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Records of wells, driller's logs,
    water analyses, and map
    showing location of wells.
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TEXAS STATE BOARD OF WATER ENGINEERS
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Prepared in cooperation with the United States Department of the Interior, Geological Survey

# Introduction 

## By

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This release contains records of wells in Jim Wells County, together with tables of well logs and well water analyses. It is illustrated by a map on which the wells listed are shown, each well being given a number on the map corresponding to the number assigned to it in the tables. The records were obtained during the summer and fall of 1933 by Samuel F. Turner, Walter A. Lynch and James C. Cumley in the course of an investigation by the Texas Board of Water Engineers in cooperation with the United States Department of the Interior, Geolngical Survey. Samples of water were taken from a large number of the wells and tested in the field to determine approximately the hardness of the water and its chloride content. Altogether about 400 wells fairly well distributed through the county are described in the tables.

The southern part of the county, from Ella to the Brocks County line, was studied more intensively and from these studies the following facts are summarized: altogether 157 wells were recorded and mapped in this part of the county in 1933, of which 139 are deep ( 300 to 900 feet) and the others shallow, of these wells 61 were used for irrigation as well as for domestic use and stock, with about 360 acres being irrigated or an average of about 6 acres to each well, the irrigated crops consisted mostly of citrus fruits and garden truck, the total withdrawal of ground water in this part of the county in 1933 was estimated as amounting to 700 to 800 acre-feet.

From a partial inventory, made in April 1940, it is estimated that there has been a reduction of approximately $60 \%$ in the total irrigated acreage as compared with that in 1953-34. The reduction has been due to the almost complete cessation of irrigation by the owners of the smaller citrus groves and to a reduction in the acreage of truck farms irrigated with ground water. However the farmers who have maintained operations are now irrigating more thoroughly, and as the groves are older and the trees larger, more water is used to the acre than was used in 1933-34. Therefore it is probable that there has been little change in the total amount of ground-water used for irrigation since 1933-34.

The public water supply of Alice, the county seat, is obtained from four wells (Nos. 153 to 156) ranging from 535 to 992 feet in depth. The average daily pumpage from these wells in 1938 varied from about 240,000 to about 450,000 gallons a day, and averaged 346,100 gallons a day. A fifth well (No. 410) was being completed a $\ddagger$ the time this was written. The town of Premont is supplied from a well (No. 4l8) 520 feet in depth, which is reported to yield about 120 gallons a minute.

Since the summer of 1933 periodic measurements of water levels in 10 selected wells have been made in the south central and southern parts of the county. Seven of these wells are less than 100 feet in depth, one is 125 feet, one is 475 feet and one is 629 feet in depth.

The records show that the water levels in the shallow observation wells fluctuates with the rainfall. Some of them were lower in October 1939 than they were in October 1933 and others were slightly higher. The deep wells apparently have
been affected to some extent by withdrawals of ground water for irrigation in this county and in an adjacent area in the northern part of Brooks County. One of the deep observation wells showed a net decline of $1-3 / 4$ feet and the other a net decline of about 7 feet during the seven years.

In most of the county, water encountered at shallow depths is somewhat highly mineralized, although there are numerous exceptions to that rule. In general the best water is obtained from wells 250 to 700 feet deep in the south central and southern parts of the county.

The records given in this release serve as a guide to land owners and others who need information regarding wells and pumping plants in different parts of the area, and the quantity and quality of water yielded by the wells.

The publication was mimeographed by employees of the Work Projects Administration project No, 10443.

Records of wells in Jim Tells County, Texas
(Principal water-bearing beds are sand or sandstone.)

|  |  |  |  |  |  |  | Nater | ing |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No, | Distance from Orange Grove | Owner | Driller | Date com-pleted a/ | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ (\mathrm{ft} .) \end{array}\right\|$ | Diam eter of well (in.) | Depth to top of bed (ft.) | $\begin{gathered} \text { Thick- } \\ \text { ness of } \\ \text { bed } \\ \text { (ft.) } \end{gathered}$ |
|  | $\begin{array}{\|l\|} \hline 17 \frac{1}{2} \text { miles } \\ \text { west northwest } \end{array}$ | L. Rodrigues | - | - | 65 | 4 | - | - |
|  | $\begin{aligned} & 17 \text { miles } \\ & \text { west northwest } \end{aligned}$ | O. Rodrigues | - | - | 74 | 4 | - | - |
| 3 | do. | Allegreia mst, | - | - | 135 | 4 | - | - |
| 4 | do. | Pedro Trevino | - | - | 158 | 4 $\frac{1}{4}$ | - | - |
|  | $\begin{array}{\|l\|} \hline 16 \frac{1}{2} \text { miles } \\ \text { west northwest } \end{array}$ | $\begin{aligned} & \text { Jose Maria } \\ & \text { Salinas } \end{aligned}$ | - | - | 178 | 4 | 165 | - |
| 76 | do. | School Dist. No. 16 | G. Cosa | 1930 | 80 | 4 | - | - |
|  | $\begin{array}{\|l\|} \hline 15 \text { miles } \\ \text { west nor thwest } \end{array}$ | $\begin{gathered} \text { S. E. } \\ \text { Smitherwick } \end{gathered}$ | - | - | 170 | 4 | - | - |
|  | $\begin{array}{\|l\|} \hline 15 \frac{1}{2} \text { miles } \\ \text { west northwest } \end{array}$ | Mrs. Tom Sheeran | -- Davis | 1913 | 105 | 4 | 105 | - |
| 9 | do. | H. Hymen | - | 1927 | 158 | 4 | - | - |
| 10 | $\begin{array}{\|l\|} \hline 15 \text { miles } \\ \text { west northwest } \\ \hline \end{array}$ | Mrs. <br> R. Shaeffer | - | - | 102 | 6 | - | - |
| 11 | $\begin{array}{\|l\|} \hline 15 \frac{1}{2} \text { miles } \\ \text { west northwest } \\ \hline \end{array}$ | S. N. Smith | S.N. Smith | 1930 | 118 | 4 | 115 | 3 |
| 12 | do. | M. E. milict | - | - | 115 | 6 | - | - |
| 13 | $\begin{aligned} & 15 \text { miles } \\ & \text { west northwest } \end{aligned}$ | J. T. Reeves | - | - | 118 | 4 | - | - |
| 14 | $\begin{aligned} & 14 \text { miles } \\ & \text { west nor thwest } \end{aligned}$ | $\begin{aligned} & \text { Mrs. } \\ & \text { R. Shaeffer } \\ & \hline \end{aligned}$ | - | 01d | 85 | 4 | - | - |
| 15 | $\begin{array}{\|l\|} \hline 13 \frac{1}{2} \text { miles } \\ \text { west northwest } \\ \hline \end{array}$ | E. R. Davidson | ${ }^{-}$ | - | 295 | $4 \frac{1}{4}$ | 255 | 40 |
| e/ 16 | $\begin{aligned} & \hline 13 \text { miles } \\ & \text { west northwest } \end{aligned}$ | S. M. Freeborn | A. C. White | 1926 | 275 | 4 $\frac{1}{4}$ | 232 | 42 |
| 17 | $\begin{aligned} & 12 \text { miles } \\ & \text { west northwest } \end{aligned}$ | Mrs. <br> R. Shaeffer | - | - | 200 | 6 | - | - |
| 18 | $\begin{array}{\|l\|} \hline 16 \text { miles } \\ \text { west northwest } \end{array}$ | do. | - | 1929 | 280 | - | - | - |
| 19 | $\begin{array}{\|l\|} \hline 14 \frac{1}{2} \text { miles } \\ \text { west northwest } \end{array}$ | do. | - | - | 200 | - | - | - |
| 20 | $\begin{array}{\|l\|} \hline 12 \text { miles } \\ \text { west nor thwest } \end{array}$ | do. | - | - | 90 | 6 | - | - |
| 21 | 14 milus west | do. | - | - | 280 | 6 | - | - |

a/ Old, probably completed prior to 1910.
b/ H, hand pump or rope and bucket; 7 , windmill; A, air lift; $T$, doep well turbine; $J$, jack pump; E, electric motor; $G$, gasoline engine or oil engine.
a/P, public supply; RR, locomotives; I, irrigation; Ind, industrial; D, domestic; S, stock; $N$, not used.
w/ Hardness as calcium carbonate by the soap method.
(All wells are drilled unless otherwise stated in remarks.)

| To. | Water Depth below surface or bench mark (ft.) | levelDate of <br> meas urement | Method of lift and amount of power b) | Use of water c/ | $\left\lvert\, \begin{aligned} & \text { Field } \\ & \text { (Parts } \\ & \frac{\text { mill }}{\text { Chlo- }} \\ & \text { ride } \end{aligned}\right.$ | tests <br> per <br> lion) <br> Hard- <br> ness <br> d/ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 53.8 | Nov. 20, 1933 | 7 | D, S | 85 | 500 | On bank of creek. |
| 2 | 50.0 | do. | H | D, ${ }^{\text {S }}$ | 220 | 500 | do. |
| 3 | 102 | do. | E | $\mathbb{N}$ | 1,100 | 1,300 |  |
| 4 | - | do. | T | D | 440 | 460 |  |
| 5 | - | - | H | D, 5 | 1,000 | 1,000 |  |
| 6 | 50.2 | Nov. 18, 1933 | H | P | 210 | 360 | Tell is near permanent pool in creek. 70 feet of 4 inch casing. Tempere |
| 7 | - | - | $\sqrt{7}$ | D, S | 170 | 370 | ture $76^{\circ} \mathrm{F}$. |
| 8 | - | - | 7\% | D. S | 800 | 950 | Strunk water under hard rock. |
| 9 | - | - | 71 | D, S | 340 | 500 | First water at 90 feet. |
| 10 | - | - | TJ | S | 1,200 | 1,400 |  |
| 11 | - | - | 7 | D.S | 440 | 700 | First water at 85 feet. |
| 12 | 76.8 | Nov. 16, 1933 | T | S | 440 | 550 |  |
| 13 | 95.2 | do. | W | S | - | - |  |
|  | - | - | 7 | S | 750 | 850 |  |
| 15 | - | - | W | D, S | 500 | 500 |  |
| 16 | 71.0 | Mar. 21, 1934 | T | D, E | 400 | 400 | Well cased to 232 feet. |
| 17 | - | - | NT | S | 700 | 700 |  |
| 18 | - | - | 7 | 5 |  | - |  |
| 19 | - | - - | T | S | - | - |  |
| 201 | - | - | N | S | 550 | 850 |  |
| 21 | - | - |  | D, S | - | - |  |
| e/ For analysis of water see under well number in table pp 54 . <br> $\bar{f} /$ Reported by driller. |  |  |  |  |  |  |  |
| / Measured by S. S. Mye, U. S. Geological Survey. |  |  |  |  |  |  |  |
| I/ T. U. Taylcr, underground waters of Coastal Plain of Texas: U. S. Geological |  |  |  |  |  |  |  |

Records of wells in Jim Wells County -- Continued

|  |  |  |  |  |  |  |  | ng bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Distance from Orange Grove | Owner | Driller | Date com-pleted a/ | $\left\lvert\, \begin{gathered} \text { Depth } \\ \text { of } \\ \text { well } \\ (\mathrm{ft},) \end{gathered}\right.$ | $\begin{gathered} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in } \end{gathered}$ | Depth to top of bed (ft.) | $\begin{gathered} \text { Thick- } \\ \text { ness of } \\ \text { bed } \\ \text { (ft.) } \end{gathered}$ |
|  | 14 miles west | Mrs. R. Shaeffer | - | 01 d | 80 | - | - | - |
| 23 | $\begin{aligned} & 14 \frac{1}{2} \text { miles } \\ & \text { west } \end{aligned}$ | do. | - | 1929 | 280 | $4 \frac{1}{2}$ | - | - |
| 24 | 17 miles west | do. | - | 1928 | 380 | 4 $\frac{1}{4}$ | 350 | 30 |
| 25 | $\begin{aligned} & 15 \frac{1}{2} \text { miles } \\ & \text { west } \end{aligned}$ | do. | - | 01d | 180 | $4 \frac{1}{4}$ | - | - |
| 26 | $\begin{aligned} & 13 \frac{1}{2} \text { miles } \\ & \text { west } \end{aligned}$ | do. | - | - | 200 | - | - | - |
| 27 | $\begin{aligned} & \text { 11⿺ } \frac{1}{2} \text { miles } \\ & \text { west } \end{aligned}$ | do. | - | - | 280 | - | - | - |
| 28 | 12 miles west | do. | - | - | 190 | - | - | - |
| 29 | do. | Mrs. <br> R. Shaeffer No. 5 | $\begin{aligned} & \text { Gulf Pro- } \\ & \text { duction Co. } \end{aligned}$ | 1932 | 3,044 | 5-5/8 | - | - |
| 30 | 10 miles west | $\begin{gathered} \text { T. L. } \\ \text { Delemater } \end{gathered}$ | L. Jurgens | - |  |  | - | - |
| 31 | do. | Mrs. <br> M. Stehle | - | - | 400 | 4 $\frac{1}{4}$ | - | - |
| 32 | ```I2 miles``` | Shaeffer, No. 4 | $\begin{aligned} & \text { Gulf Pro- } \\ & \text { duction Co. } \end{aligned}$ | 1931 | 2,362 | 6-5/8 | - | - |
| 33 | $\begin{aligned} & 10 \text { miles } \\ & \text { northwest } \end{aligned}$ | Mrs. R. Shaeffer, ivo. 3 | do. | 1931 | 2,861 | 10 | - | - |
| 34 | $\begin{aligned} & 8 \text { miles } \\ & \text { northwest } \end{aligned}$ | $\begin{gathered} \text { Mrs. R. } \\ \text { Shaeffer, No. } 2 \end{gathered}$ | do. | 1931 | 3,007 | 6-5/8 | - | - |
| 35 | $\begin{aligned} & 7 \frac{1}{2} \text { miles } \\ & \text { west northwest } \end{aligned}$ | M. T. Kelso | J. Cemisack | 1925 | 248 | 3 | 239 | 9 |
| 36 | $\begin{aligned} & 6 \frac{1}{2} \text { miles } \\ & \text { west nor thwest } \end{aligned}$ | Dr. C. Frey | L. Jurgens | 1934 | 212 | 4 $\frac{1}{2}$ | 174 | 30 |
| 37 | $\begin{aligned} & 5 \frac{1}{2} \mathrm{miles} \\ & \text { north northwest } \end{aligned}$ | Charles Cook No. 1 | Magnolia Petroleum | 1929 | 4,795 | 12 ${ }^{\frac{1}{2}}$ | - | - |
| 38 | 4를 miles north northwest | John Benson | - | 01d | 80 | $4 \frac{1}{4}$ | - | - |
| 39 | 3늘 miles north nor thwest | H. Fuhrken | A. C. Thite | 1932 | 341 | 6 | - | - |
| 40 | 3 miles north northwest | A. C. Fuhrken | David Usel | 1913 | 125 | 4 | - | - |
| 41 | 4 miles southwest | -- Smith | L. Jurgens | 1933 | 256 | 4 | 236 | 20 |
| 42 | $3 / 4$ mile west | L. A. Stravb | - | - | 175 | 4 | - | - |
| 43 | $1 / 4$ mile north | B. Comelius | L. Jurgens | 1925 | 245 | 4 | - | - |
| E/44 | In Orange Grove | $\begin{aligned} & \text { Mrso } \\ & \text { G. Toller } \end{aligned}$ | J. Cemisack | 1927 | 217 | 5 | - | - |
| 45 | 6 miles north northesst | -Tade, ITo. 1 | Simms Oil Co. | - | 2,966 | - | - | - |

(All wells are drilled unless otherwise stated in remarks.)

| Wio. | Water Depth below surface or bench mark $(f t$. | $\frac{\text { level }}{$ Date of  <br>  measurement } | Method of lift and amount of power b/ | Use of water c/ | $\|$Field <br> (Parts <br> milli <br> Chlo- <br> ride | tests <br> por <br> ion) <br> Hard- <br> ness <br> d/ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | - | - | W | D.S | - | - | Small supply of water. |
| 23 | 114.2 | Feb. 1, 1934 | T | 5 | 1,000 | 950 |  |
| 24 | - | - | T | S | 500 | 600 | Two good sands above 350 feet. |
| 25 | - | - | 7 | S | 1,400 | 1,600 |  |
| 26 | - | - | TI | S | - | - |  |
| 27 | - | - | 7 | S | 220 | 430 |  |
| 28 | - | - | \% | S | - | - |  |
| 29 | ${ }^{-}$ | - | - | ${ }^{-}$ | ${ }^{-}$ | - | Oil test, Initial pro- estimated at $7,000,000$ cubic feet of gas a dayi |
| 30 | 133.4 | Jan. 25, 1934 | V | D,S | 500 | 370 | Small supply of water reported. |
| 31 | 164.7 | do. | W | D, S | 750 | 1,000 |  |
| 32 | - | - | - | - | - | - | $\begin{aligned} & \text { oil test. No production } \\ & \text { reported. } \underline{\text { i }} \end{aligned}$ |
| 33 | - | - | - | - | - | - | Oil test. No production. i. |
| 34 | - | - | - | - | - | - | do. |
| 35 | - | - | TI | D, | - | - | Casing; 239 feet of 3 inch. First strata at 157 feet. Teak supply. |
| 36 | - | - | - | NT | - | - | New well, pump not yet installed. |
| 37 | - | - | - | - | - | - | Oil test. No production. |
| 38 | 66.5 | Feb. 101934 | T | D, S | 150 | 420 | Reported water level as 15 to 20 feet below surface about 1914. |
| 39 | 101.3 | Feb. 6, 1934 | - | N | - | - | Tell drilled to supply water for drilling oil. |
| 40 | 105.5 | do. | TT | D, S | 850 | 950 | $\longrightarrow$ test. |
| 41 | - | - | W | S | - | - | Casing; 256 feet of 4 inch with bottom 20 feet perforated. First water stratum found at 125 feet |
| 42 | - | - | T | D, S | - | - |  |
| 43 | - | - | T | D,S | - | - | Casing; 209 feet of 4 inch. |
| 44 | 150.6 | War. 21, 1934 | 7 | D | 500 | 500 | Cased to bottom, Tem- perature $78^{\circ} \mathrm{F}$. |
| 45 | - | - | - | - | - | - | Oil test. No production. |

Records of wells in Jim Nells County -- Continued

|  |  |  |  |  |  |  | Water-bear | ng bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Distance from Orange Grove | Owner | Driller | Date com-pleted a/ | $\begin{aligned} & \text { Depth } \\ & \text { of } \\ & \text { well } \\ & (\mathrm{ft} .) \end{aligned}$ | $\begin{array}{\|c\|} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in.) } \end{array}$ | Depth to top of bed (ft.) | Thickness of bed (ft.) |
| e] 46 | $\begin{aligned} & 5 \text { miles east } \\ & \text { northeast } \end{aligned}$ | Tom Bowden | TV. C. David | 1931 | 115 | $4 \frac{1}{4}$ | 112 | $3+$ |
| 47 | $\begin{aligned} & 7 \frac{1}{2} \text { miles } \\ & \text { northeast } \end{aligned}$ | IV. Bruni No. 1 | Simms Oil Co. | - | 2,737 | - | - | - |
| 48 | $\begin{aligned} & 9 \text { miles } \\ & \text { northeast } \\ & \hline \end{aligned}$ | A. T. Teller | A. T. Teller | 1930 | 72 | $4 \frac{1}{4}$ | 70 | $2+$ |
| 49 | $\begin{aligned} & 7 \frac{1}{2} \text { miles } \\ & \text { northeast } \end{aligned}$ | Harry Cade | - | - | 110 | 4 | - | - |
| 50 | $\begin{aligned} & 3 \frac{1}{2} \text { miles } \\ & \text { east } \\ & \hline \end{aligned}$ | Mrs. <br> W. Wiechring | - | O1d | 192 | $4 \frac{1}{4}$ | - | - |
| 51 | $\begin{aligned} & 2-3 / 4 \text { miles } \\ & \text { southeast } \end{aligned}$ | F. B. Boerner | - | 01d | 150 | 5-3/ | $6-$ | - |
| 52 | $\begin{aligned} & 4 \frac{7}{2} \text { miles } \\ & \text { south } \\ & \hline \end{aligned}$ | $\begin{gathered} =-\frac{R a g l a n d,}{} \\ \text { No. } 1 \\ \hline \end{gathered}$ | R. $\& G_{1}$ Corporation | 1929 | 13,003 | 10 | - | - |
| No. | Distance from Alice | Cwner | Driller | Date com-pleted a/ | $\begin{gathered} \text { Depth } \\ \text { of } \\ \text { well } \\ (f t .) \end{gathered}$ | $\begin{gathered} \text { Diam } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in. } \end{gathered}$ | Tater-be Depth to top of bed (ft.) | ring bed ness of bed (ft.) |
| 53 | $\begin{aligned} & 14 \text { miles } \\ & \text { nor thwest } \end{aligned}$ | Eduardo Barrera | R. A. Raba | 1928 | 273 | 4 | - | - |
|  | $\begin{aligned} & 13 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | do. | - | 1922 | 240 | 4 | - | - |
| 55 | $\begin{aligned} & 13 \text { miles } \\ & \text { northwest } \end{aligned}$ | $\begin{aligned} & \text { G. B. } \\ & \text { de Garcia } \end{aligned}$ | - | 01d | 80 | - | - | - |
| 56 | do. | Francisco Barrera | F. G. Garcia | 1914 | 150 | 5 | - | - |
| 57 | $\begin{aligned} & 12 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | G. B. de Garcia | - | O1d | 90 | 4 | - | - |
| 58 | $\begin{aligned} & 12 \text { miles } \\ & \text { northwest } \end{aligned}$ | $\begin{gathered} \text { James Luby, } \\ \text { Est. } \\ \hline \end{gathered}$ | - | - | 131 | 4 | - | - |
| 59 | do. | M. E. Barrow | - | - | 142 | 4 | - | - |
| 60 | $\begin{aligned} & 13 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | $\begin{gathered} \text { James Luby, } \\ \text { Est. } \end{gathered}$ | - | - | 155 | 5 | - | - |
| 61 | $\begin{aligned} & 13 \text { miles } \\ & \text { northwest } \end{aligned}$ | do. | - | - | 110 | 5 | - | - |
| 62 | $13 \frac{1}{2}$ miles northwest | $\begin{aligned} & \text { Mrs. } \\ & \text { R. Shaeffer } \end{aligned}$ | - | 1928 | 400 | - | - | - |
| 63 | $12 \frac{1}{2}$ miles northwest | Black \& Beall | - | - | - | 6 | - | - |
| 64 | 12 miles northwest | D. Saueda | - | 1908 | 126 | 4 | - | - |
| 65 | do. | Nestor Villareal | Juan Hinojosa | 1860 | 62 | 72 | - | - |
| 66 | do. | J. B. Resendes | - | 1925 | 110 | 4 | ${ }^{-}$ | - |
| ef 67 | do. | Manuel Trejo | L. Rodrigues | 1926 | 150 | $4 \frac{1}{4}$ | 145 | 5 |
| 68 | 11咅 miles northwest | Felix Trejo | - | - | 105 | - | - | - |
| 69 | do. | $\begin{gathered} \text { James Luby, } \\ \text { Est. } \\ \hline \end{gathered}$ | - | - | 147 | 5 | - - | - |
| 70 | 11 miles north | T. T. Wright | -- Turner | 1903 | 206 | 6 | - | - |

(All wells are drilled unless otherwise stated in remarks.)

| No. | Filater <br> Depth below <br> surface or <br> bench mark <br> $(f t)$. | $\frac{\text { level }}{\text { Date of }}$measurement | Method of lift and amount of power $\qquad$ | Use of water c/ | $\|$Field <br> (Parts <br> milli <br> Chlo- <br> ride | tests <br> s per <br> ion) <br> Hard- <br> ness <br> d/ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 46 | - | - | E | D, P | 250 | 370 | Casing; 112 feet of $4 \frac{1}{2}$ inch. Temperature $76^{\circ}$ |
| 4 | - | - | - | - | - | - | Oil test. No production. |
| 48 | 42.4 | Feb. 6, 1934 | H | D,S | 75 | 420 | Casing; 68 feet of $4 \frac{1}{2}$ inch. |
| 49 | 77.6 | do. | W | D, S | 240 | 420 |  |
| 50 | 120.0 | do. | W | D, S | 700 | 750 |  |
| 51 | - | - | W | D, S | 550 | 500 |  |
| 52 | - | - | - | - |  |  | Oil test. No production. |
| No. | Tlater <br> Depth below <br> surface or <br> bench mark <br> (ft.) | levelDate of <br> measurement | Method of lift and amount of power b/ | Use of water ㅇ/ |  <br> Field <br> (Parts <br> milli <br> Chic- <br> ride | tests per ion) Hard- ness | Remarks |
| 53 | - | - | T | D,S | 460 | 330 |  |
| 54 | - | - | 7 | S. | - | - | 200 feet of 4 inch casing. First water at Dug well. 60 feet, bad. |
| 56 | - | - | W | D, ${ }^{\text {S }}$ | - | - |  |
| 57 | - | - | \% | D, ${ }^{\text {S }}$ | - | - | Originally dug well 85 feet deep. Drilled to 90 feet in 1905 and filled |
| 58 | - | - | W | D, S | 700 | 850 | $\begin{aligned} & \text { Dug well a round casing } \\ & \text { to } 63 \text { feet, drilled to } \end{aligned}$ |
| 59 | - | - | T | D, S | 650 | 900 | $\underline{131 ~ f e e t ~}$ |
| 60 | - | - | Ti | D,S | - | - |  |
| 61 | - | - | W, F | N | - | - |  |
| 62 | - | - | TV | S | - | - |  |
| 63 | 89.9 | Nov. 22, 1933 | W | D, ${ }^{\text {S }}$ | 1,200 | 650 |  |
| 64 | 59.3 | do. | T | D,S | 800 | 850 |  |
| 65 | 56.9 | do. | 7 | D, S | 1,300 | 1,500 | Dug well, cypress curbing to 50 feet. |
| 66 | - | - | H | D.S | 450 | 450 |  |
| 67 | 64.9 | Mar. 21, 1934 | 7 | D,S | 1,000 | 850 | 145 feet of $4 \frac{1}{4}$ inch casing. |
| 68 | 60 | - | 7 | D,S | 1,900 | 1,500 |  |
| 69 | - | - | W | D, S | 650 | 1,100 |  |
| 70 | - | - | T | D, S | 1,000 | 1,100\| |  |

Records of wells in Jim Jells County - - Continued

|  |  |  |  |  |  |  | Tater-be | ing her |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Distance <br> from <br> Alice | Owner | Driller | Date com-pleted a/ | $\begin{aligned} & \text { pepth } \\ & \text { of } \\ & \text { well } \\ & \text { (ft.) } \end{aligned}$ | $\begin{array}{\|c\|} \text { Diam } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in.o } \end{array}$ | $\begin{aligned} & \text { Depth } \\ & \text { to top } \\ & \text { of bed } \\ & \text { (fto) } \end{aligned}$ | $\begin{aligned} & \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \text { (ft.) } \end{aligned}$ |
| 71 | 12 miles northwest | Francisco Gonzales | - | - | 125 | - | - | - |
| 72 | 11 $\frac{1}{2}$ miles nor thwest | $\begin{array}{r} \text { Cumilo } \\ \text { Palacios } \end{array}$ | - | - | 125 | - | - | - |
| 73 | 11 miles northwest | $\begin{gathered} \text { James Luby, } \\ \text { Est. } \end{gathered}$ | - | ल1d | 236 | 5 | - | - |
| 74 | do. | Mrs. Martha Gonzales | - | 1890 | 78 | 60 | - | - |
| 75 | do. | R, Rebles | - | 1910 | 85 | 60 | - | - |
| 76 | $10 \frac{T}{2}$ miles northwest | Amando $G$. Martinez | - | - | 154 | 5 | - | - |
| 77 | do. | $\begin{gathered} \text { James Luby, } \\ \text { Est. } \end{gathered}$ | - | - | 137 | 6 | - | - |
| 78 | 10 miles northwest | Juanita V, Everette | - | 1888 | 62 | 72 | - | - |
| 782 | do. | do. | - | 1908 | 200 | 5 | - | - |
| 79 | 10 miles north northwest | Francisco Gonzales | $\begin{gathered} \text { Panteleon } \\ \text { Rostro } \end{gathered}$ | $\begin{array}{\|c\|} \hline 1850 \\ ? \\ \hline \end{array}$ | 68 | 72 | - | - |
| 80 | 9 miles north northwest | Clemente Hinojosa | - | 1921 | 130 | 4 | - | - |
| 81 | do. | Antonio Perez | - | - | 226 | - | - | - |
| 82 | do. | Clemente Hinojosa | - | 1909 | 200 | 6 | - | - |
| 83 | 11 miles north northeast | L. Jurgens | - | $\begin{gathered} 1910 \\ ? \end{gathered}$ | 160 | $4 \frac{1}{4}$ | - | - |
| 84 | 10 miles north northesst | T. T. Perry | John Riggins | 1921 | 290 | 5 | 270 | 20 |
| 85 | do. | School Dist. No. 12 | - | 1914 | 267 | $4 \frac{1}{4}$ | - | - |
| 86 | $9 \frac{1}{2}$ miles north northeast | B. Cornelius | L. Jurgens | - | 243 | 4 | - | - |
| 87 | 8 miles northeast | $\begin{gathered} \text { J. H. } \\ \text { Hoelscher } \end{gathered}$ | - | 1913 | 255 | 6 | - | - |
|  | 7 miles northeast | $\begin{gathered} \text { Alamo } \\ \text { National Bank } \end{gathered}$ | - | 1927 | 429 | 4 | 390 | 429 |
| $\text { ef } 89$ | 6 miles north northeast | T. S. Wimbs |  | 1928 | 431 | 6 | - | - |
| 90 | 6t miles nor thwest | T. B. Gregory | W.B. Gregory | - | 150 | 6 | - | - |
| 91 | $4 \frac{1}{4}$ miles north | San Antonio Loan \& Trust Co | mintson Bros. | 1926 | 375 | $4 \frac{1}{4}$ | 363 | 12 |
| 92 | 5 miles northeast | N. C. Wedimeyer | - | 1925 | 417 | $4 \frac{1}{4}$ | - | - |
| 93 | $7 \frac{1}{2}$ miles northeast | V. E. Bird | Thitson Bros. | 1925 | 314 | 6 | 295 | 19 |

(All wells are drilled unless otherwise stated in remarks,)

| No. | Tater <br> Depth below <br> surface or <br> bench mark <br> (ft.) | level Date of measurement | Method of lift and amount of power b/ | Use of water c/ | $\|$Field <br> (Parts <br> milli <br> Chlo- <br> ride | tests per on) Hard- ness d/ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 71 | - | - | T | D, S | - | - |  |
| 72 | - | - | W | D,S | - | - |  |
| 73 | - | - | J, G, - | S | 1,100 | 1,800 | Water used for irrigatio until 5 years ago when the water became salty. |
| 74 | 63.0 | Nov. 21, 1933 | 7 | D, S | 750 | 800 | Dug well. |
| 75 | 72.0 | do. | \# | D, S | 1,100 | 1,800 | Dug well 85 feet deep with uncased,drilled |
| 76 | - | - | 7 | D,S | - | - | well 12 feet deeper. |
| 77 | - | - | W | 5 | - | - | TTell was originally dug 110 feet deep, drilled to 137 feet and filled |
| 78 | 54.2 | Nov. 10, 1933 | - | N | 1,000 | 2,000 | Dug well. a round casine. Wes used until 1908 when well was drilled deeper. |
| 788 | a 60.4 | do. | VI | D, ${ }^{\text {S }}$ | 750 | 1,200 | Casing of drilled well stands above water in |
| 79 | 62.4 | Nov. 12, 1933 | - | N | - | - | $\begin{aligned} & \text { Dug dug well, No. } 78 . \\ & \text { well, } \\ & \hline \end{aligned}$ |
| 80 | 63.4 | Nov. 9, 1933 | W | S | - | - | 60 feet of 4 inch casing. |
| 81 | 135.8 | Nov. 12, 1933 | Ti | D, ${ }^{\text {S }}$ | - | - |  |
| 82 | 86.0 | Not. 9, 1933 | T 7 | D, S | - | - | Owner reports this well has small supply of water |
| 83 | - | - | 7 | D, S | - | - |  |
| 84 | - | - | J.G | D,S | 950 | 650 | Water reported recently turned salty. |
| 85 | - | - | TT | P | 400 | 270 |  |
| 86 87 | - | - | 7 | D.S | - | - | Original well 105 feet deep, deepened for more dependable supply. |
| 88 | 90.0 | Feb. 1, 1934 | A,G, - | D, S | 650 | 500 |  |
| 89 | 96.8 | Feb. 10, 1934 | A,G, - | D, S | 650 | 600 |  |
| 90 | 35.6 | Nov. 15, 1933 | W | D,S | - | - | Originally had old dug well 35 feet deep. |
| 91 | - | - | V | D, S | 750 | 550 | Casing; 6 inches at surface and $4 \frac{1}{4}$ inch set at 375 feet with lower |
| 92 | 91.1 | Jan. 26, 1934 | T | D,S | 650 | 440 | Cas- 8 feet perforated. ing; 284 feet of 5 inch and 220 feet of $4 \frac{1}{2}$ inch with bottom joint perfor- |
| 93 | 105.2 | Feb. 8, 1934 | Tif | D,S | 700 | 440 | ated. |


| To. | Distance <br> from <br> Alice | Owner | Driller | $\begin{gathered} \text { Date } \\ \text { com- } \\ \text { ple- } \\ \text { ted } \\ \text { a/ } \end{gathered}$ | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ \text { (ft. }) \end{array}\right\|$ | Water-bearing ber |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{array}{\|c\|c} \text { Iiem- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in. }) \end{array}$ | Fepth to top of bed $(\mathrm{ft}, \mathrm{l})$ | Thickness of bed (ft.) |
| 94 | $\begin{aligned} & 8 \text { miles } \\ & \text { northeast } \end{aligned}$ | John Bird | Thitson Bros. |  | 348 | 6 | 328 | 20 |
| 2] 95 | $\begin{aligned} & 9 \text { miles } \\ & \text { northeast } \end{aligned}$ | 3. Thitley | - | 1905 | 1,600 | 12글 | - | - |
| e796 | $\begin{aligned} & 9_{\frac{1}{4} \text { miles }}^{\text {northeast }} \end{aligned}$ | Fayden and Reeves | - | - | 175 | - | - | - |
| 97 | 9 miles east northeast | E. Sain | Frank Thitson | 1932 | 521 | $4 \frac{7}{4}$ | 515 | $6+$ |
| 98 | 4 miles north northeast | Temple Lumber Co. | - | - | 380 | 6 | - | - |
| 99 | $3 \frac{1}{4}$ miles north | Pablo Ferez | - | - | 45 | 48 | - | - |
| 99 a do |  | do. | - | - | 112 | 6 | - | - |
| 100 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { north } \end{aligned}$ | Mrs. <br> Vera Blinka | Whitson Bros. | 1925 | 336 | 6 | 308 | 28 |
| 101 | $\begin{aligned} & 9 \frac{1}{2} \text { miles west } \\ & \text { northwest } \end{aligned}$ | N. A. Hoffman | - | $\begin{gathered} 1900 \\ ? \end{gathered}$ | 138 | 6 | - | - |
| 102 | , | James Luby, Est. | - | 01d | 71 | 60 | - | - |
| 103 | $\begin{aligned} & 9 \text { miles west } \\ & \text { northwest } \\ & \hline \end{aligned}$ | M. J. Luby | - | - | 95 | 6 | - | - |
| 104 | do. | R. C. Filliot | - | - | 197 | 4 | - | - |
| 105 | 7 miles west northwest | Otto Brandt | - | - | 260 | 4 | - | - |
| 106 | $\begin{aligned} & 8 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | Hawkins and गallis | Tom Leary | 1906 | 1,866 | $8 \frac{1}{4}$ | $\begin{array}{r} 545 \\ 1,550 \\ \hline \end{array}$ | $\begin{array}{r} 5 \\ 20 \\ \hline \end{array}$ |
| 107 | 7 miles northwest | M. L. Luby | - | - | 349 | - | - | - |
| $\begin{array}{r} 108 \\ \bar{e} / 109 \end{array}$ | 9 miles west do. | J. H. Reynolds M. J. Luby | Joe Gonzales | $\left\lvert\, \begin{gathered} 1927 \\ 01 \mathrm{~d} \end{gathered}\right.$ | $\begin{array}{r} 114 \\ \\ 87 \end{array}$ | 6 | $\cdots$ | $\frac{-}{-}$ |
| 110 | do. | Lawrence Tiblier | - | - | 135 | 4 | - | - |
| 111 | 8 miles west | Lucio Arredondo | Ernest Riley | 1919 | 120 | 5 | - | - |
| 112 | do. | Reguilo Comez | - | 1913 | 130 | 4 | - | - |
| e/113 | 7 miles west | James Talker | - | - | 50 | 6 | - | - |
| e/114 | do. | $\begin{gathered} \text { C.F. Longwish, } \\ \text { Fst. } \end{gathered}$ | - | 01d | 53 | 6 | - | - |

a/ Cld, probably completed prior to 1910.
H , hand pump or rope and bucket; $T$, windmill; $A$, air lift; $T$, deep well turbine; $J$, jack pump; $F$, electric motor; $G$, gasoline engine or oil engine. c/ P, public supply; RR, locomotives; I, irrigation; Ind., industrial; D, domestic; S, stcok; $N$, not used.
d/ Hardness as caloium carbonate by the soap method.
(All wells are drilled unless otherwise stated in remarks.)

| No. | Water Durface or sench mark $(f t$. | $\begin{aligned} & \text { Ievel } \\ & \text { Date of } \\ & \text { measurement } \end{aligned}$ | Method of lift and amount of power b/ | Use of water c/ | $\|$Field <br> (Part <br> mil <br> Chlo- <br> ride | tests per ion) Hard- ness a/ | + Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 94 | 107.3 | Feb. 8, 1934 | ग | D, S | 800 | 550 | Casing; 6 inch at surfacs and $4 \frac{1}{4}$ inch to 348 feet with bottom 20 feet per- |
| 95 | 91.0 | do. | T | D, S | 600 | 270 | forated. |
| 96 | - | - | T | D S | 600 | 550 |  |
| 97 | 82.4 | Feb. 8, 1934 | T | D, S | 450 | 350 | Casing; 521 feet of $4 \frac{1}{2}$ inch. |
| 98 | - | - | T | D,S | 1,500 | 1,200 |  |
| 99 | 31.3 | Nov. 2, 1933 | - | D, ${ }^{\text {S }}$ | - | - | Dug well, too weak for use during dry weather. |
| 998 | 31.3 | do. | W | D, 5 | - | - | Drilled well in bottom of dug well, No. 99, with casing perforated so both stratas are connected. |
| 100 | - | - | 7 | D, 5 | - | - | Casing: 6 inch at surface and $4 \frac{1}{4}$ inch to 336 feet with lower 20 feet per- |
| 101 | - | - | H | N | - | - | forated. |
| 102 | 65.5 | Nov. 27, 1933 | T | S | 450 | 650 | Dug well. |
| 103 | 62.3 | do. | 7 | S | - | - |  |
| 104 | - | - | T | S | - | - |  |
| 105 | - | - | T | D.S | - | - |  |
| 106 | $\begin{array}{r} 18 . \\ \mathrm{c} / 102.8 \end{array}$ | Mar. 3,1933 | - | N | - | - | Nell abandoned, plugged at 56 feet. |
| 107 | - | - | - | - | - | - |  |
| 108 | - | - | T1 | D, S | 220 | 230 | 15 feet of 6 inch casing. |
| 109 | 37.5 | Jan. 4, 1934 | H | N | - | - |  |
| 110 | 61.0 | do. | 7 | D, S | 500 | 400 |  |
| 111 | - | - | W | D, S | 410 | 450 | 14 feet of 5 inch casing. |
| 112 | - | - | H | D, ${ }^{\text {S }}$ | 1,200 | 1,300 | 20 feet of 4 inch casing. |
| 113 | 34.0 | Jan. 8, 1934 | T | D,S | 120 | 290 | Small garden irrigated. |
| 114 | 35.9 | do. | - | N | - | - |  |

e/ For analysis of water see under well number in table pp. 54 .
$\bar{f} /$ Reported by driller.
g/ Measured by S. S. Nye, U. S. Geological Survey.
h/ Sulphate test by turbidity method and may be as much as 25 per cent in error. T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Nater-Supply Paper 190, 1907.

Records of wells in Jim "Tells County -- Continued

|  |  |  |  |  |  |  | fater-be | ing bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Distance <br> from <br> Alice | Owner | Driller | $\begin{array}{\|c} \text { Date } \\ \text { com- } \\ \text { ple- } \\ \text { ted } \\ \text { a/ } \\ \hline \end{array}$ | $\left\|\begin{array}{c} \text { Depth } \\ o f \\ \text { well } \\ (f t,) \end{array}\right\|$ | $\begin{gathered} \text { Piam-1 } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { in, } \end{gathered}$ | Depth to top of bed (ft.) | $\begin{gathered} \text { Thick- } \\ \text { ness of } \\ \text { bed } \\ (f t .) \end{gathered}$ |
| 115 | 7 miles west | A. Koopmann | - | 01d | 265 |  | - | - - |
| $\underline{6 / 116}$ | do. | A. L. Stokes | Tom Leary | 1907 | 1,500 | 5-3/ | 161- | $\cdots$ |
| 117 | 71 $\frac{1}{2}$ miles west | Mr . H. F. Clark | Clyde Miller | 1918 | 350 | $4 \frac{7}{4}$ | - | - |
| 118 | 7 miles west southwest | A. Bowen | R.Albert | -1927 | 89 | $\overline{6}$ | - | - |
| 119 | 8 miles west southwest | P. T. Firight | - | 1916 | 120 | 4 | - | - |
| 120 | $7 \frac{1}{2}$ miles west southwest | G. J. Paschall | Ernest Riley | 1929 | 160 | 5-3/ | 15 - | - |
| 121 | $6 \frac{1}{2}$ miles west southwest | John Stromberg | J.m. Davis | 1913 | 147 |  | $5$ | - |
| 122 | $5 \frac{1}{2}$ miles west | J. S. Floyd | - | - | 68 | $2 \frac{1}{2}$ | - | - |
| 123 | do. | do. | Joe Gonzales | 1931 | 456 |  | ]- | - |
| 124 | do. | 0. 7. Schmidt | A. C. Mhite | 1928 | 310 | 6 | 290 | 20 |
| 125 | $4 \frac{1}{4}$ miles west | Ernesto Uresta, et al. | - | $\begin{gathered} 1908 \\ 8 \\ \hline \end{gathered}$ | 85 | $3 \frac{1}{2}$ | - | - |
| 123 | $\begin{aligned} & \text { 4 } \frac{1}{2} \text { miles west } \\ & \text { southwest } \end{aligned}$ | Holmgreen and Martins | - | $\begin{gathered} 1910 \\ ? \end{gathered}$ | 130 | 4 | - | - |
| 127 | $\begin{aligned} & 5 \text { miles } \\ & \text { southwest } \end{aligned}$ | Tm. Franks | R. Albert | 1932 | 188 | 4 | - | - |
| 128 | do. | do. | - | - | 110 | 4 | - | - |
| 129 | $\left[\begin{array}{l} 7 \text { miles } \\ \text { southwest } \end{array}\right.$ | T. F. $\overline{\text { Book }}$ | A. C. White | 1926 | 360 |  | $16 \sqrt{300}$ | 58 |
| 130 | do. | C. A. Austin | do. | 1930 | 234 | $4 \frac{1}{4}$ | 216 | 18 |
| -131 | $\begin{aligned} & \frac{3 x}{3} \text { miles } \\ & \text { west } \end{aligned}$ | Parlo Pana |  | - | 120 | 3 | - | - |
| e/132 | $3 \frac{7}{4}$ miles west | Anastacio Lopez | Nicolas <br> Martinez | - | 120 | 5 | - | - |
| 133 | 3 miles west | David Pena | - | - |  |  | - | - |
| 134 | $\left\lvert\, \begin{aligned} & 3 \frac{1}{4} \text { miles } \\ & \text { southwest } \end{aligned}\right.$ | T. R. Perkins | - | - | 141 | 6 | - | - |
| 135 | $\begin{aligned} & 3-3 / 4 \text { miles } \\ & \text { southwest } \end{aligned}$ | Taylor Bros. | R. A. Albert | 1929 | 206 | 4 | - | - |
| 136 | $\begin{aligned} & 4-3 / 4 \text { miles } \\ & \text { southwest } \end{aligned}$ | 3ichard Albert | do. | 1933 | 122 | 4 | 110 | 17 |
| 137 | $\begin{aligned} & 5 \text { miles } \\ & \text { southwest } \end{aligned}$ | Otto Goldapp | do. | 1925 | 191 |  | $16]^{182}$ | 8 |
| 138 | 5늘 miles southwest | T. J. Schutte | do. | 1925 | 218 | $4 \frac{1}{4}$ | 208 | 10 |
| 139 | $\begin{aligned} & 6 \text { miles } \\ & \text { southwest } \end{aligned}$ | L. A. Echuter | R. AIbert \& A. C. Thite | $\begin{aligned} & 1925 \\ & 1933 \end{aligned}$ | 351 | $4 \frac{7}{4}$ | $\begin{aligned} & 115 \\ & 208 \\ & 325 \end{aligned}$ | $\begin{array}{r} 10 \\ 2 \\ 26 \end{array}$ |

（All wells aro drilled unless otherwise steted in remarks．）

| No． | Vater <br> Depth below surface or bench fark （ft．） | level <br> Date of <br> measurement | Method of lift and amount of power b／ | Use of water c／ | $\|$Field <br> （parts <br> mill <br> Chir－ <br> ride | $\begin{gathered} \hline \text { tests } \\ \text { s per } \\ \text { linn } \\ \text { Frard } \\ \text { ness } \\ d / \\ \hline \end{gathered}$ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 115 | 109.0 | Jan．8，1934 | I | D．S | 190 | 170 |  |
| 116 | － | － | 7 | $\overline{\mathrm{D}, \mathrm{S}, \mathrm{I}}$ | 210 | 120 | Small garden irrigated． |
| 117 | － | － | $\pi$ | D，S | 900 | 750 |  |
| 118 | 60.9 | Jan．10， 1934 | 7 | D，S | 900 | 800 | Very weak supply． |
| 119 | 91.1 | Jan．5，1934 | T | D， S | 1，100 | 1，000 |  |
| 120 | － | － | TiT | D，S | 1，400 | 1，200 | Casing； 145 feet of $5-$ 3／16 inch．Had old well 80 feet deep，reported as weak supply and bad wate． |
| 121 | － | － | 埌 | D， S | 1，300 | 1，400 | Very little casing in well． |
| 122 | 55.0 | Jan．7， 1933 | － | N | 1，500 | 1，200 | Dug well． |
| 123 | 102.8 | do． | 7i | D，S，I | 380 | 370 | Casing； 250 feet of $6-$ $5 / 8$ inch balance uncaser Garden irrigated． |
| 124 | － | － | 交 | D， 5 | 500 | 400 | Casing； 310 feet of 6 inch． |
| 125 | 56.9 | Jan．16， 1933 | 7 | D，S | 480 | 550 |  |
| 126 | 93.0 | Jan．8， 1934 | 算 | D，S | 1，500 | 1，800 | －7ell on property line． |
| 127 | － | － | T | D，S | 7，500 | 1，5n0 | Casing； 185 feet of 4 inch． |
| 128 | － | － | － | N | 1，100 | 750 | Tell abandoned because of bad water． |
| 129 | － | － | J，G， | D，S | 550 |  | Casing； 300 feet of $5-$ 3／16 inch． |
| 130 | － | － | 7 | D，S | 1，000 | 650 | Other sands at 90 and 130 feet reported as bad wats |
| 131 | 60.7 | Jan．16， 1933 | I | D，S | 450 | 550 |  |
| 132 | 57.95 | Jan．3， 1934 | V | D．S | 800 | 850 |  |
| 133 | 61.1 | Jan．16， 1933 | \％ | D，S | 450 | 600 |  |
| 134 | 102.9 | Jan．10，1934 | 7 | D，S | 1，300 | 1，100 | t |
| 135 | 92.6 | Jan．9， 1934 | \％ | D，S | 2，800 | 2，600 | inoh．Water was good unt： about one year ago．Can－ ing leaks now． |
| 136 | － | － | － | N | － | － | Casing；185 |
| 137 | 96.3 | Jan．5， 1934 | W | D， 5 | 900 | 750 | feet of 5－3／16 inch． Casing； 209 feet of $4 \frac{1}{4}$ |
| 138 | － | － | 柯 | D． 5 | 450 | 470 | inch．Original well，239 <br> feet deep，was too weak |
| 139 | － | － | 7 | D， 5 | 460 | 330 | deepened to 351 feet for larger supply．Casing；200 feet of $4 \frac{1}{4}$ inch， 160 feet of $3 \frac{1}{4}$ inch with bottom 80 feet perforated． |

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Records of wells in Jim Tells County -- Continued

|  |  |  |  |  |  |  | t | ng bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Distance <br> from <br> Alice | Owner | Driller | Date com-pleted a) | $\left(\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ (f t .) \end{array}\right.$ | $\left\lvert\, \begin{gathered} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in. }) \end{gathered}\right.$ | $\begin{aligned} & \text { Depth } \\ & \text { to top } \\ & \text { of bed } \\ & \text { (ft.) } \end{aligned}$ | Thickness of bed (ft.) |
| 140 | $\begin{aligned} & 5 \text { miles so uth } \\ & \text { southwest } \end{aligned}$ | $\begin{aligned} & \text { Chas. } \\ & \text { Stillwell } \end{aligned}$ | Ignacio <br> Trevino | 1924 | 138 | $4 \frac{1}{4}$ | - | - |
| 141 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { west } \end{aligned}$ | -- Norton | - | - | - | $4 \frac{1}{4}$ | - | - |
| $e / 142$ | lit miles west | J. B. Polk | - | 1924 | 129 | 5-37 | $6]^{128}$ | $1 \frac{1}{2}$ |
| 143 | $2 \frac{1}{4}$ miles south southwest | Taylor Bros. | A. C. Thite | 1926 | 380 | 4 | 360 | 20 |
| 144 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { south } \end{aligned}$ | Geo. A. Clegg | - | $\begin{gathered} 1905 \\ ? \\ \hline \end{gathered}$ | 863 | 4 | - | - |
| 145 | $\begin{aligned} & 2-3 / 4 \mathrm{miles} \\ & \text { south } \end{aligned}$ | S. C. Ingram | - | $\begin{gathered} 1910 \\ ? \end{gathered}$ | 460 | $3 \frac{1}{4}$ | - | - |
| 146 | 4 miles south | B. J. Lyan | A. B. Fuller | 1909 | 521 | 5 | - | - |
| 147 | $\frac{1}{4}$ mile west | B. A. Kempe | A. C. Mhite | 1930 | 140 | 6 | $\begin{aligned} & 111 \\ & 133 \end{aligned}$ | $\begin{aligned} & 9 \\ & 7 \end{aligned}$ |
| 148 | Alice | City of Alice | Layne Texas | 1928 | 751 | 12 | $\begin{aligned} & 376 \\ & 482 \end{aligned}$ | $\begin{aligned} & 30 \\ & 56 \end{aligned}$ |
| 149 | $\frac{1}{4}$ mile west | Central Power \& Light Co. | A. C. White | 1925 | 560 | 6 | 505 |  |
| 150 | Alice | do | do | 1928 | 120 | 6 | 107 | $13-$ |
| e/151 | $\frac{1}{4}$ mile west | Alioe Cotton Oil Mill | A. B. Fuller | 1909 | 544 | 6 | 500 | 44 |
| 152 | Alice | do. | do. | 1927 | 141 | 6 | - | - |
| $9 / 153$ | do. | City of Alice No. 4 | - | 1938 | 622 | 5 | 600 | 22 |
| 154 | do. | City of Alice No. 3 | $\cdots$ | 1936 | 535 | 5 | $\begin{array}{r} 400 \\ 510 \\ \hline \end{array}$ | $\begin{aligned} & 23 \\ & 25 \\ & \hline \end{aligned}$ |
| e/155 | do. | City of Alice No. 2 | mitson Bros. | 1920 | 550 | $5-3$ | $16502$ | 33 |

(All wells are drilled unless otherwise stated in remarks.)

| No. | Tater <br> Depth below <br> surface or <br> bench mark <br> $(f t)$. | level Date of measurement | $\left.\left\lvert\, \begin{array}{c}\text { Method of } \\ \text { lift and } \\ \text { amount of } \\ \text { power } \\ b /\end{array}\right.\right]$ | Use of water c/ | $\|$Field <br> (Parts <br> milli <br> Chlo- <br> ride | tests sper ion) <br> Hardness d/ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 140 | 83.2 | Jan. 8, 1934 | T | D, S | 800 | 600 |  |
| 141 | 93.6 | Jan. 16, 1933 | T | D, S | 350 | 280 | Small garden irrigated. |
| 142 | 90.2 | Feb. 4, 1933 | W | D, ${ }^{\text {c }}$ | - | - | 129 feet of $5-3 / 16$ inch casing. |
| 143 | - | - | 斯 | D,S | 430 | 180 | 380 feet of 4 inch casing. |
| 144 | - | - | TT | D, S | 340 | 40 |  |
| 145 | - | - | T1 | D, | 3,000 | 3,000 | Water was good when well was completed. |
| 146 | 107.8 | Jan. 9, 1934 | 7 | D,S | 650 | 250 |  |
| 147 | 80.9 | $\operatorname{Jan} .15,1934$ | J, F, - | D, S | 95 | 200 | Tater used to make ice by C. P. \& L. Co. |
| 148 | 120.8 | Jan. 3, 1934 | $\square$ | N | $\cdots$ | - | Casing: 378 feet of 12 inch, 200 feet of 6 inch with 36 foot lap and strainers from 378 to 408 and 483 to 539. Water level reported as 115 feet when completed, June 9, 1928. f/ |
| 149 | $\begin{array}{r} 6 / 123.2 \\ 133.3 \end{array}$ | Mar. 3,1928 <br> Jan. 15, 1934 | A, E, - | Ind. | 650 | 220 | Casing; 505 feet of 6 inch. Used for cooling purposes. |
| 750 | 84.5 | Mar. 3, 1928 | ${ }^{-}$ | N | - | - | This well was abandoned, filled to 78 feet and was dry Jan. $3,1934$. |
| 151 | - | - | A, E, - | Ind. | 460 | 700 | Used for cooling purposes. |
| 152 | - | - | ${ }^{-}$ | - | - | - | Reported to have had good water but weak sup- ply. Now abandoned. |
| 153 | - | - | A, O, - | P | - | - |  |
| 154 | 143.2 | Jan. 15, 1934 | A,O,- | P | 450 | 210 |  |
| 155 | - | - | A,, , | P | 430 | $230$ | 502 feet of $5-3 / 16$ inch casing. Temperature $82^{\circ} \mathrm{F}$. |

-17-
Records of wells in Jim Tells County -- Continued

(All wells are drilled unless otherwise stated in remarks.)

| No. | $\begin{gathered} \text { Tater } \\ \text { Depth belcw } \\ \text { surface or } \\ \text { bench mark } \\ (f t,) \end{gathered}$ | level Date of measurement | Method of lift and amount of power b/ | Use of water c/ | Field tests <br> (Parts per <br> million) <br> Chlo- Hard- <br> ride ness <br> $d$ | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 156 | $\begin{array}{r} 55.5 \\ 58.5 \end{array}$ | Feb. 27,1928 Jan. 2, 1934 | $\begin{gathered} \mathrm{T}, \mathrm{E}, 40 \\ \mathrm{H}, \mathrm{~F} \end{gathered}$ | P | 270110 | Well drilled to 2,068 feet, Casing; 250 feet of 16 inch, 1,108 feet of 8 inch with 12 foot lap into 16 inch, 653 feet of 6 inch with 16 foot lap into 8 inch and 89 feet of 4 inch with swedge nipple. Strainers set at 837 to 867,945 to $986,1,078$ to 1,139 , 1,280 to 1,327 , and 1,958 to 2,004 feet. Well tested, then plugged at 1,347 feet, tested again and plugged at 992 feet. See analysis table for analyses of water from various strata. |
| 157 | 85.5 | Jan. 27, 1033 | T | D, S | $550 \quad 700$ |  |
| 158 | - | - | W | S | 2,500 1,500 | Temperature $76^{\circ} \mathrm{F}$. |
| 159 | 90.0 | Jan. 27, 1933 | J,G,- | D, $\overline{\text { S }}$ | 800600 |  |
| 160 | 80.6 | do. | 第 | S | 3,000 2,300 | $\begin{aligned} & \text { Sulphate } 900 \text { parts per } \\ & \text { million. } h / \end{aligned}$ |
| 161 | 94.6 | Feb. 24, 1933 | 7 | S | 1,800 1,400 |  |
| 162 | 74.2 | Jan. 151934 | TT | D, S | $600 \quad 400$ |  |
| 163 | 75.6 | do. | TI | D, S | 1,100 1,000 |  |
| 164 | - | - | W | D,S | $550-370$ | Casing; 300 feet of 4 inch, 100 feet of $3 \frac{1}{4}$ inch with 2 feet perfo- |
| 165 | - | - | J, G, - | P | $800 \quad 350$ | 443 feet of $4 \frac{1}{4}$ ratea |
| 166 | 82.0 | Jan. 15, 1934 | 7 | S | 2,000 1,400 | 138 feet of perforated. 4 inch casing. |
| 167 | 100.4 | Feb. 19, 1934 | 而 | D, S | 1,100 750 |  |
| 168 | 93.4 | Feb. 9, 1934 | T | D, S | - - |  |
| 169 | - |  | H | D, 5 | $280 \quad 210$ | 10 feet of 6 inch casing Water found in Caliche. |
| 170 | 68.1 | Jan. 27, 1933 | W | 5 | 1,700 1,000 |  |
| 171 | 72.3 | Jan. 15, 1934 | TiT | D.S | - - |  |


| $\cdots$. | Distance <br> from <br> Ben Bolt | Owner | Driller | Date com-pleted a/ | $\left(\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { vell } \\ (f t .) \end{array}\right.$ | riameter of well (in, | $\begin{aligned} & \text { ater-be } \\ & \text { Depth } \\ & \text { to top } \\ & \text { of bod } \\ & \text { (ft.) } \end{aligned}$ | ing bed <br> Thick- <br> ness of bed (ft.) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| - 172 | $\begin{aligned} & 3-3 / 4 \text { miles } \\ & \text { northeast } \end{aligned}$ | August Dnring | - |  | 448 | 5-3/ | TGT | - - |
| 173 | $3 \frac{\mathrm{~T}}{\mathrm{z}}$ miles northeast | Deering NC. 1 | Diamond s . Oil Co. | - | 4,344 |  | - | - |
| 174 | $\begin{aligned} & 2-3 / 4 \text { miles } \\ & \text { north northeast } \end{aligned}$ | C. E. Savage | -1... 0 .... | 1929 |  | 5-3/ | 6 |  |
| $0 / 175$ | $\begin{aligned} & 2 \text { miles north } \\ & \text { northeast } \\ & \hline \end{aligned}$ | 7. F. Botard | John Riggins | 1921 | 349 | 3 | - | - |
| 176 | $\begin{aligned} & 4 \text { miles } \\ & \text { northeast } \end{aligned}$ | Mary Shear | A. C. White | 1926 | 460 | 3 $\frac{1}{2}$ | - | - |
| 177 | 5 miles east northeast | E. L. Kelly | - | $\begin{gathered} 1916 \\ ? \end{gathered}$ | 198 | 4 | - | - |
| 178 | $\begin{aligned} & \text { 6I miles east } \\ & \text { northeast } \end{aligned}$ | Magnolia Colony | Tom Leary | 1909 | 1,510 | $4 \frac{1}{4}$ | $\begin{aligned} & 435 \\ & 880 \end{aligned}$ | $\begin{aligned} & 35 \\ & 38 \end{aligned}$ |
| 179 | 3 miles east | TV. $\overline{4}$. Seefeld | - |  | 90 $?$ | - | - | - |
| 180 | $4 \frac{1}{2}$ miles east | Pedro Garcia | - | - | - | - | - | - |
| 181 | $1 \frac{}{\frac{1}{x} \text { miles east }}$ | Romana $V$. de Garcia | A. C. White | - | 460 | $4 \frac{1}{4}$ | 420 | $40^{-}$ |
| 182 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { north northwest } \end{aligned}$ | J. W. Startz | L. Jurgens | 1920 | 130 | 4 | - | - |
| 183 | $3 \frac{1}{2}$ miles west | do. | - | 1923 $?$ | 135 | $\overline{6}$ | - | - |
| 184 | $2 \frac{7}{4}$ miles west | J. J. Thite | A, C. White | 1926 | 423 | $4 \frac{1}{4}$ | 383 | 40 |
| 185 | 1 1 miles west | C. F. Stacy | - | - | 130 | 4 | - | - |
| 186 | $2 \frac{7}{2}$ miles west southwest | T. A. Hoffman | - | - | - | - | - | - |
| 187 | 1 mile west southwest | Tix. A. Sodek | - | - | 110 | 3 | - | - |
| 188 | $\frac{1}{4}$ mile west southwest | J. P. Blake | - | - | - | $4 \frac{1}{4}$ | - | - |
| 189 | Ben Bolt | School Dist. No. 7 | A. C. White | 1934 | 398 | $4 \frac{1}{4}$ | 345 | 50 |

ITOl, probably completed prior to 1910.
$H$, hand pump or rope and bucket; T , windmill; A, air lift; $T$, deep well turbine; $J$, jack pump; F, electric motor; $G$, gasoline engine or oil engine,
P, public supply; RR, locomotives; I, irrigation; Ind., industrial; D, domestic; s, stook; $N$, not used.
Hardness as calcium carbonate hy the soap method.
(All wells are drilled unless otherwise stated in remarks,)

| No. | Dater Depth below surface or bench mark (ft.) | level <br> Date of <br> measurement | kothad of lift and amount of power b/ | Use of water c/ | Field tests <br> parts per million <br> Chlo- Hard- Sul. <br> ride ness |  | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 172 | 89.5 | Jan. 27, 1933 | - 7 | D,S | 1,200 1,300 | - |  |
| 173 | - | - | - | N | - - |  | Oil test. No production. |
| 174 | - | - | 7 | D, 8 | 700400 | - |  |
| 175 | - | - | T, E | D, S | $330 \quad 120$ |  | Irrigates small garden. |
| 176 | - | - | TiT | D,S | $330 \quad 120$ |  | 460 feet of $3-1 / 3$ inch casing. |
| 177 | - | ${ }^{-}$ | T] | S | 4,800 2,800 |  | Unfit for domestic use. Cattle do not like to drink it. |
| 178 | 67.2 | Feb. 5, 1934 | 7 | D, S | $340 \quad 150$ |  | Water became salty in 1928. Well repain ed by inserting 250 feet of $4 \frac{1}{4}$ inch casing with packer in end and cementing between new and old |
| 179 | - | - | T | S | $650 \quad 550$ |  | ```lile at casings.``` |
| 180 | - | - | T | S | 2,200 1,300 | - |  |
| 181 | - | - | 7 | D, S | $330-140$ |  | 460 feet of $4 \frac{1}{4}$ inch casing. |
| 182 | - | - | T | D, S | 1,600 1,500 |  | 130 feet of 4 inch casing. |
| 183 | 108.1 | Jan. 10, 1934 | V | D,S | 2,000 1,900 |  | Not used for drinking Hard rock from 23 feet nearly to bot- |
| 184 | 82.7 | do. | 7 | D,S | $500 \quad 140$ |  | 390 feet of tom. $4 \frac{1}{4}$ inch casing. |
| 185 | - | - | W | § | 4,000 2,000 |  | 8 feet of 4 inch casing at top. Rock to |
| 186 | - | - | W | S | 1,000 600 | - | bottom. |
| 187 | - | - | T | S | 2,400 1,400 | - |  |
| 188 | - | - | TT | D,S | $280 \quad 130$ | - |  |
| 189 | 104.4 | Feb. 1, 1934 | 7 | P | $600-320$ |  | 398 feet of $4 \frac{1}{4}$ inch casing with bottom 20 feet perforated. Weak water stratas at 90,160 and 260 feet. |

For analysis of watcr see under well number in table pp. -54 .
Reported by driller.
Measured by S. S. Nye, U. S. Geological Survey.
Sulphate test by turbidity method and may be as much as 25 per cent in error. T. T. Taylrr, underground waters of Coastal Plain of Texas: U. S. Geolcgical Survey, Jater-Supply Paper 190, 1907.

Records of wells in Jim Nells County -- Continued

|  |  |  |  |  |  |  | Vater- | ring bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| In. | Distance from Ben Bolt | Owner | Driller | Date com. <br> Ple- <br> ted <br> a | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { vell } \\ (\mathrm{ft} .) \end{array}\right\|$ | $\|$Diam- <br> eter <br> of <br> well <br> (in.) | Depth to top of bed (ft.) | $\begin{gathered} \text { Thick- } \\ \text { ness of } \\ \text { bed } \\ \left(f t_{0}\right) \end{gathered}$ |
| 190 | $\frac{1}{4}$ mile east | C. Fi. Stacy | Teodolo Martinez | - | 114 | 4 | 98 | 2 |
| e/191 | Ben Bolt | Romana V . de Garcia | Pete Christensen | 1924 | 500 | 5 | $\begin{aligned} & 385 \\ & 450 \end{aligned}$ | $40$ |
| 192 | $3 / 4 \mathrm{mile}$ south | Mrs. Magrie Kinney | -- Morris | - | 395 | $4 \frac{1}{4}$ | - | - |
| 193 | $8 \frac{1}{2} \mathrm{miles}$ west | M. Morales | - | O1\% |  | 40 | - | - |
| 194 | 8 miles west | Ferman Lopez | - | - | 90 | $4 \frac{7}{4}$ | - | - |
| 195 | 81 $\frac{1}{2}$ miles west | Pedro G. Lopez | - | $\begin{gathered} 1915 \\ ? \end{gathered}$ | 8 n | $5-3 / 1$ | $6]^{-}$ | - |
| 196 | do. | Santos Garoia | F, Foster | 1910 | 90 | 4 |  | - |
| 197 | do. | Ysidr Saenz | - | $1910$ | 70 | 8 | - | - |
| 198 | do. | Eduardo Lopez | - | 1930 | 100 |  |  | - |
| 199 | do. | Ferman Lopez | - | 1910 $?$ | 60 | - |  | - |
| 200 | 6 miles west southwest | $\begin{gathered} \text { C. D. } \\ \text { Fitzimmons } \end{gathered}$ | Dick Howard | 1903 | 165 |  | I- | - |
| 201 | $8 \frac{1}{2}$ miles west southwest | Santos Garcia | Francisco $G$. Chacon | 1918 | 87 | 5-3 | $6]^{-}$ | - |
| 202 | 8 miles west southwest | do. | do. | 1918 | 97 |  |  | - |
| 203 | do. | Dan Tobin | - | 1930 |  | 6-5 | $31$ | - |
| $2 \cap 4$ | do. | Jesus Tobin | - | 1903 | 50 | - | - | - |
| 205 | 7 miles west southwest | Norman Fitzimmens | - | 1905 | 165 |  | 151 | - |
| e 206 | do. | Fmilia Earrera | milia Barrera | $\begin{gathered} 1880 \\ ? \end{gathered}$ | 75 | 48 |  | - |
| 207 | $6 \frac{1}{2}$ miles west southwest | Roman Saenz | $\begin{array}{r} \text { Tiodeln } \\ \text { Martinez } \end{array}$ | 1920 | 99 | $5-3 / 1$ | $5$ | - |
| 208 | g miles west southwest | N. A. H-ffman |  | - | - |  |  | - |
| - 209 | $4 \frac{1}{2}$ miles west southwest | do. |  | - | - | 5-3/1 | $16 T-$ | - |
| 210 | 6咅 miles west southwest | Jose Garza |  | 1923 |  | $5-3 / 1$ | $16$ | - |
| 211 $\vdots$ 212 | $\left\|\begin{array}{c} 3-3 / 4 \text { miles } \\ \text { wist southrost } \\ \frac{\text { do. }}{} \end{array}\right\|$ | $\begin{aligned} & \text { N. A. Hoffman } \\ & \text { No. } 1 \\ & \text { N. A. Hoffman } \end{aligned}$ | Stanolind oil \& Gas Cn. - | $\left[\begin{array}{l} 1931 \\ 1931 \end{array}\right.$ | $6,464$ | $12 \frac{1}{2}$ | $-$ | $-$ |
| 213 | $\begin{aligned} & 2-3 / 4 \text { miles } \\ & \text { sovthwest } \end{aligned}$ |  |  | 1929 | $450$ | $5-3$ | $165=$ |  |
| $\therefore 214$ | $\begin{aligned} & 8 \text { miles } \\ & \text { southwest } \end{aligned}$ |  <br> Ygnacio Cadena | IVi guel Cadena | $\begin{gathered} 1910 \\ \ldots ? \end{gathered}$ |  | $--$ | $-$ | - |

(All wells are drilled unless otherwise stated in remarks.)

| $\because$ | Thater <br> Depth below <br> surface or <br> bench mark <br> (ft.) | level <br> Date of measurement |  | Use of water c/ | Fiold tests <br> parts per million <br> Chlo- Fard- <br> ride <br> rides |  |  | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 190 | 97.8 | Jan. 11, 1934 | T | D, | 950 | 650 | - |  |
| 191 | $93.4$ | Mar. 20, 1934 | W | D, S | 250 | 110 |  | Temperature 810 F , |
| 192 | - | - | 7 | D, S | 650 | 450 |  | Reported that water becomes brackish in |
| 193 | 28.5 | June 30, 1933 | H | D S | 625 | 1,100 | 100 | $\qquad$ |
| 194 | 43.2 | do. | Ti | D S | 15 | 450 | 50 |  |
| 195 | - | - | 7 | D, S | 190 | 440 | 70 |  |
| 196 | - | - | 7 | $\bar{D}, \mathrm{~S}$ | 600 | 1,0ก0 |  | 20 feet of $4 \frac{1}{4}$ inch casing. |
| 197 | 42.8 | June 30, 1933 | W | D, S | 700 | 1,100 | 200 |  |
| $\overline{198}$ | - | - | 潞 | D,S | 600 | 600 | $100$ | 3 feet of 6-5/8 inch casing at top, uncased through rock |
| 199 | 31.9 | June 30, 1933 | W | D,S | 180 | 490 |  | No casing 100 feet. used. |
| 200 | - | - | T | S | 650 | 700 |  | 20 feet of $6-5 / 8$ inch casing at top, uncased to bottom. |
| 201 | 33.8 | June 30, 1933 | T | D, S | 300 | 460 | 60 |  |
| 202 | 35.5 | do. | VT | D, ${ }^{\text {S }}$ | 600 | 700 | 100 | Tile casing used. |
| 203 | 57.3 | do. | T | D, S | 1,400 | 1,700 | 200 |  |
| 204 | - | - | ग | S | 100 | 400 | 20 |  |
| 205 | - | - | T | D.S | 650 | 700 | 100 | $\begin{aligned} & 124 \text { feet of } 5-3 / 16 \\ & \text { inch casing. } \end{aligned}$ |
| 206 | 56.0 | June 30, 1933 | 7 | D, S | 720 | 1,600 | 160 | Dug well. |
| 207 | 77.0 | June 29, 1933 | T | D, S | 915 | 1,500 | - |  |
| 208 | - | - | V1 | D.S | 700 | 700 | - |  |
| 209 | - | - | Tf | S | 1,800 | 1,600 |  |  |
| 210 | - | - | 7 | D, S | 900 | 900 | - |  |
| 211 | - | - | - | - | - | - |  | Oil test. No production. |
| 212 | - | - | J,G,- | S | 320 | 140 | - |  |
| 213 | 88.2 | June 29, 1933 | W | D,S | 340 | 150 | - |  |
| 214 | 47.4 | July 1, 1933 | H | D,S | 180 | 320 |  | 15 feet of casing. |

－23－

|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vo． | $\begin{aligned} & \text { Distance } \\ & \text { from } \\ & \text { Ben Bolt } \end{aligned}$ | Owner | Driller | $\begin{aligned} & \text { Date } \\ & \text { corm- } \\ & \text { ple- } \\ & \text { ted } \\ & \mathrm{a} / \end{aligned}$ | Depth of well （ft．） | $\left\lvert\, \begin{gathered} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in. }) \end{gathered}\right.$ | Depth to top of bed （ft．） | Thick－ ness of bed （ft．） |
| 215 | $\begin{aligned} & 9 \text { miles } \\ & \text { southwest } \end{aligned}$ | Manuel Cadena |  | $\left\lvert\, \begin{gathered} \underline{\alpha} 70 \\ ? \end{gathered}\right.$ |  |  | － | － |
| 216 | $\begin{aligned} & 7 \frac{1}{2} \text { miles } \\ & \text { southwest } \end{aligned}$ | Antonio Tobín | － | －${ }^{-}$ | $46 \pm$ |  | － | － |
| 217 | do． | Valentia Gonzales | － | $\left[\begin{array}{c} 1910 \\ ? \end{array}\right.$ |  |  |  | － |
| 218 | $\begin{aligned} & 7 \text { miles } \\ & \text { southwest } \end{aligned}$ | $\begin{gathered} \text { Mrs. A. Ch. } \\ \text { Gonzales } \end{gathered}$ | Teodolo <br> Martinez | 1915 | 160 | 6 | － | － |
| 219 | do． | Porfirio Zamora | Teodolo <br> Rndriguez | 1925 | 298 |  | 296 | $2+$ |
| 220 | $\left\lvert\, \begin{aligned} & 6 \frac{1}{2} \text { miles } \\ & \text { west southwest } \end{aligned}\right.$ | $\begin{gathered} \text { Porfirio } \\ \text { Garcia } \\ \hline \end{gathered}$ | Luis Tamez | $1910$ | $330$ | $4 \frac{7}{4}$ | － |  |
| 221 | $\begin{aligned} & 8 \text { miles } \\ & \text { southwest } \end{aligned}$ | Feliz Perez Cadena | － | $\begin{gathered} 1850 \\ ? \end{gathered}$ |  | 60 | － | － |
| 222 | 80. | Manuel Cadena | － | 1850 $?$ | 60 | 60 | － | － |
| 223 | do． | Nicolas Cadena | － | 1905 | 110 | 6 | － | － |
| 224 | $\begin{aligned} & 9 \text { miles } \\ & \text { southwest } \end{aligned}$ | －－Moos | － | － | － | 6 | － | － |
| 225 | $\begin{aligned} & 9 \frac{1}{2} \text { miles } \\ & \text { southwest } \end{aligned}$ | Romulo Valdez | － | 1927 | － | 5－3／1 | $6]-$ | － |
| 226 | $\begin{aligned} & 10^{\frac{1}{2}} \text { miles } \\ & \text { southwest } \end{aligned}$ | Mateo Valdez | － | － | － |  | 16 | － |
| 227 | $\begin{aligned} & 11 \text { miles } \\ & \text { southwest } \end{aligned}$ | Viotor Garcia | Santos Barrera | 1925 | 130 | $4 \frac{1}{4}$ | － | － |
| 228 | $\begin{array}{\|l\|} 10 \text { miles } \\ \text { southwest } \end{array}$ | do． | － | $\begin{gathered} 1890 \\ ? \end{gathered}$ | 100 | 60 | － | － |
| 229 | $\begin{aligned} & 11 \text { miles } \\ & \text { southwest } \end{aligned}$ | do． | Santos Barrera | 1925 | 300 | 5－3／1 | 16 － | － |
| 230 | $\begin{aligned} & 9 \text { miles } \\ & \text { southwest } \end{aligned}$ | do． | － | $\begin{gathered} 1915 \\ ? \\ \hline \end{gathered}$ | 180 | 6 | － | － |
| 231 | $\begin{aligned} & 10 \text { miles } \\ & \text { southwest } \end{aligned}$ | $\begin{aligned} & \text { Clara D. } \\ & \text { Sevier } \end{aligned}$ | － | O1d | － | 5－3／ | $161-$ | － |
| 232 | do． | E．G．Lloyd | － | 1916 | 454 |  | － | － |
| 233 | $\begin{aligned} & 6 \text { miles } \\ & \text { southwest } \end{aligned}$ | N．A．Hoffman |  | 1900 $?$ | 400 | 5 | － | － |
| 234 | 5 miles southwest | $\begin{gathered} \mathrm{J}_{0} \mathrm{M}_{1} \\ \text { MoPherson } \end{gathered}$ | McPherson | 1925 | 142 | $4 \frac{1}{1}$ | － | － |
| 235 | do． | J．P．Blake | －－ | － | － | － | － | － |
| 236 | $4 \frac{1}{2}$ miles south southwest | Mrs. | B．L．Tamez | 1927 | 422 | $3 \frac{7}{2}$ | － | － |
| 237 | $5 \frac{1}{2}$ miles southwest | J．P．Blake | － | － | － | $4 \frac{1}{4}$ | － | － |
| 238 | do． | do． | － | － | － | $4 \stackrel{1}{\text { ¹ }}$ | － | － |
| 339 | $\begin{aligned} & 7 \text { miles } \\ & \text { southwest } \end{aligned}$ | 7．P．Bdmund | T．Martinez | 1922 | 96 |  | $161-$ | － |
| 240 | 8 miles south southwest | Clara D． Sevier | － | 1920 | － |  |  | － |
| $\begin{gathered} 241 \\ 4 \\ \hline \end{gathered}$ | $7 \frac{7}{2}$ miles south s outhwest | do． |  | ［1900 | － | 5－3／1 | $161$ | － |
| 242 | 6⿳亠二口欠彡 miles south | Mrs．H．M． King，Est． | － | ［－1 | － | 5－3／3 | $161-$ | － |

(All wells are drilled unless otherwise stated in remarks.)

| \$0. |  | $\begin{aligned} & \text { level } \\ & \text { Date of } \\ & \text { measurement } \end{aligned}$ | Method of lift and amount of power b/ | Use of water c/ | $\|$Fie <br> parts <br> Chlo- <br> ride | ld tes <br> Hard- <br> ness <br> d/ | $\begin{aligned} & \hline \text { sts } \\ & +1110 \\ & \hline \text { Sul- } \\ & \text { phat } \end{aligned}$ |  | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 215 | 77.9 | July 1, 1933 | T | D. S | 650 | 900 | 80 | Dug |  |
| 216 | - | - | T | S | 1,700 | 1,600 | 400 |  |  |
| 217 | - | - | T | D,S | 500 | 750 | 300 |  |  |
| 218 | 64.9 | July 1, 1933 | T | D,S | 1,600 | 1,600 | 240 |  |  |
| 219 | - | - | N | D, S | 220 | 270 | - |  |  |
| 220 | - | - | 7 | D, S | 220 | 210 | - | Dug |  |
| -221 | 59.2 | July 1, 1933 | T | D, S | 1,635 | 1,700 | 250 |  |  |
| 222 | 56.6 | do. | V | D, S | 430 | 600 | 150 |  |  |
| 223 | 62.2 | do. | 7 | 5 | 8,000 | 3,500 | 400 |  |  |
| 224 | 82.9 | do. |  | $\overline{\mathrm{D}, \mathrm{S}}$ | $1,0001$ | 1,200 | 100 |  |  |
| 225 | 84.8 | do. | \% | D, ${ }^{\circ}$ | 1, 300 | 1,300 | 120 |  |  |
| 226 | 85.7 | do. | T | S | $\left\|\begin{array}{l} 1,500 \\ 1,580 \end{array}\right\|$ | $\left\|\begin{array}{l} 1,500 \\ 1,515 \end{array}\right\|$ | 400 |  |  |
| 227 | 85.0 | do. | T | S | 1,700 | 2,000 | 300 |  |  |
| 228 | 84.0 | do. | N | S | 1, 3 \%0 | 1,300 | 300 | Dug |  |
| 229 | 89.2 | do. | T | $\overline{\mathrm{s}}$ | 220 | 260 | 150 |  |  |
| 230 | - | - | T | S | 2,000 | 1,700 | 200 |  |  |
| 231 | 53.6 | June 8, 1933 | N | S | 420 | 440 | - |  |  |
| 232 | 76.2 | June 22, 1933 | T | D, S | 210 | 240 | - |  |  |
| 533 | - | - | 7 | D, S | 210 | 100 | - |  |  |
| 234 | - | - | V | S | 1,900 | 2,400 | - |  |  |
| 235 | - | - | T | 5 | 1,900 | 1,600 | - |  |  |
| $\overline{236}$ | 66.7 | Jan. 16, 1933 | - | D, 5 | 220 | 100 |  | $422$ | $\text { of } 3 \frac{1}{2} i$ perforat |
| $\overline{2} \overline{37}$ | 76.2 | June 22, 1933 | ท | D,S,I | 300 | 180 | - | $\begin{aligned} & \text { One } \\ & \text { of } \end{aligned}$ | at bot |
| 238 | - | - | W | 5 | 1,600 | 1,200 | - |  | $\underline{\text { rig }}$ |
| 233 | 85.2 | June 22, 1933 | 抲 | D, 5 | 330 | 340 | - |  |  |
| 240 | - | - | 7 | S | 320 | 250 | - |  |  |
| 241 | 73.8 | June 7, 1933 | T | D.S | 380 | 270 | - |  |  |
| 242 | 55.6 | June 13, 1933 | 1 | S | - | - |  | $\begin{aligned} & \text { Alt } \\ & \text { abo } \end{aligned}$ | $\begin{aligned} & 158.3 \mathrm{f} \\ & \text { level. } \end{aligned}$ |


|  |  |  |  |  |  | Vater－b | ng be |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Yo． | Distance <br> from <br> Premont | Owner | Driller | $\begin{gathered} \text { Date } \\ \text { com- } \\ \text { ple- } \\ \text { ted } \\ \text { a/ } \end{gathered}$ | $\begin{gathered} \text { Depth } \\ \text { of } \\ \text { well } \\ (\mathrm{ft} .) \end{gathered}$ | Diam－Depth  <br> eter to top <br> of of bed <br> well （ft．） <br> （in．  | $\begin{aligned} & \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & (\mathrm{ft.}) \end{aligned}$ |
| 243 | 10 miles north | $\begin{aligned} & \text { Clara D. } \\ & \text { Sevier } \end{aligned}$ |  | $\begin{gathered} 190 n \\ ? \end{gathered}$ | － | $5-3 / 16$ | － |
| 244 | do． | Mrs． $\mathrm{H} . \mathrm{M}$ ． King，Est， | － | －－ | － | $6-5 / 8]=$ | － |
| 245 | 87 miles north | $\begin{gathered} \text { Clara D. } \\ \text { Sevier } \end{gathered}$ | － | O1d | － | $5-3 / 161-$ | － |
| 246 | $\begin{aligned} & 9 \text { miles north } \\ & \text { northwest } \end{aligned}$ | do． | － | － | － | $5-3 / 161=$ | － |
| 247 | 8 miles north northwest | do． | － | O1d | － | $5-3 / 16]^{-}$ | － |
| 248 | $\begin{aligned} & 9 \text { miles } \\ & \text { northwest } \end{aligned}$ | Ed Vela | － | 1917 | 247 |  | － |
| 249 | do． | E．Canales | － | 1930 | 277 | $4 \frac{1}{2}$ | － |
| 250 | $\left\{\begin{array}{l} 8 \frac{1}{2} \text { miles } \\ \text { northwest } \end{array}\right.$ | Wick＂Garcia | － | － | 200 | $\pm$－－ | － |
| e／251 | $\left\lvert\, \begin{aligned} & 7 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}\right.$ | Ed Vela | －Riggins | 1926 | 250 | 5－3／16－ | － |
| 252 | $\left\{\begin{array}{l} 8 \text { miles } \\ \text { northwest } \end{array}\right.$ | C．Hinojosa | － | 1915 | 60 | 48 | － |
| 253 | do． | San Juana Hinojosa | － | $\begin{gathered} 1900 \\ ? \\ \hline \end{gathered}$ | 125 | 72 | － |
| 254 | $\begin{aligned} & 7 \text { miles } \\ & \text { northwest } \end{aligned}$ | Felipe Hinojosa | Santiago Barrera | 1933 | 120 | $5-3 / 16$ | － |
| 255 | do． | Jose $F$ ． Fuentes | － | － | 230 | $4 \frac{7}{4}$ | － |
| 256 | do． | Justo Suarez | － | 1925 | 200 | $5-3 / 16$－ | － |
| 257 | $\begin{array}{\|l} 6 \frac{1}{2} \text { miles } \\ \text { northwest } \end{array}$ | Charlie Premont | － | 1923 | 270 | $5-3 / 161-$ | － |
| －258 | $\begin{aligned} & 6 \text { miles } \\ & \text { northwest } \end{aligned}$ | Frank Bernett | － | 1917 | 260 | 6－5／81－ | － |
| 259 | $\left\lvert\, \begin{aligned} & 6 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}\right.$ | $\begin{aligned} & \text { Nicholas } \\ & \text { Miguel } \end{aligned}$ | Santiago Barrera | 1927 | 112 | $5-3 / 16$ | － |
| 260 | $\begin{gathered} 6 \text { miles } \\ \text { northwest } \end{gathered}$ | －Chopa | － | － | － | 5－3／16－ | － |
| 261 | do． | －－Bailez | － | － | － | $4 \frac{1}{2}$ | － |
| 262 | $5 \frac{1}{2}$ miles north nor thwest | $\begin{gathered} \text { Seeligson } \\ \text { Bros. } \\ \hline \end{gathered}$ | $\cdots$ | － | 480 | －－－ | － |
| 263 | $\begin{aligned} & 5 \text { miles } \\ & \text { nor thwest } \end{aligned}$ | Wash Storm | Elmer Rupp | 1930 | 506 | $8 \quad 450$ | 56 |
| 264 | 6 miles north northwest | $\begin{gathered} \text { Seeligson } \\ \text { No. } 1 \end{gathered}$ | $\begin{gathered} \text { Magnolia } \\ \text { Petroleum Co. } \end{gathered}$ | 1932 | 6，010 | $12 \frac{7}{2}$ | － |
| 265 | G⿴囗⿱一一口𧘇 | $\begin{gathered} \text { Seeligson } \\ \text { Bros. } \end{gathered}$ | － | Old | 1，001 | 125 | 82 |
| 266 | 7 miles north | do． | － | － |  | $\pm 5-3 / 16$ | － |
| 267 | $\begin{aligned} & 6 \text { miles north } \\ & \text { northeast } \end{aligned}$ | do． | － | － |  | $\pm 5-3 / 16$ | － |

(All wells are drilled unless otherwise stated in remarks.)

| o. | Depater <br> Depth below <br> surface or <br> bench mark <br> (ft.) | level Date of measurement | $\left\|\begin{array}{c} \text { Method of } \\ \text { lift and } \\ \text { amount of } \\ \text { power } \\ b / \end{array}\right\|$ | Use of water c/ | Fie $\frac{\text { parts }}{\text { Chio- }}$ ride | eld tes per mi Fardness d/ | ts 11 ion Sul- phate | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $24 \overline{3}$ | 45.4 | June 7, 1933 | $\cdots$ | 5 | 500 | 460 | - |  |
| 244 | 57.5 | Feb. 7, 1933 | T | 5 | 150 | 170 | - |  |
| 245 | - | - | 可 | S | 370 | 230 | - |  |
| 246 | 65.1 | June 8, 1933 | T | S | 180 | 210 | - |  |
| 247 | 51.3 | do. | T | S | 220 | 350 | - |  |
| 248 | 66.8 | June 19, 1933 | 7 | D, S | 150 | 230 | - |  |
| 249 | 73.1 | do. | 7 | D, S | 170 | 240 | - |  |
| 250 | - | - | T | S | 1,300 | 1,700 | - |  |
| 251 | - | - | N | D, S | 190 | 260 | - |  |
| 252 | 53.6 | June 19, 1933 | J | D, S | 295 | 570 |  | Dug well. |
| 253 | 56.7 | do. | W | D, S | 650 | 500 |  | Dug well with bored well in bottom. |
| 254 | - | - | - | N | - | - |  | Well just completed. |
| 255 | 65.5 | Apr. 25,1933 | F | D.S | 210 | 190 | - |  |
| 256 | 66.0 | do. | W | D, S | 210 | 310 | - |  |
| 257 | 60 | do. | T | D, ${ }^{\text {S }}$ | 190 | 210 | - |  |
| 258 | - | - | T | D, 5 | 190 | 280 | - |  |
| 259 | - | - | V | D, S | 750 | 700 | - |  |
| 260 | - | - | T | D, S | 1,000 | 1,500 | - |  |
| 261 | - | - | H | D, S | 160 | 280 | - |  |
| 262 | - | - | J,G,- | D, 5 | 170 | 180 |  | Drilled to supply water for drilling |
| 263 | - | - | $\begin{aligned} & \text { T,G,10 } \\ & \text { H.P. } \end{aligned}$ | D,S.I | 200 | 320 |  | Three $\frac{\text { ail test. }}{\text { acres of }}$ irrigated. Casing; 106 feet of 8 inch and $5-3 / 16$ inch to |
| 264 | - | - | - | - | - | - |  | Oil test. bottom. No production. |
| 265 | $\begin{array}{r} 23.3 \\ 47.4 \\ \hline \end{array}$ | $\begin{aligned} & \text { Mar. } 2,1928 \\ & \text { Apr. } 27,1933 \\ & \hline \end{aligned}$ | T | D,S | 170 | 210 |  | Reported flow (prior to 1907) 8 gallons a |
| \%6 | - |  | TV | 5 | 140 | 155 | - | Iminute. i/ |
| 267 | - | - | T | S | 180 |  |  |  |

Records of wells in Jim Tells County -- Continued


I/ Old, probably completed prior to 1910 .
H, hand pump or rope and bucket; $\quad$, windmill; A, air lift; $T$, deep well turbine; $J$, jack pump; E, electric motor: $G$, gasoline engine or oil engine.
c/ Pe public supply; RR, lccomotives; I, irrigation; Ind., industrial; D, domestic; S, stock; N, not used.

1) Hardness as calcium carbmate by the soap method.
(All wells are drilled unless cthermise stato in remarks.)

| No. | Tater <br> Depth below <br> surface or <br> bench mark <br> (ft.) | $\begin{aligned} & \text { level } \\ & \hline \text { Date of } \\ & \text { measurement } \end{aligned}$ | Method of Use of lift and water amount of c/ power b/ | $\left[\begin{array}{l}\text { Fie } \\ \text { parts } \\ \text { Chlo- } \\ \text { ride }\end{array}\right.$ | ld tes per mi <br> Hard- <br> ness <br> d/ |  | n\| Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 268 | - | - | W S | 180 | 220 | - |  |
| 269 | 27 | April 25, 1933 | - D, | 170 | 210 | - |  |
| 270 | $\begin{aligned} & 37.4 \\ & 37.9 \end{aligned}$ | $\|$Jan. 13,1933 <br> Aug. 4, 1933 | $T, G,-\quad D, S, I$ | ${ }^{-}$ | $\cdots$ |  | Water level reported by owner as 23 feet below surface when well was completedin 1926 , and 35 feet when pump was install ed in 1929. Casing; 92 feet of 8 inch and $5-3 / 16$ inch to bottom. Irrigates 28,000 seedling citrus-trees Altitude of top of casing, 145.7 feet above sea level. |
| 271 | 65.8 | June 7, 1933 | W D,S | 240 | 280 | - |  |
| 272 | 58.3 | do. | N D,S | 220 | 240 | - |  |
| 273 | - | - | T D, | 210 | $2 \overline{3}$ |  | 8 feet of perforated casing at bottom. |
| 274 | - | - | N D S | 200 | 230 | - |  |
| 275 | - | - | N N | - | - |  | Tindmill broken,well not used. |
| 276 | - | - | TM D,S,I | 210 | 250 |  | Small garden irrigat ed. |
| 277 | 65.6 | April 25, 1933 | गT D.S,I | 200 | 230 | - | do. |
| 278 | 58. | do. | T 7 D,, 1 | 200 | 270 |  | Casing; 10 feet of 6 $5 / 8$ inch and $5-3 / 16$ inch to bottom. 3 acres of citrus fruits and one acre of vegetables irri- |
| 279 | - | - | W D,S,I | 200 | 290 |  | Small garden gated. irrigated. Irrigated 5 acres using air lift about 1923. |
| 280 | - | - | 7 D, 7 | 2001 | 250 |  | 319 feet of $4 \frac{1}{4}$ inch casing. |

37 For analysis of water see under well number in table pp 54.
Reported by driller.
EMeasured by S. S. Nye, U. S. Geolngical Survey.
Sulphate test by turbidity method and may be as much as 25 per cent in error. T. U. Tayler, underground waters of Coastal Plain of Texas: U. S. Geclogical Survey, Water-Supply Paper 190, 1907.

Records of wells in Jim Wells County -- Continued

(All wells are drilled unless otherwise stated in remarks.)


Records of uells in Jim Tells County -- Continued

|  |  |  |  |  |  | Nater-he | ing bed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -n. | Distance from Premont | Owner | Driller | Date <br> com- <br> ple- <br> ted <br> a/ | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ (f t .) \end{array}\right\|$ | Diam- <br> eter <br> Depth <br> of <br> to top <br> of bell (ft.) <br> (in.)  | ```Thick- ness of bed (ft.)``` |
| 304 | 6 miles west | F. R. Disbro | Nelson Foster | 1920 | 366 | $4 \frac{1}{4}$ 366 | - |
| 305 | $6 \frac{1}{2}$ miles west | $\begin{gathered} \text { Miguel } \\ \text { Castellana } \end{gathered}$ | - | - | 385 | $4 \frac{1}{4}$ | - |
| 306 | $6 \frac{7}{4}$ miles west | B. Gartner | Charlie Premont | $\begin{array}{\|c\|} \hline 1892 \\ ? \end{array}$ | 530 | $5-3 / 16 \mid-$ | - |
| 307 | $\begin{aligned} & \hline 5-3 / 4 \text { miles } \\ & \text { west } \end{aligned}$ | A. R. Clarke | Chester Downs | 1919 | 390 | $5-3 / 16 / 350$ | 40 |
| 308 | do. | F. Castellano | Luis Tamez | $\begin{array}{\|c\|} \hline 1902 \\ ? \\ \hline \end{array}$ | 408 | $4 \frac{7}{4}$ | - |
| 309 | $5 \frac{1}{2}$ miles west | V. E. Bevins | - | 1911 | - | 5-3/16 | - |
| 310 | $5 \frac{1}{4}$ miles west | Mrs. Rebecca Stauffer | - | 1913 | 400 | $5-3 / 16$ | - |
| 311 | 4 $\frac{1}{2}$ miles west | Charles Lofland | - | - | 420 | 5-3/16 - | - |
| 312 | 4 $\frac{1}{4}$ miles west | -- Reid | - | - | - |  | - |
| 313 | $3 \frac{1}{2}$ miles west | $\begin{gathered} \text { TI. T. } \\ \text { Nicholsen } \end{gathered}$ | - | 01d | 379 | 5-3/16 - | - |
| 314 | $\begin{aligned} & 2-3 / 4 \text { miles } \\ & \text { west } \end{aligned}$ | - | - | - | - | $4 \frac{1}{4}$ | - |
| 315 | $\begin{array}{\|l\|} \hline 2-3 / 4 \text { miles } \\ \text { west southwest } \end{array}$ | J. P. Fast | -- Tamez | $\begin{gathered} 1915 \\ ? \\ \hline \end{gathered}$ | 584 | $5-3 / 16$ | - |
| 316 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { west southwest } \end{aligned}$ | C. T. Hewitt | - | - | 700 | $5-3 / 16$ | - |
| 317 | $\begin{aligned} & 2 \text { miles west } \\ & \text { southwest } \end{aligned}$ | R. S. McBrids | - | - | - | $5-3 / 16$ | - |
| 318 | la miles west southwest | M. H. Zieger | Luis Tamez | 1928 | 489 | $\begin{gathered} 8-5 / 8 \\ \hline \end{gathered}$ | - |
| 319 |  southwest | Joe Lange | - | - | $500 \pm$ | $\pm$ - | - |
| 320 | $\begin{array}{\|l} \hline 1 \text { mile } \\ \text { southwest } \end{array}$ | J. L. Reid | - | - | 538 |  | - |
| 321 | do. | Theodore Myer | - | - | $530$ | $\begin{gathered} 5-3 / 161 \\ \hline \end{gathered}$ | - |
| 322 | do. | -- Haldeman | Luis Tamez | - |  | $\pm 5-3 / 16]-$ | - |
| 323 | $\begin{aligned} & 3 / 4 \text { mile } \\ & \text { southwest } \end{aligned}$ | Eudoxio Garcia | do. | 1929 | 533 | $6-5 / 8-$ | - |

(All wells are drilled unless otherwise stated in remarks.)

| No. | Vater Depth below surface or bench mark $(\mathrm{ft}$. |  | Method of Use of lift and water pmount of c power b/ | $\|$Field tests <br> parts per million <br> Chlo- Hard- Sul- <br> ride <br>  <br>  |  |  | n $]$ Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 304 | - | - | $\underset{Y}{\text { A, }}$ G; $\quad$ D, S,I | 1901 | 280 |  | Garden irrigated. |
| 305 | - | - | W | 200 | 250 | 35 |  |
| 306 | 30.4 | Dec. 1, 1932 | $\bar{D} \quad \text { D,S,I }$ | 240 | 320 |  | Tell reported to have had large flow when completed. Water level less than 15 feet below ground level in 1910. Old Falconina well of Seeligson ranch. Small garden |
| 307 | 43.8 | Dec. 6, 1932 | TH D,S <br>   <br>   | 180 | 260 |  | Casing; irrigated. 100 feet of $5-3 / 16$ inch and $4 \frac{1}{4}$ inch set at 350 feet. |
| 308 | - | - | J ${ }^{\text {d }}$ | 190 | 230 | 65 |  |
| 309 | - | - | T D, S,I | 200 | 280 |  | 5 acres of vegetables irrigated. |
| 310 | - | - | Ti D, | 200 | 230 | S | Small garden irrigated. |
| 311 | - | - | D,S | 210 | 200 | $\overline{30}$ |  |
| 312 | 42. | Dec. 27, 1932 | D, S | 210 | 210 | 45 |  |
| 313 | - |  | T DS | 210 | 290 | - |  |
| $\overline{314}$ | 41.6 | Dec. 27, 1932 | f ${ }^{\text {a }}$ | $\overline{2} 20$ | 20त | 40 |  |
| 31.5 | - | - | 每 ${ }^{\text {D, }}$ D, I | 2201 | 220 |  | Small garden irrigated. |
| 316 | $4 \overline{8.4}$ | Dec. 26, 1932 | T D,S | 220 | 190 | 35 |  |
| 317 | 40.2 | Dec. 27 1932 | S | 220 ? | 190 |  |  |
| 318 | 45.7 | Aug. 24, 1933 | A,G,- $\bar{D}, \bar{S}, \mathrm{I}$ |  | 190 | 206 | 6 acres of citrus fruit irrigated. |
| 319 | 41.7 | do. | T,G, ${ }^{\text {D,S,I }}$ | 220 | 210 |  | 5 acres of citrus fruit irrigated. |
| 320 | - | ${ }^{-}$ | $\substack{\text { A, G,22 } \\ \text { H.P. }}$ $D, S, I$ | 2201 | 210 |  | 3 aores of citrus fruit and 20 acres of vegetables and feed crop irrigated. Temperature $82^{\circ} \mathrm{F}$. Yield 150 gallons a minute, measured Dec |
| 321 | 43.5 | Aug. 24, 1935 | TV D,S,I | 220 | 250 |  | One acre of citrus fruit irri |
| 322 | 43.2 | Dec. 29, 1932 | $\overline{D, S}$ | 210 | 230 | 30 | gated. |
| 323 | 50.5 | Dec. 23,1932 | S | 200 | 180 | 30 |  |

Records of wells in Jim Nells County -- Continued

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(All wells are drilled unless otherwise stated in remarks.)


|  | Distance <br> from <br> Premont | Owner | Driller |  |  | Moter-boaring bed |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  |  | $\begin{gathered} \text { Date } \\ \text { com- } \\ \text { ple- } \\ \text { ted } \\ \text { a/ } \end{gathered}$ | Depth of well (ft.) | $\left\|\begin{array}{l} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in. } \end{array}\right\|$ | Depth to top of bed (ft.) | $\begin{aligned} & \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \left(f_{0}\right) \end{aligned}$ |
| 346 | 6 miles southwest | Charlie Premont | Luis Tamez | 1930? | 482 | 8 | - | - |
| 347 | 4 miles west southwest | L. D. Atkinson | - | 1915? | 365 | $\|5-3 / 16\|=$ |  | - |
| $\sqrt{348}$ |  southwest | iT. A. Keith | Chester Downs | 1926 | 486 | 6-5/8 | - | - |
| -349 | $3 \frac{1}{4} \mathrm{miles}$ west southwest | -- Johnston | - | - | - | 6-5/8 | - | - |
| 350 | $\begin{aligned} & 4 \text { miles } \\ & \text { southwest } \end{aligned}$ | C. T. Hewett | - | - | - | 6-5/8 | - | - |
| 351 | $2-3 / 4 \text { miles }$ <br> southwest | M. F. Mertens | - | - | 384 | 4 | - | - |
| 352 | $2 \frac{1}{2}$ miles <br> southwest | J. F. Carroll | - | 1912 | 540 | $5-3 / 16$ |  | - |
| 353 | 3 miles southwest | Dr. -- Collins | - | - | - | - | - | - |
| 354 | 2t miles south southwest | Dr. -- Dozier | - | 1932 | - | 6-5/8 | - | - |
| 355 | do. | Valentine | -- Vermeen | - | 535 | $4 \frac{1}{4}$ |  | - |
| - 356 | do, | C. M. Miles | Benito Tamez | 1916 | 520 | 4 $\frac{7}{7}$ | - | - |
| 357 | $\begin{aligned} & 1-3 / 4 \text { miles } \\ & \text { south } \end{aligned}$ | Nelson English | Benito Tamez | - | 532 | 10 | - | - |
| 358 | 3 miles south | Bill Watkins | - | 1913 | 705 | - | - | - |
| 359 | $\begin{aligned} & 3 \frac{1}{4} \text { miles } \\ & \text { south } \end{aligned}$ | J. F. Langen | Chester Downs | 1915 | 488 | $[5-3 / 16]-$ |  | - |
| 360 | $3 \frac{1}{2}$ miles south | Walter Blumer | do. | - | $500 \pm$ | $5-3 / 16]-$ |  | - |
| $9 / 361$ | $\begin{aligned} & 2-3 / 4 \text { miles } \\ & \text { south } \end{aligned}$ | Lindquist Bros. | Luis Tamez | 1925 | 520 | 10 | 490 | 30 |
| 362 | 3 miles south | C. F. H. Von Blucher | Charlie Fremont | - | - | - | - | - |
| 363 | 3 miles south southeast | do. | --Foster | 1918 | 560 | $5-3 / 1$ | $6$ | - |
| 364 | $\begin{aligned} & 3-3 / 4 \text { miles } \\ & \text { southeast } \end{aligned}$ | Canales Estate | - | - | 490 | 5-3/1 | 5 - | - |

a/ Old, probably completed prior to 1910.
[/H, hand pump or rope and bucket; N, windmill; A, airlift; $T$, deep well turbine; J, jack pump; $\mathbb{F}^{\text {, electric motor; } G \text {, gasoline engine or oil engine, }}$
c/ P, public supply; RR, locomotives; I, irrigation; Ind , industrial; D, domestic;
S, stock; N, not used.
d/ Hardness as calcium carbonate by the soap method.
(All wells are drilled unless otherwise stated in remarks.)

$5 /$ For analysis of water see under well number in table pp 54.
f/ Reported by driller.
Q/Measured by S. S. Nye, U. S. Geological Survey.
h/ Sulphate test by turbidity method and may be as much as 25 per cent in error. I/ T. U. Taylrr, underground waters of Coastal Plain of Texas; U. S. Geolcgical Survey, Water-Supply Paper 190, 1907.
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Records of wells in Jim Tells County -- Continued

| earing bed |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N | Distance from <br> La Gloria | Owner | Driller | Date com-pleted a/ | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ (f t,) \end{array}\right\|$ | $\begin{gathered} \text { Diam } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \text { (in.) } \end{gathered}$ | Depth to top of bed (ft.) | Thickness of bed (ft.) |
| 365 | 5 miles west | R. E. McBride | Night \& Haunz | 1927 | 465 | 6 | - | - |
| 366 | $5 \frac{1}{2}$ miles west | $\begin{gathered} \text { Star Lumber } \\ \text { Co. } \end{gathered}$ | - | 1912 | $600 \pm$ | 5 | - | - |
| 367 | 5 miles west | $\begin{aligned} & \text { Mrs. H. G. } \\ & \text { Sohellenherg } \end{aligned}$ | - | 01d | $650 \pm$ | 6 | - | - |
| $\overline{368}$ | 5늘 miles west | W. G. Ward | -- Tamer | 1920? | $300 \pm$ | 5-3/16 | - | - |
| 369 | do. | G. L. Crothers | Bill Tilliams | 1920 | 448 | 5-3/16 | - | - |
| 370 | dc. | do. | - | old | 133 | 4 | - | - |
| 371 | 5 miles west | Luis Guerra | - | 1900? | ? 70 | 5-3/16 | - | - |
| 372 | $\begin{aligned} & 5-3 / 4 \text { miles } \\ & \text { west southwest } \end{aligned}$ | Clarence Burdette | Chester Downs | 1912 | 430 | 8 | - | - |
| 373 | $5 \frac{1}{4}$ miles west southwest | Mrs. P. H. Chilton | - | 1928 | 500 | 6 | - | - |
| e/374 | 5 miles west southwest | E. G. Maun | 7. Zimmermann | - | 475 | 6-5/8 | - | - |
| 375 | do. | C. H. Hornsby | O. M. Boone | 1929 | 460 | 5-3/16 | - | - |
| 376 | $3 \frac{1}{2}$ miles west southwest | Cliff Burdette | Benito Tamez | 1914 | 480 | 5-3/16 | - | - |
| 377 | 3 miles west southwest | Dale Maun | - | 1925 | 495 | 10 | 460 | 35 |
| 378 | $2 \frac{1}{2}$ miles west southwest | S. Maun | T. Herring | O1d | 470 | 5-3/16 | - | - |
| 379 | $\begin{aligned} & 2 \frac{1}{4} \text { miles } \\ & \text { southwest } \end{aligned}$ | R. A. Jordan | 7. Zimmermann | 1931 | 498 | 8 | 472 | 26 |
| 380 | $2 \frac{1}{2}$ miles west | Robert Adair | - | - | - | 5-3/16 | - | - |
| 381 | $1 \frac{1}{2}$ miles west southwest | C. D. Osborne | Chester Downs | - | $500 \%$ | 4-1/4 | - | - |

(All wells are drilled unless otherwise stated in remarks.)


$-40-$
(All wells are drilled unless otherwise stated in remarks.)


Records of wells in Jim Wells County -- Continued

| No. | Distance from <br> La Gloria | Owner | Driller | Date com-pleted a) | $\left\|\begin{array}{c} \text { Depth } \\ \text { of } \\ \text { well } \\ (\mathrm{ft} .) \end{array}\right\|$ | Water-bearing bed |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\begin{gathered} \text { Diam- } \\ \text { eter } \\ \text { of } \\ \text { well } \\ \left(\text { in. }_{\text {o }}\right) \\ \hline \end{gathered}$ | Depth to top of bed (ft.) | ```Thick- ness of bed (ft.)``` |
| 396 | $\begin{aligned} & \text { 2-3/4 miles } \\ & \text { oast } \end{aligned}$ | Charles <br> Boerjan | Chester Downs | 1918 | 485 | 10 | - | - |
| 397 | $\because$ miles east | John Minter | do. | 1914 | 540 | - | - | - |
| 398 | Tmilo :mutheast | J. P. Gonzales | do. | 1929 | 471 | 6-5/8 | - | - |
| 399 | $1 / 2$ mile south | O. M. Boone | O. M. Boone | 1928 | 600 | 12 | 560 | 40 |
| 400 | 1 mile south | - | -- Brown | 1905? |  | - | 480 | - |
| 401 | $1-1 / 4 \text { miles }$ southeast | Mrs. M. A. <br> Kempshall | -- Downing | 1905 | 600 | $12 \frac{1}{2}$ | $\begin{aligned} & 520 \\ & 560 \end{aligned}$ | $\begin{aligned} & 20 \\ & 40 \end{aligned}$ |
| 402 | 1-1/2 milot | L. W. Moore | O. M. Boone | - | 471 | 6-5/8 | - | - |
|  | *outh southerst |  |  |  |  |  |  |  |
| 403 | $\begin{aligned} & \text { } \begin{array}{l} -3 / 4 \text { mile } \\ \text { gouth southeast } \end{array} \end{aligned}$ | Joo Myriok | Cheater Downs | - | 580 | 4-1/4 | - | - |
| 404 | $\begin{aligned} & 3 \times 1 / 4 \text { mम1e6 } \\ & \text { sethent } \end{aligned}$ | A. Baont | - | - | 521 | $4-1 / 4$ | - | - |

- Q1d, probebly oompleted pror bo 156,


9/F. publie gupply, Th, loematlveti I, Irfigetion; Ind, industrial; D, domestic;
番, look $\mathrm{N}_{\text {, }}$ not ued.

(All wells are drilled unless otherwise stated in remarks.)


Records of wells in Jim "ells County -- Continued

| 5 S | ```Distance from Orange Grove``` | Owner | Driller | Date com-pleted: a/ |  | Diam- eter of well (in.) | Water-b Depth to top of bed (ft.) | $\begin{aligned} & \text { aring bed } \\ & \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \text { (ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 405 | 5 miles southwest | Robert Adams | Smith \& Story | $1936 ?$ | $360+$ | 5 | - | - |
| $3 / 406$ | $\begin{aligned} & 5 \frac{1}{2} \text { miles } \\ & \text { southwest } \end{aligned}$ | do. | Rowen \& Hope | $\begin{array}{r} 1936 ? \\ \hline \end{array}$ | $400 \pm$ | 5 | - | - |
| $\begin{array}{r} 407 \\ \hline \end{array}$ | $\begin{aligned} & 7 \text { miles } \\ & \text { southwest } \end{aligned}$ | Ed. Adams | Ed Jergins | 1936 | $411$ | $4$ | - | - |
| No. | $\begin{gathered} \text { Distance } \\ \text { from } \\ \text { Alice } \end{gathered}$ | Owner | Driller | Date com- ple- ted a/ | Depth of well (ft.) | Diameter of ; well (in.) | Water-b Depth to top of bed (ft.) | $\begin{aligned} & \hline \text { ring bed } \\ & \hline \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \text { (ft.) } \end{aligned}$ |
| 408 | $\begin{aligned} & \frac{1}{4} \text { mile } \\ & \text { north } \end{aligned}$ | $\begin{gathered} \text { Magnolia Pet. } \\ \text { Co. } \end{gathered}$ | H. C. White | $1939$ | $550$ | 7 | 497 | 53 |
| -7409 | $2 \frac{1}{2}$ miles east | - | - | 1930? | ? $900+1$ | 10 | - | - |
| 410 | In Alice | City of Alice No. 5 | Texas Water Supply \& Devel | $\frac{1940}{\text { opment }}$ | 64 | $10$ | $\begin{aligned} & 500 \\ & 540 \\ & 567 \end{aligned}$ | $\begin{aligned} & 35 \\ & 20 \\ & 10 \end{aligned}$ |
| No. | Distance from Premont | Owner | Driller | Date com-pleted a/ | $\begin{gathered} \text { Depth } \\ \text { of } \\ \text { weil } \\ \text { (ft.) } \\ \hline \end{gathered}$ | (Diam- eter of (inell (in. | $\begin{aligned} & \text { Water-b } \\ & \hline \text { Depth } \\ & \text { to top } \\ & \text { of bed } \\ & \text { (ft.) } \end{aligned}$ | $\begin{aligned} & \frac{\text { iring bed }}{\text { Thick- }} \\ & \text { ness of } \\ & \text { bed } \\ & \text { (it.) } \end{aligned}$ |
| 411 | 7 miles northwest | -- Ritter | -- Glascock | 1937 |  | 6 | - | - |
| 412 | $\begin{aligned} & 6 \frac{1}{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | -- Johnson | Tom Graham | 1937 | $500^{+}$ | 6 | - | - |
| 413 | $\begin{aligned} & 6_{4}^{2} \text { miles } \\ & \text { northwest } \end{aligned}$ | Chas. Laughlin | - - | 1939 | $500 \pm$ | 6 | - | - |
| 414 | $\begin{aligned} & 5 \frac{1}{4} \text { miles } \\ & \text { northwest } \end{aligned}$ | Wash Storm | A. A. Porter | 1939 | 370 | 6 | 358 | 12 |
| 415 | $4 \frac{3}{4}$ miles north | Seeligson Ranch | $\begin{gathered} \text { Magnolia Pet. } \\ \text { Co. } \end{gathered}$ | 1938 | $460$ | $7$ | 410 | 50 |

I Old, probably completed prior to 1910.

$J$, jack pump; $E$, electric motor; $G$, gasoline engine or oil engine.
$\therefore P$, public supply; RR, locomotives; I, irrigation; Ind, industrial; $D$, domestic; S, stock; N, not used.
I/ Hardness as calcium carbonate by the soap method.

| $\because$ ". | Water Depth below surface or bench mark (ft.) | $\begin{aligned} & \text { level } \\ & \begin{array}{l} \text { Date of } \\ \text { measurement } \end{array} \end{aligned}$ | Method ofíuse of lift and Iwater amount of c/ power b/ |  | Field tes <br> parts per mi <br> Chlow:Hard-i <br> ride <br>  |  | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 405 | - | - | A, 0 | Ind | - - | - | Water well for oil test |
| 406 | - | - | A, 0 | Ind | - - | - | Do. |
| 407 | - | - | A,O | Ind | - - | - | $\begin{aligned} & \text { Casing: } 411 \text { feet of } \\ & 4 \text {-inch. } \end{aligned}$ |
| No. | Water <br> Depth below <br> surface or <br> bench mark <br> (ft.) | levelDate of <br> measurement | Method of lift and amount of power b/ | Use of water c) | Field tests <br> parts per million <br> Chlo- Hard <br> ride <br>  <br>  |  | Remarks |
| 9 | - | - | T, E | D, Ind | - -1. |  | Casing: 493 feet of 7 -inch, screen set from 489 to 550 feet. Yield 21 gallons a minute at completion. Reported yield of sand at 129 to 148 feet was 10 gallons |
| $4 \sqrt{9}$ | - | - | W | D, S | - - |  | Started a minute. as oil test but abandoned at about |
| $-10$ | - | - | - | P | -  <br>   <br>   <br>   |  | Casing: 1900 feet. <br> 502 feet of 10 -inch. <br> Screen set from 502 <br> to 647 feet. |
|  | Water Ievel <br> Depth below <br> surface or <br> bench.mark of <br> (ft.) |  |    <br> Method of <br> lift and <br> amount of <br> power <br> $b /$ water  |  |  |  | Remarks |
| 411 | - | 1 - | A, 0 | Ind | - - - | - | $\begin{aligned} & \text { Water well for oil } \\ & \text { test. } \end{aligned}$ |
| 412 | - | - | A, 0 | Ind | - - | - | Do. |
| $\overline{413}$ | - | - | A, 0 | Ind | - - | - | Do. |
| 414 | - | - | A, 0 | Irr | - - | - | $\begin{aligned} & \text { Casing: } 358 \text { feet of } \\ & 6 \text {-inch. } \end{aligned}$ |
| 415 | - | - | A, 0 | D |  | - ${ }_{-1}$ | Casing: 405 feet of 7 -inch, 88 feet of 5-inch with lap of 33 feet into 7 -inch 5 -inch casing perforated from 415 to 460 feet. |

3 For analysis of water see under well number in table pp. 54.
/ Reported by driller.
I/ Measured by S. S. Nye, U. S. Geological Survey.
I/ Sulphate test by turbidity method and may be as much as 25 per cent in error. T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Suppiy Paper 190, 1907.
$-45=$
Records of wells in Jim Wells County -- Continued

| No. | $\begin{aligned} & \text { Distance } \\ & \text { from } \\ & \text { Premont } \end{aligned}$ | Owner | Driller | $\begin{array}{l\|l\|l\|} \hline \text { Date } \text { Depth } & \text { Diam- } \\ \text { com- of } & \text { oter } \\ \text { ple-well } & \text { of } \\ \text { ted (ft.) } & \text { well } \end{array}$ | $\begin{aligned} & \text { Water-b } \\ & \text { Depth } \\ & \text { to top } \\ & \text { of bed } \\ & \text { (ft.) } \end{aligned}$ | $\begin{aligned} & \text { aring bed } \\ & \hline \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \text { (ft.) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 416 | $\begin{aligned} & 6 \text { miles } \\ & \text { northeast } \end{aligned}$ | $\begin{gathered} \text { Seeligson } \\ \text { Ranch } \end{gathered}$ | $\begin{gathered} \text { Magnolia Pet. } \\ \text { Co. } \end{gathered}$ |  | $568$ | 62 |
| $417$ | do. | do. | do. | 1938 515 7 <br>    <br>    | $\begin{aligned} & 420 \\ & 450 \end{aligned}$ | $\begin{aligned} & 25 \\ & 65 \end{aligned}$ |
| 418 | In Premont | City of Premont | Peurifoy \& Patterson | 1939 520 8 <br>  $\vdots$  <br> $\vdots$   <br>    <br>    | $410$ | $110$ |
| Mo. | Distance from <br> La Gloria | Owner | Driller | 'Date' Depth; Diam-com- of eter ple-'well of ted (ft.) well a/ (in.) | Vater-b <br> Depth to top of bed (ft.) | $\begin{aligned} & \text { aring bed } \\ & \text { Thick- } \\ & \text { ness of } \\ & \text { bed } \\ & \text { (ft.) } \end{aligned}$ |
| $3 / 419$ | $\begin{aligned} & 1 \frac{3}{4} \text { miles } \\ & \text { southwest } \end{aligned}$ | Sam Maun | $\begin{gathered} \text { Magnolia Pet. } \\ \text { Co. } \end{gathered}$ | 1940 $516: 7$ | $458$ | 58 |

a/ 01d, probably completed prior to 1910.
b/H, hand pump or rope and bucket; $W$, windmill; A, air lift; $T$, deep well turbine; $J$, jack pump; E, electric motor; $G$, gasoline engine or oil engine.
C/P, public supply; RR, locomotives; I, irrigation; Ind, industrial; D, domestic; S, stock; N, not used.
I/ Hardness as calcium carbonate by the soap method.
(All wells are drilled unless otherwise stated in remarks.)

| No. | Water level | Method of Use of lift and water amount of $c /$ power | Field tests <br> parts per million <br> Chlo- Hard- Sul- <br> ride <br>  <br>  <br>  <br>  |  | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Depth below Date of <br> surface or measurement <br> bench mark  <br> $\left(f^{\prime} t,\right)$  |  |  |  |  |
| 416 | - - | A, O ( N | - - | - | Casing: 558 feet of 7 -inch, 113 feet of 5 -inch with 24 feet lap into 7-inch. 5- inch casing per- forated from 558 to |
| 4.17 | - - | A,0 Ind | - - | - | Casing: 647 feet. 413 feet of 7 -inch. Screens set from 413 to 515 feet. Water well for oil |
| 418 | - - | $\mathrm{T}, \mathrm{T}$ P | - ${ }^{-1}$ |  | Casing: 120 test. feet of 8 -inch, 285 feet of 6 -inch with 8x6 swedge. Reported yield of 122 gal lons a minute when tested Feb.11,1940. |
| No. | Water level <br> Depth below Date of <br> surface or measurement <br> bench mark  <br> $(f t)$.  |  Field tests   <br> Method of Use of parts per million <br> lift and <br> amount of <br> power <br> b/ water  Chlo- |  |  | Remarks |
| 419 | - $\quad-$ | A,0 Ind |  | - | Casing: 458 feet of 17 and 5 -inch. |
| e/ For analysis of water see under well number in table pp. 54 <br> f/ Reported by driller. <br> g/ Measured by S. S. Nye, U. S. Geological Survey. |  |  |  |  |  |
| h/ Sulphate test by turbidi <br> i/ T. U. Taylor, undergroun |  | method and may be aters of Coastal 190, 1907. | as much as 2 Plain of Texa |  | cent in error. <br> S. Geological |



Table of Drillers' Logs, Jim Wells County -- Continued

$\ldots$| Thickness <br> (feet) |
| :---: |
| Depth <br> (feet) |


| Thickness <br> (feet) | Depti, <br> (fes!) |
| :---: | :---: |

Driller's log of well 37 - continued

| Sandy shale | - |  | 96 | 582 |
| :---: | :---: | :---: | :---: | :---: |
| Nater sand | - - |  | 13 | 595 |
| Streaks of sand | - - |  | 120 | 715 |
| Gummy gypsum | - - | - | 97 | 812 |
| Sand - | - | - | 18 | 830 |
| Gumbo - - | - | - | 15 | 845 |
| Broken sand and | shale | - | 75 | 920 |
| Gumbo - | - |  | 12 | 932 |
| Shale - | - | - | 11 | 94.3 |
| Sand - | - | - | 13 | 956 |
| Gumbo - | - | - | 78 | 1034 |
| Sticky shale | - | - | 16 | 1050 |
| Gumbo - | - | - | 30 | 1080 |
| Gummy lime- | - | - | 20 | 1100 |
| Sticky shale | - | - | 80 | 1180 |
| Sand - | - | - | 12 | 1192 |
| Shale - | - |  | 28 | 1220 |
| Sticky shale | - | - | 5 | 1225 |
| Gumbo - - | - | - | 28 | 1253 |
| Sand -- | - | - | 32 | 1285 |
| Shele - | - | - | 45 | 1330 |
| Gurbo - | - | - | 21 | 1351 |
| Shale - - | - | - | 25 | 1376 |
| Streaks nf shale | - | - | 53 | 1429 |
| Sticky shale | - | - | 55 | 1484 |
| Sand -- - | - | - | 19 | 1503 |
| Streaks of shale | - | - | 42 | 1545 |
| Sand - - | - | - | 23 | 1568 |
| Shele - - | - | - | 17 | 1585 |
| TOTAL DTPTH |  |  |  | 4795 |


|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 0. Corp. Ragland IVumber |  |  |  |  |
| Surface | - | - | - | 14 |
| Clay - | - | - | - | 6 |
| Caliche and | sand | - | - | 24 |
| Clay - - | - | - | - | 28 |
| Caliche - | - | - | - | 12 |
| Lime rock- | - | - | - | 3 |
| Sand - | - | - | - | 3 |
| Clay - | - | - | - | 67 |
| Sand .- | - | - | - | 11 |
| Clay - | - | - | - | 20 |
| Yellow clay | - | - | - | 27 |
| Sand - - | - | - | - | 20 |
| Yellow clay | - | - | - | 28 |
| Zend - - | - | - | - | 5 |
| Yellow clay | - | - | - | 29 |
| Sand - - | - | - | - | 0 |
| Red clay |  | - |  | 42 |
| Sand - - | - | - | - | 102 |

Driller's $\log$ of well 52 -continued

| Clay | - - | - | 3 | 453 |
| :---: | :---: | :---: | :---: | :---: |
| Sand | - - | - | 24 | 487 |
| Tough gumbo | - - | - | 15 | 502 |
| Gumbo - - | - - | - | 12 | 514 |
| Sand | - - | - | 24 | 538 |
| Gumbo - | - - | - | 18 | 556 |
| Sand - | - - | - | 22 | 578 |
| Gumbo - | - - | - | 9 | 587 |
| Hard sand and | lime- | - | 48 | 635 |
| Sticky shale | - - | - | 29 | 664 |
| Lime rock | - - | - | 2 | 666 |
| Gumbo - | - - | - | 18 | 684 |
| Sand | - - | - | 11 | 695 |
| Gumbo - | - - | - | 85 | 780 |
| Sticky shale | -- | - | 25 | 805 |
| Sand - | - - | - | 21 | 826 |
| Sticky shale | - - | - | 35 | 861 |
| Sand - - | - - | - | 42 | 903 |
| Gumbo - | - - | - | 9 | 912 |
| Sand | - - | - | 48 | 960 |
| Gumbo - | - - | - | 52 | 1012 |
| Sticky shale | - - | - | 18 | 1030 |
| Gumbo - - | - - | - | 42 | 1072 |
| Sticky shale | - - | - | 149 | 1221 |
| Fard shale- | - - | - | 5 | 1225 |
| Gumbo - | - - | - | 18 | 1244 |
| Sand - | - - | - | 9 | 1253 |
| Sticky shale | - - | - | 43 | 1296 |
| Sandy shale | - - | - | 8 | $13 \cap 4$ |
| Sticky shale | - - | - | 31 | 1335 |
| Gumbo - - | - - | - | 20 | 1355 |
| Sticky shale | - - | - | 66 | 1421 |
| Sand - - | - - | - | 14 | 1435 |
| Gumbo - | - - | - | 35 | 1470 |
| Sand - | - - | - | 8 | 1478 |
| Gumbo - | - - | - | 31 | 1509 |
| Sand - - | - - | - | 52 | 1561 |
| Sand and lime | - - | - | 49 | 1610 |
| Gumbo - - | - - | - | 17 | 1627 |
| TOTAL DEPTH |  |  |  | 3003 |

## Driller's $\log$ of well 91

San Antonio Loan and Trust Company.

$|$| Clay | - | - | - | - | - |
| :--- | :--- | :--- | :--- | :--- | ---: |
| Rock | - | - | - | - | - |
| 21 |  |  |  |  |  |
| Caliche | - | - | - | - | 60 |
| Clay | - | - | - | - | 52 |
| Sand | - | - | - | - | - |
| 8 |  |  |  |  |  |
| Clay | - | - | - | - | 183 |
| Tater sand- | - | - | - | 12 |  |


| Thickness <br> $(f e e t)$ | Depth <br> (feet) |
| :---: | :---: |

Driller's $\log$ of well 93

| V. ت. Bird, owner. |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | ---: |
| Clay- | - | - | - | - | 20 |
| Sand- | - | - | - | - | 20 |
| Clay- | - | - | - | - | 40 |
| Caliche rock. | - | - | 18 | 40 |  |
| Clay- | - | - | - | 11 | 98 |
| Caliche | - | - | - | - | 31 |
| Clay- | - | - | 109 |  |  |
| Salt water sand | - | - | 19 | 140 |  |
| Clay- | - | 159 |  |  |  |
| Water sand | - | - | - | 126 | 169 |
|  |  |  | - | 19 | 295 |
|  |  |  |  |  |  |

## Driller's lcg of well 116

| A. L. Stokes, ovmer |  |  |  |
| :---: | :---: | :---: | :---: |
| Brown sand - - | - | 40 | 40 |
| Lime re ck | - | 45 | 85 |
| Yellow clay - | - | 95 | 180 |
| Thite clay and hard sand | - | 60 | 240 |
| Red and yellow clay | - | 15 | 255 |
| Hard water sand - | - | 20 | 275 |
| Brown clay - - | - | 25 | 300 |
| Brown clay and boulders - - | - | 180 | 480 |
| Brom water sand and some clay - | - | 23 | 503 |
| Red clay, bouldres and gypsum- | - | 247 | 750 |
| Red clay, boulders and gypsum- | - | 550 | 1300 |
| Boulders and clay, hard | - | 200 | 1500 |

Driller's log of well 136
Richard Albert, owner.
Sand- - -
Clay and caliche- -
Soft sand and caliche wi th layers of hard caliche-
Red and yellow clay - 20
Tater sand - - - 17

Driller's log of well 156
City of Alice, owner.
Soil - - -
Thite clay - -
Gumbo - - - - 21
Shale - - - - 81
Sand, good, no breaks- 23
Sand and shale, very
broken-

26
84
90
156
199
393
394
403
423
496
535
538
553
554
595
622
$62^{2}$
627
645
659
678
698
720
812
837
861
949
992
1083
1142
1277
1329
1375
1385
1447
1558
1580
1653
1667
1881
1962
1985
2068

-51-
Table of Drillers' Logs, Jim Wells County -- Continued

|  | Thickness <br> (feet) |
| :---: | :---: |

Driller's log of well 264 - continued

| Shale. - | - | - | - | 50 | 110 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tater sand | - | - | - | 20 | 130 |
| Shale- | - | - | - | 40 | 170 |
| Tater sand | - | - | - | 24 | 194 |
| Broken shale | - | - | - | 61 | 255 |
| Tater sand | - | - | - | 20 | 275 |
| Shale- | - | - | - | 27 | 302 |
| Yellow shale | - | - | - | 68 | 370 |
| Sand and gra | -1 | - | - | 25 | 395 |
| Shale- - | - | - | - | 25 | 420 |
| Sandy shale | - | - | - | 45 | 465 |
| Shale- | - | - | - | 60 | 525 |
| Tater sand | - | - | - | 30 | 555 |
| Shale- | - | - | - | 10 | 565 |
| ivater sand | - | - | - | 30 | 595 |
| Shale- | - | - | - | 35 | 630 |
| Mater sand | - | - | - | 53 | 683 |
| Sand rock- | - | - | - | 1 | 684 |
| Nater sand | - | - | - | 81 | 765 |
| Shale- | - | - | - | 21 | 786 |
| Tater sand | - | - | - | 17 | 803 |
| Shale- | - | - | - | 37 | 840 |
| Tater sand | - | - | - | 25 | 865 |
| Sticky shale | - | - | - | 130 | 995 |
| Shale, cored | - | - | - | 20 | 1015 |
| Sticky shale | - | - | - | 43 | 1058 |
| Nater sand- | - | - | - | 37 | 1095 |
| Sticky shale | - | - | - | $\pm 15$ | 1410 |
| Sandy shale | - | - | - | 26 | 1436 |
| sticky shale | - | - | - | 27 | 1463 |
| Water sand- | - | - | - | 40 | 1503 |
| TOTAL DEPTH |  |  |  |  | 5010 |

## Driller's lcg of well 288

Fred C. Thomas, owner. Surface sand and

| caliche- - | - | 0 |
| :---: | :---: | :---: |
| Sand and caliche | - - | 5 |
| Clay and caliche | - - | 5 |
| Hard caliche - | - - | 5 |
| Sand and caliche | - - | 10 |
| Gravel - | - - | 10 |
| Rock- - | - - | 10 |
| Clay - | - - | 30 |
| Rock - - - | - - | 11 |
| Rock and clay- | - - | 29 |
| Mixed clay - | - - | 85 |
| Clay and rock- | - - | 18 |
| Caliche - - | - - | 2 |
| Red clay - - | - - | 20 |
| Nater sand - | - - | 9 |



Driller's log of well 288 - continued

| Red clay - | - | - | - | 31 | 400 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Mixed sand and clay | - | 15 | 415 |  |  |
| $?$ | - | - | - | - | 60 |
| Tater sand | - | - | - | - | 475 |
| Tell ends in top of sand |  |  |  |  |  |

Driller's log of well 389
James Darche, owner.
Soft, yellow sand- - 12
Sof $t$, yellow sand wi th
snail shells - - 6

Soft, gray, sandy clay with streaks of sand - - - - 20
-52-
Table of Drillers' Logs, Jim Wells County -- Continued

| Thickness <br> (feet)Depth <br> (feet) |
| ---: |

Driller's log of well 389--continued


Driller's ing of well 408

| Magnolia Petroleum Company |  |  |  |  |
| :--- | :--- | :--- | :--- | ---: |
| Surface soil | - | - | - | - |
| Sand | 8 | 8 |  |  |
| Saliche | - | - | - | - |

## Driller's log of well 415

Seeligson Ranch - Magnolia Petroleum Company.
Surface soil - - - 10
Clay - - - - - 30
Caliche - - - - 20
Sandy shale- - - - 50 Il0
Clay - - $\quad$ - - 45 155
Bhale - - - - $30 \quad 185$
Olay - - - - 35 220
Gandy shale - - - 55 275
Clay - - - - 150290

Driller's log of well 415-mentinued
Sandy shale
Shale
Clay
Clay
Sand
C

Driller's log of well 416
Seeligson Ranch - Magnolia Oil Company.


## Driller's $\log$ of well 417

Seeligson Ranch - Magnolia Oil Company.

| Sand | - | - | - | - | 10 | 10 |
| :--- | :--- | :--- | :--- | :--- | :--- | ---: |
| Caliche | - | - | - | - | 15 | 25 |
| Yellow clay | - | - | - | 115 | 140 |  |
| Sandy shale | - | - | - | 90 | 230 |  |
| Sand | - | - | - | - | 30 | 260 |
| Sticky shale | - | - | - | 10 | 270 |  |
| Sand | - | - | - | - | 20 | 290 |
| Sticky shale | - | - | - | 27 | 317 |  |
| Sand | - | - | - | - | 18 | 335 |
| Shale | - | - | - | - | 5 | 340 |
| Sand | - | - | - | - | 15 | 355 |
| Shale | - | - | - | - | 65 | 420 |
| Sand | - | - | - | 25 | 445 |  |
| Sandy shale | - | - | - | 5 | 450 |  |
| Sand | - | - | - | 65 | 515 |  |
| CASING RECORD: | 413 feet of $7-$ inch; 4 |  |  |  |  |  |
| and 5-inch screens set from 413 to 515. |  |  |  |  |  |  |

-53-

Table of Drillers' Logs, Jim Wells County -- Continued

| Thickness  <br> (feet) Depth <br> (feet) |  |  |  |  | $\begin{aligned} & \text { ness } \\ & \text { eet) } \\ & \hline \end{aligned}$ | Depth (feet |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Driller's log of well 418 | Driller's 10 g of well 419--continued |  |  |  |  |  |
| City well at Premont, Texas. | Sand rock | - | - | - | 17 | 25 |
| Caliche - - - 16 | Caliche | - | - | - | 32 | 57 |
| Saliche with clay streaks 234 250 | Sand | - | - | - | 9 | 66 |
| Jandy red shele - - 160 - 410 | Clay | - | - | - | 82 | 148 |
| Sand - - - 110 ! 520 | Sand | - | - | - | 10 | 158 |
| OASING RECORD: 120 feet of 8-inch; | Clay | - | - | - | 66 | 224 |
| 8-inch x 1 foot, 4-inch swedge; 284 $\frac{1}{2}$ | Sandy shale | - | - | - | 28 | 25: |
| feet of 6-inch. Yield $122 \mathrm{~g} \cdot \mathrm{p} \cdot \mathrm{m}$. on | Hard shale | - | - | - | 18 | 270 |
| Feb. 11, 1940. | Sandy shale | - | - | - | 35 | 505 |
|  | Clay | - | - | - | 8 | 313 |
| Driller's log of well 419 | Sand | $\cdots$ | - | - | 58 | 371 |
|  | Shale | - | - | - | 39 | 410 |
| inagnolia Petroleum Company. Water well | Sand | - | - | - | 13 | 423 |
| on Sam Maun lease. | Clay | - | - | - | 35 | 458 |
| Surface soil - - - 8 8 | Sand | - | - | - | 58 | 516 |
|  | CASING RECORD: |  | : 458 feet of 7 and 5-inch |  |  |  |

Analyses of water from Jim Wells County, Texas (Parts per million. Well numbers correspond to numbers in table of records of wells)

| Well <br> No. | Owner | Date of <br> collection | Total <br> dissolved <br> solids | Silica <br> $(\mathrm{SiO})$ | Tron <br> $(\mathrm{Fe})$ | Calcium <br> (Ca) | Magnesiun <br> $(\mathrm{Mg})$ |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |


| 16 S. M. Freeborn | Mar. 31, 1934 | a/ 940 | - | . 97 | 83 | 28 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 44 Mrs. G. E. Teller | Mar. 21, 1934 | g/1,326 | - | 1.8 | 102 | 45 |
| 46 T . L. Bowden | do. | a) 781 | - | . 33 | 77 | 31 |
| 67 Manuel Trejo | do. | 日/2,462 | - | 1.2 | 99 | 55 |
| 89 W. S. Wimbs | Mar. 1, 1928 | 1,818 | 26 | 1.1 | 68 | 50 |
| 95 E. Whitley | Nar. 4, 1913 | - | - | 0 | - | - |
| 96 Hayden \& Reeves | do. | - | - | 0 | - | - |
| 109 M. J. Luby | do. | - | - | 0 | - | - |
| 113 James Walker | do. | - | - | 5.0 | - | - |
| 114 C. F. Longwish Est. | do. | - | - | 3.0 | - | - |
| 116 A. L. Stokes | do. | - | - | 5.0 | - | - |
| 132 Anastacio Lopez | do. | - | - | 0 | - | - |
| 142 J. B. Polk | Feb. 28, 1928 | 806 | 46 | 1.2 | 34 | 21 |
| 151 Alice Cotton Oil Co. | May 3, 1913 | - | - | 0 | - | - |
| 153 City of Alice | Mar. 4, 1913 | - | - | - | - | - |
| 153 do. | Apr. 18, 1940 | 798 | - | - | - | - |
| 154 do. | do. | 1,163 | - | - | 43 | 29 |
| 155 do. | Mar. 5, 1928 | 1,234 | 25 | .17 | 43 | 24 |
| 155 do. | Apr. 18, 1940 | 1,085 | - | - | 50 | 28 |
| d/156 do. | Sept.10, 1928 | 2,336 | - | - | 70 | 17 |
| e/156 do. | Apr. 15, 1928 | 6,227 | - | - | 246 | 31 |
| f/156 do. | Apr. 20, 1928 | 6,669 | - | - | 267 | 34 |
| d/156 do. | May 1, 1928 | 3,103 | - | - | 104 | 24 |
| h/156 do. | Jan. 10, 1928 | 4,387 | - | - | 46 | 9 |
| i/156 do. | Jan. 20, 1928 | 5,041 | - | - | 155 | 17 |
| 1/156 do. | Apr. 8, 1940 | 1,109 | - | - | 34 | 17 |
| 175 W. F. Botard | Mar. 29, 1934 | a/1,082 | - | .44 | 22 | 17 |
| 191 Romana V. de Garcia | Mar. 21, 1934 | a/ 777 | - | 2.0 | 16 | 12 |
| 206 Emilia Berrera | Mar. 29, 1934 | 2/2,289 | - | . 26 | 220 | 107 |
| 214 Miguel y Ygnacio Cadena | do. | a) 621 | - | 3.6 | 73 | 56 |
| 251 Ed. Vela | do. | a) 591 | - | . 53 | 36 | 15 |
| 348 W. A. Keith | Apr. 7, 1933 | a) 699 | - | 1.5 | 46 | 18 |
| 361 Lindquist Bros. | Mar. 2, 1928 | 745 | 37 | . 11 | 47 | 19 |
| 374 E. G. Maun | Apr. 7, 1933 | a) 601 | - | 2.6 | 40 | 18 |
| 406. Robert Adams | Apr. 9, 1940 | 1,154 | - | - | 94 | 32 |
| 407 Ed. Adams | do. | 1.032 | - | - | 41 | 28 |
| 409 Dr. Adkinson | Apr. 8, 1940 | 845 | - | - | - | - |
| e/412 - Johnson | Apr, 6, 1940 | 751 | - | - | 61 | 20 |
| 419 Sam Maun | Apr. 5, 1940 | 645 | - | - | 38 | 19 |

Determined.
Sample collected by David Donoghue under the supervision of Alex Deussen.
Water from strainers at 837 to 867 feet and 945 to 986 feet.
e/ Water from strainer at 1,078 to 1,139 feet.
f/ Water from strainer at 1,280 to 1,327 feet.

Analyses of water from Jim Wells County, Texas
(Parts per million. Well numbers correspond to numbers in table of records of wells:

| $\begin{aligned} & \text { Nell } \\ & \text { vo. } \end{aligned}$ | $\begin{array}{\|c} \text { Sodium } \\ (\mathrm{Na}) \end{array}$ | Potassium (K) | $\begin{array}{\|c\|} \text { Bicar- } \\ \text { bonate } \\ \left(\mathrm{HCO}_{3}\right) \end{array}$ | Sul- <br> phate <br> $\left(\mathrm{SO}_{4}\right)$ | $\left\lvert\, \begin{aligned} & \text { Chlo- } \\ & \text { ride } \\ & \text { (cl) } \end{aligned}\right.$ | Fluor- <br> ide <br> $(F)$ | $\begin{array}{\|c\|} \hline \mathrm{N}_{\mathrm{i}}- \\ \text { trate } \\ \left(\mathrm{NO}_{3}\right) \end{array}$ | $\begin{gathered} \text { Total } \\ \text { hardness } \\ \text { as } \mathrm{CaCO}_{3} \\ (\text { calc. }) \\ \hline \end{gathered}$ | Analyst |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | a/ 252 |  | 438 | 59 | 199 | 2.0 | 2.5 | 160 | Margaret D. Foster |
| 16 | 2/ 241 |  | 316 | 51 | 375 | . 4 | 5.8 | 322 | Do. |
| 44 | a) 333 |  | 355 | 192 | 472 | . 5 | 6.9 | 440 | Do. |
| 46 | a/ 181 |  | 374 | 68 | 235 | . 8 | 4.0 | 320 | Do. |
| 67 | a) 746 |  | 401 | 416 | 938 | 1.0 | 9.2 | 473 | Do. |
| 89 | 513 | 9.6 | 402 | 283 | 615 | - | 21 | 375 | Do. |
| 95 | - - |  | 257 | 328 | 586 | - | - | W/168 | W. T. Read c/ |
| 96 | - |  | 392 | 287 | 290 | - | - | b/300 | DO. |
| 109 | - |  | 332 | 119 | 249 | - | - | b/186 | Do. |
| 113 | - |  | 295 | 19 | 73 | - | - | b/298 | Do. |
| 114 | - |  | 408 | 49 | 140 | - | - | b/290 | Do. |
| 116 | - |  | 355 | 30 | 181 | - | - | b/128 | DO. |
| 132 | $\xrightarrow{-}$ |  | 256 | 222 | 665 | - | - | b/260 | Do. |
| 142 | 235 | 4.4 | 358 | 42 | 246 | - | 1.3 | 171 | Margaret D. Foster |
| 151 | - |  | 314 | 186 | 387 | - | - | b/202 | V. T. Read c/ |
| 153 | $\cdots$ |  | 392 | 58 | 271 | - | - | b/182 | Do. |
| 153 | 287 |  | 318 | 115 | 220 | - | - | 87 | E. W. Lohr |
| 154 | 363 |  | 320 | 149 | 412 | - | - | 226 | Do. |
| 155 | 374 | 10 | 318 | 151 | 430 | - | 17 | 206 | Margaret D. Foster |
| 155 | 330 |  | 354 | 113 | 390 | - | - | 240 | E. W. Lohr |
| 156 | 2) 789 |  | 280 | 1,190 | 355 | - | - | 245 | ? |
| 156 | a/1,646 |  | 223 | 3,187 | 579 | - | - | 642 | Curtis Laboratories |
| 156 | 2/1,760 |  | 200 | 3,463 | 613 | - | - | 807 | Do. |
| 156 | a) 841 |  | 274 | 1,327 | 409 | - | - | 358 | Do. |
| 156 | a/1,368 |  | 209 | 1,947 | 660 | - | - | 152 | Do. |
| 156 | a/1,422 |  | 211 | 2,352 | 657 | - | - | 457 | Do. |
| 156 | 361 |  | 332 | 228 | 305 | - | - | 155 | E. W. Lohr |
| 175 | a/ 371 |  | 388 | 156 | 306 | 2.7 | 16 | 125 | Margaret $D$. Foster |
| 191 | a) 271 |  | 306 | 74 | 241 | .3 | 12 | 89 | DO. |
| 206 | 2) 462 |  | 360 | 399 | 890 | .7 | 33 | 989 | DO. |
| 214 | a) 85 |  | 436 | 45 | 118 | 1.8 | 27 | 412 | Do. |
| 251 | a/ 174 |  | 321 | 67 | 137 | . 4 | 3.7 | 152 | Do. |
| 348 | 9/ 194 |  | 298 | 90 | 180 | - | 24 | 189 | DO. |
| 361 | 193 | 6.2 | 304 | 84 | 189 | - | . 20 | 195 | DO. |
| 374 | a) 172 |  | 278 | 26 | 208 | - | . 50 | 174 | DO. |
| 406 | 307 |  | 318 | 62 | 502 | - | - | 366 | E. W. Lohr |
| 407 | 318 |  | 420 | 140 | 298 | - | - | 217 | Do. |
| 409 | 316 |  | 350 | 135 | 215 | - | - | 63 | Do. |
| 412 | 199 |  | 345 | 111 | 190 | - | - | 234 | Do. |
| 419 | 191 |  | 294 | 24 | 228 | - | - | 173 | Do. |

g/ Water from strainers at 837 to 867 feet 945 to 986 feet, 1,078 to 1,139 feet, and 1,280 to 1,327 feet.
h/ Water from strainer at 1,958 to 2,004 feet.
I/ Water from strainers at 837 to 869 feet, 945 to 986 feet, 1,078 to 1,139 feet, 1,280 to 1,327 feet and 1,958 to 2,004 feet.
I/ Well developed from test water from strainers at 837 to 867 feet, and 945 to 986 feet.


