

TEXAS

STATE BOARD OF WATER ENGINEERS

C. S. Clark, Chairman

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IRION COUNTY, TEXAS

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

**THE UNIVERSITY
OF TEXAS**

Work Projects Administration Project 13948

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Austin, Texas
June 10, 1941

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

| No. | Distance from Barnhart | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|-------|----------------------------------|----------------------------|--------------------|-----------------------|----------------|---------------------|------------------------|---|
| d/ 1 | 24 miles north | C. H. Sugg | -- | Hill-side | 1935 | 150 | -- | -- |
| 2 | 24 $\frac{1}{2}$ miles north | do. | -- | do. | 1939 | 160 | -- | 0.3 |
| 3 | 24 miles north | do. | -- | do. | 1933 | 165 | -- | -- |
| 4 | 23 $\frac{1}{2}$ miles north | Sugg Est. | Mrs. R. D. Johnson | Flat | 1900 | 110 | 8 | 1.0 |
| d/ 5 | 20 $\frac{1}{2}$ miles north | Sawyer Land and Cattle Co. | -- | In valley | 1930 | 170 | -- | -- |
| 6 | do. | J. Evans Est. | -- | Flat | Old | 95 | 8 | 0.5 |
| 7 | 20 $\frac{1}{2}$ miles north | Sugg Bros. | -- | do. | Old | 35 | 8 | 1.0 |
| 8 | 20 miles north | do. | -- | do. | Old | 150 | 8 | 1.3 |
| 11 | 20 $\frac{1}{4}$ miles northeast | Sheen Bros. | -- | do. | -- | 35 | 48 | 1.0 |
| 13 | 18 miles northeast | Sugg Bros. | -- | do. | -- | 90 | 8 | 3.0 |
| 14 | 16 $\frac{1}{2}$ miles northeast | Fred Ball | -- | do. | 1928 | 150 | -- | 1.0 |
| d/ 15 | 15 $\frac{1}{2}$ miles northeast | G. C. Magruder | -- | Hill-top | 1927 | 366 | -- | 1.0 |
| 16 | 18 miles northeast | Hob Mecher Est. | -- | Hill-side | Old | 102 | 8 | 1.0 |
| 17 | 15 $\frac{3}{4}$ miles northeast | E. Burnes | -- | In valley | 1920 | 72 | -- | 1.5 |
| d/ 18 | 14 $\frac{1}{2}$ miles northeast | J. Scott | -- | Flat | 1938 | 225 | 8 | 1.0 |
| d/ 19 | do. | Homer Woods | -- | In valley | 1931 | 160 | 8 | 0.5 |
| d/ 20 | 14 miles northeast | Sugg Bros. | -- | do. | 1928 | 360 | -- | -- |
| d/ 21 | 14 miles north | W. H. Cox | -- Nixon | Flat | 1909 | 350 | 8 | 0.5 |
| 22 | 15 $\frac{1}{2}$ miles north | E. J. Cox | -- | do. | Old | 160 | -- | 1.0 |
| 23 | 18 miles north | Sawyer Land and Cattle Co. | -- | In valley | 1920 | 165 | 8 | 0.5 |
| 24 | 17 $\frac{1}{2}$ miles north | Sugg Bros. | -- | Hill-side | 1935 | 160 | -- | 0.2 |
| 25 | 17 $\frac{1}{2}$ miles north | S. T. Brister | -- | Flat | 1890 | 140 | 6 | 0.5 |
| 26 | 13 miles northwest | Sawyer Land and Cattle Co. | S. Cleveland | Slope | 1928 | 265 | 6 | -- |
| 27 | 12 $\frac{1}{2}$ miles northwest | do. | -- | do. | Old | 250 | 4 | -- |

a/ Measuring point was usually top of casing, top of well curb or top of pipe clamp.
b/ B, bucket; C, cylinder; E, electric; G, gasoline; H, hand; W, windmill. Number indicates horsepower.

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

| No. | Water level Depth below measur- ing point (ft.) | Date of measure- ment | Pump and power b/ | Use of water c/ | Remarks |
|-----|--|-----------------------------|----------------------------|--------------------------|--|
| 1 | 53 | e/ | C,W | D,S | No casing. Reported strong supply of hard water. |
| 2 | 53.53 | July 8, 1940 | C,W | D,S | Do. |
| 3 | 53 | e/ | C,W | D,S | Do. |
| 4 | 35.41 | July 8, 1940 | C,W | D,S | Steel casing to bottom. Reported strong supply. |
| 5 | 65 | e/ | C,W | S | Reported strong supply. |
| 6 | 69.84 | July 29, 1940 | C,W | D,S | Tin casing top 50 feet. Reported strong supply. |
| 7 | 21.27 | do. | C,W | D,S | Tin casing top 20 feet. Reported strong supply. |
| 8 | 69.88 | July 8, 1940 | C,W | D,S | Do. |
| 11 | 22.23 | July 29, 1940 | C,W | D,S | Dug well. Rock casing to bottom. Reported strong supply. |
| 13 | 49.40 | do. | C,W | S | Iron casing to bottom. Reported strong supply. |
| 14 | 48.20 | do. | C,W | S | Reported strong supply. |
| 15 | 278.22 | Aug. 7, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 16 | 80.69 | July 29, 1940 | C,W | D,S | Tin casing. Reported strong supply. |
| 17 | 51.02 | May 27, 1940 | C,W | S | Reported strong supply. |
| 18 | 147.48 | Aug. 7, 1940 | C,W | D,S | Tin casing top 50 feet. Reported strong supply. |
| 19 | 146.36 | do. | C,W | D,S | Tin casing to bottom. Reported weak supply. |
| 20 | 275 | e/ | C,W | S | No casing. Reported strong supply. |
| 21 | 144.11 | Aug. 7, 1940 | C,W | D,S | Tin casing to bottom. Reported weak supply. |
| 22 | 62.59 | July 8, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 23 | 69.55 | do. | C,W | S | Tin casing top 15 feet. Reported strong supply. |
| 24 | 78.09 | do. | C,W | S | No casing. Reported strong supply. |
| 25 | 59.46 | do. | C,W | D,S | Tin casing to bottom. Reported yield, 30 gallons a minute. |
| 26 | 220 | e/ | C,W | D,S | Iron casing. Reported strong supply. |
| 27 | 220 | e/ | C,W | S | Reported strong supply. |

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

d/ No water sample collected for analyses.

e/ Water level reported.

Records of wells and springs in Irion County--Continued

| No. | Distance from Barnhart | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) |
|-------|----------------------------------|----------------------------|-----------------|-----------------------|----------------|---------------------|------------------------|--|
| d/ 28 | 12 $\frac{1}{2}$ miles northwest | Sawyer Land and Cattle Co. | -- | Gentle slope | Old | 250 | -- | -- |
| d/ 29 | 12 miles north | Sugg Bros. | -- | Flat | 1934 | 350 | -- | -- |
| 30 | 11 $\frac{1}{2}$ miles north | do. | -- | In valley | -- | 210 | -- | 1.0 |
| 31 | 10 miles north | do. | -- | Flat | -- | 200 | -- | 0.5 |
| 32 | 10 $\frac{1}{2}$ miles north | J. Scott | -- | do. | -- | 309 | -- | 1.0 |
| d/ 33 | 10 $\frac{1}{4}$ miles north | do. | -- | In valley | 1920 | 300 | -- | -- |
| 34 | 10 miles north | do. | -- | Flat | 1920 | 400 | -- | 1.0 |
| d/ 35 | 10 $\frac{1}{2}$ miles north | do. | -- | do. | 1915 | 400 | -- | 1.0 |
| d/ 36 | 9 miles north | J. B. Becton | -- | do. | 1904 | 300 | -- | 2.0 |
| 37 | 8 $\frac{1}{2}$ miles north | do. | -- | do. | 1934 | 300 | -- | 1.0 |
| d/ 38 | 8 miles north | do. | -- | In valley | 1933 | 355 | -- | -- |
| 39 | 8 $\frac{1}{2}$ miles north | Sugg Bros. | -- | do. | 1920 | 240 | 6 | 0.5 |
| 40 | 4 $\frac{1}{2}$ miles northwest | Mrs. T. Murphey | -- | do. | Old | 310 | 8 | -- |
| 41 | 3 $\frac{1}{2}$ miles northwest | Sol Meyer | -- | In draw | 1900 | 450 | -- | -- |
| 42 | 2 $\frac{1}{2}$ miles north | do. | -- Snow | Hill-top | 1939 | 460 | -- | -- |
| 43 | 1 mile north | do. | -- | Flat | 1900 | 650 | -- | -- |
| 44 | 1 $\frac{1}{2}$ miles northeast | do. | -- | do. | 1934 | 425 | -- | -- |
| 45 | 1 $\frac{1}{2}$ miles east | G. Linthicum | -- | do. | Old | 350 | 8 | 0.7 |
| 46 | $\frac{1}{2}$ mile north | State Highway Department | R. A. Cleveland | do. | 1940 | 398 | 8 | 1.0 |
| 47 | In Barnhart | F. Burks | O. P. Wyatt | Hill-side | -- | 510 | 8 | -- |
| d/ 48 | do. | Santa Fe R.R. | -- | Flat | 1905 | 350 | -- | -- |
| 49 | 1 $\frac{1}{2}$ miles west | A. C. Hinde | S. Cleveland | Hill-top | 1934 | 461 | -- | -- |
| d/ 50 | 3 $\frac{3}{4}$ miles west | do. | -- Cleveland | -- | 1934 | 430 | 8 | -- |
| 51 | 3 $\frac{1}{2}$ miles west | The University of Texas | -- | In valley | -- | 100 | -- | 0.5 |
| d/ 52 | do. | do. | -- | do. | Old | 125 | 6 | 1.0 |
| 53 | 2 $\frac{1}{2}$ miles west | A. C. Hinde | F. Holt | Flat | 1926 | 330 | 8 | -- |

| No. | Water level | | Pump and power b/ | Use of water c/ | Remarks |
|-----|---|-----------------------------|----------------------------|--------------------------|---|
| | Depth below measur- ing point (ft.) | Date of measure- ment | | | |
| 28 | 220 | e/ | C,W | S | Reported strong supply. |
| 29 | 295 | e/ | C,W | S | Do. |
| 30 | 107.29 | May 27, 1940 | C,W | S | Do. |
| 31 | 179.16 | July 5, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 32 | 72.04 | May 27, 1940 | C,W | S | Reported strong supply. |
| 33 | 260 | e/ | C,W | S | No casing. Reported strong supply. |
| 34 | 279.16 | Aug. 7, 1940 | C,W | D,S | Do. |
| 35 | 268.78 | do. | C,W | S | Do. |
| 36 | 76.41 | May 27, 1940 | C,W | S | Do. |
| 37 | 73.26 | do. | C,W,G | D,S | Do. |
| 38 | 70 | e/ | C,W | S | Do. |
| 39 | 163.56 | July 5, 1940 | C,W | S | Iron casing top 20 feet. Reported strong supply. |
| 40 | 165 | e/ | C,W,G | D,S | Iron casing top 40 feet. Reported strong supply. |
| 41 | 350 | e/ | C,W | S | No casing. Reported weak supply. |
| 42 | 300 | e/ | C,W | S | No casing. Reported yield, 15 gallons a minute. |
| 43 | 300 | e/ | C,W | S | No casing. Reported yield, 7 gallons a minute. |
| 44 | 300* | e/ | C,W | S | Reported strong supply. |
| 45 | 118.65 | July 5, 1940 | C,W,G | D,S | Iron casing top 100 feet. Reported strong supply. |
| 46 | 264.30 | do. | -- | D,I | First water at 265 to 285 feet. See partial log. |
| 47 | 300* | e/ | C,W | P | Iron casing top 20 feet. Reported strong supply. Supplies part of City of Barnhart. |
| 48 | 265 | e/ | C,G, 15 | D,RR | No casing. Reported strong supply. |
| 49 | 300* | e/ | C,W | S | Reported yield, $2\frac{1}{2}$ gallons a minute. |
| 50 | 340 | e/ | C,W | S | Iron casing top 5 feet. Reported yield, $2\frac{1}{2}$ gallons a minute. |
| 51 | 67.07 | July 2, 1940 | C,W | S | Reported weak supply. |
| 52 | 66.50 | do. | C,G | S | Tin casing top 100 feet. Reported weak supply. |
| 53 | 325 | e/ | C,W | D,S | Iron casing top 5 feet. Reported yield, 10 gallons a minute. |

Records of wells and springs in Irion County--Continued

| No. | Distance from Barnhart | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) ^{a/} |
|-------|----------------------------------|----------------------------|-------------------------|-----------------------|----------------|---------------------|------------------------|--|
| 54 | 1 $\frac{1}{2}$ miles southwest | The University of Texas | H. Grey | Gentle slope | 1930 | 475 | -- | -- |
| 55 | $\frac{3}{4}$ mile southwest | do. | -- | In valley | Old | 40 | 36 | 0.0 |
| 56 | $\frac{1}{8}$ mile southwest | C. Owens | -- | Flat | Old | 360 | 6 | -- |
| 57 | $\frac{1}{8}$ mile south | L. R. Taylor | H. Parker | do. | 1917 | 265 | 6 | -- |
| 58 | 2 miles south | The University of Texas | R. A. Cleveland | Hill-top | 1939 | 330 | 6 | -- |
| d/ 59 | 2 $\frac{3}{4}$ miles southeast | do. | -- | do. | 1940 | 452 | 6 | -- |
| d/ 60 | 4 $\frac{5}{8}$ miles east | R. L. Gibson, et al | -- | Hill-side | Old | 250 | -- | -- |
| d/ 61 | 6 $\frac{1}{8}$ miles east | R. L. Gibson | -- | In valley | Old | 210 | -- | -- |
| 62 | 5 $\frac{1}{8}$ miles east | R. L. Gibson, et al | -- | Hill-side | 1904 | 260 | -- | -- |
| 63 | 9 $\frac{1}{4}$ miles east | R. L. Gibson | -- | In valley | Old | 200 | 6 | 1.0 |
| 64 | 8 $\frac{1}{8}$ miles east | Nolke Est. | -- | Flat | -- | 40 | 48 | 2.0 |
| 65 | do. | do. | -- | do. | Old | 300 | -- | 2.0 |
| 66 | 4 miles northeast | R. Ash | -- | Gentle slope | 1924 | 340 | 6 | -- |
| d/ 67 | 7 miles northeast | Nolke Est. | S. M. Harvick | Flat | 1935 | 220 | -- | 2.0 |
| d/ 68 | 5 $\frac{1}{8}$ miles northeast | do. | P. H. Williams | Hill-top | 1926 | 3535 | -- | -- |
| d/ 69 | 9 $\frac{1}{8}$ miles northeast | do. | -- | In valley | Old | 400 | -- | -- |
| 70 | do. | do. | -- | Flat | Old | 60 | 48 | 0.0 |
| 71 | 10 $\frac{1}{8}$ miles east | do. | -- | Hill-side | -- | 250 | -- | -- |
| d/ 72 | 12 $\frac{1}{4}$ miles northeast | Sugg Bros. | -- | do. | 1910 | 450 | -- | -- |
| d/ 73 | 15 miles north | Sawyer Land and Cattle Co. | Oklavania Oil Co. | -- | 1926 | 2703 | -- | -- |
| d/ 74 | 25 miles north | Sugg Est. | Furhman Petroleum Corp. | -- | 1929 | 2450 | -- | -- |

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

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

| No. | Water level Depth below measuring point (ft.) | Date of measurement | Pump and power b/ | Use of water c/ | Remarks |
|-----|--|---------------------|----------------------|--------------------|--|
| 54 | 390 | e/ | C,W | D,S | Reported strong supply. |
| 55 | 19.69 | July 2, 1940 | C,W | S | Dug well. Rock casing to bottom. Reported weak supply. |
| 56 | 280 | e/ | C,W | D,S | Tin casing top 40 feet. Reported weak supply. |
| 57 | 235 | e/ | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 58 | 290 | e/ | C,W | S | Iron casing top 10 feet. Reported yield, 6 gallons a minute. |
| 59 | 390 | e/ | C,W | S | Do. |
| 60 | 185 | e/ | C,W | S | No casing. Reported yield, 200 gallons a minute. |
| 61 | 180 | e/ | C,W | S | No casing. Reported strong supply. |
| 62 | 196 | e/ | C,W | S | No casing. Reported yield, 20 gallons a minute. |
| 63 | 153.16 | July 2, 1940 | C,W | S | Iron casing top 40 feet. Reported strong supply. |
| 64 | 24.97 | July 3, 1940 | C,W | D | Dug well. Rock casing. Reported weak supply. |
| 65 | 165.48 | do. | C,W | S | No casing. Reported strong supply. |
| 66 | 300+ | e/ | C,W | D,S | Iron casing top 200 feet. Reported strong supply. |
| 67 | 169.08 | Aug. 6, 1940 | C,W | S | No casing. Reported strong supply. |
| 68 | -- | -- | -- | -- | Oil test. See log. |
| 69 | 290 | e/ | C,W | S | No casing. |
| 70 | 22.10 | Aug. 6, 1940 | C,W | S | Dug well. Rock casing to bottom. Reported strong supply. |
| 71 | 148 | e/ | C,W | D,S | No casing. Reported strong supply. |
| 72 | 238 | e/ | C,W | S | Do. |
| 73 | -- | -- | None | N | Oil test. See log. |
| 74 | -- | -- | None | N | Do. |

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

d/ No water sample collected for analysis.

e/ Water level reported.

Records of wells and springs in Irion County--Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|-------|----------------------------------|-----------------|--------------|-----------------------|----------------|---------------------|------------------------|---|
| a/101 | 16 miles northwest | Sugg Bros. | -- | Flat | 1910 | 65 | 8 | 0.5 |
| a/102 | 18 miles northwest | do. | -- Holt | Hill-top | 1938 | 210 | -- | -- |
| a/103 | 18 miles north | Mrs. M. McManus | -- | In valley | 1938 | 20 | 36 | 3 |
| a/104 | 15 $\frac{1}{2}$ miles north | Nolke Est. | -- | Hill-side | 1930 | 110 | -- | 0.5 |
| 105 | 15 $\frac{1}{2}$ miles northwest | Mrs. M. McManus | -- | do. | 1926 | 55 | 8 | 1.0 |
| a/106 | 15 $\frac{3}{4}$ miles northwest | do. | -- | In valley | Old | 18 | 36 | 2.5 |
| a/107 | 15 $\frac{1}{2}$ miles northwest | Sugg Bros. | -- | do. | Old | 50 | 6 | 0.5 |
| a/108 | 14 $\frac{1}{2}$ miles northwest | do. | -- | Hill-side | 1935 | 78 | -- | 0.5 |
| a/109 | 13 $\frac{1}{2}$ miles northwest | E. Nolke | -- | Flat | 1900 | 60 | 6 | 1.0 |
| 110 | 10 $\frac{1}{2}$ miles north | Sugg Bros. | -- | Gentle slope | 1934 | 70 | -- | -- |
| 111 | do. | do. | F. Holt | do. | 1936 | 95 | -- | -- |
| 112 | 11 $\frac{1}{2}$ miles north | H. W. Clark | P. Holt | Flat | 1936 | 35 | 6 | 0.5 |
| 113 | 13 miles north | H. Cargile | -- | In valley | Old | 50 | 36 | 3.0 |
| 114 | 12 miles north | do. | -- | Flat | -- | 70 | 6 | 3.0 |
| 115 | 12 $\frac{1}{4}$ miles north | do. | -- | do. | 1926 | 70 | 6 | 1.0 |
| 116 | 12 $\frac{1}{2}$ miles north | H. Roark | -- | do. | 1926 | 45 | 6 | 1.0 |
| 117 | 12 $\frac{3}{4}$ miles north | Irion County | -- | do. | 1920 | 90 | 6 | 0.5 |
| 118 | 13 miles north | G. W. Stewart | -- | do. | 1915 | 60 | 6 | -- |
| 119 | 16 miles north | R. Underwood | N. Oliver | do. | 1915 | 90 | 6 | 1.0 |
| 120 | 14 $\frac{1}{4}$ miles north | P. C. Kolster | -- | do. | 1910 | 60 | 6 | 1.0 |
| 121 | 13 miles north | H. Roark | -- | Hill-top | -- | 70 | 6 | 1.0 |
| 122 | 13 $\frac{1}{4}$ miles north | J. W. Fields | -- | Flat | Old | 65 | 6 | 0.8 |
| 123 | 13 $\frac{1}{2}$ miles northeast | Abe Meyer | -- | do. | 1930 | 72 | -- | 0.5 |
| 124 | 6 $\frac{1}{2}$ miles north | H. W. Clark | H. M. Curtis | do. | 1934 | 119 | 6 | -- |

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

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

| No. | Water level | | Pump and power b/ | Use of water c/ | Remarks |
|-----|---|-----------------------------|----------------------------|--------------------------|---|
| | Depth below measur- ing point (ft.) | Date of measure- ment | | | |
| 101 | 46.49 | Aug. 9, 1940 | C,W | S | Iron casing top 50 feet. Reported strong supply. |
| 102 | 150 | e/ | C,W | S | No casing. Reported strong supply. |
| 103 | 17.18 | Aug. 9, 1940 | C,W | S | Dug well. Rock casing. Reported strong supply. |
| 104 | 78.58 | do. | C,W | S | Reported strong supply. |
| 105 | 36.53 | July 9, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 106 | 14.69 | Aug. 9, 1940 | C,W | S | Dug well. Rock casing to bottom. Reported strong supply. |
| 107 | 22.19 | do. | C,W | S | Iron casing to bottom. Reported strong supply. |
| 108 | 48.86 | do. | C,W | S | No casing. Reported strong supply. |
| 109 | 27.37 | June 25, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 110 | 40 | e/ | C,W | D | No casing. Reported strong supply. |
| 111 | 37.89 | June 25, 1940 | C,W | D,S | Do. |
| 112 | 30.58 | do. | C,W | D,S | Iron casing top 25 feet. Reported strong supply. |
| 113 | 37.42 | do. | C,W | D,S | Dug well. Rock casing to bottom. Reported weak well. |
| 114 | 61.02 | May 15, 1940 | C,W | S | Iron casing top 20 feet. Reported strong supply. |
| 115 | 67.60 | do. | C,W | S | Tin casing top 50 feet. Reported strong supply. |
| 116 | 36.40 | do. | C,H | D,S | Iron casing to bottom. Reported weak supply. |
| 117 | 36.79 | do. | C,W | D,P | Iron casing. Reported strong supply. Supplies water for school. |
| 118 | 27.11 | do. | C,W | D,S | Tin casing top 12 feet. Reported strong supply, which furnishes water to filling station. |
| 119 | 46.73 | do. | C,W | D,S | Tin casing top 50 feet. Reported weak supply. |
| 120 | 41.29 | do. | C,W | D,S | Iron casing top 20 feet. Reported strong supply. |
| 121 | 40.81 | do. | C,W | D,S | Iron casing top 20 feet. |
| 122 | 41.04 | June 25, 1940 | C,W | D,S | Tin casing top 45 feet. Reported weak supply. |
| 123 | 57.59 | do. | C,W | S | No casing. Reported strong supply. |
| 124 | 64.00 | May 15, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |

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

d/No water sample collected for analysis.

e/Water level reported.

Records of wells and springs in Irion County--Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|------------------------|-------------------|--------------------------|-----------------------|----------------|---------------------|------------------------|--|
| 125 | 6 miles north | W. E. Newton | -- | Gentle slope | Old | 125 | 6 | 1.0 |
| d/126 | 9 miles northwest | Sugg Bros. | -- Holt | Hill-side | 1932 | 90 | 6 | 0.5 |
| d/127 | do. | do. | -- | Flat | 1935 | 36 | 36 | 3.0 |
| 128 | 11 miles northwest | Hemphill & Leffle | -- | Hill-side | -- | 40 | 4 | 1.0 |
| d/129 | 12½ miles northwest | Sugg Bros. | -- | Flat | 1916 | 70 | 8 | 1.0 |
| 130 | do. | do. | -- | do. | Old | 40 | 8 | 0.5 |
| 131 | 11½ miles northwest | do. | -- | do. | Old | 35 | 8 | 0.2 |
| 132 | 11¼ miles northwest | J. J. Burney Est. | -- | do. | 1900 | 75 | 6 | 1.5 |
| 133 | 8 miles northwest | Sugg Bros. | -- | Hill-side | 1910 | 110 | 8 | 1.5 |
| d/134 | 10½ miles west | J. Clark | -- | do. | 1930 | 150 | -- | 1.0 |
| d/135 | 7 miles west | Sugg Est. | -- | Flat | 1910 | 300 | -- | -- |
| 136 | 6½ miles northeast | Frank Emerick | -- | do. | -- | 70 | -- | 0.8 |
| 137 | 7 miles northeast | D. E. Hughes | -- | do. | -- | 40 | 8 | 1.0 |
| 138 | do. | J. D. Hare | -- | do. | 1928 | 40 | -- | 1.0 |
| 139 | 8 miles northeast | Joe Pfluger | -- | do. | -- | 64 | 8 | 3.0 |
| 140 | 8½ miles northeast | W. A. Thomas | -- | do. | 1926 | 46 | 6 | 1.0 |
| 141 | 6½ miles northeast | W. O. Hodges | -- | do. | 1935 | 40 | 6 | 0.5 |
| 142 | 4 miles northeast | D. E. Hughes | -- | Hill-side | 1920 | 125 | 8 | 0.5 |
| 143 | do. | do. | -- | Hill-top | Old | 150 | -- | -- |
| d/144 | 4 miles east | J. M. Lee | Straughn and Adkin Bros. | Flat | 1932 | 1505 | -- | -- |
| 145 | 4½ miles east | D. Gentry | -- | In draw | -- | 100 | -- | 0.5 |
| d/146 | 3½ miles east | Barney Wilson | -- | Gentle slope | -- | 160 | 4 | -- |
| d/147 | 4½ miles east | Ed S. Roberts | -- | Flat | -- | 180 | 6 | 1.0 |
| d/148 | 8 miles southeast | W. A. Guinn | -- | Hill-top | 1940 | 90 | 8 | 1.0 |
| d/149 | do. | do. | -- | In valley | Old | 35 | -- | 0.5 |
| 150 | 7½ miles southeast | J. I. Case Est. | -- | Creek bottom | -- | Spring | -- | -- |

| No. | Water level | | Pump and power b/ | Use of water c/ | Remarks |
|-----|---|-----------------------------|----------------------------|--------------------------|--|
| | Depth below measur- ing point (ft.) | Date of measure- ment | | | |
| 125 | 100.63 | June 22, 1940 | C,W, G,1 $\frac{1}{2}$ | D,S | Tin casing top 60 feet. Reported weak supply. |
| 126 | 54.72 | Aug. 9, 1940 | C,W | S | Iron casing to bottom. Reported weak supply. |
| 127 | 31.43 | do. | H,B | D | Dug well. Rock casing to bottom. Reported weak supply from gravel. |
| 128 | 34.00 | May 21, 1940 | C,W | D,S | Tin casing. Reported strong supply. |
| 129 | 22.49 | Aug. 9, 1940 | C,W | S | Iron casing top 50 feet. Reported strong supply. |
| 130 | 25.44 | July 22, 1940 | C,W | S | Tin casing. Reported strong supply. |
| 131 | 25.38 | do. | C,W | D,S | Do. |
| 132 | 43.55 | July 29, 1940 | C,W | D,S | Tin casing top 50 feet. Reported strong supply. |
| 133 | 82.42 | July 22, 1940 | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 134 | 103.62 | Aug. 9, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 135 | 197 | e/ | C,W, G,2 | D,S | Do. |
| 136 | 35.06 | June 19, 1940 | C,W | S | Do. |
| 137 | 32.55 | May 24, 1940 | C,W | D,S | Tin casing top 20 feet. Reported strong supply. |
| 138 | 32.73 | do. | C,W | D,S | Dug well. No casing. Reported weak supply. |
| 139 | 29.28 | do. | C,W | S | Iron casing top 40 feet. Reported strong supply. Water levels, 27.65 on Feb. 21, 1938; 29.11 on Mar. |
| 140 | 30.53 | do. | C,W, G,1 $\frac{1}{2}$ | D,S | Tin casing top 45 feet. Reported strong supply. Struck water at 34 feet. 25, 1939. |
| 141 | 21.36 | June 7, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 142 | 74.49 | June 18, 1940 | C,W, G,1 $\frac{1}{2}$ | S | Iron casing top 100 feet. Reported strong supply. |
| 143 | 93.56 | do. | C,W | D,S | Reported strong supply. |
| 144 | -- | -- | None | N | Oil test. |
| 145 | 94.22 | July 17, 1940 | C,W | S | Reported strong supply. |
| 146 | 128.00 | June 6, 1940 | C,W | S | Tin casing top 20 feet. Reported weak supply. |
| 147 | 81.00 | do. | C,W | D,S | Iron casing top 15 feet. Reported strong supply. |
| 148 | 67.47 | Aug. 5, 1940 | C,W | D,S | Iron casing top 58 feet. Reported strong supply. |
| 149 | 22.10 | Aug. 12, 1940 | C,W | D,S | Dug well. No casing. Reported strong supply. |
| 150 | Flows | -- | None | D,S,I | Reported flow 2,000 gallons a minute from limestone. Known as "Dove Spring". Temperature 68° F. |

Records of wells and springs in Irion County--Continued

| No. | Distance from Mertzon | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|----------------------------------|-------------------|----------------|-----------------------|----------------|---------------------|------------------------|--|
| d/151 | 7 $\frac{1}{4}$ miles southeast | J. I. Case Est. | -- | Hill-side | -- | 40 | 8 | 1.0 |
| d/152 | 7 $\frac{1}{2}$ miles southeast | do. | -- | In valley | 1920 | -- | 8 | 1.0 |
| 153 | 7 $\frac{1}{2}$ miles south | Max Tankersly | P. Holt | do. | -- | 240 | 6 | -- |
| d/154 | 6 $\frac{1}{2}$ miles southeast | R. S. Williams | -- | Hill-side | 1928 | 115 | -- | -- |
| 155 | 5 $\frac{1}{2}$ miles south | do. | -- Evans | do. | 1910 | 260 | -- | 1.0 |
| 156 | 4 $\frac{1}{2}$ miles south | J. M. Nutt | -- Curtis | Gentle slope | 1929 | 155 | 6 | 1.2 |
| 157 | 4 miles south | F. Tankersly | -- | Flat | -- | 125 | 6 | 1.0 |
| 158 | do. | J. M. Nutt | -- Fox | Hill-side | 1932 | 225 | 6 | -- |
| d/159 | 3 $\frac{1}{2}$ miles south | do. | do. | do. | 1934 | 220 | 6 | -- |
| 160 | 3 $\frac{1}{2}$ miles south | B. Mayse | -- | Hill-top | -- | 100 | 8 | 1.0 |
| 161 | 4 $\frac{1}{2}$ miles southwest | Ada Moorehead | -- | Gentle slope | -- | 74 | -- | 1.0 |
| d/162 | 4 $\frac{1}{2}$ miles southwest | do. | Concho Oil Co. | Flat | 1930 | 3287 | -- | -- |
| 163 | 6 miles southwest | F. Tankersly | -- | do. | 1931 | 110 | 6 | -- |
| 164 | 4 miles west | Mrs. M. Lindley | -- Stamps | do. | 1895 | 186 | -- | 2.0 |
| 165 | 3 $\frac{1}{2}$ miles west | D. E. Hughes | -- | do. | 1921 | 150 | -- | 1.0 |
| 166 | 5 $\frac{1}{2}$ miles west | H. Lindley | -- | do. | 1890 | 200 | -- | -- |
| d/167 | 7 miles west | B. Mayse | -- | Hill-side | -- | 200 | -- | -- |
| d/168 | 8 $\frac{1}{2}$ miles west | F. B. Carter Est. | -- Curtis | do. | 1939 | 440 | -- | 1.0 |
| d/169 | 10 $\frac{1}{2}$ miles west | M. W. Whitley | -- | Flat | 1929 | 47 | 8 | 0.0 |
| d/170 | do. | F. B. Carter Est. | -- | do. | Old | 250 | -- | 0.5 |
| 171 | 10 miles west | Mrs. F. B. Carter | -- | Hill-side | 1928 | 240 | -- | 1.0 |
| d/172 | 9 $\frac{1}{2}$ miles southwest | H. W. Cathey | -- | Hill-top | -- | 300 | -- | -- |
| d/173 | 8 $\frac{1}{2}$ miles southwest | do. | B. Cathey | Gentle slope | 1905 | 265 | -- | -- |
| 174 | 8 $\frac{1}{2}$ miles southwest | Nolke Est. | -- | Hill-side | 1927 | 187 | 6 | 1.0 |
| d/175 | 11 $\frac{1}{2}$ miles southwest | Sam Chaney | P. Holt | Gentle slope | 1931 | 409 | 8 | -- |
| 176 | 12 $\frac{1}{2}$ miles southwest | Nolke Est. | -- | Hill-side | -- | 185 | -- | 2.0 |

| No. | Water level | | Pump and power b/ | Use of water c/ | Remarks |
|-----|-----------------------------------|---------------------|----------------------|--------------------|--|
| | Depth below measuring point (ft.) | Date of measurement | | | |
| 151 | 28.07 | Aug. 12, 1940 | C,W | S | Tin casing to bottom. Reported strong supply. |
| 152 | 35.80 | do. | C,W | S | Tin casing top 50 feet. Reported strong supply. |
| 153 | 105 | e/ | C,W | S | Iron casing top 20 feet. Reported strong supply. |
| 154 | 67 | e/ | C,W | D,S | No casing. Reported strong supply. |
| 155 | 82.90 | June 27, 1940 | C,W | S | Do. |
| 156 | 94.84 | do. | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 157 | 85.88 | do. | C,W | S | Iron casing to bottom. |
| 158 | 100 | e/ | C,G | D,S | Iron casing to bottom. Reported strong supply. Supplies drinking water to small oil field. |
| 159 | 95 | e/ | None | N | Iron casing top 100 feet. Reported strong supply. Not completed when visited. |
| 160 | 72.08 | May 24, 1940 | C,W | S | Tin casing. Reported strong supply. |
| 161 | 42.11 | July 5, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 162 | -- | -- | None | N | Oil test. See log. |
| 163 | 65 | e/ | C,W | D,S | Iron casing top 50 feet. Reported strong supply. |
| 164 | 134.78 | July 23, 1940 | C,W | D,S | Reported strong supply of water from sand at 150 to 186 feet. |
| 165 | 124.66 | do. | C,W | S | Reported strong supply. |
| 166 | 135 | e/ | C,W | D,S | |
| 167 | 165 | e/ | C,W | D,S | Reported strong supply. |
| 168 | 361.48 | Aug. 6, 1940 | C,W | S | No casing. Reported strong supply. |
| 169 | 32.78 | do. | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 170 | 145.40 | do. | C,W | S | No casing. Reported weak supply. |
| 171 | 146.78 | do. | C,W | D,S | No casing. Reported strong supply. |
| 172 | 198 | e/ | C,W | S | Do. |
| 173 | 200 | e/ | C,W, G,3 | D,S | Do. |
| 174 | 74.58 | May 24, 1940 | C,W | S | Iron casing. Reported strong supply. |
| 175 | 329 | e/ | C,W | D,S | Do. |
| 176 | 151.96 | July 2, 1940 | C,W | S | No casing. Reported strong supply. |

Records of wells and springs in Irion County --Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|----------------------------------|-------------------|---------------------------|-----------------------|----------------|---------------------|------------------------|--|
| d/177 | 10 $\frac{1}{2}$ miles southwest | Nolke Est. | -- | In valley | 1880 | 81 | 6 | -- |
| 178 | 10 miles south | J. W. Shaw | -- | Flat | Old | 150 | 6 | 1.0 |
| 179 | do. | R. E. Atkinson | -- | do. | 1900 | 125 | 7 | 1.0 |
| 180 | 12 miles south | R. S. Williams | -- | In valley | 1904 | 120 | 6 | 0.5 |
| 181 | 12 $\frac{1}{4}$ miles south | B. E. Tankersly | W. P. Holt | do. | 1920 | 125 | -- | 2.0 |
| d/182 | 12 $\frac{3}{4}$ miles south | R. S. Williams | -- | Hill-side | -- | 250 | 8 | 1.0 |
| d/183 | 11 $\frac{1}{2}$ miles southeast | R. Atkinson | -- | Flat | 1932 | 240 | 12 | 1.0 |
| d/184 | 10 miles southeast | J. I. Case Est. | -- | On bluff | Old | 110 | -- | 0.5 |
| d/185 | 13 miles southeast | W. H. Williams | Stanolind Oil and Gas Co. | -- | 1932 | 6519 | -- | -- |
| d/186 | 4 $\frac{1}{2}$ miles south | J. M. Nutt | Furhman Pet. Corp. | -- | 1929 | 1494 | -- | -- |
| d/187 | 3 $\frac{1}{2}$ miles west | Sugg Est. | Kingwood Oil Co. | -- | 1929 | 7818 | -- | -- |
| d/188 | 14 $\frac{3}{4}$ miles northeast | Abe Meyer | Wittmar Oil and Gas Corp. | -- | 1928 | 1350 | -- | -- |
| 201 | 3 $\frac{1}{2}$ miles northwest | Bill Freitag | -- | Creek bottom | -- | Spring | -- | -- |
| 202 | 3 $\frac{3}{4}$ miles north | W. Burks | -- Curtis | Flat | 1939 | 151 | 6 | 0.8 |
| 203 | do. | do. | -- | -- | -- | 43 | -- | 0.5 |
| 204 | 3 $\frac{1}{2}$ miles north | do. | -- | Creek bottoms | -- | 100 | -- | -- |
| 205 | 3 miles north | do. | -- | Hill-side | 1930 | 100 | -- | 1.0 |
| 206 | 3 $\frac{3}{4}$ miles north | J. M. Nutt | -- Curtis | Flat | -- | 70 | 4 | -- |
| 207 | 3 $\frac{1}{2}$ miles northeast | J. Richardson | -- | do. | Old | 41 | 36 | 3.0 |
| d/208 | 3 $\frac{1}{2}$ miles north | A. J. Kinser | -- | Gentle slope | -- | 38 | 6 | 1.0 |
| 209 | 3 $\frac{3}{4}$ miles northeast | Arno Helmers | -- | Flat | Old | 40 | 6 | 1.0 |
| 210 | 4 $\frac{1}{2}$ miles north | A. J. Kinser | -- | do. | -- | 202 | 12 | -- |
| 211 | 4 $\frac{1}{2}$ miles northeast | H. W. Clark | -- | do. | 1932 | 70 | 6 | 1.0 |
| 212 | 4 $\frac{1}{2}$ miles northeast | Frank Emerick | -- Holt | Gentle slope | 1939 | 110 | 6 | 0.5 |
| 213 | 4 miles northeast | D. E. Hughes | -- | Hill-top | Old | 150 | -- | 1.0 |
| 214 | 3 $\frac{1}{2}$ miles northeast | Ira G. Yates, Jr. | -- | Flat | 1932 | 60 | 6 | 1.0 |

| No. | Water level | | Pump and power b/ | Use of water c/ | Remarks |
|-----|-----------------------------------|---------------------|-------------------|-----------------|--|
| | Depth below measuring point (ft.) | Date of measurement | | | |
| 177 | 40 | e/ | C,W | S | Iron casing to bottom. |
| 178 | 125.18 | June 27, 1940 | C,W | D,S | Iron casing to bottom. Reported strong supply. |
| 179 | 95.80 | do. | C,W | D,S | Tin casing top 100 feet. Reported strong supply. |
| 180 | 67.40 | do. | C,W | D,S | Iron casing top 100 feet. Reported strong supply. |
| 181 | 98.40 | do. | C,W | D,S | No casing. Reported strong supply. |
| 182 | 110.40 | Aug. 12, 1940 | C,W | S | Iron casing top 120 feet. |
| 183 | 170.30 | do. | C,W | S | Iron casing top 40 feet. Reported strong supply. |
| 184 | 54.46 | do. | C,W | S | No casing. Reported strong supply. |
| 185 | -- | -- | None | N | Oil test. See log. |
| 186 | -- | -- | None | N | Do. |
| 187 | -- | -- | None | N | Do. |
| 188 | -- | -- | None | N | Do. |
| 201 | Flows | July 18, 1940 | -- | D,S | Reported yield, 25 gallons a minute from sand and gravel fill which never fails. Known as "Lopez |
| 202 | 109.29 | do. | C,W | S | Tin casing top 40 feet. Reported strong supply. Spring". Temperature 68° F. |
| 203 | 18.23 | July 23, 1940 | C,W | S | |
| 204 | 28 | e/ | C,W | S | |
| 205 | 64.59 | July 18, 1940 | C,W | D,S | Reported strong supply. |
| 206 | 33 | e/ | C,W | S | Tin casing to bottom. Reported strong supply. |
| 207 | 23.51 | June 19, 1940 | C,W | D,S | Dug well. Rock casing to bottom. Reported strong supply. |
| 208 | 32.10 | May 15, 1940 | C,G, 1 1/2 | S | Tin casing top 30 feet. Reported strong supply. |
| 209 | 23.48 | June 19, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 210 | Flows | -- | None | S | Oil test. See log. Cast iron casing top 200 feet. Reported flow, 75 gallons a minute. |
| 211 | 51.66 | May 24, 1940 | C,W | S | Tin casing top 40 feet. Reported strong supply. |
| 212 | 47.86 | July 18, 1940 | C,W | S | Tin casing top 20 feet. Reported strong supply. |
| 213 | 83.02 | do. | C,W | S | Reported strong supply. |
| 214 | 52.30 | June 19, 1940 | C,W | S | Tin casing top 20 feet. Reported weak supply. |

Records of wells and springs in Irion County --Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|---------------------------------|-------------------------|----------------------------|-----------------------|----------------|---------------------|------------------------|--|
| d/215 | 3 $\frac{1}{2}$ miles northeast | Dick Helmers | Dick Helmers | Flat | 1932 | 18 | 8 | 2.0 |
| 216 | 3 $\frac{1}{4}$ miles northeast | Community Club Cemetery | -- | Hill-side | -- | 105 | -- | 0.5 |
| d/217 | do. | E. L. Keegan | E. L. Keegan | Flat | -- | 17 | 36 | 4.0 |
| 219 | 3 miles northeast | Dr. D. D. Wall | -- | do. | 1927 | 60 | 4 | 1.0 |
| 220 | 2 $\frac{1}{2}$ miles north | J. M. Nutt | -- | do. | 1937 | 30 | 4 | 1.0 |
| d/221 | 3 miles northeast | E. L. Keegan | E. L. Keegan | do. | 1940 | 17 | 36 | 4.0 |
| 222 | do. | James Lee | J. Snow | do. | 1939 | 98 | 4 | -- |
| d/223 | 2 $\frac{1}{2}$ miles northeast | do. | do. | do. | 1900 | 40 | 4 | 0.0 |
| d/224 | do. | Albert Ledenham | -- | do. | 1924 | 70 | 4 | 1.0 |
| 226 | 2 $\frac{1}{4}$ miles northeast | Bill Carr, Jr. | -- | do. | 1937 | 20 | -- | 1.0 |
| d/227 | 2 $\frac{1}{2}$ miles north | Joe P. Thorp | -- | do. | 1910 | 36 | 8 | 1.0 |
| d/228 | 2 miles north | J. M. Nutt | -- | do. | 1938 | 70 | 6 | 0.5 |
| 229 | 1 $\frac{3}{4}$ miles north | do. | -- | Gentle slope | Old | 50 | -- | -- |
| 230 | do. | do. | Shell Oil and Refining Co. | -- | 1938 | 1191 | 4 | 1.0 |
| d/231 | 1 $\frac{1}{2}$ miles north | do. | -- | Flat | 1921 | 35 | 4 | 2.5 |
| 234 | 1 $\frac{1}{2}$ miles northeast | A. J. Burney | -- | Gentle slope | Old | 22 | 6 | 1.0 |
| d/235 | 1 $\frac{1}{4}$ miles northeast | Scott Chatman | -- | Flat | Old | 25 | 6 | 0.3 |
| 236 | do. | J. A. Hood | -- | Hill-side | 1927 | 100 | 6 | 1.0 |
| 237 | 2 miles northeast | Community Club | -- Curtis | Flat | 1939 | 40 | 6 | 1.0 |
| 238 | do. | Mrs. J. J. Burney | -- | Hill-side | 1910 | 125 | -- | 1.0 |
| 239 | do. | T. B. Jordan | -- | Flat | Old | 60 | -- | 1.5 |
| 240 | do. | T. Gentry | -- | Hill-side | Old | 70 | 6 | 1.5 |
| d/241 | do. | Irion County | -- | do. | Old | 90 | 10 | 0.5 |
| 242 | 2 $\frac{1}{2}$ miles east | Mrs. D. Gentry | -- | Flat | Old | 70 | -- | 0.5 |
| 243 | 1 $\frac{1}{4}$ miles northeast | R. E. Key | -- | do. | 1931 | 40 | 6 | 0.5 |
| d/246 | 1 mile northeast | J. M. Nutt | -- | do. | 1937 | 1194 | 4 | 1.0 |

| No. | Water level | | Pump and power | Use of water | Remarks |
|-----|-----------------------------------|---------------------|----------------|--------------|--|
| | Depth below measuring point (ft.) | Date of measurement | | | |
| 215 | 16.04 | May 15, 1940 | C,H | P,S | Iron casing to bottom. Reported strong supply. |
| 216 | 63.55 | June 20, 1940 | C,W | P,I | |
| 217 | 14.25 | June 22, 1940 | None | N | Dug well. Rock casing to bottom. Reported weak supply. |
| 219 | 25.71 | May 15, 1940 | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 220 | 21.60 | June 19, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 221 | 14.25 | May 8, 1940 | C,W | D,S | Dug well. Rock casing to bottom. Reported strong supply. |
| 222 | 33 | e/ | C,W | D,S | Iron casing to bottom. Reported strong supply. |
| 223 | 32.28 | May 20, 1940 | None | N | Tin casing top 20 feet. Reported weak supply. |
| 224 | 42.09 | June 19, 1940 | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 226 | 16.67 | May 8, 1940 | C,W | D,S | Dug well. Reported weak supply. |
| 227 | 28.30 | May 1, 1940 | C,W | D,S | Iron casing top 20 feet. Reported weak supply. |
| 228 | 25.50 | June 19, 1940 | C,W | S | Tin casing top 20 feet. Reported strong supply. |
| 229 | 24 | e/ | C,W | D,S | Reported weak supply. |
| 230 | 20.14 | June 3, 1940 | None | N | Oil test. Tin casing. Well plugged and used as water well. |
| 231 | 24.06 | May 2, 1940 | None | N | Tin casing to bottom. |
| 234 | 10.13 | July 17, 1940 | C,W | D,S | Tin casing to bottom. Reported strong supply. |
| 235 | 13.19 | do. | C,H | D | Do. |
| 236 | 90.77 | do. | C,W | D,S | Tin casing top 40 feet. Reported strong supply. |
| 237 | 25.94 | June 28, 1940 | C,W | D,P | Iron casing to bottom. Reported strong supply. |
| 238 | 46.89 | July 17, 1940 | C,W | D,S | No casing. Reported strong supply. |
| 239 | 51.98 | do. | C,W | D,S | Reported strong supply. |
| 240 | 59.63 | do. | C,W | S | Tin casing to bottom. Reported weak supply. |
| 241 | 55.50 | do. | None | N | Tin casing. |
| 242 | 59.27 | do. | C,W | D,S | Reported strong supply. |
| 243 | 22.84 | June 19, 1940 | C,W | D | Tin casing to bottom. Reported strong supply. |
| 246 | 20.67 | do. | None | N | Oil test. Tin casing top 420 feet. Well plugged back to 420 feet and used as water well. |

Records of wells and springs in Irion County--Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|------------------------|--------------------------|--------------|-----------------------|----------------|---------------------|------------------------|--|
| 247 | 1 1/4 miles northeast | J. M. Nutt | -- | Flat | 1937 | 29 | 8 | 2.5 |
| 248 | 1 mile north | do. | -- | Hill-top | 1934 | 110 | 6 | 1.0 |
| 249 | 1/2 mile north | J. W. Hargraves | -- | Hill-side | 1890 | 70 | -- | 0.0 |
| d/250 | 1/4 mile north | F. Sheldon | -- | Flat | -- | 40 | 6 | 0.7 |
| d/251 | 1 mile northeast | B. Clark Est. | -- | do. | -- | 40 | 8 | 1.8 |
| d/252 | do. | W. A. McCollum | -- Holt | -- | 1929 | 88 | 6 | -- |
| d/253 | 3/4 mile east | A. W. Christopher | -- Adkins | Flat | 1932 | 26 | 6-7/8 | 1.0 |
| 254 | do. | do. | S. Lewis | Hill-side | 1890 | 85 | -- | -- |
| 255 | 1/2 mile east | H. R. Richburg | -- | Flat | 1880 | 28 | 36 | 3.0 |
| d/256 | 1/4 mile east | R. N. Mitchell | -- Gulliar | do. | 1920 | 52 | 6 | 1.3 |
| d/257 | 1/4 mile northwest | City of Mertzson | -- | In valley | 1934 | 35 | 12 | 1.5 |
| d/258 | 1/2 mile north | M. L. VanCourt | -- Curtis | Flat | 1915 | 65 | 8 | -- |
| 259 | 1/4 mile west | J. R. Scott | -- | Hill-side | 1931 | 110 | 4 | 1.2 |
| d/260 | 1/2 mile west | Mrs. F. Deal | -- | Hill-top | 1920 | 90 | -- | 1.0 |
| d/261 | do. | Mrs. H. Huff | -- | Gentle slope | Old | 77 | 6 | 1.0 |
| d/262 | 1/4 mile west | F. DeLong | -- Curtis | Flat | 1938 | 75 | 8 | 1.4 |
| d/263 | In Mertzson | H. Clark | -- | do. | Old | 50 | 6 | 1.5 |
| 264 | do. | J. J. Burney | -- | do. | 1910 | 54 | 6 | 1.0 |
| 265 | do. | Olie E. Fox | -- | do. | 1936 | 50 | 8 | 1.2 |
| 266 | do. | Ada Moorehead | -- | do. | 1927 | 60 | 6 | -- |
| 267 | 1/4 mile east | L. Ortiz | -- Curtis | do. | 1930 | 35 | -- | 1.5 |
| d/268 | 1/2 mile southeast | F. Tankersly | S. E. Colgin | do. | 1934 | 1445 | -- | -- |
| 269 | 1 mile southeast | do. | -- | Base of hill | -- | Spring | -- | -- |
| 270 | do. | do. | -- | Flat | -- | 40 | 8 | 0.9 |
| 271 | 1/4 mile south | San Angelo Telephone Co. | H. M. Curtis | do. | 1940 | 74 | 6 | -- |
| 272 | do. | Irion County | Holt Bros. | Hill-top | 1937 | 370 | 6 | -- |

| No. | Water level | | Pump and power | Use of water | Remarks |
|-----|-----------------------------------|---------------------|-----------------------|--------------|---|
| | Depth below measuring point (ft.) | Date of measurement | | | |
| 247 | 18.89 | May 2, 1940 | B,H | D,S | Tin casing to bottom. Reported strong supply. |
| 248 | 49.39 | July 17, 1940 | C,W | S | Tin casing top 80 feet. Reported strong supply. |
| 249 | 53.64 | do. | C,W | D,S | Reported strong supply. |
| 250 | 23.39 | June 19, 1940 | C,W | D | Tin casing to bottom. Reported strong supply. |
| 251 | 25.27 | May 8, 1940 | C,W | D,S | Do. |
| 252 | 20 | e/ | C,E, $\frac{1}{2}$ | D,S | Do. |
| 253 | 18.16 | June 10, 1940 | C,H | D,S | Dug well. Iron casing. Reported weak supply. |
| 254 | 40 | e/ | C,W | D,S | No casing. Reported strong supply. |
| 255 | 18.70 | May 8, 1940 | C,W | D,S | Dug well. Rock casing to bottom. Reported strong supply. |
| 256 | 18.33 | June 19, 1940 | C,W | D | Tin casing to bottom. Reported strong supply. |
| 257 | 28.09 | June 3, 1940 | C,W | D,S,P | Cased to bottom. Reported strong supply. |
| 258 | 29.76 | May 8, 1940 | C,W | D,S | Tin casing. Reported strong supply. |
| 259 | 57.30 | do. | C,W | D,S | Tin casing top 60 feet. Reported strong supply. |
| 260 | 54.13 | June 19, 1940 | C,W | D | No casing. Reported strong supply. |
| 261 | 60.94 | do. | C,W | D | Tin casing. Reported strong supply. |
| 262 | 38.14 | May 8, 1940 | C,W | D | Tin casing top 40 feet. Reported strong supply. |
| 263 | 30.58 | July 17, 1940 | C,W | D,S | Tin casing top 20 feet. Reported strong supply. |
| 264 | 29.28 | do. | C,W | D | Iron casing top 15 feet. Reported strong supply. |
| 265 | 24.03 | May 8, 1940 | H,B | D,P | Tin casing to bottom. Reported strong supply. |
| 266 | 25.30 | June 19, 1940 | C,W | D | Tin casing. Reported strong supply. |
| 267 | 18.67 | May 8, 1940 | C,W | D | Reported strong supply. |
| 268 | -- | -- | None | N | Oil test. See log. |
| 269 | Flows | May 29, 1940 | None | D,S,I | Reported flow 75 gallons a minute from two openings in limestone. Known as "Yardley Spring." Temperature 67° F. |
| 270 | 17.34 | do. | C,W | D,S | Iron casing to bottom. Reported strong supply. |
| 271 | 28 | e/ | C,E, $\frac{1}{2}$ | D | Iron casing top 40 feet. Reported strong supply. |
| 272 | 88 | e/ | C,E | D,P | Iron casing. Reported strong supply. Supplies water to courthouse. |

Records of wells and springs in Irion County--Continued

| No. | Distance from Mertzson | Owner | Driller | Topographic situation | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) <u>a/</u> |
|-------|--------------------------------|-------------------------------|--------------|-----------------------|----------------|---------------------|------------------------|--|
| 273 | $\frac{1}{2}$ mile west | M. A. Goodall | S. Cleveland | Hill-top | 1934 | 100 | -- | 1.0 |
| 274 | do. | City of Mertzson | -- | do. | 1909 | 165 | -- | 1.0 |
| 275 | $\frac{1}{2}$ mile southwest | V. T. Hughes | -- | do. | -- | 250 | 6 | 1.5 |
| 276 | do. | John Clark | -- Holt | Hill-side | 1908 | 156 | 6 | 0.5 |
| 277 | $\frac{3}{4}$ mile south | C. L. Tankersly | -- | Gentle slope | -- | 110 | 6 | 1.0 |
| 278 | $1\frac{1}{4}$ miles southwest | Mertzson Cemetery Association | -- | Flat | -- | 70 | 6 | 0.5 |
| d/279 | 1 mile southwest | Evans Est. | -- | Gentle slope | Old | 68 | -- | 0.0 |
| 280 | $1\frac{1}{2}$ miles southwest | do. | -- | Flat | 1910 | 110 | 6 | 1.0 |
| 281 | $1\frac{1}{2}$ miles south | S. G. Williams | -- | Hill-side | 1910 | 72 | 6 | -- |
| 282 | $1\frac{1}{2}$ miles south | F. Tankersly | -- | In valley | 1930 | 90 | 6 | 0.5 |
| d/283 | $\frac{3}{4}$ mile south | C. L. Asbury | -- | Hill-side | Old | 70 | -- | 1.0 |
| d/284 | do. | Mrs. F. Tankersly | -- | Hill-top | -- | 90 | -- | -- |
| a/285 | 1 mile south | S. M. Brown | -- | Flat | -- | 50 | 6 | 1.5 |
| 286 | $1\frac{1}{4}$ miles south | West Texas Wool Co. | -- | do. | -- | 100 | 6 | 1.0 |
| d/287 | $1\frac{1}{2}$ miles south | Bert Mayse | -- | Hill-top | 1910 | 35 | 36 | -- |
| 288 | do. | do. | P. Holt | do. | 1935 | 145 | 6 | 1.0 |
| 289 | 2 miles south | Mrs. H. Schooler | -- | Flat | 1920 | 40 | -- | 0.5 |
| 290 | $1\frac{3}{4}$ miles south | F. Tankersly | F. Tankersly | do. | 1920 | 12 | 48 | 0.0 |
| 291 | do. | do. | -- | do. | 1912 | 40 | 6 | 0.3 |
| 292 | 2 miles south | Boy Scouts of America | E. M. Keith | do. | 1934 | 20 | 36 | 1.0 |
| 293 | $2\frac{1}{4}$ mile south | F. Tankersly | -- | Creek bottom | -- | Spring | -- | -- |
| 294 | $2\frac{1}{2}$ miles south | do. | -- | Gentle slope | 1925 | 120 | 8 | -- |

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

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

| No. | Water level | | Pump and power | Use of water | Remarks |
|-----|-----------------------------------|---------------------|----------------|--------------|--|
| | Depth below measuring point (ft.) | Date of measurement | | | |
| 273 | 80.56 | July 23, 1940 | C,W | D,S | No casing. Reported weak supply. |
| 274 | 78.70 | June 17, 1940 | C,W G,1 | D,P | Reported strong supply. Supplies water for high school. |
| 275 | 77.50 | do. | C,W | D | Iron casing top 10 feet. Reported strong supply. |
| 276 | 85.60 | July 17, 1940 | C,W | D,P | Tin casing to bottom. Reported strong supply. Supplies water to part of Mertzon. |
| 277 | 60.61 | June 17, 1940 | C,W | D | Tin casing top 40 feet. Reported strong supply. |
| 278 | 41.36 | July 23, 1940 | C,W | I | Tin casing top 60 feet. Reported strong supply. |
| 279 | 33.69 | do. | None | N | Reported formerly strong well. |
| 280 | 93.89 | do. | C,W | D,S | Tin casing to bottom. Reported weak supply. |
| 281 | 68 | e/ | C,W | D,S | Tin casing. Reported weak supply. |
| 282 | 69.87 | July 23, 1940 | C,W | S | Tin casing to bottom. Reported weak supply. |
| 283 | 48.62 | June 17, 1940 | None | N | No casing. |
| 284 | 50 | e/ | C,W | S | Reported strong supply. |
| 285 | 17.55 | June 17, 1940 | C,W | D,S | Tin casing. Reported strong supply. |
| 286 | 60.57 | do. | C,W | S | Tin casing to bottom. Reported strong supply. |
| 287 | 35 | e/ | C,W | N | Dug well. Rock casing to bottom. |
| 288 | 72.27 | May 24, 1940 | C,W | D,S | Tin casing top 50 feet. Reported strong supply. |
| 289 | 26.79 | May 2, 1940 | C,E, 1/2 | D,S,P | Supplies water to filling station. |
| 290 | 1.44 | May 24, 1940 | C,G | S,I | Dug well. Concrete casing to bottom. Reported yield 400 gallons a minute. |
| 291 | 19.68 | June 20, 1940 | C,W | D,S | Tin casing. Reported strong supply. |
| 292 | 16.80 | May 21, 1940 | C,G | D,S,P | Dug well. Brick casing. Reported strong supply. Supplies water to Boy Scout Camp. |
| 293 | Flows | June 6, 1940 | None | S | Reported flow 2000 gallons a minute from three openings in limestone. Known as "Head Water Spring." Temperature 68° F. |
| 294 | 30 | e/ | C,G, 2 | D,Ind. | Iron casing to bottom. Reported strong supply. Supplies water for oil refinery. |

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

e/ No water sample collected for analysis.

f/ Water level reported.

IRION COUNTY, TEXAS

* * *

Introduction
by
William O. George
Assistant Geologist
United States Geological Survey

This publication consists of an assemblage of data obtained in the course of a survey in Irion County, Texas, consisting of records of 244 wells, 12 drillers' logs, 9 test wells, 3 springs and 157 chemical analyses of water from springs and wells. These basic data contribute to the general fund of information needed in the study of the ground-water resources by the Texas State Board of Water Engineers in cooperation with the United States Geological Survey.

The survey was started on April 16, 1940, and completed on August 17, 1940, as Project No. 13048 of the Work Projects Administration, with J. M. Frazier, Jr. as project supervisor.

The analyses were made by chemists employed on Work Projects Administration Project No. 17276 under the direction of Dr. E. P. Schoch, Director of the Bureau of Industrial Chemistry, The University of Texas, and E. W. Lohr, Chemist of the Quality of Water Division of the Federal Geological Survey. The Bureau of Industrial Chemistry furnished laboratory space and equipment. The analyses in this release are tabulated in parts per million. A number of these analyses are also given in milligram equivalents per liter for the convenience of those who prefer this form of expressing the quality of water.

This release was typed by typists employed on Work Projects Administration Project No. 17276.

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

Table of Drillers' Logs, Irion County, Texas

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 46 | | |
| State Highway Dept yard, $\frac{1}{2}$ mile north of Barnhart. | | |
| Caliche - - - - - | 50 | 50 |
| Yellow limestone - - - | 75 | 125 |
| Blue shale - - - - - | 100 | 225 |
| Limestone - - - - - | 60 | 285 |
| TOTAL DEPTH | | 398 |
| CASING RECORD: 398 feet of 8-inch iron casing. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 68 | | |
| Polke Est. tract, P. H. William driller, $5\frac{1}{2}$ miles northeast of Barnhart. | | |
| Gray top soil - - - - - | 2 | 2 |
| Gray lime - - - - - | 8 | 10 |
| Pink lime - - - - - | 6 | 16 |
| Yellow lime - - - - - | 122 | 138 |
| Blue shale - - - - - | 3 | 141 |
| Blue lime - - - - - | 6 | 147 |
| Gray lime - - - - - | 37 | 184 |
| Gray slate - - - - - | 26 | 210 |
| Gray lime - - - - - | 35 | 245 |
| Gray shale - - - - - | 13 | 258 |
| Gray lime - - - - - | 12 | 270 |
| Blue lime - - - - - | 23 | 293 |
| Gray lime - - - - - | 28 | 321 |
| Yellow lime - - - - - | 31 | 352 |
| White lime - - - - - | 20 | 372 |
| Brown lime - - - - - | 53 | 425 |
| Gray lime - - - - - | 28 | 453 |
| Brown lime - - - - - | 14 | 467 |
| Gray lime - - - - - | 58 | 525 |
| Blue shale - - - - - | 5 | 530 |
| White sand, water - - - | 23 | 553 |
| Red rock - - - - - | 12 | 565 |
| Red sand - - - - - | 12 | 577 |
| Red rock - - - - - | 63 | 640 |
| Sandy gray lime - - - - | 50 | 690 |
| Red rock - - - - - | 55 | 745 |
| Blue shale - - - - - | 12 | 757 |
| Gray sand - - - - - | 15 | 772 |
| Red rock - - - - - | 173 | 945 |
| White lime - - - - - | 10 | 955 |
| Red rock - - - - - | 45 | 1000 |
| Blue slate, lime shells | 30 | 1030 |
| Blue sand - - - - - | 20 | 1050 |
| Blue slate - - - - - | 25 | 1075 |
| Red rock - - - - - | 15 | 1090 |
| Gray lime - - - - - | 30 | 1120 |
| Red rock - - - - - | 15 | 1135 |
| Blue shale - - - - - | 190 | 1325 |
| Brown lime - - - - - | 5 | 1330 |
| Blue shale - - - - - | 14 | 1344 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| Partial driller's log of well 68--Cont. | | |
| Blue shale, water - - - | 36 | 1380 |
| Gray sand - - - - - | 50 | 1430 |
| Blue shale - - - - - | 100 | 1530 |
| Gray lime - - - - - | 50 | 1580 |
| Red conglomerate - - - | 75 | 1655 |
| Red rock - - - - - | 35 | 1690 |
| Gray lime - - - - - | 5 | 1695 |
| Blue shale - - - - - | 5 | 1700 |
| Red conglomerate - - - | 25 | 1725 |
| Gray lime - - - - - | 20 | 1745 |
| Red shale - - - - - | 5 | 1750 |
| Blue shale - - - - - | 5 | 1755 |
| Gray lime - - - - - | 15 | 1770 |
| Red rock - - - - - | 5 | 1775 |
| Shale, gray lime shell | 5 | 1780 |
| Gray lime - - - - - | 13 | 1793 |
| Blue shale - - - - - | 7 | 1800 |
| Red rock - - - - - | 70 | 1870 |
| Red beds - - - - - | 80 | 1950 |
| Gray lime - - - - - | 3 | 1953 |
| Blue shale - - - - - | 117 | 2070 |
| TOTAL DEPTH | | 3536 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| Partial driller's log of well 73 | | |
| Sawyer Land and Cattle Co. Tract, Oklavania Oil Co. drillers, 15 miles north of Barnhart. | | |
| White lime - - - - - | 140 | 140 |
| Yellow gravel - - - - - | 6 | 146 |
| Water sand - - - - - | 34 | 180 |
| Yellow sand rock - - - | 5 | 185 |
| Red rock - - - - - | 95 | 280 |
| Red beds, gumbo - - - | 10 | 290 |
| Sand, gravel - - - - - | 7 | 297 |
| Lime - - - - - | 4 | 301 |
| Red rock - - - - - | 9 | 310 |
| Red beds - - - - - | 13 | 323 |
| Lime - - - - - | 3 | 326 |
| Gray shale (hole full of water) - - - - - | 3 | 329 |
| Sand - - - - - | 17 | 346 |
| Black shale - - - - - | 14 | 360 |
| Water sand - - - - - | 10 | 370 |
| Lime - - - - - | 4 | 374 |
| Water sand - - - - - | 11 | 385 |
| Lime - - - - - | 20 | 405 |
| Water sand - - - - - | 7 | 412 |
| Lime - - - - - | 5 | 417 |
| White lime - - - - - | 6 | 423 |
| Red beds, gumbo - - - | 87 | 510 |
| Sandy red beds - - - | 1 | 511 |

(Continued on next page)

Table of Drillers' Logs , Irion County--Continued

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 73-Cont. | | |
| Red beds, gumbo - - - - - | 4 | 515 |
| Sandy lime - - - - - | 2 | 517 |
| Red beds, gumbo - - - - - | 3 | 520 |
| Red beds - - - - - | 140 | 660 |
| Lime - - - - - | 40 | 700 |
| White lime - - - - - | 10 | 710 |
| Blue shale - - - - - | 10 | 720 |
| Red beds - - - - - | 20 | 740 |
| Red beds, shell - - - - - | 10 | 750 |
| Rock salt - - - - - | 44 | 794 |
| Salt, red beds - - - - - | 45 | 839 |
| Salt, shale - - - - - | 61 | 900 |
| Red beds - - - - - | 5 | 905 |
| Shell - - - - - | 3 | 908 |
| Red beds, salt - - - - - | 52 | 960 |
| Red beds - - - - - | 20 | 980 |
| Shell - - - - - | 8 | 988 |
| Gravel, sand - - - - - | 6 | 994 |
| Gypsum, sand - - - - - | 6 | 1000 |
| Gypsum, gravel - - - - - | 15 | 1015 |
| Gray lime - - - - - | 45 | 1060 |
| Salt, red beds and gravel | 7 | 1067 |
| Red beds - - - - - | 30 | 1097 |
| Red sand, water - - - - - | 45 | 1142 |
| Lime shells, gravel - - - | 13 | 1155 |
| Shale, gumbo - - - - - | 1 | 1156 |
| Shells - - - - - | 2 | 1158 |
| Water sand - - - - - | 2 | 1160 |
| Shale, gumbo - - - - - | 1 | 1161 |
| Gypsum, shell - - - - - | 2 | 1163 |
| Water sand - - - - - | 47 | 1210 |
| Sand - - - - - | 13 | 1223 |
| Sand, sandy shale - - - - | 27 | 1250 |
| Sand - - - - - | 25 | 1275 |
| Red rock - - - - - | 5 | 1280 |
| Sand - - - - - | 10 | 1290 |
| Gray lime - - - - - | 15 | 1305 |
| Water sand - - - - - | 5 | 1310 |
| Red beds - - - - - | 15 | 1325 |
| Red rock - - - - - | 3 | 1328 |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 73-Cont. | | |
| Sandy shale - - - - - | 4 | 1332 |
| Gypsum, shale - - - - - | 6 | 1338 |
| Sandy shale - - - - - | 10 | 1348 |
| Shale, gumbo - - - - - | 6 | 1354 |
| Shale and sand - - - - - | 16 | 1370 |
| Sand - - - - - | 10 | 1380 |
| White shale - - - - - | 18 | 1398 |
| Water sand - - - - - | 17 | 1415 |
| Shale, gumbo - - - - - | 15 | 1430 |
| Sandy shale - - - - - | 10 | 1440 |
| Packed sand - - - - - | 22 | 1462 |
| Water sand - - - - - | 18 | 1480 |
| Shale, gumbo - - - - - | 10 | 1490 |
| Gumbo - - - - - | 5 | 1495 |
| Sand - - - - - | 16 | 1511 |
| Gray sand - - - - - | 3 | 1514 |
| Shale, gumbo - - - - - | 6 | 1520 |
| Gray shale - - - - - | 9 | 1529 |
| Sandy gray lime - - - - - | 8 | 1537 |
| Lime - - - - - | 9 | 1546 |
| Gray lime - - - - - | 9 | 1555 |
| Lime - - - - - | 47 | 1602 |
| TOTAL DEPTH | | 2703 |

| | | |
|---|-----|-----|
| Partial driller's log of well 74 | | |
| Sugg Est. tract, Fuhran Petroleum Corp. drillers, 25 miles north of Barnhart. | | |
| Cellar - - - - - | 10 | 10 |
| Lime - - - - - | 120 | 130 |
| Gravel, sand - - - - - | 10 | 140 |
| Water sand - - - - - | 22 | 162 |
| Red beds - - - - - | 13 | 175 |
| Water sand - - - - - | 45 | 220 |
| Red beds - - - - - | 5 | 225 |
| Sand - - - - - | 45 | 270 |
| Red beds - - - - - | 30 | 300 |
| Water sand - - - - - | 20 | 320 |

(Continued on next page)

Table of Drillers' Logs, Irion County--Continued

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Partial driller's log of well 74-Contd.</u> | | |
| Hard sand - - - - - | 10 | 330 |
| Red beds - - - - - | 5 | 335 |
| Lime - - - - - | 5 | 340 |
| Red beds - - - - - | 35 | 375 |
| Sandy lime - - - - - | 65 | 440 |
| White slate - - - - - | 25 | 465 |
| Red beds - - - - - | 60 | 525 |
| Red sand - - - - - | 20 | 545 |
| Red beds - - - - - | 100 | 645 |
| Sand - - - - - | 7 | 652 |
| Red beds (5 bailers of water per hour) - - | 148 | 800 |
| Sandy lime - - - - - | 27 | 827 |
| Red beds - - - - - | 8 | 835 |
| Anhydrite, gypsum - - | 14 | 849 |
| Red beds - - - - - | 5 | 854 |
| Anhydrite, gypsum - - | 4 | 858 |
| Sand - - - - - | 17 | 875 |
| Anhydrite, gypsum, red beds - - - - - | 45 | 920 |
| Salt, anhydrits - - - | 120 | 1040 |
| Red beds - - - - - | 8 | 1048 |
| Salt, anhydrite - - - | 8 | 1056 |
| Red beds - - - - - | 17 | 1073 |
| Salt, anhydrite - - - | 37 | 1110 |
| Anhydrite, lime - - - | 10 | 1120 |
| Red beds - - - - - | 5 | 1125 |
| Anhydrite - - - - - | 17 | 1142 |
| Broken anhydrite - - - | 18 | 1160 |
| Red beds - - - - - | 22 | 1182 |
| Anhydrits, salt - - - | 8 | 1190 |
| Anhydrite - - - - - | 20 | 1210 |
| Sandy anhydrite - - - | 33 | 1243 |
| Anhydrite - - - - - | 18 | 1261 |
| Red beds - - - - - | 9 | 1270 |
| Anhydrite, shale, red beds - - - - - | 53 | 1323 |
| Red sand - - - - - | 34 | 1357 |
| Sandy red beds - - - - | 13 | 1370 |
| Anhydrite, red beds - | 10 | 1380 |
| Sandy red beds - - - - | 95 | 1475 |
| Salt, anhydrite - - - | 10 | 1485 |
| Sandy red beds - - - - | 50 | 1535 |
| Anhydrite, salt - - - | 9 | 1544 |
| Anhydrite - - - - - | 11 | 1555 |
| Sandy red beds - - - - | 5 | 1560 |
| Anhydrite, red beds - - | 20 | 1580 |
| Salt - - - - - | 4 | 1584 |
| Anhydrite - - - - - | 11 | 1595 |
| Water sand (Holo full of salt water, 1615-25) | 65 | 1660 |
| Red beds - - - - - | 14 | 1674 |
| Red sand - - - - - | 8 | 1682 |
| Red beds - - - - - | 13 | 1695 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Partial drillers log of well 74-Contd.</u> | | |
| Anhydrite - - - - - | 3 | 1698 |
| Water sand - - - - - | 12 | 1710 |
| Red beds - - - - - | 20 | 1730 |
| Anhydrite - - - - - | 10 | 1740 |
| Red sand - - - - - | 20 | 1760 |
| Anhydrite - - - - - | 48 | 1808 |
| Lime - - - - - | 9 | 1817 |
| Broken anhydrite - - - | 16 | 1833 |
| Lime - - - - - | 25 | 1858 |
| Lime, green shale - - - | 6 | 1864 |
| Broken lime - - - - - | 6 | 1870 |
| Lime anhydrite - - - - | 6 | 1876 |
| Anhydrite - - - - - | 24 | 1900 |
| Lime anhydrite - - - - | 69 | 1969 |
| Lime - - - - - | 6 | 1975 |
| Lime anhydrite - - - - | 10 | 1985 |
| Lime - - - - - | 15 | 2000 |
| TOTAL DEPTH | | 2450 |

| <u>Partial driller's log of well 162</u> | | |
|--|-----|-----|
| Ada Moorehead Tract, Concho Oil Co. drillers, 4 $\frac{1}{2}$ miles southwest of Mertzson. | | |
| Soil, lime - - - - - | 25 | 25 |
| Yellow clay - - - - - | 5 | 30 |
| Boulders, water - - - - | 15 | 45 |
| Sandy clay, water - - - - | 20 | 65 |
| Lime - - - - - | 48 | 113 |
| Sand, water - - - - - | 30 | 143 |
| Blue shale - - - - - | 3 | 146 |
| Sand - - - - - | 11 | 157 |
| Red beds - - - - - | 3 | 160 |
| Sand - - - - - | 8 | 168 |
| Red beds - - - - - | 15 | 183 |
| Blue shale - - - - - | 12 | 195 |
| Red beds - - - - - | 5 | 200 |
| Sandy lime - - - - - | 8 | 208 |
| Red rock and sandy lime - | 10 | 218 |
| Red beds - - - - - | 23 | 241 |
| Sand - - - - - | 11 | 252 |
| Gray lime - - - - - | 32 | 284 |
| Red beds - - - - - | 46 | 330 |
| Gray lime - - - - - | 8 | 338 |
| Sandy shale - - - - - | 118 | 456 |
| Gray lime - - - - - | 3 | 459 |
| Sandy shale (show of oil and gas) - - - - - | 72 | 531 |
| Lime - - - - - | 3 | 534 |
| Sandy shale - - - - - | 11 | 545 |
| Blue lime - - - - - | 10 | 555 |
| Gray lime - - - - - | 3 | 558 |
| Sandy shale - - - - - | 4 | 562 |

(Continued on next page.)

Table of Drillers' Logs, Irion County--Continued

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 162-Cont.* | | |
| Lime - - - - - | 50 | 612 |
| Gray shale - - - - - | 13 | 625 |
| Sandy lime - - - - - | 23 | 648 |
| Blue shale - - - - - | 37 | 685 |
| Gray lime - - - - - | 23 | 708 |
| Sand - - - - - | 4 | 712 |
| Sandy shale - - - - - | 36 | 748 |
| Red rock - - - - - | 14 | 762 |
| Sand - - - - - | 8 | 770 |
| Brown shale - - - - - | 5 | 775 |
| Shale and shell - - - | 8 | 783 |
| Sand - - - - - | 20 | 803 |
| Blue shale - - - - - | 2 | 805 |
| Sand, water - - - - - | 15 | 820 |
| Sandy shale - - - - - | 5 | 825 |
| Gray lime - - - - - | 6 | 831 |
| Red rock - - - - - | 7 | 838 |
| Blue shale - - - - - | 4 | 842 |
| Red beds - - - - - | 25 | 867 |
| Blue shale - - - - - | 33 | 900 |
| Lime - - - - - | 2 | 902 |
| Green shale - - - - - | 55 | 957 |
| Lime - - - - - | 2 | 959 |
| Green shale - - - - - | 27 | 986 |
| Gray lime - - - - - | 7 | 993 |
| Lime - - - - - | 8 | 1001 |
| Shale and shells - - - | 14 | 1015 |
| Lime - - - - - | 22 | 1037 |
| Dark-colored lime - - - | 15 | 1052 |
| Blue shale - - - - - | 3 | 1055 |
| Lime, shale - - - - - | 5 | 1060 |
| Lime - - - - - | 20 | 1080 |
| Blue shale - - - - - | 25 | 1105 |
| Sandy lime, water - - - | 18 | 1123 |
| Gray lime - - - - - | 4 | 1127 |
| Lime - - - - - | 8 | 1135 |
| Dark-blue shale - - - - | 14 | 1149 |
| Lime - - - - - | 8 | 1157 |
| Gray lime - - - - - | 13 | 1170 |
| Sand, water - - - - - | 5 | 1175 |
| Sandy lime - - - - - | 10 | 1185 |
| Gray lime - - - - - | 19 | 1204 |
| Lime, anhydrite - - - - | 23 | 1227 |
| Gray shale - - - - - | 6 | 1233 |
| Lime - - - - - | 7 | 1240 |
| Gray shale - - - - - | 10 | 1250 |
| Gray lime - - - - - | 4 | 1254 |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 162-Cont. | | |
| Gray shale - - - - - | 56 | 1310 |
| Gray lime - - - - - | 4 | 1314 |
| Gray shale - - - - - | 3 | 1317 |
| Gray lime - - - - - | 5 | 1322 |
| Shale and shells - - - | 53 | 1375 |
| Dry sand - - - - - | 9 | 1384 |
| Shale, lime shells - - - | 10 | 1394 |
| Dry sand - - - - - | 9 | 1403 |
| Dark-colored shale - - - | 2 | 1405 |
| Sand - - - - - | 5 | 1410 |
| Blue shale - - - - - | 2 | 1412 |
| Lime - - - - - | 7 | 1419 |
| Sand - - - - - | 8 | 1427 |
| Sandy shale - - - - - | 23 | 1450 |
| Brown shale - - - - - | 5 | 1455 |
| Sandy shale(hole full of water) - - - - - | 15 | 1470 |
| Gray lime - - - - - | 27 | 1497 |
| Sandy shale - - - - - | 19 | 1516 |
| Hard lime - - - - - | 11 | 1527 |
| Blue shale - - - - - | 23 | 1550 |
| Sand - - - - - | 10 | 1560 |
| Sandy shale - - - - - | 30 | 1590 |
| Gray lime - - - - - | 5 | 1595 |
| Gray shale - - - - - | 37 | 1632 |
| Sandy lime - - - - - | 3 | 1635 |
| Sand, water - - - - - | 19 | 1654 |
| Sandy shale - - - - - | 17 | 1671 |
| Lime - - - - - | 1 | 1672 |
| Sand, water - - - - - | 6 | 1678 |
| Sandy lime - - - - - | 7 | 1685 |
| Sand - - - - - | 5 | 1690 |
| Gray shale - - - - - | 3 | 1693 |
| Sandy lime - - - - - | 40 | 1733 |
| Sandy shale - - - - - | 27 | 1760 |
| Gray shale - - - - - | 35 | 1795 |
| Sandy lime - - - - - | 8 | 1803 |
| Gray lime - - - - - | 11 | 1814 |
| Blue shale - - - - - | 4 | 1818 |
| Gray lime - - - - - | 7 | 1825 |
| Blue shale - - - - - | 15 | 1840 |
| Blue water sand - - - - | 18 | 1858 |
| Sand and shells - - - - | 6 | 1864 |
| Sand - - - - - | 6 | 1870 |
| Gray lime - - - - - | 13 | 1883 |
| Sandy lime - - - - - | 25 | 1908 |
| (Continued on next page) | | |

Table of Drillers' Logs, Irion County--Continued

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 162-Contd. | | |
| Lime - - - - - | 5 | 1913 |
| Gray shale - - - - - | 4 | 1917 |
| Lime - - - - - | 18 | 1935 |
| Gray shale - - - - - | 10 | 1945 |
| Lime - - - - - | 17 | 1962 |
| Sandy shale - - - - - | 8 | 1970 |
| Gray lime - - - - - | 14 | 1984 |
| Gray shale - - - - - | 6 | 1990 |
| Lime - - - - - | 55 | 2045 |
| TOTAL DEPTH | | 3287 |

| Partial driller's log of well 185 | | |
|-----------------------------------|-----|------|
| W. H. Williams tract, Standlind | | |
| Oil & Gas Co.drillers, 13 miles | | |
| southeast of Mertzon. | | |
| Soft broken lime - - - - - | 130 | 130 |
| Shale - - - - - | 260 | 390 |
| Gravel - - - - - | 10 | 400 |
| Shale - - - - - | 115 | 515 |
| Lime - - - - - | 10 | 525 |
| Sand - - - - - | 5 | 530 |
| Sand and lime - - - - - | 10 | 540 |
| Red shale - - - - - | 10 | 550 |
| Sand - - - - - | 5 | 555 |
| Red shale - - - - - | 70 | 625 |
| Light-blue slate - - - - - | 15 | 640 |
| Dark-blue slate - - - - - | 19 | 659 |
| Sandy lime "gyp" rock - - - - - | 41 | 700 |
| Sandy lime - - - - - | 20 | 720 |
| Green shale - - - - - | 25 | 745 |
| Red shale - - - - - | 43 | 788 |
| Lime shells, red shale - - - - - | 12 | 800 |
| Red shale - - - - - | 25 | 825 |
| Light-colored shale - - - - - | 10 | 835 |
| Red shale - - - - - | 15 | 850 |
| Lime - - - - - | 4 | 854 |
| Red shale - - - - - | 61 | 915 |
| Lime - - - - - | 10 | 925 |
| Blue shale, lime shells - - - - - | 30 | 955 |
| Lime - - - - - | 10 | 965 |
| Light-colored shale, salt | | |
| water - - - - - | 50 | 1015 |
| Sand - - - - - | 5 | 1020 |
| Lime - - - - - | 20 | 1040 |
| Light-colored shale - - - - - | 5 | 1045 |
| Lime - - - - - | 70 | 1115 |
| Blue shale - - - - - | 25 | 1140 |
| Lime and sand - - - - - | 25 | 1165 |
| Sandy shale - - - - - | 10 | 1175 |
| Sand, water - - - - - | 15 | 1190 |
| Sandy shale - - - - - | 10 | 1200 |
| Red shale - - - - - | 35 | 1235 |
| Lime - - - - - | 25 | 1260 |
| Blue shale - - - - - | 20 | 1280 |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| Partial driller's log of well 185-Contd. | | |
| Red shale - - - - - | 25 | 1305 |
| Blue shale - - - - - | 35 | 1340 |
| Hard sand - - - - - | 20 | 1360 |
| Sandy shale - - - - - | 15 | 1375 |
| Sandy lime - - - - - | 40 | 1415 |
| Sand, water - - - - - | 10 | 1425 |
| Sandy lime - - - - - | 20 | 1445 |
| Sand - - - - - | 8 | 1453 |
| Blue shale - - - - - | 2 | 1455 |
| Sandy lime - - - - - | 35 | 1490 |
| Sand, hard broken | | |
| shale - - - - - | 75 | 1565 |
| Sand, broken shale -- | 35 | 1600 |
| Sand (hole full of | | |
| water) - - - - - | 45 | 1645 |
| Hard sand - - - - - | 5 | 1650 |
| Blue shale - - - - - | 10 | 1660 |
| Lime - - - - - | 5 | 1665 |
| Shale - - - - - | 2 | 1667 |
| Sandy lime, water | 13 | 1680 |
| Sandy shale - - - - - | 70 | 1750 |
| Sand, water - - - - - | 25 | 1775 |
| Shale - - - - - | 30 | 1805 |
| Blue shale - - - - - | 235 | 2040 |
| TOTAL DEPTH | | 6519 |

| Driller's log of well 186 | | |
|-------------------------------|-----|-----|
| J. M. Nutt tract, Pohram | | |
| Petroleum Corp.drillers | | |
| 4 1/2 miles south of Mertzon. | | |
| Lime - - - - - | 125 | 125 |
| Blue shale - - - - - | 20 | 145 |
| Water sand (10 bailers | | |
| of water per hour) - | 20 | 165 |
| Sand - - - - - | 18 | 183 |
| White shale - - - - - | 7 | 190 |
| Red rock - - - - - | 12 | 202 |
| Sand - - - - - | 23 | 225 |
| Red shale - - - - - | 10 | 235 |
| Red rock - - - - - | 10 | 245 |
| Sand and shale - - - - - | 10 | 255 |
| Red rock - - - - - | 10 | 265 |
| Red shale - - - - - | 5 | 270 |
| Sand - - - - - | 10 | 280 |
| Red shale - - - - - | 20 | 300 |
| Red rock - - - - - | 12 | 312 |
| Blue shale - - - - - | 8 | 320 |
| Lime - - - - - | 5 | 325 |
| Shale - - - - - | 15 | 340 |
| Red shale - - - - - | 10 | 350 |
| Red rock - - - - - | 20 | 370 |
| Water sand - - - - - | 5 | 375 |

(Continued on next page.)

Table of Drillers' Logs, Irion County--Continued

| Driller's log of well 186-Cont. | | Driller's log of well 186-Cont. | | | |
|--|--------------|---------------------------------|--|-----|------|
| Thickness (feet) | Depth (feet) | Thickness (feet) | Depth (feet) | | |
| Red rock - - - - - | 10 | 385 | Lime - - - - - | 9 | 1414 |
| Red shale - - - - - | 10 | 395 | Blue shale - - - - - | 5 | 1419 |
| Blue shale - - - - - | 60 | 455 | Lime - - - - - | 2 | 1421 |
| Sand - - - - - | 5 | 460 | Blue shale - - - - - | 5 | 1426 |
| Gray shale - - - - - | 10 | 470 | Lime - - - - - | 16 | 1442 |
| Shale, water(6 bailers per hour)- - - - - | 15 | 485 | Sand - - - - - | 14 | 1456 |
| Blue shale - - - - - | 22 | 507 | Lime - - - - - | 9 | 1465 |
| Blue sand - - - - - | 13 | 520 | Blue shale - - - - - | 4 | 1469 |
| Blue shale - - - - - | 15 | 535 | Sand - - - - - | 6 | 1475 |
| Sand - - - - - | 5 | 540 | Blue shale - - - - - | 7 | 1482 |
| Blue shale - - - - - | 5 | 545 | Sand - - - - - | 12 | 1494 |
| Sand - - - - - | 25 | 570 | TOTAL DEPTH | | 1494 |
| Blue shale - - - - - | 15 | 585 | Driller's log of well 187 | | |
| Shale - - - - - | 15 | 600 | Kingwood Oil Co. H.& T. C. | | |
| Water sand - - - - - | 5 | 605 | Ry. Co. survey. In center of | | |
| Sand - - - - - | 7 | 612 | SE $\frac{1}{2}$ of section 19. | | |
| Shale - - - - - | 88 | 700 | Lime water - - - - - | 100 | 100 |
| Green shale - - - - - | 25 | 725 | Gray lime - - - - - | 30 | 130 |
| Red shale - - - - - | 25 | 750 | (From 75' to 100' approx. 300 bbls. fresh water per day) | | |
| Sand (hole full of water at 750-800) - - - - - | 65 | 815 | Sand and gravel - - - - - | 15 | 145 |
| Red rock - - - - - | 15 | 830 | Blue shale - - - - - | 5 | 150 |
| Lime - - - - - | 5 | 835 | Brown sand - - - - - | 25 | 175 |
| Red shale - - - - - | 65 | 900 | Red rock - - - - - | 60 | 235 |
| Blue shale - - - - - | 43 | 943 | Sand-set 234' of 15 $\frac{1}{2}$ " casing - - - - - | 8 | 243 |
| Lime - - - - - | 4 | 947 | Lime - - - - - | 27 | 270 |
| Blue shale - - - - - | 38 | 985 | Red rock - - - - - | 112 | 382 |
| Sandy shale - - - - - | 70 | 1055 | Blue shale - - - - - | 103 | 485 |
| Blue shale - - - - - | 10 | 1065 | Lime - - - - - | 35 | 520 |
| Lime - - - - - | 5 | 1070 | Blue shale - - - - - | 60 | 580 |
| Sand - - - - - | 15 | 1085 | Sandy lime (show oil $\frac{1}{4}$ bbl. per hour, water in bottom) - - - - - | 5 | 585 |
| Blue shale - - - - - | 10 | 1095 | Blue shale - - - - - | 21 | 606 |
| Lime - - - - - | 8 | 1103 | Gray lime - - - - - | 14 | 620 |
| Blue shale - - - - - | 17 | 1120 | Blue shale - - - - - | 11 | 631 |
| Lime - - - - - | 10 | 1130 | Gray lime - - - - - | 9 | 640 |
| Broken lime - - - - - | 10 | 1140 | Lime - - - - - | 5 | 645 |
| Broken sand (1 bailer water per hour) - - - - - | 10 | 1150 | Blue shale - - - - - | 60 | 705 |
| Lime - - - - - | 15 | 1165 | Lime - - - - - | 5 | 710 |
| Blue shale - - - - - | 10 | 1175 | Blue shale - - - - - | 144 | 854 |
| Lime - - - - - | 15 | 1190 | Lime - - - - - | 5 | 859 |
| Blue shale - - - - - | 10 | 1200 | Blue shale - - - - - | 16 | 875 |
| Lime - - - - - | 110 | 1310 | Lime - - - - - | 25 | 900 |
| Blue shale - - - - - | 5 | 1315 | Blue shale - - - - - | 35 | 935 |
| Sand, lime - - - - - | 8 | 1323 | Red shale - - - - - | 32 | 967 |
| Blue shale - - - - - | 28 | 1351 | Sandy lime - - - - - | 25 | 992 |
| Brown lime - - - - - | 7 | 1358 | Blue shale - - - - - | 10 | 1002 |
| Blue shale - - - - - | 4 | 1362 | Sand, pyrite - - - - - | 15 | 1017 |
| Brown lime - - - - - | 2 | 1364 | (Continued on next page) | | |
| Blue shale - - - - - | 18 | 1382 | | | |
| Sand (hole full of salt water at 1389) - - - - - | 18 | 1400 | | | |
| Blue shale - - - - - | 5 | 1405 | | | |

Table of Drillers' Logs, Irion County--Continued

| Thickness | | Depth | Thickness | | Depth |
|--|-----|--------|----------------------------------|-----|--------|
| (feet) | | (feet) | (feet) | | (feet) |
| <u>Driller's log of well 187-Cont.</u> | | | <u>Driller's log of well 188</u> | | |
| Lime | 8 | 1025 | Abe Mayer G. C. & S. F. Survey | | |
| Blue shale | 5 | 1030 | Section 1127 - 1000 feet from | | |
| Red shale (caving) | 60 | 1090 | NL 2640 feet from EL. | | |
| Blue shale | 13 | 1103 | Soil | 5 | 5 |
| Lime shells | 3 | 1106 | Yellow clay | 10 | 15 |
| Blue shale | 12 | 1118 | Gravel | 10 | 25 |
| Lime shells | 2 | 1120 | Lime | 5 | 30 |
| Blue shale | 65 | 1185 | Yellow clay | 20 | 50 |
| Sand | 5 | 1190 | Lime | 10 | 60 |
| Lime | 10 | 1200 | Red bed | 20 | 80 |
| Blue shale | 30 | 1230 | Blue sandy shale | 5 | 85 |
| Lime | 15 | 1245 | Sandy lime | 15 | 100 |
| Sand-(water) | 33 | 1278 | Water sand | 10 | 110 |
| Blue shale | 12 | 1290 | Blue shale | 30 | 140 |
| Sand | 35 | 1325 | Sandy lime | 25 | 165 |
| Blue shale | 35 | 1360 | Sandy shale | 40 | 205 |
| Lime | 22 | 1382 | Sandy lime | 5 | 210 |
| Blue shale | 4 | 1386 | Gray shale | 10 | 220 |
| Lime | 16 | 1402 | Dry sand | 3 | 223 |
| Blue shale | 5 | 1407 | Blue shale | 17 | 240 |
| Lime | 103 | 1510 | Lime | 30 | 270 |
| Blue shale | 18 | 1528 | Green shale | 5 | 275 |
| Lime | 13 | 1541 | Lime | 15 | 290 |
| Blue shale | 4 | 1545 | Red bed | 40 | 330 |
| Lime | 10 | 1555 | Sandy shale | 12 | 342 |
| Blue shale | 10 | 1565 | Red bed | 6 | 348 |
| Lime | 25 | 1590 | Gray sandy shale | 22 | 370 |
| Blue shale | 12 | 1602 | Red bed | 35 | 405 |
| Lime | 16 | 1618 | Blue shale | 3 | 408 |
| Blue shale | 7 | 1625 | Lime | 22 | 430 |
| Lime | 10 | 1635 | Red bed | 5 | 435 |
| Blue shale | 35 | 1670 | Blue shale | 5 | 440 |
| Sandy shale | 30 | 1700 | Lime | 5 | 445 |
| Water sand | 35 | 1735 | Shale | 55 | 500 |
| Lime | 3 | 1738 | Lime | 2 | 502 |
| Sand (water) | 12 | 1750 | Blue shale | 13 | 515 |
| Blue shale | 5 | 1755 | Lime | 5 | 520 |
| Red shale | 5 | 1760 | Blue shale | 108 | 628 |
| Blue and red shale | 40 | 1800 | Sand | 13 | 641 |
| Lime shell | 4 | 1804 | Blue shale | 23 | 664 |
| Red and blue shale | 8 | 1812 | Sand | 8 | 672 |
| Red rock and lime shell | 23 | 1835 | Blue shale | 14 | 686 |
| Blue sandy shale | 29 | 1864 | Sand | 30 | 716 |
| Water sand | 41 | 1905 | Gray lime | 5 | 721 |
| Blue shale | 10 | 1915 | Blue shale | 14 | 735 |
| Sand | 35 | 1950 | Lime | 6 | 741 |
| Blue sandy shale | 10 | 1960 | Blue shale | 14 | 755 |
| Lime | 14 | 1974 | Lime | 5 | 760 |
| Sand (hole full of | | | Blue shale | 5 | 765 |
| water) | 26 | 2000 | Lime | 10 | 775 |
| TOTAL DEPTH | | 7818 | | | |

(Continued on next page)

Table of Drillers' Logs, Irion County--Continued

| | Thickness (feet) | Depth (feet) |
|---------------------------------|---------------------|-----------------|
| Driller's log of well 188-Cont. | | |
| Blue shale | 15 | 790 |
| Lime | 5 | 795 |
| Blue shale | 15 | 810 |
| Lime | 10 | 820 |
| Blue shale | 7 | 827 |
| Water sand | 28 | 855 |
| Blue shale | 3 | 858 |
| Lime | 77 | 935 |
| Sand | 37 | 972 |
| Blue shale | 11 | 983 |
| Lime | 7 | 990 |
| Blue shale | 2 | 992 |
| Lime | 8 | 1000 |
| Blue shale | 10 | 1010 |
| Lime | 340 | 1350 |
| TOTAL DEPTH | | 1350 |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| Driller's log of well 268 | | |
| S. E. Colgin, J. F. Voelker Survey, Section 723, 52 ac of W end, 535 feet from NW 150 feet from SL. | | |
| Surface soil | 26 | 26 |
| Lime | 9 | 35 |
| Yellow clay | 5 | 40 |
| Red sand | 65 | 105 |
| Red bed | 20 | 125 |
| Water sand | 20 | 145 |
| Red clay | 5 | 150 |
| Sand | 18 | 168 |
| Blue shale | 32 | 200 |
| Dark shale | 40 | 240 |
| Lime | 7 | 247 |
| Blue shale | 55 | 302 |
| Lime | 4 | 306 |
| Blue sandy shale | 66 | 372 |
| Sand | 10 | 382 |
| Sulphur water | 3 | 385 |
| Sandy shale | 22 | 407 |
| Hard brown sand | 13 | 420 |
| Blue shale | 3 | 423 |
| Dry sand | 22 | 445 |
| Blue shale | 15 | 460 |
| Sandy shale | 35 | 495 |
| Blue shale | 15 | 510 |
| Lime | 10 | 520 |
| White shale | 45 | 565 |
| Blue shale | 5 | 570 |
| Sand | 15 | 585 |
| Sandy shale | 20 | 605 |

| | Thickness (feet) | Depth (feet) |
|---------------------------------|---------------------|-----------------|
| Driller's log of well 268-Cont. | | |
| White shale | 35 | 640 |
| Lime | 8 | 648 |
| Shale | 22 | 670 |
| Sand | 10 | 680 |
| Blue shale | 48 | 728 |
| Red bed | 80 | 808 |
| Green shale | 32 | 840 |
| Sandy lime | 13 | 853 |
| Blue shale | 12 | 865 |
| Water sand | 5 | 870 |
| Blue shale | 45 | 915 |
| Sand | 7 | 922 |
| Green shale | 16 | 938 |
| Lime | 12 | 950 |
| Blue shale | 35 | 985 |
| Lime | 5 | 990 |
| Blue shale | 28 | 1018 |
| Lime | 5 | 1023 |
| Shale | 5 | 1028 |
| Lime | 43 | 1071 |
| Blue shale | 25 | 1096 |
| Lime | 69 | 1165 |
| Blue shale | 15 | 1180 |
| Red clay | 25 | 1205 |
| Sandy lime | 10 | 1215 |
| Blue shale | 27 | 1242 |
| Sandy lime | 10 | 1252 |
| Blue shale | 8 | 1260 |
| Sandy lime | 10 | 1270 |
| Shale | 5 | 1275 |
| Lime shells | 10 | 1285 |
| Sandy lime | 13 | 1298 |
| Red clay | 8 | 1306 |
| Blue shale | 12 | 1318 |
| Sand | 17 | 1335 |
| Blue shale | 20 | 1355 |
| Lime | 1 | 1356 |
| Red clay | 2 | 1358 |
| Blue shale | 12 | 1370 |
| Lime | 10 | 1380 |
| Blue shale | 10 | 1390 |
| Sandy lime | 5 | 1395 |
| Red shale | 1 | 1396 |
| Sandy shale | 12 | 1408 |
| Red clay | 5 | 1413 |
| Sandy blue shale | 5 | 1418 |
| Red clay | 6 | 1424 |
| Sandy lime | 19 | 1443 |
| Shale | 2 | 1445 |
| TOTAL DEPTH | | 1445 |

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

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 9</u> | | |
| Flat, Sugg Bros. ranch, 21 miles north of Barnhart. | | |
| Surface material - - - - | 5 | 5 |
| Clay - - - - - | 3 | 8 |
| Caliche - - - - - | 5 | 13 |
| Gumbo - - - - - | 9 | 22 |
| Struck water at 18 feet. July 23, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 10</u> | | |
| Flat, John Sheen tract, 21 $\frac{1}{4}$ miles north of Barnhart. | | |
| Caliche - - - - - | 6 | 6 |
| Clay - - - - - | 6 | 12 |
| Gravel - - - - - | 1 | 13 |
| Clay - - - - - | 7 | 20 |
| Sand and clay - - - - - | 7 | 27 |
| Sand and gravel - - - - - | 1 | 28 |
| Gravel (water) - - - - - | 5 | 33 |
| Struck water at 28 feet. Water level, 27.5 feet, below land surface, 24 hours after hole completed. July 24, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 12</u> | | |
| Flat, Sugg Bros. ranch, 20 $\frac{1}{2}$ miles northeast of Barnhart. | | |
| Surface material - - - - | 3 | 3 |
| Red clay - - - - - | 3 | 6 |
| Clay and caliche - - - - | 10 | 16 |
| Gravel (water) - - - - - | 1 | 17 |
| Struck water at 17 feet. July 23, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 218</u> | | |
| Flat, J. M. Nutt tract, 3 $\frac{1}{2}$ miles northeast of Mertzon. | | |
| Surface material - - - | 5 | 5 |
| Caliche - - - - - | 4 | 9 |
| Caliche and gravel - - - | 6 | 15 |

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 218--Continued</u> | | |
| Blue limestone, sand and gravel - - - - - | | |
| | 5 | 20 |
| Struck water at 19 feet. Water level, 18.7 feet below land surface, 24 hours after hole completed. May 22, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 225</u> | | |
| Flat, J. M. Tolson tract, 2 $\frac{1}{4}$ miles northeast of Mertzon. | | |
| Surface material - - - | 1 | 1 |
| Sand and clay - - - - | 3 | 4 |
| Pink sand and clay - - - | 7 | 11 |
| Pink clay - - - - - | 3 | 14 |
| Gravel (water) - - - - | 2 | 16 |
| Rock - - - - - | 1 | 17 |
| Struck water at 15.5 feet. Water level, 14.9 feet below land surface, 24 hours after hole completed. May 2, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 232</u> | | |
| In valley, N. Chier tract 1 $\frac{3}{4}$ miles northeast of Mertzon. | | |
| Black surface material | 13 | 13 |
| Gravel and rock - - - | 1 | 14 |
| Struck water at 1 foot. Water flowing at land surface, 24 hours after hole completed. May 22, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 233</u> | | |
| Flat, Butler tract, 1 $\frac{1}{2}$ miles northeast of Mertzon. | | |
| Surface material - - - | 1 | 1 |
| Brown surface material | 1 | 2 |
| Brown surface material and clay - - - - - | 4 | 6 |
| Gravel - - - - - | 2 | 8 |

(Continued on next page.)

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

| | Thickness (feet) | Depth (feet) |
|--|---------------------|-----------------|
| <u>Well 233--Continued</u> | | |
| Clay - - - - - | 1 | 9 |
| Gravel - - - - - | 3 | 12 |
| Struck water at 9 feet. Water level, 8.7 feet below land surface, 24 hours after hole completed. May 9, 1940. | | |
| <u>Well 244</u> | | |
| Flat, Masingate tract, 1 mile north-east of Mertzon. | | |
| Surface material - - - - | 1 | 1 |
| Clay - - - - - | 1 | 2 |
| Clay and rock - - - - - | 3 | 5 |
| Clay - - - - - | 6 | 11 |
| Gravel (water) - - - - - | 2 | 13 |
| Struck water at 11 feet. Water level, 11.1 feet below land surface, 24 hours after hole completed. May 14, 1940. | | |

| | Thickness (feet) | Depth (feet) |
|---|---------------------|-----------------|
| <u>Well 245</u> | | |
| Flat J. M. Nutt tract, 1 mile north-east of Mertzon. | | |
| Surface material - - - - | 2 | 2 |
| Surface material and clay | 1 | 3 |
| Surface material, clay and rock - - - - - | 2 | 5 |
| Surface material, clay and sand - - - - - | 2 | 7 |
| Sand - - - - - | 2 | 9 |
| Clay and gravel - - - - | 2 | 11 |
| Gravel (water) - - - - | 11 | 22 |
| Struck water at 18 feet. Water level, 17.9 feet below land surface, 24 hours after hole completed. Cased to bottom with 7-inch galvanized iron. May 1, 1940 | | |

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

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

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) (calc.) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Fluoride (F) | Total hardness as CaCO ₃ (calc.) ³ |
|-------|--------------------------|---------------------|--------------------|--------------------------------|--------------|----------------|---------------------------------------|---------------------------------|-----------------------------|---------------|----------------------------|--------------|--|
| c/ 2 | C. H. Sugg | 160 | July 8, 1940 | 366 | 60 | 48 | 9 | 329 | 20 | 32 | 34 | 1.9 | 350 |
| 3 | do. | 165 | do. | 277 | - | - | - | 232 | 20 | 29 | b/ | - | - |
| 4 | Sugg Est. | 110 | do. | 361 | 57 | 23 | 33 | 329 | 14 | 38 | b/ | 0.7 | 282 |
| 6 | J. Evans Est. | 50 | July 29, 1940 | 381 | 72 | 45 | 12 | 384 | 29 | 26 | b/ | - | 363 |
| 7 | Sugg Bros. | 35 | do. | 593 | 78 | 53 | 69 | 415 | 98 | 81 | b/ | - | 413 |
| 8 | do. | 150 | July 8, 1940 | 358 | 146 | 56 | 93 | 384 | 104 | 260 | b/ | - | 594 |
| c/ 11 | Sheen Bros. | 35 | July 29, 1940 | 442 | 104 | 32 | 22 | 451 | 20 | 19 | 22 | 0.6 | 390 |
| 13 | Sugg Bros. | 90 | do. | 392 | - | - | - | 409 | 20 | 18 | b/ | - | - |
| 14 | Fred Ball | 150 | do. | 2899 | 467 | 172 | 363 | 293 | 133 | 1620 | - | 0.4 | 1876 |
| 16 | Hob. Necher | 102 | do. | 246 | 54 | 24 | 9 | 268 | 13 | 14 | b/ | - | 235 |
| 17 | E. Burnes | 72 | May 27, 1940 | 373 | 95 | 21 | 21 | 360 | 29 | 30 | b/ | - | 323 |
| 22 | E. J. Cox | 160 | July 8, 1940 | 643 | 68 | 38 | 115 | 323 | 149 | 114 | b/ | - | 329 |
| 23 | Sawyer Land & Cattle Co. | 165 | do. | 330 | - | - | - | 299 | 15 | 41 | b/ | - | - |
| c/ 24 | Sugg Bros. | 160 | do. | 349 | 67 | 27 | 27 | 287 | 26 | 58 | b/ | 0.8 | 288 |
| 25 | S. T. Brister | 140 | do. | 312 | 71 | 20 | 23 | 281 | 20 | 40 | b/ | - | 257 |
| 26 | Sawyer Land & Cattle Co. | 265 | May 27, 1940 | 796 | 70 | 42 | 161 | 293 | 217 | 160 | b/ | 2.1 | 346 |
| 27 | do. | 250 | do. | 813 | 72 | 37 | 173 | 329 | 219 | 150 | b/ | - | 333 |
| 30 | Sugg Bros. | 210 | May 24, 1940 | 209 | 52 | 17 | 5 | 207 | 11 | 22 | b/ | - | 201 |
| 31 | do. | 200 | July 5, 1940 | 1409 | 86 | 56 | 347 | 354 | 391 | 355 | b/ | - | 444 |
| 32 | J. Scott | 309 | May 27, 1940 | 646 | 62 | 32 | 132 | 317 | 164 | 100 | b/ | - | 285 |
| 34 | do. | 400 | Aug. 7, 1940 | 792 | 61 | 34 | 183 | 342 | 221 | 123 | b/ | 2.0 | 291 |
| 37 | J. B. Becton | 300 | May 27, 1940 | 1563 | 109 | 65 | 351 | 348 | 557 | 310 | b/ | - | 540 |
| 39 | Sugg Bros. | 240 | July 5, 1940 | 929 | 119 | 44 | 147 | 317 | 305 | 150 | b/ | - | 477 |
| c/ 40 | Mrs T. Murphey | 310 | do. | 1712 | 114 | 38 | 361 | 329 | 625 | 360 | b/ | 1.6 | 650 |
| 41 | Sol Meyer | 450 | May 27, 1940 | 1303 | 116 | 66 | 247 | 354 | 488 | 210 | b/ | 1.6 | 561 |
| 42 | do. | 460 | do. | 1845 | 130 | 68 | 418 | 397 | 734 | 300 | b/ | - | 602 |

a/ Sulphate less than 10 parts per million.
 b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 39.

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

Results are in parts per million.

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calc.) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Fluoride (F) | Total hardness as CaCO ₃ (calc.) |
|------|------------------------|---------------------|--------------------|--------------------------------|--------------|----------------|---------------------------------------|---------------------------------|-----------------------------|---------------|----------------------------|--------------|---|
| | 43 Sol Meyer | 650 | May 27, 1940 | 553 | 71 | 27 | 97 | 293 | 131 | 84 | b/ | 1.4 | 287 |
| | 44 do. | 425 | May 24, 1940 | 755 | 46 | 44 | 163 | 256 | 244 | 130 | b/ | 1.6 | 297 |
| c/ | 45 G. Linthicum | 350 | July 5, 1940 | 495 | 53 | 29 | 93 | 305 | 98 | 70 | b/ | 1.8 | 253 |
| | 46 State Hwy. Dept. | 398 | June 10, 1940 | 462 | 58 | 40 | 59 | 299 | 84 | 73 | b/ | 1.0 | 310 |
| | 47 F. Burks | 510 | May 24, 1940 | 404 | 75 | 23 | 44 | 268 | 63 | 66 | b/ | 0.8 | 284 |
| | 49 A. C. Hinde | 461 | May 27, 1940 | 517 | 88 | 44 | 44 | 390 | 88 | 60 | b/ | 0.8 | 402 |
| c/ | 51 Univ. of Texas | 100 | July 2, 1940 | 478 | 80 | 15 | 79 | 238 | 55 | 119 | b/ | - | 259 |
| | 53 A. C. Hinde | 330 | May 27, 1940 | 380 | 79 | 22 | 32 | 275 | 63 | 49 | b/ | - | 289 |
| | 54 Univ. of Texas | 475 | July 2, 1940 | 423 | 92 | 32 | 22 | 317 | 63 | 58 | b/ | - | 360 |
| | 55 do. | 40 | do. | - | - | - | - | - | 105 | 68 | b/ | - | - |
| | 56 C. Owens | 360 | do. | 338 | 70 | 24 | 24 | 244 | 39 | 61 | b/ | - | 275 |
| | 57 L. R. Taylor | 265 | do. | 398 | 74 | 24 | 42 | 268 | 59 | 67 | b/ | - | 285 |
| c/ | 53 Univ. of Texas | 330 | do. | 410 | 62 | 39 | 38 | 293 | 66 | 60 | b/ | 1.2 | 314 |
| | 62 R. L. Gibson, et al | 260 | do. | 1370 | 89 | 60 | 315 | 329 | 454 | 290 | b/ | - | 467 |
| | 63 R. L. Gibson | 200 | do. | 333 | 66 | 17 | 37 | 256 | 50 | 36 | b/ | 0.8 | 235 |
| | 64 Nolke Est. | 40 | July 3, 1940 | 329 | 102 | 6.1 | 20 | 323 | a/ | 34 | b/ | 0.4 | 279 |
| c/ | 65 do. | 300 | do. | 636 | 73 | 36 | 104 | 293 | 206 | 72 | b/ | 0.8 | 332 |
| | 66 B. Ash | 340 | May 24, 1940 | 504 | 80 | 26 | 65 | 244 | 148 | 64 | b/ | 0.7 | 306 |
| | 70 Nolke Est. | 60 | Aug. 6, 1940 | 229 | 67 | 3.4 | 19 | 226 | 12 | 17 | b/ | 0.4 | 182 |
| | 71 do. | 250 | do. | 242 | 60 | 20 | 7 | 256 | 12 | 17 | b/ | 0.4 | 233 |
| | 105 Mrs M. McManus | 55 | Aug. 9, 1940 | 244 | 58 | 24 | 3 | 256 | 18 | 14 | b/ | 0.4 | 245 |
| | 110 Sugg Bros. | 70 | June 25, 1940 | 458 | 69 | 51 | 34 | 354 | 47 | 83 | b/ | - | 381 |
| | 111 do. | 95 | do. | 1758 | 208 | 126 | 210 | 378 | 713 | 310 | b/ | 0.9 | 1038 |
| c/ | 112 H. W. Clark | 35 | do. | 344 | 64 | 39 | 17 | 354 | 16 | 33 | b/ | 0.7 | 319 |
| | 113 H. Cargile | 50 | do. | 591 | 110 | 40 | 37 | 354 | 21 | 68 | 141 | - | 440 |
| | 114 do. | 40 | May 8, 1940 | 668 | 80 | 45 | 86 | 195 | 168 | 140 | 53 | 0.4 | 388 |
| | 115 do. | 70 | May 15, 1940 | 1038 | 136 | 88 | 98 | 317 | 180 | 270 | 110 | - | 704 |
| | 116 H. Roark | 45 | do. | 827 | 132 | 52 | 108 | 537 | 93 | 160 | b/ | - | 542 |
| | 117 Irion County | 90 | do. | 826 | 101 | 56 | 135 | 378 | 57 | 290 | b/ | 0.5 | 485 |
| | 118 G. W. Stewart | 60 | do. | 478 | 61 | 39 | 69 | 390 | 43 | 66 | b/ | - | 314 |
| | 119 R. Underwood | 90 | do. | 460 | 97 | 38 | 31 | 439 | 15 | 63 | b/ | 0.5 | 399 |
| | 120 P. C. Kolster | 60 | do. | 395 | 84 | 37 | 20 | 439 | 16 | 22 | b/ | - | 363 |

a/ Sulphate less than 10 parts per million.
 b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 30.

partial analyses of water from wells in Irion County--Continued

Results are in parts per million.

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calc.) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Fluoride (F) | Total hardness as CaCO ₃ |
|------|-----------------------|---------------------|--------------------|--------------------------------|--------------|----------------|---------------------------------------|---------------------------------|-----------------------------|---------------|----------------------------|--------------|-------------------------------------|
| | 121 H. Roark | 70 | May 15, 1940 | 422 | 88 | 36 | 26 | 390 | 22 | 56 | b/ | - | 367 |
| | 122 J. W. Fields | 65 | June 25, 1940 | 706 | 125 | 59 | 61 | 403 | 18 | 240 | b/ | - | 557 |
| c/ | 123 Abe Meyer | 72 | do. | 466 | 85 | 50 | 25 | 378 | 16 | 100 | b/ | - | 416 |
| | 124 H. W. Clark | 119 | May 15, 1940 | 2356 | 274 | 167 | 253 | 232 | 1227 | 320 | b/ | 0.9 | 1312 |
| | 125 W. E. Newton | 125 | June 22, 1940 | 419 | 61 | 34 | 51 | 305 | 59 | 64 | b/ | - | 291 |
| | 128 Hemphill & Leffle | 40 | May 21, 1940 | 438 | 37 | 49 | 61 | 342 | 68 | 55 | b/ | - | 295 |
| | 130 Sugg Bros. | 40 | July 22, 1940 | 475 | 64 | 41 | 56 | 354 | 70 | 54 | b/ | - | 330 |
| | 131 do. | 35 | do. | 721 | 80 | 57 | 98 | 354 | 138 | 124 | b/ | - | 435 |
| c/ | 132 J. J. Burney Est. | 75 | July 29, 1940 | 382 | 106 | 22 | 13 | 390 | 20 | 29 | b/ | 0.4 | 354 |
| | 133 Sugg Bros. | 110 | July 22, 1940 | 324 | 92 | 22 | 4 | 348 | 10 | 20 | b/ | - | 319 |
| | 136 Frank Emerick | 70 | June 19, 1940 | 604 | 110 | 41 | 62 | 378 | 53 | 152 | b/ | - | 445 |
| | 127 D. E. Hughes | 40 | May 24, 1940 | 432 | 96 | 30 | 29 | 390 | 33 | 43 | b/ | - | 363 |
| | 138 J. D. Hare | 40 | do. | 412 | 117 | 27 | 6 | 427 | 24 | 28 | b/ | 0.3 | 402 |
| | 139 Joe Pfluger | 64 | do. | 360 | 85 | 22 | 22 | 293 | 31 | 56 | b/ | - | 304 |
| | 140 W. A. Thomas | 46 | do. | 512 | 120 | 35 | 25 | 390 | 41 | 94 | b/ | - | 441 |
| c/ | 141 W. O. Hodges | 40 | June 7, 1940 | 380 | 79 | 27 | 27 | 305 | 57 | 40 | b/ | - | 307 |
| | 142 D. E. Hughes | 125 | July 18, 1940 | 343 | 56 | 29 | 35 | 281 | 18 | 51 | b/ | - | 258 |
| | 143 do. | 150 | do. | 525 | 49 | 34 | 103 | 287 | 78 | 120 | b/ | - | 261 |
| | 145 D. Gentry | 100 | July 17, 1940 | 1141 | 84 | 47 | 268 | 354 | 287 | 280 | b/ | 1.4 | 404 |
| | 150 J. I. Case Est. | Spring | Aug. 7, 1940 | 257 | 70 | 14 | 11 | 268 | 12 | 18 | b/ | 0.4 | 234 |
| | 153 Max Tankersly | 240 | June 27, 1940 | 1971 | 132 | 89 | 437 | 281 | 664 | 510 | b/ | 1.4 | 695 |
| c/ | 155 R. S. Williams | 260 | do. | 1903 | 141 | 76 | 425 | 329 | 627 | 470 | b/ | 1.5 | 667 |
| | 156 J. M. Nutt | 155 | do. | 305 | - | - | - | 287 | 13 | 33 | b/ | - | - |
| c/ | 157 F. Tankersly | 125 | do. | 271 | 72 | 17 | 10 | 268 | 10 | 30 | b/ | 0.2 | 251 |
| | 153 J. H. Nutt | 225 | do. | 341 | 63 | 29 | 29 | 305 | 18 | 52 | b/ | - | 278 |
| | 160 B. Mayse | 100 | May 24, 1940 | 547 | 50 | 25 | 114 | 195 | 156 | 106 | b/ | - | 225 |
| | 161 Ada Morrehead | 74 | July 5, 1940 | 340 | 76 | 18 | 28 | 281 | 43 | 37 | b/ | - | 266 |
| | 163 F. Tankersly | 110 | May 24, 1940 | 343 | 83 | 15 | 27 | 293 | 47 | 27 | b/ | 0.4 | 269 |
| | 164 Mrs H. L. Lindley | 186 | July 23, 1940 | 1032 | 96 | 53 | 201 | 323 | 293 | 230 | b/ | - | 458 |
| | 165 D. E. Hughes | 150 | do. | 312 | 69 | 29 | 9 | 268 | 31 | 42 | b/ | - | 293 |
| c/ | 166 H. Lindley | 200 | June 6, 1940 | 324 | 48 | 33 | 32 | 287 | 29 | 41 | b/ | - | 255 |

a/Sulphate less than 10 parts per million.

b/Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 39.

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

Results are in parts per million.

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) (calc.) | Bicarbonate (HCO ₃) | Sulphate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Fluoride (F) | Total hardness as CaCO ₃ (calc.) ³ |
|-------|-------------------------|---------------------|--------------------|--------------------------------|--------------|----------------|---------------------------------------|---------------------------------|-----------------------------|---------------|----------------------------|--------------|--|
| 171 | Mrs F. B. Carter | 240 | Aug. 6, 1940 | 295 | 62 | 27 | 15 | 293 | 20 | 27 | b/ | 0.8 | 267 |
| 174 | Nolke Est. | 187 | May 24, 1940 | 1610 | 128 | 70 | 334 | 268 | 596 | 350 | b/ | - | 608 |
| 176 | do. | 185 | July 2, 1940 | 337 | 80 | 18 | 24 | 293 | 33 | 38 | b/ | - | 276 |
| c/178 | J. W. Shaw | 150 | June 27, 1940 | 234 | 54 | 22 | 5 | 195 | 20 | 37 | b/ | 0.6 | 224 |
| 179 | R. T. Atkinson | 125 | do. | 335 | - | - | - | 275 | 16 | 56 | b/ | - | - |
| 180 | R. S. Williams | 120 | do. | 239 | 47 | 20 | 17 | 220 | 18 | 21 | b/ | - | 197 |
| 181 | B. E. Tankersly | 125 | do. | - | - | - | - | - | 14 | 36 | b/ | - | - |
| c/201 | Bill Freitag | Spring | July 18, 1940 | 323 | 78 | 26 | 11 | 305 | 17 | 40 | b/ | 0.6 | 301 |
| 202 | W. Burks | 151 | do. | 324 | 59 | 27 | 29 | 293 | 31 | 34 | b/ | - | 257 |
| 203 | do. | 43 | July 23, 1940 | 1157 | 136 | 65 | 175 | 293 | 406 | 230 | b/ | 1.1 | 610 |
| 204 | do. | 100 | do. | 385 | - | - | - | 378 | 13 | 36 | b/ | - | - |
| 205 | do. | 100 | July 18, 1940 | 431 | - | - | - | 342 | 59 | 43 | b/ | - | - |
| 206 | J. M. Nutt | 70 | May 20, 1940 | 468 | 100 | 25 | 45 | 390 | 59 | 47 | b/ | - | 350 |
| 207 | J. Richardson | 41 | June 19, 1940 | 364 | 82 | 24 | 27 | 366 | 20 | 31 | b/ | - | 305 |
| c/209 | Arno Helmers | 40 | do. | 686 | 126 | 41 | 55 | 329 | 39 | 130 | 132 | 1.1 | 485 |
| 210 | A. J. Kinser | 202 | May 15, 1940 | 4324 | 642 | 181 | 684 | 220 | 2348 | 350 | b/ | - | 2352 |
| 211 | H. W. Clark | 70 | May 24, 1940 | 628 | 103 | 41 | 67 | 305 | 147 | 120 | b/ | - | 425 |
| 212 | Frank Emerick | 110 | July 13, 1940 | 2507 | 234 | 99 | 485 | 287 | 1016 | 530 | b/ | 2.1 | 992 |
| 213 | D. E. Hughes | 150 | do. | 2354 | - | - | - | 262 | 959 | 490 | b/ | - | - |
| c/214 | Ira G. Yates Jr. | 60 | June 20, 1940 | 1981 | 264 | 63 | 321 | 287 | 320 | 370 | b/ | 1.7 | 918 |
| 216 | Community Cemetery Club | 105 | do. | 1531 | 139 | 68 | 241 | 299 | 596 | 290 | b/ | - | 752 |
| 218 | W. P. A. Test | 20 | June 3, 1940 | 664 | 106 | 56 | 79 | 659 | 12 | 80 | b/ | - | 494 |
| 219 | Dr. D. D. Wall | 60 | May 15, 1940 | 1568 | 154 | 76 | 270 | 293 | 664 | 230 | 29 | 1.2 | 697 |
| 220 | J. M. Nutt | 30 | June 19, 1940 | 583 | 98 | 41 | 62 | 390 | 103 | 87 | b/ | - | 415 |
| 222 | James Lee | 98 | May 20, 1940 | 1938 | 216 | 103 | 289 | 244 | 850 | 360 | b/ | - | 964 |
| 226 | Bill Carr, Jr. | 20 | May 3, 1940 | - | - | - | - | - | 86 | 41 | b/ | - | - |
| 229 | J. M. Nutt | 50 | June 19, 1940 | 590 | 102 | 41 | 58 | 390 | 99 | 78 | b/ | 0.6 | 425 |
| c/230 | do. | 1191 | June 3, 1940 | 576 | 112 | 37 | 55 | 476 | 86 | 51 | b/ | 0.6 | 433 |
| 233 | W. P. A. Test | 12 | May 9, 1940 | 391 | 63 | 29 | 44 | 305 | 68 | 37 | b/ | - | 278 |
| 234 | A. J. Burney | 22 | July 17, 1940 | 392 | 59 | 35 | 41 | 305 | 60 | 46 | b/ | 0.9 | 292 |
| 236 | J. A. Hood | 100 | do. | 1173 | 126 | 53 | 217 | 329 | 364 | 250 | b/ | 1.3 | 533 |
| 237 | Community Club | 40 | May 8, 1940 | 668 | 80 | 45 | 86 | 195 | 168 | 140 | 53 | 0.4 | 388 |

a/Sulphate less than 10 parts per million.

b/Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 39.

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

Results are in parts per million.

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na / K) (calc.) | Bicarbonate (HCO ₃) | Sulfate (SO ₄) | Chloride (Cl) | Nitrate (NO ₃) | Fluoride (F) | Total hardness as CaCO ₃ (calc.) ³ |
|-------|--------------------------|---------------------|--------------------|--------------------------------|--------------|----------------|---------------------------------------|---------------------------------|----------------------------|---------------|----------------------------|--------------|--|
| 238 | Mrs J. J. Burney | 125 | July 17, 1940 | 805 | 118 | 37 | 125 | 342 | 156 | 190 | b/ | 0.1 | 448 |
| 239 | T. B. Gordon | 60 | do. | 580 | 112 | 37 | 50 | 342 | 82 | 115 | b/ | 0.2 | 433 |
| 240 | T. Gentry | 70 | do. | 947 | 106 | 45 | 174 | 329 | 250 | 210 | b/ | 0.1 | 448 |
| 242 | Mrs D. Gentry | 70 | do. | 675 | 92 | 41 | 97 | 336 | 131 | 130 | b/ | 0.5 | 400 |
| c/243 | R. E. Key | 40 | June 19, 1940 | 391 | 75 | 28 | 34 | 305 | 60 | 44 | b/ | - | 302 |
| 247 | J. M. Nutt | 29 | May 2, 1940 | - | - | - | - | - | 45 | 33 | b/ | - | - |
| 248 | do. | 110 | July 17, 1940 | 415 | 70 | 30 | 46 | 342 | 39 | 47 | b/ | - | 299 |
| 249 | J. W. Hargraves | 70 | do. | 906 | 73 | 35 | 221 | 305 | 127 | 300 | b/ | 1.0 | 327 |
| c/254 | A. W. Christopher | 85 | July 6, 1940 | 654 | 125 | 50 | 37 | 397 | 57 | 96 | 94 | 0.3 | 516 |
| 255 | H. R. Richburg | 28 | May 8, 1940 | - | - | - | - | - | 215 | 320 | 34 | - | - |
| 259 | J. R. Scott | 110 | do. | 267 | 69 | 21 | 6 | 287 | 14 | 16 | b/ | 0.4 | 258 |
| 264 | J. J. Burney | 54 | June 19, 1940 | 778 | 108 | 48 | 105 | 421 | 144 | 116 | 50 | - | 470 |
| 265 | Otie E. Fox | 50 | May 3, 1940 | 1055 | 144 | 61 | 139 | 421 | 202 | 194 | 108 | 0.7 | 613 |
| 266 | Ada Moorehead | 60 | June 19, 1940 | 671 | 84 | 45 | 104 | 439 | 117 | 85 | 20 | - | 393 |
| 267 | L. Ortiz | 35 | May 8, 1940 | 470 | 76 | 28 | 60 | 329 | 93 | 51 | b/ | - | 308 |
| 269 | F. Tankersly | Spring | May 29, 1940 | 296 | 75 | 22 | 8 | 305 | 16 | 16 | b/ | 0.4 | 279 |
| 270 | do. | 40 | do. | 500 | 94 | 27 | 56 | 378 | 92 | 45 | b/ | - | 347 |
| 271 | San Angelo Telephone Co. | 74 | June 19, 1940 | 598 | 94 | 40 | 75 | 403 | 97 | 94 | b/ | - | 400 |
| 272 | Irion County | 370 | May 23, 1940 | 1737 | 166 | 76 | 321 | 305 | 733 | 290 | b/ | 1.4 | 727 |
| c/273 | H. A. Goodall | 100 | July 23, 1940 | 1006 | 184 | 51 | 142 | 323 | 270 | 198 | b/ | 1.2 | 670 |
| 274 | City of Mertzon | 165 | June 21, 1940 | 1081 | 97 | 52 | 220 | 329 | 300 | 250 | b/ | - | 457 |
| 275 | V. T. Hughes | 250 | June 17, 1940 | 968 | 90 | 48 | 191 | 317 | 273 | 210 | b/ | - | 425 |
| c/276 | John Clark | 156 | May 23, 1940 | 1052 | 110 | 48 | 194 | 329 | 327 | 200 | b/ | 1.5 | 475 |
| 277 | C. L. Tankersly | 110 | June 17, 1940 | 1002 | 82 | 46 | 218 | 323 | 267 | 230 | b/ | - | 393 |
| 278 | Mertzon Cemetery Asso. | 70 | July 23, 1940 | 304 | 77 | 21 | 11 | 275 | 14 | 40 | b/ | - | 278 |
| 280 | Evans Estate | 110 | do. | 822 | 96 | 45 | 141 | 342 | 199 | 170 | b/ | - | 423 |
| c/281 | S. G. Williams | 72 | do. | 258 | 58 | 23 | 11 | 256 | 12 | 28 | b/ | 0.4 | 239 |
| 282 | F. Tankersly | 90 | do. | 715 | - | - | - | 281 | 199 | 130 | b/ | - | - |
| 286 | West Texas Wool Co. | 100 | June 17, 1940 | 971 | 78 | 53 | 198 | 342 | 292 | 180 | b/ | 1.5 | 413 |
| 288 | B. Mayse | 145 | May 24, 1940 | 354 | 90 | 16 | 23 | 305 | 43 | 32 | b/ | - | 290 |
| 289 | Mrs H. Schooler | 40 | May 2, 1940 | - | - | - | - | - | 35 | 24 | b/ | - | - |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter on page 39.

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

Results are in parts per million.

| Well | Owner | Depth of well (ft.) | Date of collection | Total dissolved solids (calc.) | Cal- cium (Ca) | Magne- sium (Mg) | Sodium and Potassium (Na + K) (calc.) | Bicar- bonate (HCO ₃) | Sul- phate (SO ₄) | Chlo- ride (Cl) | Ni- trate (NO ₃) | Fluor- ide (F) | Total hardness as CaCO ₃ (calc.) |
|--------|--------------------------|------------------------------|--------------------------|---|----------------------|------------------------|--|---|-------------------------------------|-----------------------|------------------------------------|----------------------|--|
| 290 | F. Tankersly | 12 | May 24, 1940 | 330 | 90 | 17 | 9 | 281 | 41 | 27 | b/ | 0.4 | 296 |
| c/ 291 | do. | 40 | June 20, 1940 | 363 | 94 | 17 | 23 | 336 | 27 | 37 | b/ | - | 306 |
| 292 | Boy Scouts of America | 20 | May 21, 1940 | 523 | 114 | 20 | 53 | 390 | 104 | 36 | b/ | - | 367 |
| 293 | F. Tankersly | Spring | do. | 314 | 71 | 21 | 16 | 238 | 51 | 30 | b/ | - | 263 |
| 294 | do. | 120 | May 24, 1940 | 309 | 80 | 43 | 153 | 342 | 231 | 134 | b/ | - | 377 |

a/ Sulphate less than 10 parts per million.

b/ Nitrate less than 20 parts per million.

c/ Analyses of selected wells are given in milligram equivalents per liter 39.

Chemical Analyses--Continued

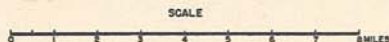
Results are in milligrams equivalents per liter.

| Well | Owner | Depth of well (ft.) | Date of collection | Total hardness as CaCO ₃ (calc.) | Cal- cium (Ca) | Magne- sium (Mg) | Sodium and Potassium (Na + K) (calc.) | Bicar- bonate (HCO ₃) | Sul- phate (SO ₄) | Chlo- ride (Cl) | Fluor- ide (F) | Ni- trate (NO ₃) | Total dissolved solids (calc.) |
|------|-------------------|------------------------------|--------------------------|--|----------------------|------------------------|--|---|-------------------------------------|-----------------------|----------------------|------------------------------------|---|
| 2 | C. H. Sugg | 160 | July 8, 1940 | 7.00 | 3.02 | 3.98 | 0.37 | 5.4 | 0.42 | 0.90 | 0.10 | 0.55 | 14.74 |
| 11 | Sheen Bros. | 35 | July 29, 1940 | 7.80 | 5.20 | 2.60 | 0.94 | 7.4 | 0.42 | 0.54 | 0.03 | 0.35 | 17.48 |
| 24 | Sugg Bros. | 160 | July 8, 1940 | 5.76 | 3.36 | 2.40 | 1.16 | 4.7 | 0.54 | 1.64 | 0.04 | - | 13.89 |
| 40 | Mrs T. Murphey | 310 | July 5, 1940 | 13.00 | 5.72 | 7.28 | 15.65 | 5.4 | 13.02 | 10.15 | 0.08 | - | 57.30 |
| 45 | G. Linthicum | 350 | do. | 5.06 | 2.66 | 2.40 | 4.04 | 5.0 | 2.04 | 1.97 | 0.09 | - | 18.20 |
| 51 | Univ. of Texas | 100 | July 2, 1940 | 5.18 | 3.98 | 1.20 | 3.43 | 3.9 | 1.14 | 3.36 | - | 0.21 | 17.22 |
| 58 | do. | 330 | do. | 6.28 | 3.10 | 3.18 | 1.65 | 4.8 | 1.38 | 1.69 | 0.06 | - | 15.86 |
| 65 | Nolké Est. | 300 | July 3, 1940 | 6.64 | 3.66 | 2.98 | 4.51 | 4.8 | 4.28 | 2.03 | 0.04 | - | 22.30 |
| 112 | H. W. Clark | 35 | June 25, 1940 | 6.38 | 3.20 | 3.18 | 0.72 | 5.8 | 0.33 | 0.93 | 0.04 | - | 14.20 |
| 123 | Abe Meyer | 72 | do. | 4.32 | 4.24 | 4.08 | 1.10 | 6.2 | 0.33 | 2.82 | - | 0.07 | 18.84 |
| 132 | J. J. Burney Est. | 75 | July 29, 1940 | 7.08 | 5.28 | 1.30 | 0.58 | 6.4 | 0.42 | 0.82 | 0.02 | - | 15.32 |
| 141 | W. O. Hodges | 40 | June 7, 1940 | 6.14 | 3.94 | 2.20 | 1.17 | 5.0 | 1.18 | 1.13 | - | - | 14.62 |
| 155 | R. S. Williams | 260 | June 27, 1940 | 13.34 | 7.06 | 6.28 | 18.46 | 5.4 | 13.06 | 13.26 | 0.08 | - | 63.60 |
| 157 | F. Tankersly | 125 | do. | 5.02 | 3.62 | 1.40 | 0.44 | 4.4 | 0.21 | 0.85 | 0.01 | - | 10.92 |
| 166 | H. Lindley | 200 | June 6, 1940 | 5.10 | 2.42 | 2.68 | 1.37 | 4.7 | 0.61 | 1.16 | - | - | 12.94 |
| 178 | J. W. Shaw | 150 | June 27, 1940 | 4.43 | 2.68 | 1.80 | 0.21 | 1.8 | 3.20 | 0.42 | 0.03 | - | 9.38 |
| 201 | Bill Freitag | Spring | July 18, 1940 | 6.02 | 3.92 | 2.10 | 0.49 | 5.0 | 0.35 | 1.13 | 0.03 | - | 13.02 |
| 209 | Arno Helmes | 40 | June 19, 1940 | 9.70 | 6.32 | 3.38 | 2.37 | 5.4 | 0.81 | 3.67 | 0.06 | 2.13 | 24.14 |
| 214 | Ira G. Yates, Jr. | 66 | June 20, 1940 | 18.36 | 13.2 | 5.16 | 13.96 | 4.7 | 17.09 | 10.44 | 0.09 | - | 64.64 |
| 230 | J. M. Nutt | 1,191 | June 3, 1940 | 8.66 | 5.58 | 3.08 | 2.40 | 7.8 | 1.79 | 1.44 | 0.03 | - | 22.12 |
| 243 | R. E. Key | 40 | June 19, 1940 | 6.04 | 3.76 | 2.28 | 1.46 | 5.0 | 1.26 | 1.24 | - | - | 15.00 |
| 254 | A. W. Christopher | 85 | June 6, 1940 | 10.32 | 6.24 | 4.08 | 1.59 | 6.5 | 1.18 | 2.71 | 0.02 | 1.52 | 23.82 |
| 273 | M. A. Goodall | 100 | July 23, 1940 | 13.40 | 9.22 | 4.18 | 6.16 | 5.3 | 8.62 | 5.53 | 0.06 | - | 37.12 |
| 276 | John Clark | 156 | May 23, 1940 | 9.50 | 5.52 | 3.98 | 8.44 | 5.4 | 6.82 | 5.64 | 0.08 | - | 35.88 |
| 281 | S. G. Williams | 72 | July 23, 1940 | 4.78 | 2.88 | 1.90 | 0.48 | 4.2 | 0.25 | 0.79 | 0.02 | - | 10.52 |
| 291 | F. Tankersly | 40 | June 20, 1940 | 6.12 | 4.72 | 1.40 | 0.99 | 5.5 | 0.57 | 1.04 | - | - | 14.22 |

MAP OF IRION COUNTY, TEXAS SHOWING WATER WELLS AND SPRINGS

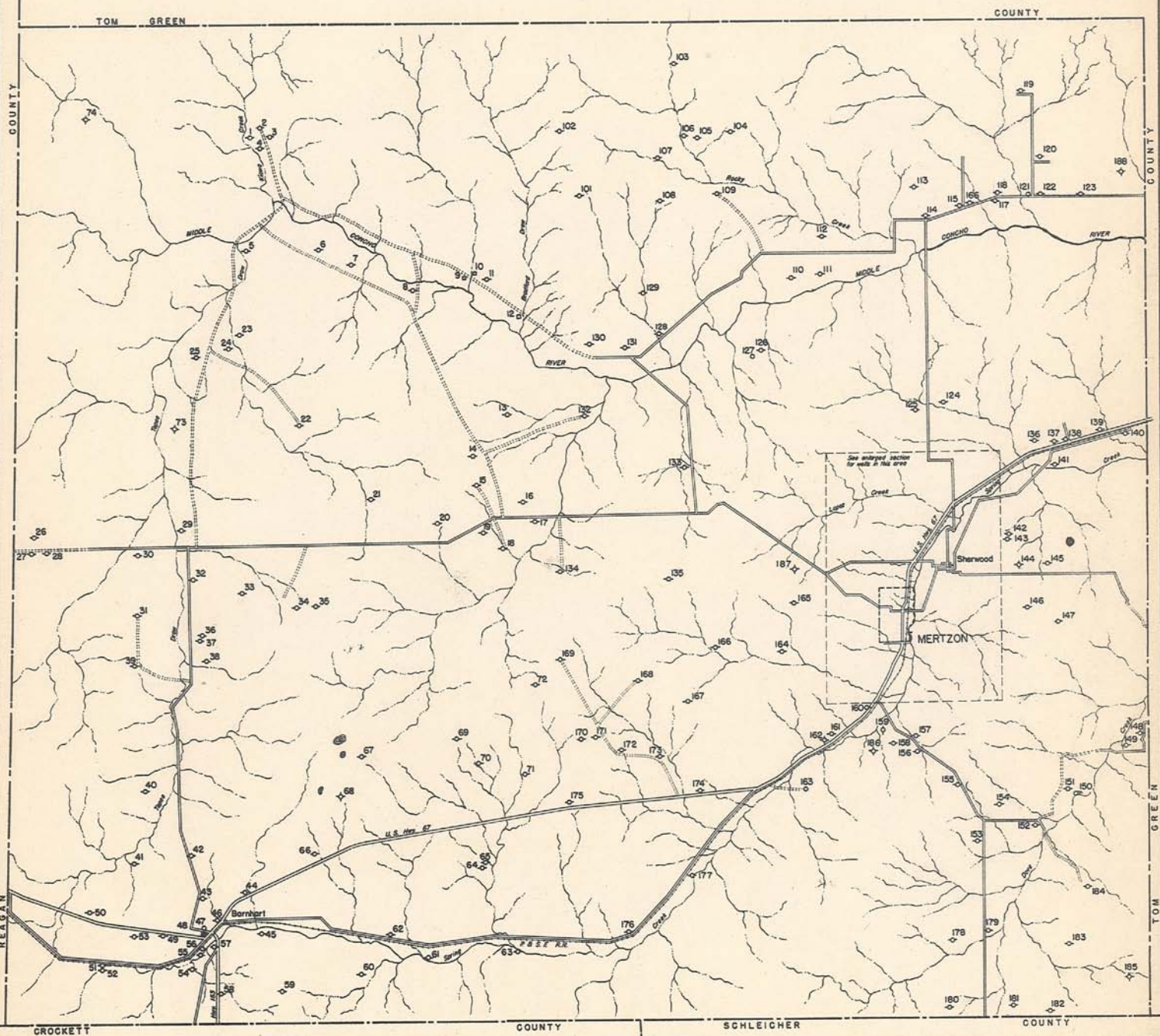
FIELD WORK BY
J. M. FRAZIER, JR.
PROJECT SUPERINTENDENT
W. P. A. PROJECT 13048

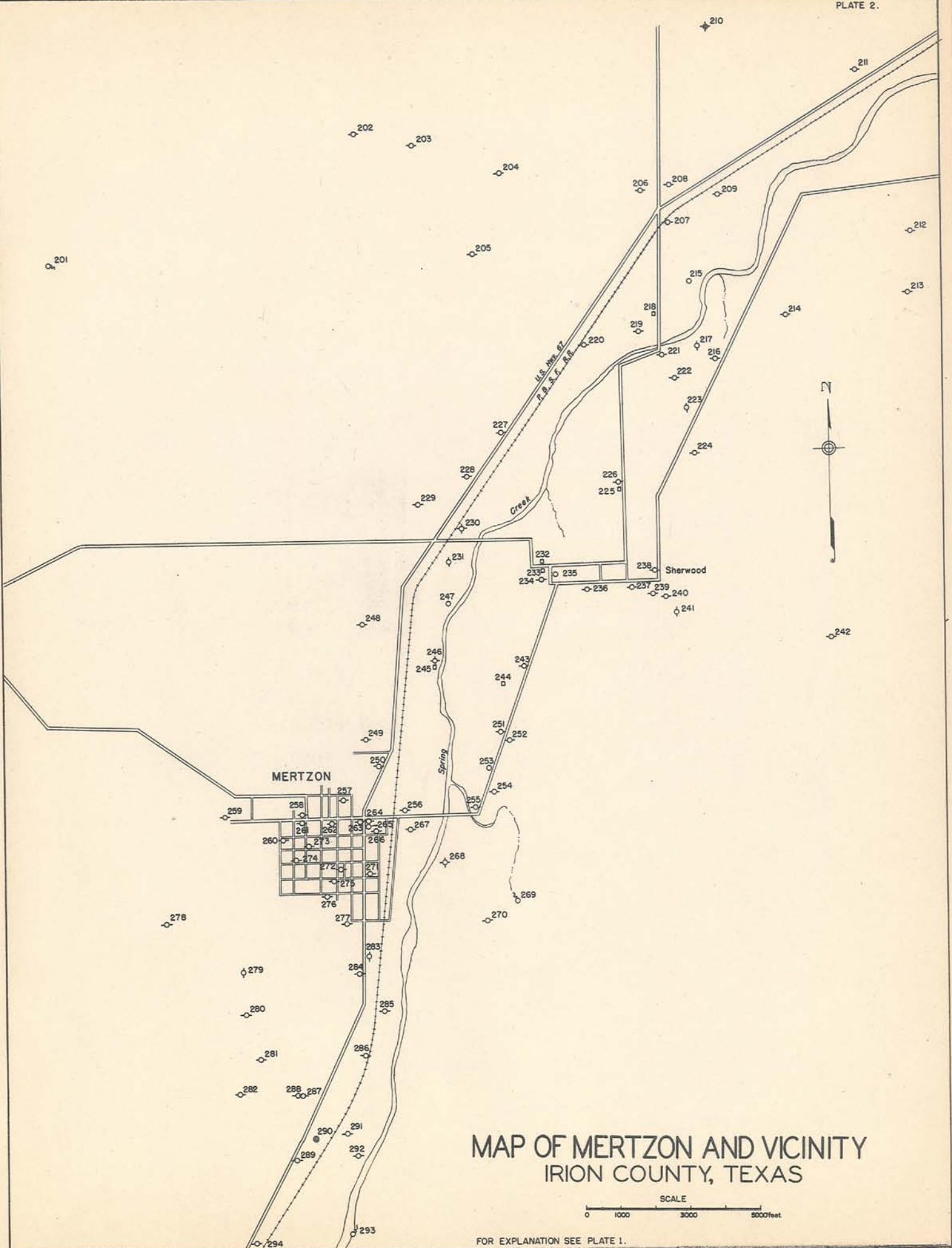
- EXPLANATION —
- WELL WITH HAND PUMP, BUCKET OR BAILER
 - ◊ WELL WITH WINDMILL OR SMALL POWER PUMP
 - ⋈ WELL DRILLED TO TEST FOR OIL OR GAS
 - WELL WITH PUMPING PLANT —
5 HORSE POWER OR LARGER
 - ◊ UNUSED WELL
 - SPRING
 - ⊖ TEST WELL DRILLED BY W. P. A. LABOR



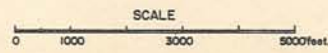
BASE COMPILED FROM
STATE HIGHWAY PLANNING SURVEY COUNTY ROAD MAP
AND FIELD NOTES

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





MAP OF MERTZON AND VICINITY
IRION COUNTY, TEXAS



FOR EXPLANATION SEE PLATE 1.