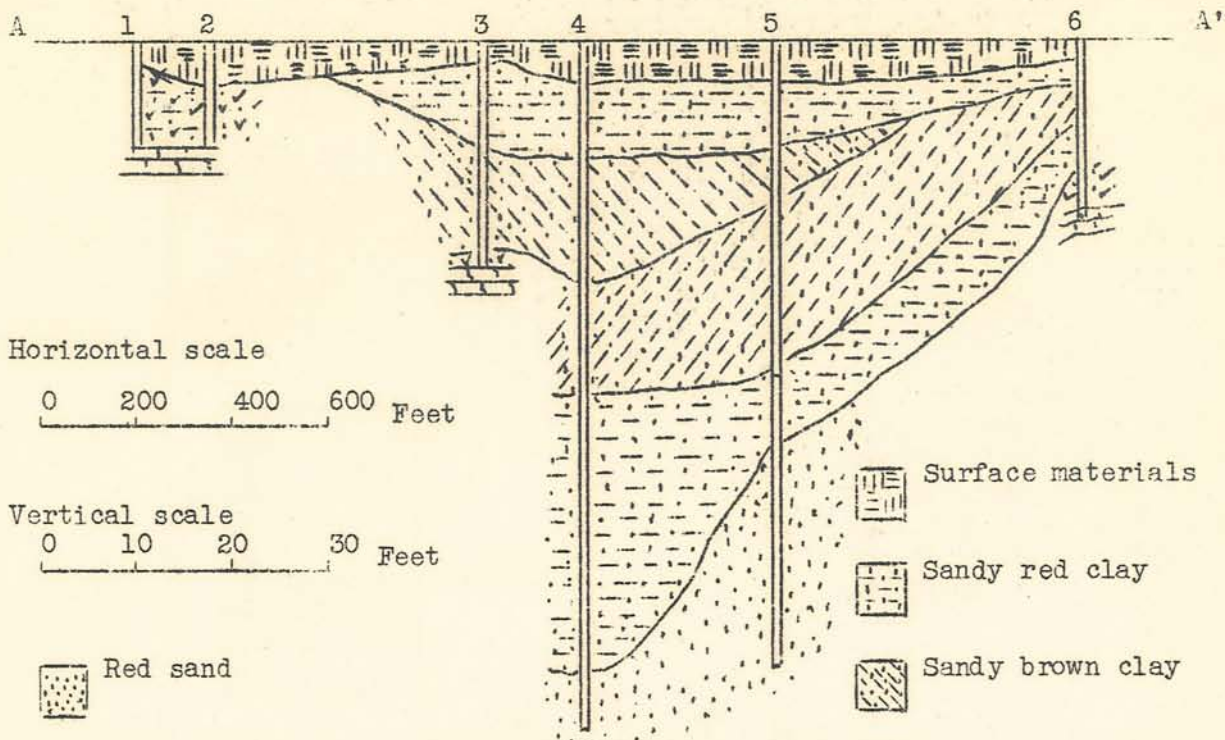
a/ Nitrate less than 20 parts per million.

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

Fluoride determinations by E. W. Lohr, Chemist, Quality of Water Division, Geological Survey,
 United States Department of the Interior. (For partial analyses of these samples see table of analyses.)

| Well No. | Fluoride (F) | Well No. | Fluoride (F) | Well No. | Fluoride (F) | Well No. | Fluoride (F) |
|----------|--------------|----------|--------------|----------|--------------|----------|--------------|
| 4 | 0.7 | 37 | 0.7 | 209 | 1.4 | 252 | 0.7 |
| 8 | 1.0 | 55 | 1.1 | 211 | 1.1 | 255 | 1.9 |
| 12 | 0.9 | 65 | 1.7 | 218 | 1.0 | 258-6 | 0.4 |
| 16 | 0.9 | 69 | 0.6 | 224 | 0.7 | 276 | 1.5 |
| 31 | 2.1 | 100 | 2.2 | 230 | 0.8 | 281 | 1.2 |
| | | | | 242 | 0.8 | 327 | 4.2 |

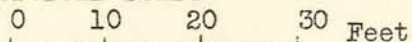
SECTION A-A' COMPILED FROM 6 TEST WELLS



Horizontal scale



Vertical scale



Red sand

Rock

Caliche and brown clay

Gray sand

Surface materials

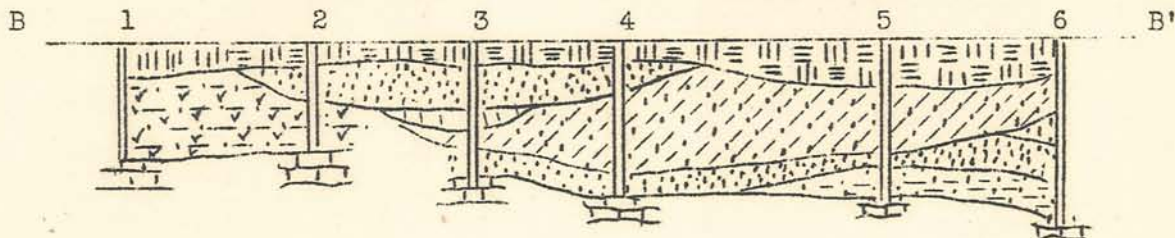
Sandy red clay

Sandy brown clay

Sandy gray clay

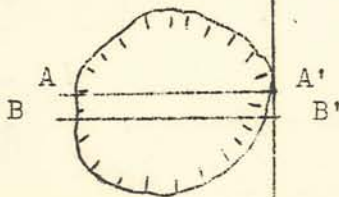
Clay, sand and caliche

SECTION B-B' COMPILED FROM 6 TEST WELLS



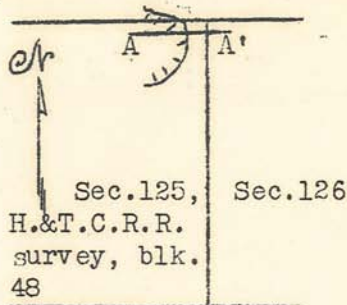
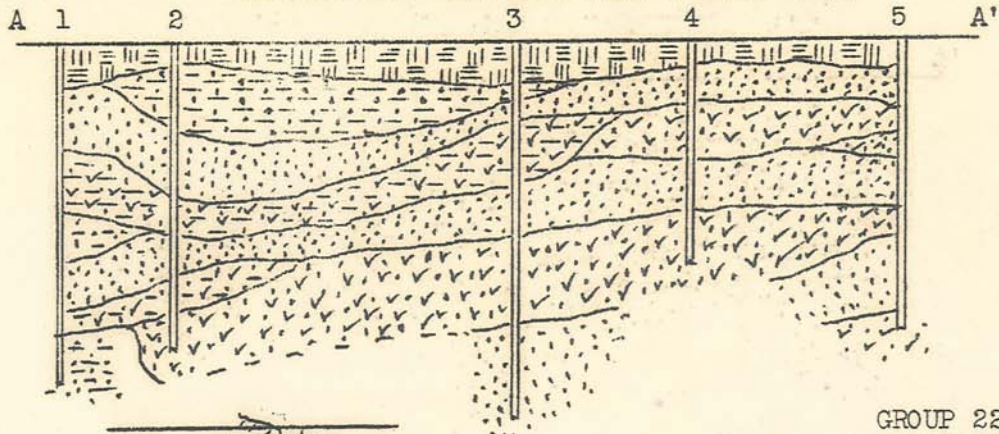
Sec. 72,
H.&T.C.R.R. survey,
blk. 48

N

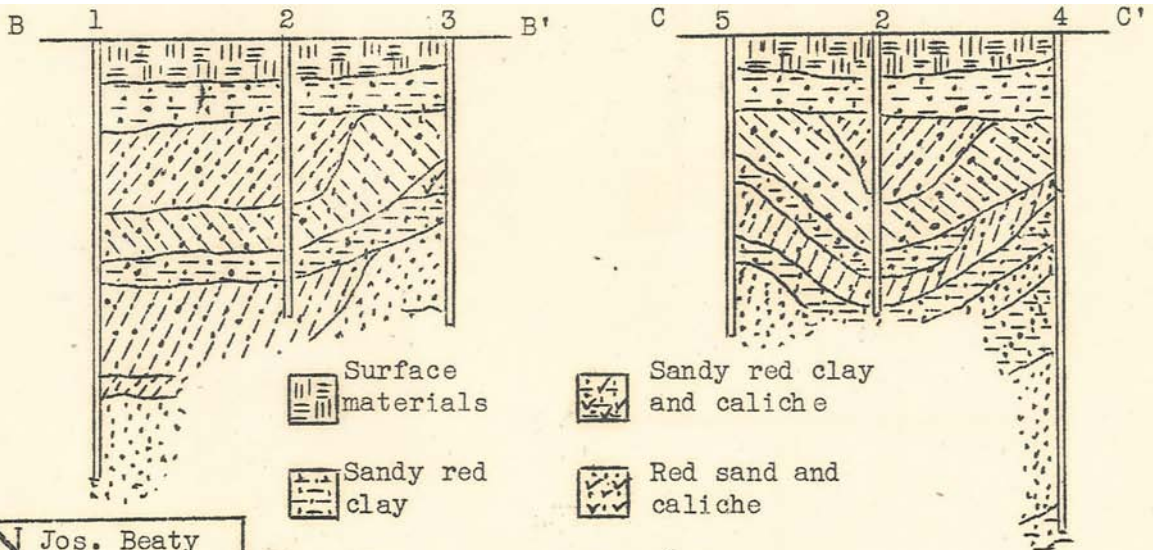
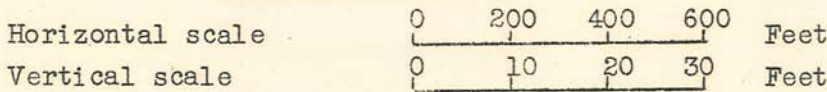


GROUP 215
W.P.A. TEST WELLS SHOWING
SECTION ACROSS DRY LAKE IN
SE $\frac{1}{2}$ SEC. 72, H.&T.C.R.R.
SURVEY, BLK. 48, 9 MILES
NORTH OF HARTLEY.

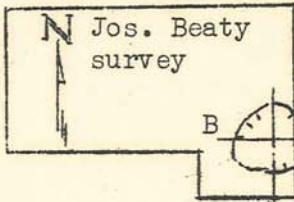
SECTION A-A' COMPILED FROM 5 TEST WELLS



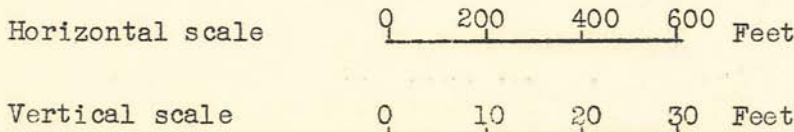
GROUP 221
 W.P.A. TEST WELLS SHOWING
 SECTION INTO DRY LAKE IN
 NE $\frac{1}{4}$ SEC. 125 AND NW $\frac{1}{4}$ SEC. 126
 H. & T.C. R.R. SURVEY, BLK.
 48, 5 $\frac{1}{2}$ MILES NORTH OF
 HARTLEY.



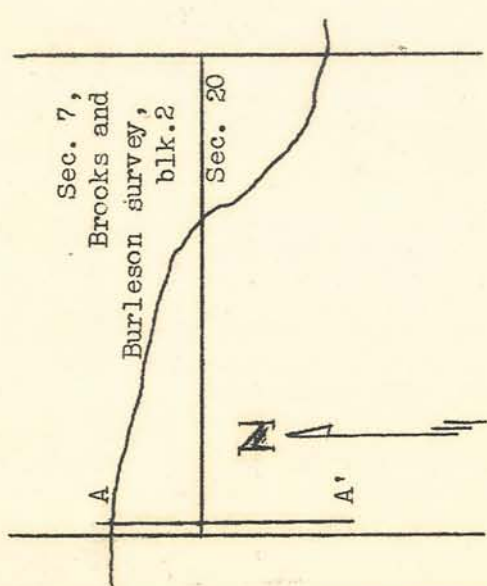
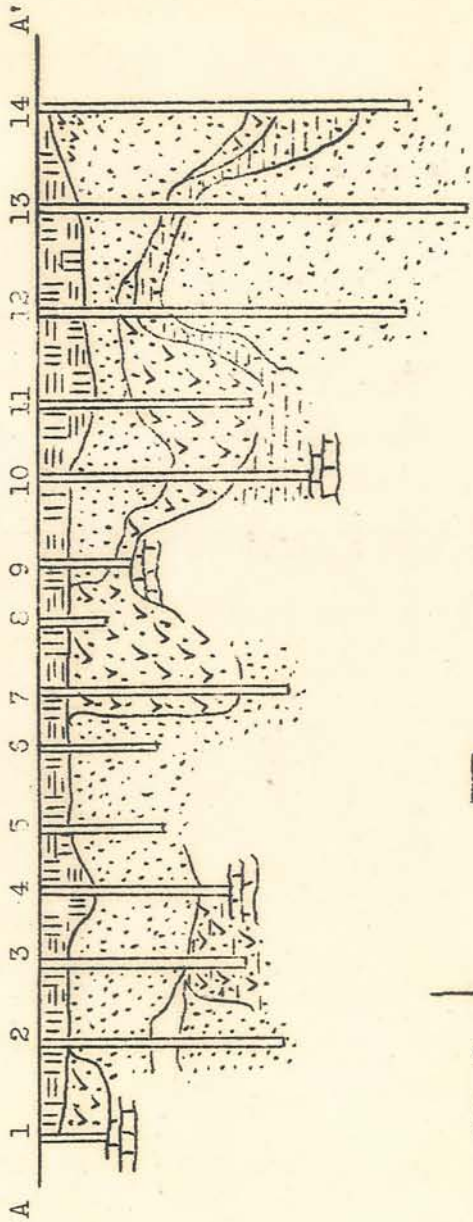
- Surface materials
- Sandy red clay
- Red sand
- Sandy gray clay
- Sandy red clay and caliche
- Red sand and caliche
- Sandy brown clay
- Gray clay



GROUP 226
 W.P.A. TEST WELLS SHOWING
 SECTION ACROSS DRY LAKE IN
 SE $\frac{1}{4}$ JOS. BEATY SURVEY, 8 $\frac{1}{2}$
 MILES NORTHEAST OF HARTLEY.

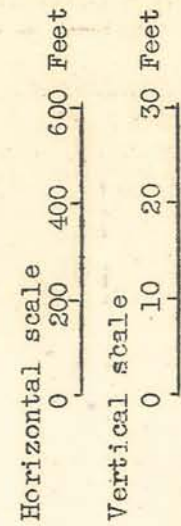


SECTION A-A' COMPILED FROM 14 TEST WELLS



- Surface materials
- Red sand and caliche
- Red sand
- Rock

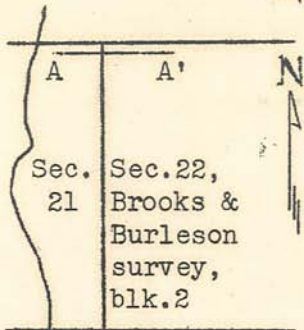
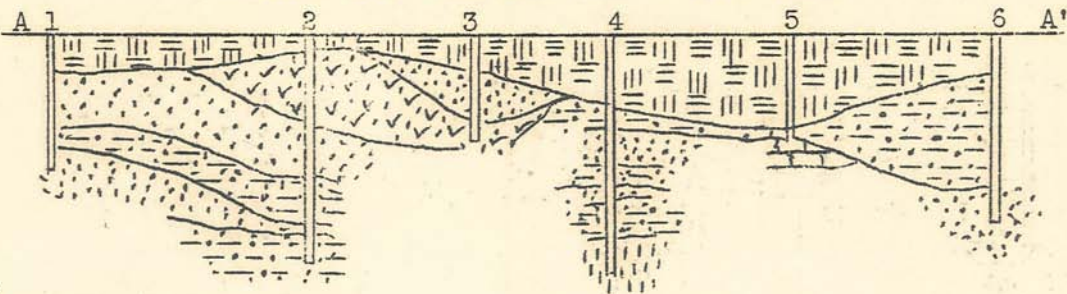
- Sandy red clay
- Sandy red clay and caliche



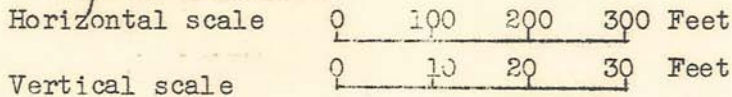
GROUP 258
 W.P.A. TEST WELLS SHOWING
 SECTION INTO CREEK IN SW $\frac{1}{4}$
 SEC. 7 AND NW $\frac{1}{4}$ SEC. 20,
 BROOKS & BURLESON SURVEY,
 BLK. 2, 8 MILES WEST OF HARTLEY.

O.G.K.
 5-26-38.

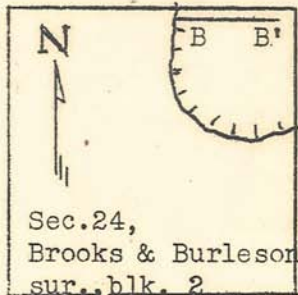
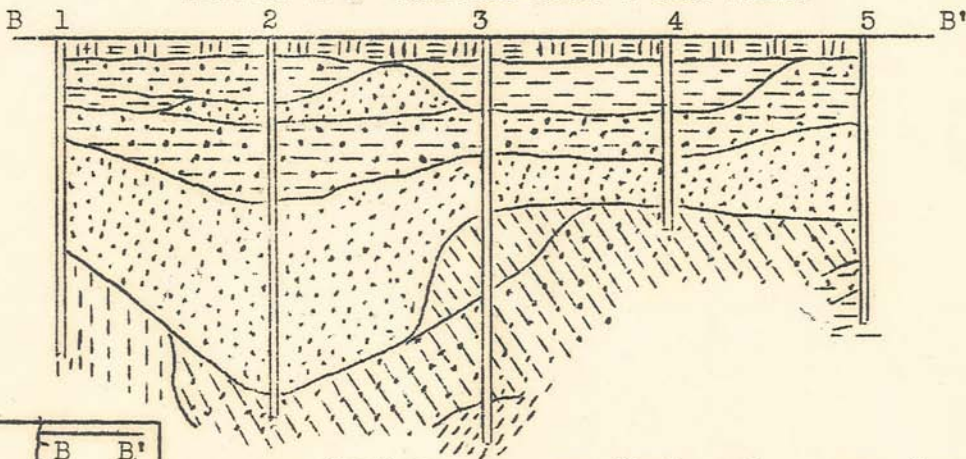
SECTION A-A' COMPILED FROM 6 TEST WELLS



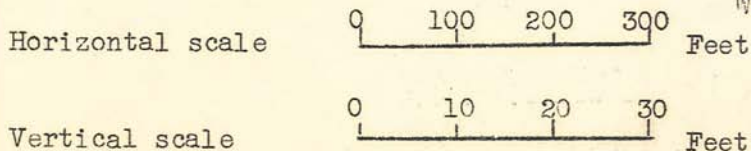
GROUP 260
 W. P. A. TEST WELLS SHOWING SECTION
 INTO CREEK IN NE $\frac{1}{4}$ SEC. 21 AND NW $\frac{1}{4}$
 SEC. 22, BROOKS & BURLESON SURVEY,
 BLK. 2, 7 $\frac{1}{2}$ MILES SOUTHWEST OF
 HARTLEY.



SECTION B-B' COMPILED FROM 5 TEST WELLS

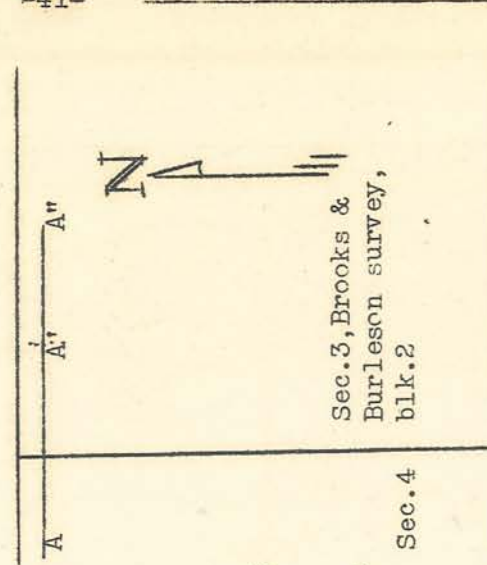
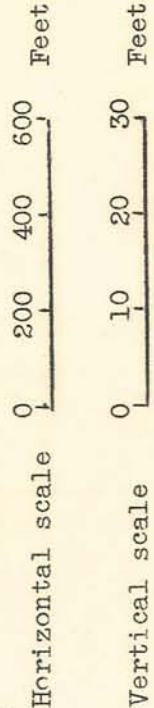
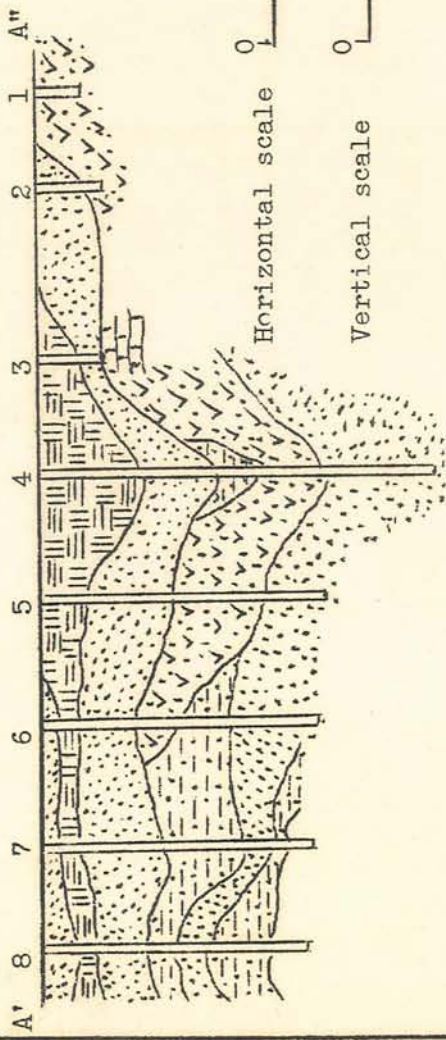
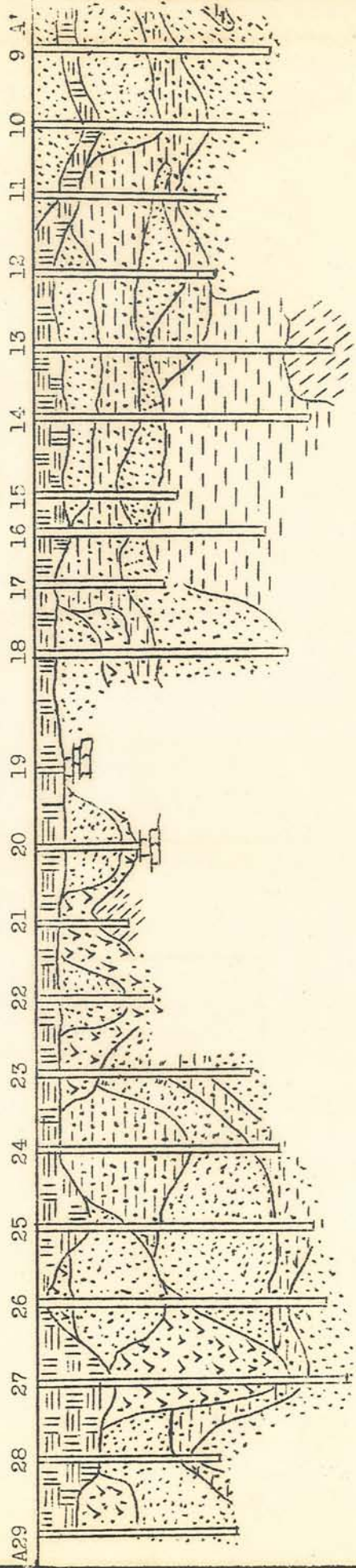









- | | | | | | |
|--|----------------------|--|------------------|--|-----------|
| | Surface materials | | Sandy red clay | | Gray clay |
| | Red sand | | Red clay | | Gray sand |
| | Red sand and caliche | | Brown clay | | |
| | Rock | | Sandy brown clay | | |



GROUP 262
 W. P. A. TEST WELLS SHOWING SECTION
 ACROSS DRY LAKE IN NE $\frac{1}{4}$ SEC. 24,
 BROOKS & BURLESON SURVEY, BLK. 2
 4 $\frac{3}{4}$ MILES SOUTHWEST OF HARTLEY.

SECTION A-A" COMPILED FROM 29 TEST WELLS

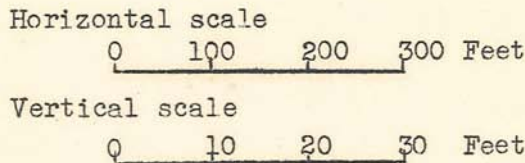
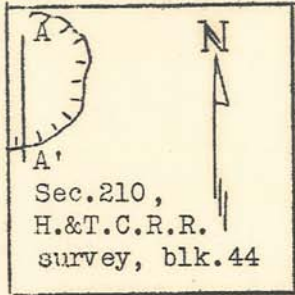
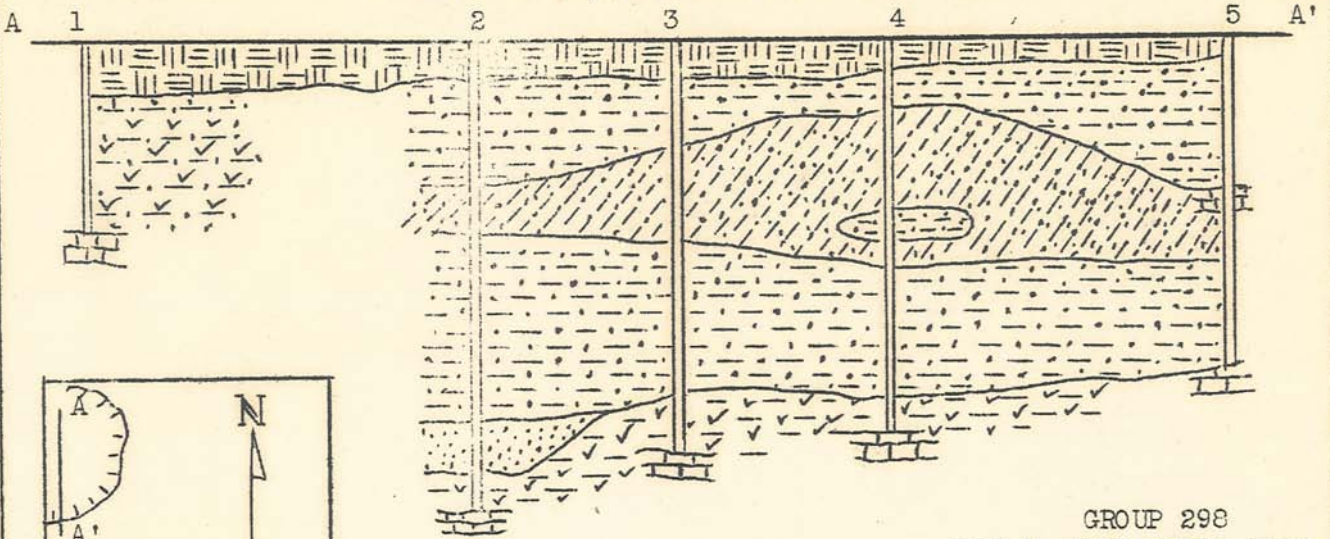


-  Red sand
-  Sandy red clay
-  Caliche rock
-  Gray clay
-  Reddish-brown soil
-  Caliche and red sand
-  Blue clay

GROUP 266
W.P.A. TEST WELLS SHOWING SECTION
ACROSS CREEK ALONG NORTH SIDE OF
SECS. 3 AND 4, BROOKS & BURLLESON SUR.,
BLK. 1, 8 MILES SOUTH WEST OF HARTLEY.

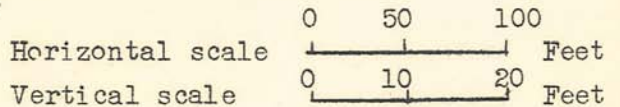
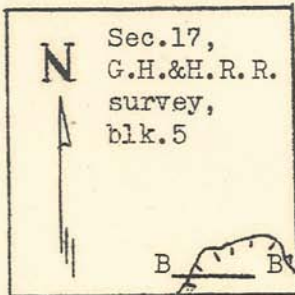
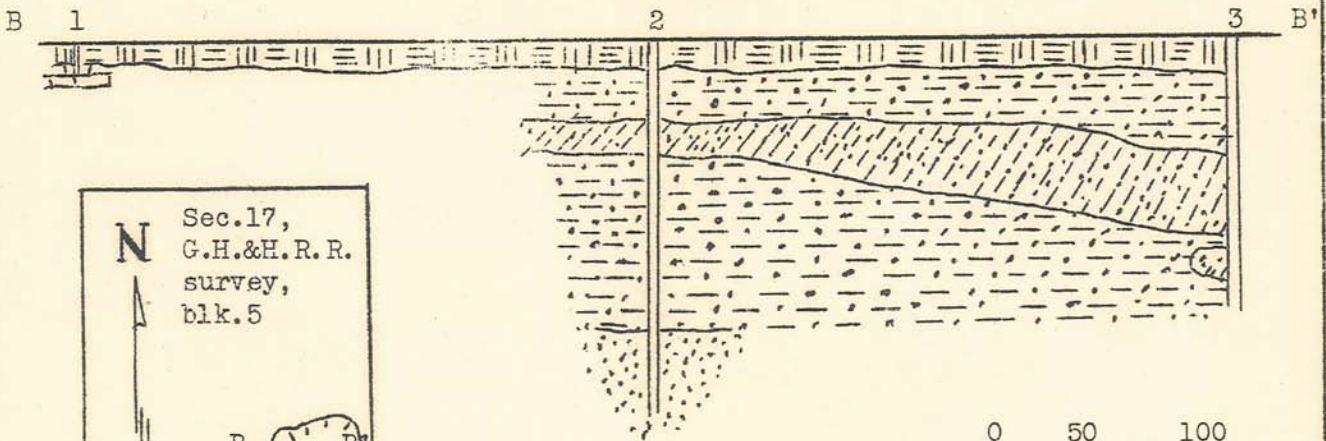
O.G.K.
5-25-38

SECTION A-A' COMPILED FROM 5 TEST WELLS



GROUP 298
W.P.A. TEST WELLS SHOWING SECTION ACROSS DRY LAKE IN NW 1/4 SEC. 210, H. & T.C.R.R. SURVEY, BLK. 44 9 1/2 MTLES EAST OF HARTLEY

SECTION B-B' COMPILED FROM 3 TEST WELLS



GROUP 300
W.P.A. TEST WELLS SHOWING SECTION INTO DRY LAKE IN SE 1/4 SEC. 17, G.H.&H.R.R. SURVEY, BLK. 5, 10 1/2 MTLES SOUTHEAST OF HARTLEY.

- | | | | |
|--|----------------------------|--|----------------------|
| | Surface materials | | Sandy gray clay |
| | Rock | | Red sand |
| | Sandy red clay and caliche | | Red clay and caliche |
| | Sandy red clay | | |

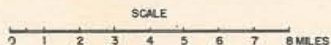
O.G.K.
5-25-38.

MAP OF HARTLEY COUNTY, TEXAS.

SHOWING LOCATIONS OF WATER WELLS LISTED

FIELD WORK BY
C. R. FOLLETT - J. H. HARRISON
PROJECT SUPERINTENDENTS
W. P. A. PROJECT 6763

BASE COMPILED FROM
LAND OFFICE MAP
AND FIELD NOTES



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

- EXPLANATION -
- WELL WITH HAND PUMP; BUCKET OR BAILER
 - ◇ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ⊕ WELL WITH PUMPING PLANT—5 HORSE POWER OR LARGER
 - ◊ WELL DRILLED TO TEST FOR OIL OR GAS
 - FLOWING WELL
 - TEST WELL DRILLED BY W. P. A. LABOR
 - ◇ UNUSED WELL
 - ▽ EARTHEN TANK OR RESERVOIR
 - ⤴ ESCARPMENT
 - SINK
 - IMPROVED ROAD
 - - - UNIMPROVED ROAD
 - - - TRAIL
 - ⊕ SPRING

