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# GROUND-WATER RESOURCES OF BRAZORIA COUNTY, TEXAS

By

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Prepared in cooperation with the United States
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C O N T E N T S



ILLUSTRATION

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## INTRODUCTION

### Location, general features of the area, and economic development

Brazoria County, in southeastern Texas, is bounded on the north by Fort Bend and Harris Counties, on the east by Galveston County, on the south by the Gulf of Mexico, and on the west by Matagorda County. The land surface is relatively flat but rises gently from the Gulf to a maximum altitude of about 60 feet in the northern and northwestern parts of the county. Most of the area consists of open prairie but a part is covered with hardwood timber.

The county has an area of 1,441 square miles and in 1940, according to the U. S. Bureau of the Census, had a population of 48,000, or an average of 33 persons to the square mile. The population has increased materially since 1940 as a result of industrial expansion and additional oil development. The six largest towns are Freeport, Velasco, Alvin, Lake Jackson, Angleton, and West Columbia. Smaller towns are Brazoria, Sweeny, East Columbia, Damon, and Pearland.

Brazoria County is one of the leading rice-growing counties in Texas; it produced 624,306 barrels in 1945. Other marketable crops include cotton, corn, grain sorghum, figs, pecans, sugar cane, fresh vegetables, and hay. Much of the area is devoted to livestock. The major products are beef cattle, hogs, and chickens, but dairying is also an important source of income.

The occurrence and development of oil, natural gas, sulfur, and salt have made Brazoria County one of the leading mineral-producing counties of the State. According to the Texas Almanac for 1947-48, the total production of oil amounted to 29,308,106 barrels in 1946, and this was exceeded by only three counties in Texas. Large quantities of sulfur are mined by the circulating hot water method. Magnesium and various other chemicals are produced in plants near Freeport. Oyster shells, dredged from the adjoining bays, are used for industrial processing and for road building.

### Previous reports

Previous reports on ground water and its development in Brazoria County include two mimeographed publications giving detailed records of several hundred wells 1/ prepared in connection with the cooperative program of ground-water

1/ Heuser, J. F., Records of wells, drillers' logs, water analyses, and map showing locations of wells in Brazoria County, Texas (west of the Brazos River), Texas State Board of Water Engineers in cooperation with the U. S. Geological Survey, mimeographed, 1937.

Turner, Samuel F., and Livingston, Penn, Records of wells, drillers' logs, water analyses, and map showing locations of wells in Brazoria County, Texas (east of the Brazos River), Texas State Board of Water Engineers in cooperation with the U. S. Geological Survey, mimeographed, 1939.

investigations in Texas by the State Board of Water Engineers and the U. S. Geological Survey; and two confidential manuscript reports relating to ground-water supplies for defense projects near Freeport and Sweeny. The public water supplies of the county are discussed in considerable detail in a report on the public water supplies of eastern Texas 2/. The report was published in mimeographed form in two volumes by the Texas State Board of Water Engineers, in 1945.

## Acknowledgments

Grateful acknowledgment is due the owners of wells in Brazoria County who have given their cooperation in the collection of these data. The city water superintendents, well drillers, and the representatives of industrial plants and oil companies also have contributed much valuable information.

The field work was done under the supervision of W. N. White, retired district engineer of the U. S. Geological Survey in charge of ground-water investigations in Texas. The water analyses were made under the supervision of E. W. Lohr or W. W. Hastings, chemists in the Quality of Water Division of the U. S. Geological Survey, and the discussion of quality of water was prepared by B. Irelan, associate chemist, Austin, Texas.

## Precipitation

According to the records of the U. S. Weather Bureau, the average annual precipitation at Angleton, near the center of Brazoria County, during the 33-year period from 1914 to 1946, inclusive, was 48.33 inches. The amounts of precipitation during the four wettest years were as follows: 66.79 inches in 1919, 67.96 inches in 1922, 70.88 inches in 1941, and 82.64 inches in 1946. The amounts during the four driest years were 35.12 inches in 1916, 22.78 inches in 1917, 33.71 inches in 1927, and 35.02 inches in 1928. The following table gives the records of monthly precipitation at Angleton, Brazoria County, Texas.

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2/ Sundstrom, R. W., Hastings, W. W., and Broadhurst, W. L., Public water supplies in eastern Texas: U. S. Geol. Survey Water-Supply Paper 1047, in press.

Precipitation in inches, 1895-96 and 1913-1947, at Angleton, Brazoria County, Texas

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1895 | - | - | - | - | - | 5.13 | 1.47 | 4.49 | 1.96 | 3.25 | 9.35 | 3.60 | - |
| 1896 | 4.25 | 5.90 | 5.75 | - | - | - | - | - | - | - | - | - | - |
| 1913 | - | - | - | - | - | - | 1.57 | 8.60 | 10.71 | 17.77 | 4.58 | 5.17 | - |
| 1914 | .49 | 3.16 | 2.93 | 15.16 | 7.89 | .26 | 1.73 | 8.49 | 4.34 | 3.61 | 8.02 | 4.19 | 60.27 |
| 1915 | 2.96 | 4.03 | 3.53 | 2.25 | 2.66 | .00 | 3.95 | 13.87 | 6.29 | 2.49 | 2.04 | 4.74 | 48.81 |
| 1916 | 1.62 | .13 | .35 | 1.63 | 6.49 | 5.37 | 5.66 | 5.43 | 3.55 | 1.08 | 1.68 | 2.13 | 35.12 |
| 1917 | 2.38 | 2.98 | .75 | 2.37 | 6.04 | .44 | 3.12 | 1.66 | 1.15 | .49 | .84 | .56 | 22.78 |
| 1918 | .27 | 2.06 | 2.30 | 5.65 | 1.86 | 1.41 | 2.48 | 5.03 | 2.87 | 5.67 | 6.91 | 3.93 | 40.44 |
| 1919 | 6.20 | 2.59 | 9.21 | 1.35 | 5.27 | 16.57 | 6.55 | 5.42 | 3.62 | 5.93 | 2.30 | 1.78 | 66.79 |
| 1920 | 6.12 | 1.85 | 1.36 | .54 | 3.64 | 5.83 | 4.76 | 9.10 | 2.49 | 6.81 | 3.83 | 3.03 | 49.36 |
| 1921 | 3.32 | .43 | 3.97 | 3.88 | 1.25 | 8.12 | 3.94 | 1.60 | 3.66 | 1.05 | 3.27 | 3.73 | 38.22 |
| 1922 | 5.87 | 1.65 | 8.49 | 2.17 | 4.98 | 15.05 | 9.29 | 2.92 | 5.67 | 7.02 | 1.80 | 3.05 | 67.96 |
| 1923 | 1.36 | 6.28 | 6.07 | 5.39 | 1.49 | 5.59 | 8.75 | 2.85 | 6.88 | 3.55 | 3.79 | 10.72 | 62.72 |
| 1924 | 4.74 | 5.13 | 2.24 | 1.15 | 4.64 | 4.62 | 1.06 | 3.94 | 1.83 | .02 | 1.01 | 8.36 | 38.74 |
| 1925 | 3.25 | .27 | .78 | 1.23 | 1.49 | 3.73 | 6.52 | 2.71 | 7.06 | 10.54 | 5.31 | 3.72 | 46.61 |
| 1926 | 3.55 | .99 | 6.65 | 2.57 | 3.83 | 2.31 | 5.32 | 2.47 | 1.59 | 3.98 | 1.67 | 3.50 | 38.43 |
| 1927 | 1.40 | 1.85 | 1.34 | 2.78 | .14 | 4.42 | 2.72 | .09 | 6.74 | 2.45 | 2.12 | 7.66 | 33.71 |
| 1928 | .78 | 6.05 | .74 | 1.38 | 2.75 | 4.75 | .40 | 2.63 | 4.51 | 2.66 | 3.51 | 4.86 | 35.02 |
| 1929 | 4.54 | 1.29 | 5.08 | 2.94 | 8.35 | 2.21 | 4.45 | 3.17 | 1.82 | 5.41 | 6.71 | 5.08 | 51.05 |
| 1930 | 3.71 | 2.72 | 1.23 | 1.73 | 5.73 | .45 | 2.95 | 2.56 | 3.61 | 9.79 | 4.93 | 3.75 | 43.16 |
| 1931 | 4.28 | 4.73 | 3.12 | 1.27 | 2.59 | 1.36 | 5.03 | 1.34 | .96 | 3.99 | 3.07 | 9.07 | 40.81 |
| 1932 | 5.85 | 4.24 | 1.12 | 5.58 | 2.40 | 1.33 | .79 | 12.55 | 5.66 | 2.71 | 1.66 | 2.73 | 46.62 |
| 1933 | 2.18 | 4.87 | 2.92 | .40 | 2.96 | .64 | 12.34 | 2.85 | 3.87 | 3.45 | 2.24 | 3.77 | 42.49 |
| 1934 | 9.59 | 3.24 | 4.17 | 4.95 | 4.09 | .12 | 6.95 | 3.38 | 5.31 | .47 | 10.30 | 4.57 | 57.14 |
| 1935 | 1.87 | 5.14 | 1.95 | 3.62 | 5.01 | 5.18 | 5.17 | .31 | 12.09 | 4.37 | 1.08 | 8.87 | 54.66 |
| 1936 | 2.03 | 2.31 | 2.31 | 3.45 | 9.43 | .56 | 8.11 | 3.57 | 5.19 | 2.56 | 2.61 | 3.93 | 46.06 |
| 1937 | 2.34 | .92 | 4.86 | .71 | .45 | 4.85 | 1.81 | 3.94 | 3.73 | 3.52 | 3.41 | 7.44 | 37.98 |
| 1938 | 4.93 | 1.83 | 1.08 | 1.46 | 5.19 | 4.01 | 2.28 | 2.87 | 6.70 | 4.34 | 3.52 | 2.87 | 41.08 |
| 1939 | 4.18 | 3.13 | 1.03 | 2.05 | 2.69 | 4.94 | 15.50 | 1.86 | 3.00 | 1.07 | 2.12 | 2.27 | 43.84 |
| 1940 | 2.30 | 3.72 | 1.33 | 1.79 | 1.68 | 1.47 | 4.43 | 2.11 | 4.46 | 7.25 | 7.20 | 7.58 | 45.32 |
| 1941 | 2.32 | 3.32 | 5.13 | 7.28 | 2.64 | 4.16 | 8.64 | 6.41 | 17.49 | 9.22 | 2.34 | 1.93 | 70.88 |
| 1942 | 1.75 | 4.87 | 3.19 | 2.12 | .32 | 5.39 | 9.16 | 7.24 | 5.72 | .63 | 3.84 | 3.18 | 47.41 |
| 1943 | 3.10 | 2.63 | 3.60 | 2.96 | 1.01 | 2.99 | 9.24 | 1.67 | 2.01 | .56 | 7.26 | 5.69 | 42.72 |
| 1944 | 10.46 | 1.97 | 8.10 | .90 | 8.02 | 1.15 | .68 | 8.22 | 8.39 | .08 | 3.87 | 5.29 | 57.13 |
| 1945 | 1.41 | 3.60 | 6.42 | 5.65 | 4.01 | 3.02 | 7.69 | 12.64 | 2.15 | 4.12 | 1.11 | 7.09 | 58.91 |
| 1946 | 7.61 | 3.82 | 3.92 | 2.65 | 11.22 | 6.44 | 8.71 | 5.50 | 10.44 | 6.13 | 13.21 | 2.99 | 82.64 |
| 1947 | 3.05 | 1.00 | 5.54 | 1.96 | 10.23 | 2.02 | 4.78 | 9.37 | 2.49 | 1.30 | 5.81 | 4.51 | 52.06 |

## GENERAL PRINCIPLES OF THE OCCURRENCE AND MOVEMENT OF GROUND WATER

For discussions of the fundamental principles of the occurrence and movement of ground water the reader is referred to papers by Meinzer and Wenzel 3/.

Ground water is derived chiefly from water that falls as rain and snow. A part of the water from precipitation runs off in streams; a part is returned to the atmosphere by evaporation and transpiration of trees and other plants; and a part sinks to the zone of saturation, in which all the interstitial openings of the rocks are filled with water.

In most places ground water is slowly but steadily moving under the influence of gravity from areas of intake to areas of discharge. In the more permeable rocks, such as coarse sand, gravel, and cavernous limestone, the water moves with comparative freedom although the movement generally is very slow as compared with the flow of a surface stream. Permeable rocks are capable of yielding abundant supplies of water to wells. In less permeable rocks, such as shale or clay, molecular attraction retards the movement of the water, which may be almost infinitely slow. Such rocks yield little or no water to wells.

In the outcrop areas of water-bearing beds, water is generally unconfined and does not rise in wells above the water table, which is the upper surface of the zone of saturation and the level at which water is first encountered.

The water table is not a level surface, but it usually slopes in about the same direction as the slope of the land surface. In places where the land surface is lower than the water table in adjacent areas, such as along many streams, some of the ground water emerges in seeps and springs.

In some localities perched water accumulates above the main zone of saturation, supported by local bodies of relatively impermeable material, especially during the winter and spring when the rates of evaporation and transpiration are low. Perched water supplies are usually small and are not dependable.

In areas down the dip of the water-bearing beds, where the rocks are under cover and are inclined between relatively impermeable strata, the water usually is under artesian pressure and will rise in wells above the level at which it is first encountered. If the altitude to which the water will rise is greater than the altitude of the land surface, flowing wells may be obtained.

Most wells are subject to water-level fluctuations of varying magnitude. These fluctuations are due to many different causes, but most of them are a manifestation of a change in the ratio between the rate of ground-water intake or recharge and the rate of loss or discharge. Most water-table wells are supplied largely from precipitation through intake areas close at hand and respond with only a moderate lag to changes in rainfall. In very shallow wells the water level may rise several feet after heavy rains and decline until the wells go dry during prolonged droughts. Artesian wells that draw from sand or sandstone beds at considerable distances from the outcrops of the water-bearing beds seldom are affected by seasonal or yearly changes in rainfall, although if not too far from the outcrop they may respond to the effect of a series of wet or dry years. In general, however, the major fluctuations in pressure in artesian wells and accompanying rise and fall in water

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3/ Meinzer, O. E., The occurrence of ground water in the United States: U.S. Geol. Survey Water-Supply Paper 489, 1923; Outline of methods for estimating ground-water supplies: U. S. Geol. Survey Water-Supply Paper 638-C, pp. 99-145, 1931.

Wenzel, L. K., Methods for determining permeability of water-bearing materials: U.S. Geol. Survey Water-Supply Paper 887, 1942.

Meinzer, O. E., and Wenzel, L. K., Physics of the Earth, vol. 9, Hydrology, pp. 385-478, McGraw-Hill, New York, 1942.

levels are due to withdrawals of ground water from the well itself or from other wells that tap the same water-bearing beds.

When a well is pumped the water level in the well declines and a hydraulic gradient is developed toward the well from all directions. It is this hydraulic gradient that causes water to flow toward the well. Within limits the amount of water that will enter a well varies directly with the amount the water level is lowered. For example, if a pumped well in fairly permeable material will yield 200 gallons a minute when the water level is lowered 20 feet, it will yield about 100 gallons a minute when the water level is lowered 10 feet. This ratio between the yield and the drawdown is called the specific capacity and is generally expressed as the yield in gallons a minute per foot of drawdown.

Large withdrawals of ground water are accompanied by a general lowering of the water table or artesian pressure surface, and a cone of depression gradually spreads in all directions from the center of pumping until large areas may be affected. However, this is usually considered not very serious unless the rate of decline persists without a corresponding increase in the rate of pumping or the trend is such as to indicate that the pumping lift may eventually exceed the economic limit. Some beds contain fresh water near the outcrop and salty water down the dip; others are overlain or underlain by and are imperfectly separated from beds carrying salty water, and excessive pumping may lead to the invasion of salt water into the wells.

## GROUND-WATER RESERVOIRS IN BRAZORIA COUNTY

Brazoria County is underlain by a thick sequence of unconsolidated sediments consisting mostly of sand and clay. They dip generally to the southeast but those near the surface have only a gentle dip.

The Beaumont clay, of Pleistocene age, crops out in northern and eastern Brazoria County. It is overlain by surficial deposits of alluvium, wind-blown sand, and silt in the valleys of the Brazos and St. Bernard Rivers and in a wide belt along the Gulf Coast. The Beaumont clay is underlain in downward succession by the Lissie formation, the so-called Willis-Goliad sand, and older rocks that generally contain mineralized water. Beds of sand or sand and gravel in the Willis-Goliad sand and younger deposits, confined between layers of clay and shale, comprise the principal ground-water reservoirs in the county. Most wells draw from surficial deposits or sands in the Beaumont clay; a smaller number tap the Lissie formation, and only a few wells in the northern part of the county are known to draw from the Willis-Goliad sands.

The aquifers in the Beaumont clay and older formations, which are confined between beds of relatively impermeable clay, dip toward the Gulf at angles greater than the slope of the land surface. Hence, most of the wells, except the very shallow ones, encounter water under artesian pressure. The pressure formerly was sufficient to cause a flow from the deeper wells, but large withdrawals of water during recent years in Galveston and Harris Counties, as well as in Brazoria County, have caused a regional decline in pressure and most of the wells have ceased flowing.

## PRESENT DEVELOPMENT OF WATER SUPPLIES FROM WELLS

### Public supplies

All the public water supplies in Brazoria County are obtained from wells. Alvin, Angleton, Freeport, Lake Jackson, Velasco, and West Columbia have two wells each, and the combined pumpage for these towns averages about 1,000,000 gallons a day (see table on page 7 ). The water systems are discussed in the report on the public water supplies of eastern Texas 4/. Brazoria and Sweeny are now supplied from privately owned wells, but the two towns have created water-control and improvement districts which will soon operate public water plants. The smaller towns and villages depend on privately owned wells.

### Industrial supplies

The first large industrial development in Brazoria County was that of the Freeport Sulphur Company at Brans Mound, 3 miles southwest of Freeport. The water used for mining sulphur at that plant was obtained from several wells about 200 feet deep, some of which were in the vicinity of the plant and others were north of the plant along Jones Creek. About 1925 the plant was moved to Hoskins Mound 15 miles northeast of Freeport, and since then a part of the water supply has been obtained from wells and a part from surface sources. The wells at the Hoskins Mound plant (Nos. 467-478) range in depth from 239 to 628 feet and yield from 80 to 550 gallons a minute each. Two sand zones furnish most of the water; one zone lies between 100 and 250 feet and the other between 535 and 620 feet below the land surface. The pumpage from the wells was estimated to be about 2,500,000 gallons a day until 1942, but it has increased and was about 3,300,000 gallons a day in 1947.

The Jefferson Lake Sulphur Company, Inc., started operations in 1937 at Clemens Dome, about 3 miles south of Brazoria. The water used at the mine is obtained from wells which are about 500 feet deep. Altogether seven wells have been put down, of which three (Nos. 147, 149, and 150) were still in use in 1946. The pumpage averages about 1,500,000 gallons a day.

The next large industrial development to be put into operation in the county was that of the Dow Chemical Company, which was started in 1940 near Freeport. During the early part of World War 2, the development was expanded to include four large plants, two of which were owned by the Defense Plant Corporation. By 1943 the company had completed 27 wells. Twenty-two of the wells range in depth from 200 to 270 feet and furnished fresh water; the other five are about 1,100 feet deep and furnished brackish or salty water. The wells were pumped at rates ranging from 200 to 500 gallons a minute each, and in June 1941 the total pumpage was estimated to average 3,000,000 gallons a day. As the plant was expanded the draft was increased. The average daily pumpage in 1942-43 was much greater than it was in 1941, but figures are not available to indicate the amount of the increase. Early in 1944 the water supply for the plant was supplemented with water from the Brazos River, and withdrawal from the wells was reduced. In the latter part of 1944 and during 1945-46 the withdrawal of ground water averaged about 3,000,000 gallons a day, or about the same as in June 1941.

The gasoline plant of the J. S. Abercrombie Company was built in 1942 between Old Ocean and Sweeny. The water supply was obtained from 10 wells. Seven of the wells (Nos. 109 to 115) are near the plant and range in depth from 120 to 180 feet, whereas the other three wells are near Sugar Valley in Matagorda County. The

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4/ Sundstrom, R. W., Hastings, W. W., and Broadhurst, W. L., Op. cit. p. 2.

withdrawal of ground water for this plant averaged about 1,150,000 gallons a day, although a supplemental supply was obtained from a nearby creek.

In the early part of 1943 a high-octane gasoline plant was constructed by the Federal Government just south of Old Ocean. The plant was operated from October 1943 to August 1945 to supply war needs. During that period an average of about 3,000,000 gallons a day was pumped from five wells (Nos. 102 to 106). Four of the wells drew from sands between 150 and 170 feet below the land surface and one drew from sands between 428 and 715 feet. Operation of the plant was discontinued in 1945.

Water in considerable quantities, perhaps between 1,000,000 and 2,000,000 gallons a day, is pumped from wells in various parts of the county to supply oil-drilling rigs, refrigeration plants, bottling plants, cotton gins, rice elevators, and other small industries. A well 585 feet deep (No. 23), near Danciger, is pumped continuously at the rate of about 175 gallons a minute (about 250,000 gallons a day) to supply a small gasoline plant.

## Rice irrigation

Most of the rice produced in Brazoria County is irrigated with water diverted or pumped from the Brazos River, small creeks, bayous, and drainage ditches. In 1946 six wells (Nos. 412, 428-9, 451, 544, and 612) were used to irrigate rice, but only one well supplied all the water applied to the land; the other five were used to furnish water needed to supplement the available supply of surface water.

## Domestic use and stock

Supplies of water sufficient for domestic use and stock can be found almost anywhere in the county at depths of 100 feet or less.

## Summary of ground-water withdrawals

The following table gives the average daily withdrawal of ground water in Brazoria County in 1945 for public supply, industrial uses, and rice irrigation.

Estimated average daily withdrawal of ground water in Brazoria County in 1945 for public supply, industrial uses, and rice irrigation

| | Gallons a day |
|---|---|
| Public supplies | |
| Alvin | 150,000 |
| Angleton | 100,000 |
| Freeport | 250,000 |
| Lake Jackson | 200,000 |
| Velasco | 130,000 |
| West Columbia | 175,000 |
| | 1,005,000 |
| Industrial supplies | |
| Sulfur mines | 4,800,000 |
| Magnesium and chemical plants | 3,179,000 |
| Oil refineries and others | 5,535,000 |
| Rice irrigation | 500,000 |
| Total | 15,019,000 |

## WATER LEVELS AND ARTESIAN PRESSURES IN WELLS

Continuous records of the fluctuations of water levels and artesian pressures in Brazoria County are not available, although measurements of water levels in several wells in different parts of the county have been made at irregular intervals since 1930. The measurements are given in the table of well records, and the declines in artesian pressures in different parts of the county are briefly discussed below.

Alvin.- Measurements of water levels in wells in the vicinity of Alvin show the following: Well 530 (750 feet deep), a decline of 58.6 feet between 1931 and 1946; well 531, a decline of 47.5 feet between 1937 and 1946, well 535 ($4\frac{1}{2}$ miles south of Alvin and 843 feet deep), a decline of 42 feet between 1930 and 1945; and well 559 (6 miles southeast of Alvin and 906 feet deep), a decline of 36.3 feet between 1939 and 1946.

Angleton.- The water levels in the city wells, 546 and 547 (about 1,000 feet deep), declined about 7 feet between 1940 and 1944, and rose 1.0 foot between 1944 and 1946.

Bonney.- Well 411 (923 feet deep) showed a decline of 9.5 feet between 1931 and 1946; and nearby well 412 (1,164 feet deep) had a flow in 1933 but the water stood 11.4 feet below the land surface in 1946.

Brazoria.- At the Jefferson Lake Sulphur Company mine, 3 miles south of Brazoria wells 144 to 150 are completed in what is known as the 500-foot sand, and the pumpage from them averages about 1,500,000 gallons a day. As a result of the withdrawals the artesian head in the wells declined from 12 feet above the land surface in 1936 to 180 feet below the land surface in 1946. Other wells in the vicinity, which draw from the same, sand, show declines that vary inversely in magnitude with the distance from the mine, and many wells have ceased flowing. Wells in this area that draw from sands above or below the 500-foot sand have not been seriously affected.

Freeport.- Pumping from wells of the Dow Chemical Company near Freeport was started in the early part of 1940. The water levels had declined about 80 feet by June 1941, and they were still lower during 1942-43 after the withdrawal was increased substantially. However, when the rate of withdrawal was reduced in 1944, the water levels recovered somewhat and were about the same in 1946 as in June 1941.

Old Ocean.- The water levels in wells at the Government gasoline plant near Old Ocean (wells 100-106) were from 10 to 12 feet below the land surface in the early part of 1943, but they had declined several feet by December 1944. However, after pumping was discontinued in September 1945, they rose and were from about 7 to 10 feet below the surface in November 1946, or slightly higher than when pumping started. The sands are relatively shallow and the water levels respond promptly to recharge from rainfall. During 1946 the rainfall at Angleton was 82.64 inches, the highest on record.

Pearland.- In well 613 at Pearland (507 feet deep) the water level declined 50 feet during the 15-year period 1931-46; and in well 630 (5 miles south of Pearland and 410 feet deep) the water level declined 45 feet during the 11-year period 1935-46.

## QUALITY OF WATER

The accompanying analyses were made by chemists of the U. S. Geological Survey, Austin, Texas, under the direction of W. W. Hastings, district chemist. The analyses are reported in parts per million. The results may be converted to grains per gallon by multiplying by 0.0584. Equivalents per million may be computed by dividing the values for the radicals in parts per million by the following combining weights: Calcium 20, magnesium 12, sodium 23, bicarbonate 61, sulfate 48, chloride 35, fluoride 19, and nitrate 62.

The chemical character of ground water in Brazoria County is shown by 282 analyses given in the table at the end of this report. Unless otherwise noted the samples were collected and analyzed by the U. S. Geological Survey by methods in general use by the Survey. The analyses show only the dissolved mineral content and do not indicate sanitary conditions.

Waters containing less than 500 parts per million dissolved solids are preferable for domestic use, although waters having up to 1,000 parts per million of dissolved solids are acceptable for use in interstate commerce under the U. S. Public Health Service standards. Some municipalities use waters having substantially more than 1,000 parts per million dissolved solids without apparent harm to the user, although such supplies are apt to have a noticeable taste to persons not accustomed to the water.

Many large industries require water that has dissolved solids of less than 250 parts per million, whereas other industries are much more tolerant of the mineral content of their supply. Cooling is generally one of the chief functions of an industrial water supply, and the amount of dissolved solids is of secondary importance.

The water from most of the wells in Brazoria County meets the standards of the United States Public Health Service. No analysis showed less than 250 parts per million of dissolved solids, but only a few of the waters were highly mineralized. The amount of dissolved solids in well waters in Brazoria County generally becomes greater with depth, as shown in the following table:

Dissolved solids in 258 well waters in Brazoria County

| Depth (ft.) | Number of wells | Dissolved solids in parts per million | | | |
|---|---|---|---|---|---|
| | | 250-500 (Good) | 500-1,000 (Fair) | 1,000-2,000 (Poor) | Over 2,000 (Unsatisfactory) |
| 0 - 200 | 95 | 27 | 54 | 9 | 5 |
| 200 - 500 | 61 | 8 | 35 | 18 | 0 |
| 500 - 800 | 79 | 10 | 44 | 23 | 2 |
| Over 800 | 23 | 4 | 4 | 2 | 13 |

Hardness is the property of water that generally receives the most attention. Water having a hardness of more than 250 parts per million should be softened if it is to form a satisfactory lather with soap. Many cities with raw water supplies having a hardness greater than 250 parts per million find municipal softening to be economically justifiable. The finished water from a softening plant usually has a hardness of from 60 to 80 parts. Waters with a hardness of less than 50 parts are considered soft.

Most of the wells in Brazoria County yield hard water. Hard waters are found at all depths, but the deeper wells are more likely to yield soft waters.

Total hardness in 203 well waters in Brazoria County

| Depth (ft.) | Number of wells | Total hardness as parts per million of $CaCO_3$ | | |
|---|---|---|---|---|
| | | 0 - 100 | 100 - 300 | Over 300 |
| 0 - 200 | 81 | 0 | 40 | 41 |
| 200 - 500 | 42 | 10 | 28 | 4 |
| 500 - 800 | 61 | 30 | 28 | 3 |
| Over 800 | 19 | 13 | 3 | 3 |

Wells in Brazoria County yield waters in which bicarbonates or chlorides predominate, and practically all the highly mineralized waters are high in chloride. Very few of the well waters contain much sulfate and sulfates in most well waters was less than 10 parts per million. Nitrates were negligible in all waters examined for that constituent. All the values found for fluoride were less than the 1.5 parts per million recommended as the upper limit for that constituent by the Texas State Department of Health and the U. S. Public Health Service.

On the basis of the available analyses, the driller of a new well in Brazoria County might expect to get a good or fair but hard water from a sand less than 200 feet deep; a fair to poor but soft to moderately hard water from a sand greater than 200 feet deep but less than 800 feet deep; and a water too highly mineralized for most uses from a sand more than 800 feet deep.

## SUMMARY

Most of the wells in Brazoria County draw from sands in the Beaumont clay, but a few in the northern part of the county draw from the Willis-Goliad sands. It is estimated that in 1945 the consumption of well water for public supplies, large industrial uses, and rice irrigation averaged somewhat more than 15,000,000 gallons a day. An additional quantity, perhaps of the magnitude of 1,000,000 to 2,000,000 gallons a day, was used for small industrial supplies, oil-well drilling, domestic purposes, and stock.

Pumping in adjoining areas as well as in Brazoria County itself has caused a pronounced decline in artesian pressures in most of the county since 1930-31, and most of the deep wells which formerly had a flow have ceased flowing.

The fresh-water sands at Freeport apparently were overdrawn during 1942-43, before water was brought in from the Brazos River to reduce the underground draft, and certain sands in other parts of the county may still be overpumped. The evidence indicates, however, that in most of the county the ground-water reservoirs are not being seriously overdrawn.

It is believed that substantial additional supplies of ground water of variable quality can be developed in the northern and central parts of Brazoria County in areas that are at considerable distances from the present centers of heavy pumping. In the northern part of the county the so-called Willis-Goliad sands can be drawn upon as well as sands in the Beaumont clay. In the central part of the county water of moderate mineralization is available in the deeper sands, which thus far have not been heavily pumped. Along the Coast the deeper sands contain brackish or salty water, but opportunities may exist for additional development of the shallow sands, or for development of the deeper waters for cooling and other uses in which quality is not so important. Increased pumping will cause a further decline in the artesian head, but unless the draft becomes very large this should not be serious.

Records of wells and springs in Brazoria County, Texas
(Wells west of the Brazos River)
All wells are drilled unless otherwise noted in the remarks column

| Well | Distance from West Columbia | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 1 | 12½ miles northwest | L. and M. Production Co. No. 3 | L. and M. Production Co. | 1929 | 2,745 | -- | -- |
| 2 | In Damon | Lutman Lumber Co. | Ben Weinbrenner | 1932 | 110 | 2 | -- |
| 3 | do. | A. R. Eversole | do. | 1932 | 110 | 2 | -- |
| 4 | do. | W. M. Terry | do. | 1930 | 160 | 3 | -- |
| 5 | 10½ miles northwest | Sinclair Ref. Co. | do. | 1944 | 102 | 6, 4 | -- |
| 6 | 9½ miles northwest | Antone Bosak | -- | 1927 | 60 | 2 | -- |
| 7 | 9½ miles north | A. L. Bennett | Ben Weinbrenner | 1934 | 190 | 3, 1¼ | -- |
| 8 | 9 miles north | Mrs. Kitty Nash | do. | 1935 | 160 | 3 | -- |
| 9 | 9½ miles north | do. | Ben McKinney | 1926 | 138 | 2 | -- |
| 10 | 10½ miles northeast | Mrs. R. L. Nash | -- | 1920 | 250 | 3 | -- |
| 11 | 9½ miles northeast | Mrs. Kitty Nash | Ben McKinney | 1930 | 110 | 3 | -- |
| 12 | 9 miles northeast | A. Bertran | Dick Fleschner | 1936 | 56 | 2½, 2 | -- |
| 13 | 5½ miles northeast | George Tinsley | Ben Weinbrenner | 1935 | 150 | 4, 2 | -- |
| 14 | 3½ miles northeast | State Highway Department | -- | 1935 | 135 | 4 | 4.4 |
| 15 | 6 miles northwest | R. N. Pollard | R. N. Pollard | 1934 | 80 | 1¼ | -- |
| 16 | 7½ miles northwest | C. Matula | C. Matula | 1913 | 65 | 3 | -- |
| 17 | 8½ miles northwest | R. R. Farmer | L. Patterson | 1915 | 420 | 4 | -- |
| 18 | 11 miles northwest | Humble Oil and Ref. Co. | do. | 1946 | 473 | 4 | 3.5 |
| 19 | 10 miles northwest | do. | do. | 1939 | 399 | 4 | 1.5 |
| 20 | In Danciger | O. L. Hodge, Jr. | C. L. Bundick | 1933 | 142 | 2 | 0 |
| 21 | do. | Danciger Oil and Ref. Co. | L. Patterson | 1938 | 585± | 4 | 0 |
| 22 | 11 miles northwest | do. | Danciger Oil and Ref. Co. | 1935 | 156 | 4 | -- |
| 23 | 10½ miles northwest | do. | L. Patterson | 1938 | 585 | 4 | 0 |

a/ Measuring point is usually above ground at top of casing, pump base, pipe clamp or well curb. If below ground the figures are preceded by a minus (-) sign.

b/ T, turbine; C, cylinder; J, jet type; A, air or gas lift; E, electric; G, gasoline or diesel; W, windmill; H, hand. Number indicates horsepower.

Chemical analyses of water from most of these wells and springs are shown in the table of analyses

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift [b] | Use of water [c] | Remarks |
|---|---|---|---|---|---|
| 1 | -- | -- | -- | -- | Oil test. Belle Wisdom lease. See partial log. |
| 2 | -- | -- | C,E | D | |
| 3 | -- | -- | C,E | D | Water from sand at 100-110 feet. |
| 4 | -- | -- | C,G | D | Water from sand at 110-120 feet and 145-160 feet. |
| 5 | [d] 30 | 1944 | J,E, [b] | D,S, Ind | At Damon's pipeline station. See log. |
| 6 | -- | -- | C,H | D | |
| 7 | -- | -- | C,H | D,S | |
| 8 | -- | -- | C,W | S | |
| 9 | -- | -- | C,W | S | |
| 10 | -- | -- | A,G, [b] | D | |
| 11 | -- | -- | C,W | S | |
| 12 | -- | -- | C,H,W | D | |
| 13 | -- | -- | C,W | D | |
| 14 | 14.3 | Nov. 6, 1936 | None | N | Drilled to supply water for highway construction. |
| 15 | -- | -- | C,E | D | |
| 16 | -- | -- | C,E | D | Temperature 68° F. |
| 17 | + | Oct. 21, 1936 | Flows | S | Estimated flow, 8 gallons a minute 4 feet above ground on October 21, 1936. Water from sand at 400-420 feet. |
| 18 | 8.6 | Nov. 7, 1946 | None | N | Supplied drilling rig, L. T. Lambert lease. Screen at 438-473 feet. See log. |
| 19 | 8.4 | do. | None | N | Supplied drilling rig, J. H. Bloch lease. Screen at 379-399 feet. |
| 20 | [d] 18 | -- | C,E | D | |
| 21 | [d] 11 | 1946 | C,G | D,S | Bottom 32 feet screened. |
| 22 | -- | -- | -- | -- | |
| 23 | [d] 11 | 1946 | A | Ind | Screen at 553-585 feet. Yield about 175 gallons a minute. |

[c] Ind, industrial; P, public supply; RR, railroad; D, domestic; S, stock; Irr, irrigation; N, not used.

[d] Water level reported by owner or driller.

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from West Columbia | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 24 | 10 miles northwest | Danciger Oil and Ref. Co. | Danciger Oil and Ref. Co. | 1934 | 700± | 5 | 0 |
| 25 | do. | do. | do. | 1933 | 139 | 6 | -- |
| 26 | 9½ miles northwest | Humble Oil and Ref. Co. | Humble Oil and Ref. Co. | 1930 | 650± | 4 | -- |
| 27 | do. | do. | -- | -- | 504 | -- | -- |
| 28 | 8½ miles northwest | do. | L. Patterson | 1935 | 594 | 4 | 2.0 |
| 29 | 8 miles northwest | do. | do. | 1946 | 452 | 4 | -- |
| 30 | 9 miles northwest | do. | do. | 1935 | 500± | 7 | 3.0 |
| 31 | do. | do. | do. | 1946 | 618 | 4 | 3.5 |
| 32 | 7 miles west | -- | -- | -- | Spring | -- | -- |
| 33 | 6 miles northwest | B. N. Crouch | B. N. Crouch | 1930 | 365 | 4 | -- |
| 34 | 5½ miles northwest | do. | do. | 1915 | 665 | 6, 4 | -- |
| 35 | 4 miles west | R. R. Farmer, Jr. | Ben Weinbrenner | 1944 | 600± | 2 | 1.5 |
| 36 | 3½ miles west | R. R. Farmer | L. Patterson | 1936 | 60 | 4 | 1.0 |
| 37 | do. | do. | do. | 1918 | 613 | 2 | 1.5 |
| 38 | 2¾ miles northwest | do. | Ben Weinbrenner | 1935 | 100 | 2 | -- |
| 39 | 2½ miles west | W. G. Smith | W. L. Brown | 1932 | 37 | -- | -- |
| 40 | 1¾ miles west | F. L. Wise | Ben Weinbrenner | 1934 | 320 | 2½ | .0 |
| 41 | 1¼ miles west | Texas Pipe Line Co. | -- | 1919 | 610 | 6 | -- |
| 42 | do. | J. A. Rogers | -- | 1933 | 60 | 5, 4 | -- |
| 43 | 1¾ miles west | F. N. Bullock | B. F. Hodges | 1915 | 750± | 4, 3 | .0 |
| 44 | 2 miles west | do. | L. Patterson | 1920 | 762 | 4, 3-3/8 | .0 |
| 45 | 1½ miles northwest | do. | -- | 1916 | 700± | 6, 5 | .0 |
| 46 | 2 miles northwest | The Texas Co. | L. Patterson | -- | 600± | 7 | 3.0 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 24 | 4/20 | Oct. 23, 1936 | -- | -- | |
| 25 | -- | -- | -- | -- | |
| 26 | -- | -- | -- | -- | |
| 27 | -- | -- | T,E, | D,S | Supplies oil field camp. |
| 28 | 5.1 | Nov. 7, 1946 | None | N | Supplied drilling rig, T. L. Smith Jr. lease. Screen at 582-594 feet. |
| 29 | -- | -- | None | N | Supplied drilling rig, McFarland lease. Screen at 419-451 feet. See log. |
| 30 | 7.8 | Nov. 7, 1946 | None | N | Supplied drilling rig, M. McFarland lease. |
| 31 | 4.2 | do. | None | N | Supplied drilling rig, Williams-Woodson lease. Screen at 583-618 feet. |
| 32 | + | -- | Flows | N | Ten springs on both sides of the Bernard River, had a combined flow of about 60 gallons a minute in October and November 1936. See log. |
| 33 | -- | -- | C,W,G | D | |
| 34 | -- | -- | C,G | D | Flowed until summer of 1936. |
| 35 | + | Nov. 7, 1946 | Flows C,W | D,S | Estimated flow, 4 gallons a minute 1½ feet above ground. Temperature 76½° F. |
| 36 | 26.3 | Oct. 21, 1936 | C,H | S | |
| 37 | + 8<br>15.2 | Oct. 21, 1936<br>Nov. 7, 1946 | None | N | Estimated flow, 4 gallons a minute 1½ feet above ground on October 21, 1936. Ceased to flow in 1938. Water from sand at 587-613 feet. |
| 38 | -- | -- | C,W | S | |
| 39 | -- | -- | C,W | D | |
| 40 | + 0.5 | Oct. 14, 1936 | Flows C,H | D | Estimated flow, 6 gallons an hour on October 14, 1936. Temperature 70° F. |
| 41 | -- | -- | A,- | D,Ind | Flowed until about 1938. Supplies pipeline pumping station. |
| 42 | -- | -- | C,H | D | Water from sand at 45-60 feet. |
| 43 | + 4 | Oct. 14, 1936 | Flows | D | Estimated flow, 2 gallons a minute on October 14, 1936. |
| 44 | + 20 | Oct. 13, 1936 | Flows | D | Estimated flow, 20 gallons a minute on October 13, 1936. Water from sand at 742-762 feet. Temperature 79° F. |
| 45 | + | Oct. 14, 1936 | Flows | S | Flow ½ gallon a minute at ground level on October 14, 1936. |
| 46 | + | Nov. 7, 1946 | Flows T,E,10 | Ind | W. H. Abrams lease. Drilled to replace well 47, which is 125 feet south. Flows when not being pumped. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from West Columbia | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 47 | 2 miles northwest | The Texas Co. | F. F. Powell | 1920 | 577 | 4 | 4.0 |
| 49 | 1½ miles northwest | do. | L. Patterson | 1941 | 524 | 7 | 1.5 |
| 50 | ½ mile northwest | Humble Oil and Ref. Co. | Humble Oil and Ref. Co. | 1920 | 640 | 6 | 0.0 |
| 51 | In West Columbia | Equitable Mining Co. | Equitable Mining Co. | -- | 500 | -- | -- |
| 52 | do. | E. J. Hagemeier | -- | 1922 | 502 | 3 | .0 |
| 53 | do. | T. M. Smith | T. M. Smith | 1920 | 495 | 4, 2 | .0 |
| 54 | do. | City of West Columbia No. 1 | Layne-Texas Co. | 1941 | 659 | 12, 6 | 1.0 |
| 55 | do. | City of West Columbia No. 2 | L. Patterson | 1937 | 615 | 6 | -- |
| 56 | 2 miles southeast | Glen Ogden | Matula Bros. | 1946 | 137 | 2 | .0 |
| 57 | do. | J. E. Huffman | Ben Weinbrenner | 1946 | 373 | 4, 2 | .0 |
| 58 | 1¼ miles southeast | Humble Oil and Ref. Co. | Crown Petroleum Corp. | 1914 | 750± | 5 | .0 |
| 59 | do. | do. | do. | 1914 | 750± | 4 | .0 |
| 60 | In East Columbia | T. M. Smith | L. Patterson | 1917 | 692 | 2 | .0 |
| 61 | do. | Dr. M. A. Weams | do. | 1928 | 500± | 3 | .0 |
| 62 | do. | John Craig | do. | 1918 | 635 | 3 | .0 |
| *63 | do. | East Columbia School | do. | 1925 | 688 | 3 | .0 |
| | Distance from Brazoria | (Wells west of Brazos River) | | | | | |
| 100 | 11 miles west | Defense Plant Corp. test 1 | Layne-Texas Co. | 1942 | 774 | 4 | .0 |
| 101 | do. | Defense Plant Corp. test 2 | do. | 1943 | 161 | 3½ | 2.0 |

* For records of wells 64 and 65, see pages 54 and 55.

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 47 | + | Nov. 7, 1946 | Flows | N | Estimated flow, 4 gallons a minute 4 feet above ground on November 7,1946. Screen at 533-577 feet. Temperature |
| 49 | + | do. | Flows T,E,5 | D,S, Ind | Supplies oil field camp. Flows when not being pumped. Screen at 500-524 feet. See log. |
| 50 | + 0.5 | Oct. 13, 1936 | T,G, 35 | D | |
| 51 | -- | -- | -- | -- | See log. |
| 52 | + | Oct. 13, 1936 | Flows A,G,E | D | Estimated flow, 5 gallons a minute on October 13, 1936. |
| 53 | + 10 | do. | Flows, A | D | Estimated flow, 20 gallons a minute on October 13, 1936. Water from sand at |
| 54 | 8.3 | Oct. 15, 1946 | T,E, 20 | P | Screens in sands between 540 and 649 feet. Gravel-walled. Drawdown 36 feet after pumping 257 gallons a minute for 24 hours when drilled. Now operated at 500 gallons |
| 55 | -- | -- | T,E, 7½ | P | Supplements well 54, average combined yield was 175,000 gallons daily in 1946. Screen at 590- |
| 56 | d/24 | Jan. --, 1946 | J,E | D,S | Screen at 125- 137 feet. |
| 57 | d/17 | Nov. --, 1946 | J,E, ½ | D,S | Deepened from 130 to 373 feet in 1946. Screen at 361-373 feet. |
| 58 | + 3 | Oct. 26, 1936 | Flows | N | Flow 4 gallons a minute on October 26, 1936. |
| 59 | + 3 | do. | Flows | N | Flow 5 gallons a minute on October 26, 1936. |
| 60 | + 6.5 | Nov. 10, 1936 | Flows, A | P | Measured flow 7½ gallons a minute on November 10, 1936. Water from sand at 672-692 feet. Temperature 73° F. |
| 61 | + 5.0 | do. | Flows, C,G | D | Flow, 6 gallons a minute on November 10, 1936. |
| 62 | + 45<br>+ 9.5 | 1918<br>Nov. 10, 1936 | Flows | D | Flow, 15 gallons a minute on November 10, 1936. Temperature 73° F. |
| 63 | + 7.5 | Nov. 10, 1936 | Flows | P | Measured flow, 15 gallons a minute on November 10, 1936. Water from sand at 668-688 feet. Temperature 73° F. |
| 100 | 12.0<br>35.6<br>9.6 | Oct. 1942<br>Dec. 15, 1944<br>Nov. 5, 1946 | None | N | Test well 1. Screen at bottom. Drilled to 774 feet and sands tested at 132-142, 302-311, 444-454, and 697-707 feet, then plugged at 150 feet. |
| 101 | 12.1<br>34.4<br>10.2 | Jan. 8, 1943<br>Dec. 15, 1944<br>Nov. 5, 1946 | None | N | Test well 2. Screen at bottom. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Brazoria | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 102 | 10½ miles west | Defense Plant Corp. No. 3 | M. N. Dannenbaum Co. | 1943 | 164 | 18, 10 | 3.0 |
| 103 | 11 miles west | Defense Plant Corp. No. 1 | Layne-Texas Co. | 1943 | 159 | 18, 10 | 2.0 |
| 104 | do. | Defense Plant Corp. No. 5 | M. N. Dannenbaum Co. | 1943 | 715 | 18, 8 | -- |
| 105 | do. | Defense Plant Corp. No. 2 | do. | 1943 | 166 | 18, 10 | 2.0 |
| 106 | do. | Defense Plant Corp. No. 4 | do. | 1943 | 169 | 10 | 2.5 |
| 107 | 10 miles west | J. S. Abercrombie Co. | Henry Lane | 1942 | 140 | 4 | -- |
| 108 | do. | -- | -- | Old | 600± | 2 | 0.0 |
| 109 | 11 miles west | J. S. Abercrombie Co. | Henry Lane | 1942 | 158 | 6 | -- |
| 110 | do. | do. | do. | 1942 | 156 | 4 | -- |
| 111 | do. | do. | do. | 1942 | 156 | 6 | -- |
| 112 | do. | do. | do. | 1942 | 156 | 6 | -- |
| 113 | 10½ miles west | do. | do. | 1942 | 180 | 6 | -- |
| 114 | do. | do. | do. | 1942 | 120 | 6 | -- |
| 115 | do. | do. | Texas Water Wells, Inc. | 1944 | 166 | 18 | -- |
| 116 | 11 miles west | do. | Henry Lane | 1945 | 144 | 4 | -- |
| 117 | 13 miles west | do. | do. | 1943 | 100 | 4 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 102 | 21<br>29<br>11.0 | Sept. 29, 1943<br>Dec. 15, 1944<br>Nov. 5, 1946 | T,G | N | Wells 102 to 106 were operated by J. S. Abercrombie Company-Harrison Oil Company for government during the war. Gravel-walled. Casing slotted at 109-160 feet. Drawdown 48 feet after pumping 540 gallons a minute for 24 hours when drilled. Not used since September 1945. See log. |
| 103 | 10<br>24<br>6.6 | Feb. 21, 1943<br>Dec. 15, 1944<br>Nov. 5, 1946 | T,G | N | Slotted casing in sand at 92-155 feet. Gravel-walled. Drawdown 30 feet after pumping 520 gallons a minute for 24 hours when drilled. Not used since September 1945. See log. |
| 104 | d/13 | Sept. 29, 1943 | T,G | Ind | Screens at 430-494 feet and 669-711 feet. Gravel-walled. Drawdown 62 feet after pumping 550 gallons a minute for 24 hours when drilled. Used very little since September 1945. See log. |
| 105 | 10.0 | Nov. 5, 1946 | T,E, 20 | P,Ind | Casing slotted at 102-162 feet. Gravel-walled. Drawdown 47 feet after pumping 537 gallons a minute for 24 hours when drilled. See log. |
| 106 | 24.5<br>41.5<br>7.9 | Sept. 29, 1943<br>Dec. 15, 1944<br>Nov. 5, 1946 | T,G | Ind | Casing slotted at 105-165 feet. Gravel-walled. Drawdown 71 feet after pumping 540 gallons a minute for 24 hours when drilled. See log. |
| 107 | -- | -- | None | N | Casing pulled after furnishing drilling rig, Larsen-Edling lease. See log. |
| 108 | + 4 | Oct. 26, 1936 | Flows | S | Flow 6 gallons a minute on October 26, 1936. |
| 109 | -- | -- | A | Ind | Wells 109 to 115 have a combined yield of about 800 gallons a minute which is supplemented by surface water and 3 wells in Matagorda County to supply refinery. See log. |
| 110 | -- | -- | A | Ind | See log. |
| 111 | -- | -- | A | Ind | Do. |
| 112 | -- | -- | A | Ind | Do. |
| 113 | -- | -- | A | Ind | Do. |
| 114 | -- | -- | A | Ind | |
| 115 | -- | -- | T,E | Ind | Casing slotted at 110-166 feet. Yield 450 gallons a minute. |
| 116 | -- | -- | J,E | P | Supplies oil field camp and warehouse. See log. |
| 117 | -- | -- | None | N | Casing pulled after furnishing drilling rig, P.J.Reeves lease. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Brazoria | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 118 | 11½ miles southwest | J. S. Abercrombie Co. | Henry Lane | 1943 | 135 | 4 | -- |
| 119 | 10½ miles west | Transcontinental Oil Co. | Transcontinental Oil Co. | 1923 | 4,783 | 15, 6 | -- |
| 120 | 9 miles west | J. S. Abercrombie Co. | Henry Lane | 1942 | 150 | 4 | -- |
| 121 | In Sweeny | R. R. Ramey | -- | 1910 | 160 | 4 | -- |
| 122 | 7½ miles west | A. K. Warters | -- | 1933 | 175 | 4 | .0 |
| 123 | do. | R. D. McDonald | -- | 1912 | 500 | 6 | .0 |
| 124 | In Sweeny | Clyde McKinney | -- Burford | 1930 | 120 | 2 | -- |
| 125 | 7½ miles west | The Texas Co. | L. Patterson | 1940 | 473 | 4 | .0 |
| 126 | 5½ miles west | Peerless Carbon Black Co. | Henry Lane | 1946 | 185 | 6 | 1.5 |
| 127 | 4½ miles west | W. H. Burns | -- Powell | 1909 | 510 | 2 | .0 |
| 128 | 4½ miles southwest | Chas. Brewer | D. W. Powell | 1918 | 562 | 2 | .0 |
| 129 | 4 miles southwest | A. J. Proebstle | Shell Oil Co., Inc. | 1926 | 850 | 2½ | .0 |
| 130 | do. | do. | L. Patterson | 1916 | 125 | 2 | -- |
| 131 | 3½ miles southwest | J. O. Fossel | J. O. Fossel | 1930 | 460 | 2 | .0 |
| 132 | 2¾ miles southwest | L. J. McNeill | L. J. McNeill | 1935 | 40 | 2 | -- |
| 133 | 4 miles northwest | J. S. Montgomery | Geo. Potvin | 1935 | 85 | 2 | 0.0 |
| 134 | 3¼ miles northwest | W. H. Brigance | Fred Powell | 1916 | 500 | 2 | .0 |
| 135 | In Brazoria | Smith Bros. Gin. Co. | F. Harris | 1924 | 822 | 2 | .0 |
| 136 | do. | Brazoria Colored School | -- | -- | 125 | 3, 2 | .0 |
| 137 | do. | Brazoria White School | -- | 1934 | 125 | 2 | -- |
| 138 | do. | Brazoria County | -- | 1896 | 1,200± | 6, 4 | .0 |
| 139 | do. | Stranger Bros. | Geo. Potvin | 1930 | 140 | 4 | .0 |
| 140 | do. | J. S. Montgomery | -- | 1926 | 150 | 2 | -- |
| 141 | do. | R. Prel | Aug. Potvin | 1930 | 126 | 2 | .0 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water a/ | Remarks |
|---|---|---|---|---|---|
| 118 | -- | -- | None | N | Casing pulled after furnishing drilling rig, Mueller-Moline lease. See log. |
| 119 | -- | -- | -- | -- | Oil test. See partial log. |
| 120 | -- | -- | None | N | Casing pulled after furnishing drilling rig, B.R.L.D. Co., lease. See log. |
| 121 | -- | -- | A | D,Ind | Supplies cotton gin. |
| 122 | 16.2<br>16.0 | Oct. 26, 1936<br>May 19, 1937 | -,E,<br>10 | P | |
| 123 | -- | Oct. 26, 1936 | A | P | Flowed when drilled. |
| 124 | -- | -- | -,E | D | |
| 125 | + | Nov. 4, 1946 | Flows,<br>C,E | D | Measured flow, 4 gallons a minute $2\frac{1}{2}$ feet above ground. Screen at 449-470 feet. Temperature $70\frac{1}{2}^{\circ}$ F. See log. |
| 126 | 10.4 | Nov. 5, 1946 | T,E | Ind | Screen at 145-185 feet. |
| 127 | d/+14 | 1936 | Flows | D,S | Flow 10 gallons a minute in 1936. |
| 128 | + 4.9<br>+ 4.3 | May 19, 1936<br>Oct. 15, 1936 | Flows | D | Flow 10 gallons a minute on October 15, 1936. Water from sand at 544-562 feet. |
| 129 | d/+38 | 1936 | Flows | S | Flow 75 gallons a minute in 1936. Temperature 72° F. |
| 130 | -- | -- | C,W | D | |
| 131 | d/+ 3 | 1936 | A | D | Flow 4 gallons a minute $2\frac{1}{4}$ feet above ground on October 15, 1936. Stopped flowing in April 1937. Water from sand at 440-460 feet. |
| 132 | -- | -- | C,W | D | |
| 133 | d/20 | 1936 | C,W | S | |
| 134 | d/+17 | 1936 | Flows | D | Flow 25 gallons a minute on October 15, 1936. |
| 135 | + 4.5 | Oct. 14, 1936 | Flows | Ind | Measured flow, $7\frac{1}{2}$ gallons a minute $2\frac{3}{4}$ feet above ground on May 20, 1937. |
| 136 | d/17 | 1935 | C,W | P | Temperature 70° F. |
| 137 | -a | 26 | C,E | P | |
| 138 | + | Oct. 14, 1936 | Flows | N | At old county courthouse. Flow 4 gallons a minute 3 feet above ground on October 14, 1936. |
| 139 | d/27.5 | 1930 | A,E | D | |
| 140 | -- | -- | -,G,<br>8 | D | |
| 141 | d/18 | 1936 | C,W | D | |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Brazoria | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 142 | ¾ mile southwest | H. C. Hayslip | L. Patterson | 1926 | 494 | 8 | .3 |
| 143 | 1¼ miles south | -- Hinkle | -- | 1926 | 57 | 3½ | 1.6 |
| 144 | 3 miles south | Jefferson Lake Sulphur Co., Inc. | L. Patterson | 1936 | 746 | 2 | 2.4 |
| 145 | do. | do. | Layne-Texas Co. | 1937 | 500± | 13 | .0 |
| 146 | do. | do. | L. Patterson | 1937 | 500 | 12 | -- |
| 147 | do. | do. | do. | 1937 | 495 | 10 | .0 |
| 148 | do. | do. | Layne-Texas Co. | 1937 | 500± | 13 | .0 |
| 149 | do. | do. | Jefferson Lake Sulphur Co., Inc. | 1939 | 504 | 14, 8 | .0 |
| 150 | do. | do. | do. | 1940 | 511 | 16, 8 | -- |
| 151 | 3½ miles southeast | Roxana Petroleum Corp. | Roxana Petroleum Corp. | 1926 | 3,102 | -- | -- |
| 152 | 4 miles southeast | Texas Prison System Clemens State Farm | Tom Worrel | 1942 | 650 | 6, 3 | 1.5 |
| 153 | 4½ miles southeast | do. | do. | 1940 | 253 | 6 | .0 |
| 154 | do. | do. | do. | 1940 | 558 | 8 | .0 |
| 155 | 5½ miles southeast | S. S. Perry | Humble Oil and Ref. Co. | 1926 | 1,000± | 4 | .0 |
| 156 | do. | -- | -- | Old | 700± | 3 | .0 |
| 157 | do. | Kate Huntington | F. Powell | 1909 | 487 | 2 | .0 |
| 158 | 5 miles south | P. McNeill | Eberspacher Bros. | 1930 | 505 | 2½ | .0 |
| 159 | 6 miles southwest | W. Martin | L. Patterson | 1925 | 535 | 2½ | .0 |
| 160 | 7 miles southwest | G. C. Davis | G. C. Davis | 1935 | 92 | 2½ | -- |
| 161 | 7½ miles southwest | do. | -- | Old | 40 | 48 | .0 |
| 162 | 7 miles southwest | M. N. Percy | -- | 1910 | 500± | 2 | .0 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 142 | 4.5<br>12.9 | Oct. 22, 1936<br>May 18, 1937 | C,E | D,S | Water from sand at 466-494 feet. |
| 143 | 16.5 | Oct. 22, 1936 | C,W | S | |
| 144 | d/+12 | do. | None | N | Known as Patterson test well No. 1. Tested at 74 feet, water level 19 feet below ground. Tested at 483 and 736 feet, flowed over casing, 2.4 above ground, at both depths. Flow 30 gallons a minute on October 22, 1936. Temperature 72° F. See log. |
| 145 | d/25 | Apr. 1937 | None | N | Known as Purdy No. 1. Yield was about 450 gallons a minute when drilled. |
| 146 | -- | -- | None | N | Known as Weims No. 2. Yield on test was 100 gallons a minute so well was abandoned. See log. |
| 147 | d/+ 1 | Feb. , 1937 | T,E | Ind | Known as Weims No. 1. Yield 250 gallons a minute. Screen at 450-494 feet. See log. |
| 148 | d/25 | Apr. 1937 | None | N | Known as Purdy No. 2. Yield about 450 gallons a minute when drilled. |
| 149 | d/180 | 1946 | T,E | Ind | Known as Ring No. 1. Screen at 472-495 feet. Gravel-walled. Yield about 400 gallons a minute. See log. |
| 150 | -- | -- | T,E | Ind | Known as Marcus Weims No. 1. Screen at 468-505 feet. Gravel-walled. Yield about 400 gallons a minute. See log. |
| 151 | -- | -- | -- | -- | Oil test on Clemens State Farm. See partial log. |
| 152 | 47.9 | Nov. 14, 1946 | C,W | S | Screen at 638-650 feet. |
| 153 | d/23 | 1940 | A | Ind | Screen at 233-253 feet. |
| 154 | d/38 | 1940 | A | D,S,<br>Ind | Screen at 538-558 feet. |
| 155 | d/+5 | 1936 | Flows | D | Flow 30 gallons a minute on October 30, 1936. |
| 156 | +5 | Nov. 19, 1936 | Flows,<br>C,W | D,S | Flow 3 gallons a minute on November 19, 1936. |
| 157 | d/ .0 | 1936 | C,W | D | Formerly watered several thousand cattle by natural flow. |
| 158 | d/+18 | 1936 | -- | D | Flow 15 gallons a minute on October 22, 1936. Ceased to flow in April or May 1937. Water from sand at 480-505 feet. Temperature 71° F. |
| 159 | d/+ 1 | May 18, 1937 | Flows | D,S | Flow decreased from 3 gallons to one-seventh gallon a minute during April and May 1937. |
| 160 | -- | -- | C,H | D | |
| 161 | 12.8 | Nov. 19, 1936 | C,W | D | Dug, tile curbing. |
| 162 | d/+7<br>d/ 4 | 1936<br>May 18, 1937 | Flows | D,S | Flow 20 gallons a minute prior to April 1937; flow decreased to 2 gallons a minute 5 feet below ground on May 18, 1937. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Brazoria | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| *163 | 9½ miles southwest | Craig Estate | -- Powell | 1916 | 600± | 2 | 2.0 |
| | Distance from Freeport | (Wells west of Brazos River) | | | | | |
| 200 | 16 miles west | J. L. Ducroz | Eberspacher Bros. | 1930 | 542 | 2 | 2.0 |
| 201 | 15½ miles southwest | T. J. Poole | L. Patterson | 1918 | 590 | 2 | 2.5 |
| 202 | 14 miles southwest | do. | do. | 1917 | 600 | 2 | 2.3 |
| 203 | 15 miles west | do. | do. | 1918 | 580 | 3 | 2.0 |
| 204 | 13½ miles west | do. | -- Powell | 1915 | 580 | 2 | 3.0 |
| 205 | do. | Shell Oil Co., Inc. | Shell Oil Co., Inc. | 1928 | 5,958 | -- | -- |
| 206 | 15 miles west | J. T. Hinkle | -- | 1917 | 560 | 2 | 1.0 |
| 207 | 14 miles west | do. | -- Powell | 1920 | 568 | 2½ | 1.2 |
| 208 | 13½ miles west | C. C. Hampil | do. | 1920 | 550 | 2 | .0 |
| 209 | 13 miles west | E. D. Pearson | Eberspacher Bros. | 1930 | 485 | 2 | .0 |
| 210 | do. | L. J. McNeill | L. Patterson | 1915 | 700± | 2 | .0 |
| 211 | 12½ miles west | Roxana Petroleum Corp. | Roxana Petroleum Corp. | 1927 | 5,337 | -- | -- |
| 212 | 12 miles west | E. N. Krause | L. Patterson | 1920 | 578 | 2 | .0 |
| 213 | 13 miles west | T. J. Poole | -- | 1931 | 580 | 4, 2 | .0 |
| 214 | do. | do. | -- | 1910 | 580 | 3 | .0 |
| 215 | 12 miles southwest | do. | -- | 1917 | 618 | 2 | .0 |
| 216 | do. | S. Allen | -- Powell | 1918 | 1,000 | 4 | .0 |
| 217 | do. | Nelson Bell | -- | 1932 | 600 | 3 | .0 |
| 218 | 8½ miles southwest | T. J. Poole | -- Powell | 1917 | 580 | 2 | .0 |
| 219 | do. | J. L. Ducroz | -- | 1931 | 580 | 2 | .0 |

* For record of well 164, see pages 54 and 55.

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water a/ | Remarks |
|---|---|---|---|---|---|
| 163 | +3.3 | May 18, 1937 | Flows | S | Measured flow 2½ gallons a minute 2 feet above ground on May 18, 1937, flow decreased recently. |
| 200 | +3.7 | May 18, 1937 | Flows | D,S | Screen at 532-542 feet. Flow decreased from 15 to 5 gallons a minute between March and May 18, 1937. |
| 201 | +3.3 | do. | Flows | S | Flow decreased from 20 to 4 gallons a minute between March and May 18, 1937. Temperature 76° F. |
| 202 | +2.6 | do. | Flows | S | Flow decreased from 2-inch pipe full to 17 gallons a minute between March and May 18, 1937. |
| 203 | +3.0 | do. | Flows | S | Flow decreased from 60 to 3 gallons a minute between March and May 18, 1937. |
| 204 | + | do. | Flows | S | Flow decreased from 5 to 2 gallons a minute between March and May 18, 1937. |
| 205 | -- | -- | -- | -- | Oil test, T.J.Poole lease. See partial log. |
| 206 | +2.8 | May 19, 1937 | Flows | S | Flow decreased from 2-inch pipe full to 4 gallons a minute between March and May 19, 1937. |
| 207 | c/+17<br>+2.5 | 1920<br>May 19, 1937 | Flows | D,S | Screen at 550-568 feet. Flow decreased from 55 to 2 gallons a minute between March and May 19, 1937. |
| 208 | d/+22<br>+ | 1920<br>May 19, 1937 | Flows | S | Flow decreased between March and May 1937. |
| 209 | d/+15 | Oct. 27, 1936 | Flows, T,G | D | Flow 75 gallons a minute on October 27, 1936. Ceased flowing 3 feet above ground on May 1, 1937. Flowed by syphon on May 18, 1937. |
| 210 | +2 | do. | Flows | S | Flow 2 gallons a minute on October 27, 1936. |
| 211 | -- | -- | -- | -- | Oil test. See partial log. |
| 212 | +2 | Oct. 27, 1936 | Flows | D | Flow 1 gallon a minute on October 27, 1936. |
| 213 | d/4 | do. | C,W | D | This well never flowed. |
| 214 | d/+7 | do. | Flows | D | Flow decreased gradually between 1920 and May 18, 1937 when it was barely a trickle. |
| 215 | d/+15<br>+ 4 | May 1936<br>May 18, 1937 | Flows | D,S | Flow decreased from 60 to 10 gallons a minute between March and May 18, 1937. |
| 216 | + | May 18, 1937 | Flows | S | Measured flow 13 gallons a minute 3 feet above ground on May 18, 1937. Temperature 85° F. |
| 217 | d/ 4 | 1936 | C,H | D | |
| 218 | + | May 18, 1937 | Flows | S | Measured flow 2½ gallons a minute 3 feet above ground on May 18, 1937. |
| 219 | + | do. | Flows | D,S | Measured flow 3-1/3 gallons a minute 2½ feet above ground on May 18, 1937. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Freeport | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 220 | 7 miles west | Mrs. R. E. L. Stringfellow | Henry Lane | 1940 | 208 | 4 | .3 |
| 221 | 5½ miles northwest | Freeport Sulphur Co. | Layne-Texas Co. | Old | 196 | 10, 6 | -- |
| 222 | 4½ miles northwest | do. | do. | Old | 210 | 10, 6 | -- |
| 223 | 2½ miles northwest | Mrs. R. E. L. Stringfellow | Henry Lane | 1941 | 215 | 4 | -- |
| 224 | 3 miles west | do. | do. | 1940 | 250 | 4 | .5 |
| 225 | do. | do. | -- | Old | 1,100± | 3 | .0 |
| 226 | 4 miles west | R. E. L. Stringfellow | Henry Lane | 1941 | 245 | 4 | -- |
| 227 | do. | Mrs. R. E. L. Stringfellow | do. | 1940 | 212 | 4 | .6 |
| 228 | 4½ miles west | Freeport Sulphur Co. | Layne-Texas Co. | Old | 207 | 10, 6 | -- |
| 229 | 3½ miles southwest | Mrs. R. E. L. Stringfellow | Henry Lane | 1940 | 215 | 4 | 1.2 |
| 230 | 4 miles southwest | Freeport Sulphur Co. | Layne-Texas Co. | Old | 203 | 10, 6 | -- |
| 231 | 4½ miles southwest | do. | do. | Old | 207 | 10, 6 | -- |
| 232 | do. | U. S. Engineers | do. | 1943 | 241 | 6, 4 | -- |
| | Distance from Velasco | (Wells east of Brazos River) | | | | | |
| 300 | 4½ miles southwest | U. S. Engineers | Layne-Texas Co. | 1943 | 230 | 6, 4 | -- |
| 301 | 3 miles southwest | Reed well | -- | -- | 598 | -- | -- |
| 302 | 3 miles south | W. J. Bryan | L. Patterson | 1930 | 570 | 2, 1½ | .0 |
| 303 | 2¼ miles southwest | Defense Plant Corp. No. 7 | Layne-Texas Co. | 1943 | 224 | 16, 8 | -- |
| 304 | 2 miles southwest | The Dow Chemical Co. No. 7 | do. | 1940 | 253 | 13, 6 | -- |
| 305 | 1½ miles southwest | The Dow Chemical Co. No. 6 | do. | 1940 | 254 | 13, 6 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 220 | 5.7 | July 11, 1941 | C,W | S | |
| 221 | -- | -- | -- | -- | This well and wells 222, 228, 230, and 231 formerly furnished water for Bryan's Mound sulphur mine, wells and mine were abandoned about 1922. Known as Jones Creek No. 5. Screen in sand |
| 222 | -- | -- | -- | -- | Known as Jones Creek No. 4. Screen in sand at 159-194 feet. See log. |
| 223 | -- | -- | C,W | D,S | 172-208 feet. See log. |
| 224 | 9.6 | July 11, 1941 | C,W | D,S | |
| 225 | + | do. | Flows | D,S | Flow 25 gallons a minute 3 feet above ground on July 11, 1941. |
| 226 | -- | -- | C,W | S | |
| 227 | 10.1 | July 11, 1941 | C,W | S | |
| 228 | -- | -- | -- | -- | Known as Jones Creek No. 3. Screen in sand at 170-204 feet. See log. |
| 229 | 8.5 | July 11, 1941 | C,W | S | |
| 230 | -- | -- | -- | -- | Known as Jones Creek No. 2. Screen in sand at 175-200 feet. See log. |
| 231 | -- | -- | -- | -- | Known as Jones Creek No. 1. Screen in sand at 175-204 feet. See log. |
| 232 | d/31 | Sept. 27, 1943 | T,E, 5 | D,Irr | Screen in sand at 204-235 feet. Drawdown 42 feet while pumping 73 gallons a minute when drilled. See log. |
| 300 | d/29 | Sept. 14, 1943 | T,E, 5 | D,Irr | Screen in sand at 190-224 feet. Drawdown 17 feet while pumping 110 gallons a minute when drilled. See log. |
| 301 | -- | -- | -- | -- | Known as Reed well. See log. |
| 302 | d/+15 | Oct. 30, 1936 | Flows, C,W | D | Flow 4 gallons a minute on October 30, 1936. |
| 303 | -- | -- | T,E, 30 | Ind | Gravel-walled. This well and wells 330 to 337 were operated by Dow Magnesium Corporation for government during war. Screen in sand at 184-217 |
| 304 | d/28<br>d/83 | June 2, 1940<br>June --, 1941 | T,E, 30 | Ind | Gravel-walled. feet. See log. Drawdown 34 feet after pumping 425 gallons a minute for 24 hours when |
| 305 | d/22<br>d/74 | May 15, 1940<br>June --, 1941 | T,E, 30 | Ind | Gravel-walled. drilled. See log. Screen in sand at 221-248 feet. Drawdown 45 feet after pumping 425 gallons a minute for 24 hours when drilled. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Velasco | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 306 | In Freeport | The Dow Chemical Co. No. 13 | Layne-Texas Co. | 1942 | 277 | -- | -- |
| 307 | do. | The Dow Chemical Co. No. 14 | do. | 1942 | 230 | 8 | -- |
| 308 | do. | City of Freeport No. 6 | do. | 1941 | 249 | 14, 8 | 1.5 |
| 309 | do. | City of Freeport No. 7 | A. E. Fawcett, Jr. | 1942 | 249 | 12, 8 | -- |
| 310 | do. | City of Freeport No. 3 | Freeport Sulphur Co. | 1920 | 251 | 6 | -- |
| 311 | do. | City of Freeport No. 4 | do. | 1920 | 250 | 6 | -- |
| 312 | do. | City of Freeport No. 5 | Layne-Texas Co. | 1936 | 250 | 6 | -- |
| 313 | 1¾ miles southeast | The Dow Chemical Co. No. 5 | do. | 1940 | 252 | 13, 6 | -- |
| 314 | 2¼ miles southeast | The Dow Chemical Co. No. 11 | do. | 1941 | 269 | 16, 8 | -- |
| 315 | do. | The Dow Chemical Co. No. 2 | do. | 1940 | 265 | 13, 6 | -- |
| 316 | 2½ miles southeast | The Dow Chemical Co. No. 12 | do. | 1942 | 1,130 | 12, 8 | -- |
| 317 | 2¼ miles southeast | The Dow Chemical Co. No. 9 | do. | 1941 | 1,127 | 13, 8 | -- |
| 318 | do. | The Dow Chemical Co. No. 1 | do. | 1940 | 241 | 13, 6 | -- |
| 319 | do. | The Dow Chemical Co. No. 10 | do. | 1941 | 1,137 | 13, 8 | -- |
| 320 | do. | The Dow Chemical Co. No. 3 | do. | 1940 | 252 | 13, 6 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 306 | -- | -- | -- | -- | Abandoned, insufficient sand to make a well. See log. |
| 307 | -- | -- | T,E, 30 | Ind | Screen in sand at 174-230 feet. Gravel-walled. See log. |
| 308 | d/58.5<br>112.9 | June 27, 1941<br>Oct. 26, 1946 | T,E, 30 | P | This well and well 309 have furnished the Freeport public supply since 1942. Screen in sands between 206-247 feet. Gravel-walled. Drawdown 77 feet after pumping 420 gallons a minute for 24 hours when drilled. See log. |
| 309 | -- | -- | T,E, 15 | P | Screen at 206-234 feet. Gravel-walled. Yield 278 gallons a minute in 1946. |
| 310 | d/38 | Apr. 1934 | None | N | This well and wells 311 and 312 furnished the Freeport public supply before 1941. Yield was 60 gallons a minute in 1941. See log. |
| 311 | d/38 | Apr. 1934 | None | N | Screen at 251-349 feet. See log. |
| 312 | -- | -- | None | N | See log. |
| 313 | d/41<br>d/22 | June 1940<br>Aug. 20, 1940 | T,E, 50 | Ind | Screen in sand at 211-243 feet. Gravel-walled. Drawdown 45 feet after pumping 420 gallons a minute for 24 hours when drilled. See log. |
| 314 | d/94 | Dec. 29, 1941 | T,E, 50 | Ind | Screen in sand at 228-264 feet. Gravel-walled. Drawdown 54 feet after pumping 335 gallons a minute for 24 hours when drilled. See log. |
| 315 | d/19<br>d/98 | July 15, 1940<br>June 1941 | T,E | Ind | Screen in sand at 213-256 feet. Gravel-walled. Drawdown 49 feet after pumping 350 gallons a minute for 24 hours when drilled. See log. |
| 316 | d/+ | Jan. 23, 1942 | T,E, 60 | Ind | Screen in sand at 965-1,130 feet. Gravel-walled. Flowed when drilled, yield by pump 875 gallons a minute. See log. |
| 317 | d/+ | July 18, 1941 | T,E, 60 | Ind | Screen in sand at 987-1,124 feet. Gravel-walled. Flowed when drilled, yield by pump 1,280 gallons a minute. See log. |
| 318 | d/18<br>d/105 | Mar. 29, 1940<br>June 1941 | T,E | Ind | Screen in sand at 198-235 feet. Gravel-walled. Drawdown 76 feet after pumping 400 gallons a minute for 24 hours when drilled. See log. |
| 319 | -- | -- | T,E, 60 | Ind | Screen in sands between 981 and 1,135 feet. Gravel-walled. Yield 800 gallons a minute when drilled. See log. |
| 320 | d/18<br>d/100 | Apr. 25, 1940<br>June 1941 | T,E, 30 | N | Not used since December 15, 1943. Screen in sand at 226-246 feet. Gravel-walled. Drawdown 61 feet after pumping 250 gallons for 24 hours when drilled. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Velasco | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 321 | 2¾ miles southeast | The Dow Chemical Co. No. 4 | Layne-Texas Co. | 1940 | 273 | 13, 6 | -- |
| 322 | 3 miles southeast | The Dow Chemical Co. No. 8 | do. | 1940 | 263 | 13, 6 | -- |
| 323 | 3½ miles southeast | U. S. Army | L. Patterson | 1942 | 257 | 4 | -- |
| 324 | do. | -- | -- | 1895 | 600± | 2 | .0 |
| 325 | 4 miles east | C. H. Alexander, Jr. | Gus Warnecke | 1892 | 1,050 | 10 | .0 |
| 326 | ¾ mile northeast | Missouri Pacific Ry. Co. | -- | -- | 267 | 6, 4 | -- |
| 327 | In Velasco | City of Velasco No. 2 | Layne-Texas Co. | 1945 | 255 | 10, 5 | 1.5 |
| 328 | do. | City of Velasco No. 1 | do. | 1941 | 266 | 10, 5 | 2.0 |
| 329 | 3¾ miles northwest | Missouri Pacific Ry. Co. | do. | 1942 | 240 | 8, 6 | -- |
| 330 | do. | Defense Plant Corp. No. 5 | do. | 1942 | 239 | 16, 8 | -- |
| 331 | 3½ miles northwest | Defense Plant Corp. No. 2 | do. | 1942 | 248 | 16, 8 | -- |
| 332 | 2¾ miles northwest | Defense Plant Corp. No. 1 | do. | 1942 | 225 | 16, 8 | -- |
| 333 | 3¼ miles northwest | Defense Plant Corp. No. 3 | do. | 1942 | 223 | 16, 8 | -- |
| 334 | do. | Defense Plant Corp. No. 6 | do. | 1942 | 237 | 16, 8 | -- |
| 335 | do. | Defense Plant Corp. No. 4 | do. | 1942 | 241 | 16, 8 | -- |
| 336 | 3 miles northwest | Defense Plant Corp. No. 9 | do. | 1942 | 1,238 | 12, 8 | -- |

| Well | WATER LEVEL: Above (+) or below (-) land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 321 | d/ 26<br>d/104 | Aug. 3, 1940<br>June 1941 | T,E,<br>50 | Ind | Screen in sand at 226-263 feet. Gravel-walled. Drawdown 53 feet after pumping 420 gallons a minute for 24 hours |
| 322 | d/ 33<br>d/115 | Nov. 15, 1940<br>June 1941 | T,E,<br>50 | N | Not used since May 5, 1944. Screen in sand at 229-247 feet. Gravel-walled. Drawdown 88 feet after pumping 210 gallons a minute for 24 hours when drilled. See log. |
| 323 | d/ 87 | July 1942 | -- | -- | Supplied water for small army post during war. See log. |
| 324 | d/+ 9 | Oct. 30, 1936 | Flows | Ind | Flow 10 gallons a minute on October 30, 1936. |
| 325 | + | Apr. 14, 1931<br>May 27, 1936 | Flows | N | Flow 300 gallons a minute on April 14, 1931. Temperature 84° F. |
| 326 | -- | -- | -- | RR | See log. |
| 327 | d/ 93.5<br>97.5 | Feb. 19, 1946<br>Oct. 11, 1946 | T,E,<br>15 | P | Screen in sand at 218-245 feet. Gravel-walled. Drawdown 21 feet after pumping 160 gallons a minute for 8 hours |
| 328 | d/ 84<br>101.3 | Aug. 30, 1941<br>Oct. 11, 1946 | T,E,<br>15 | P | Screen in sand at 216-263 feet. Gravel-walled. Drawdown 15 feet while pumping 200 gallons a minute when drilled. See log. |
| 329 | d/ 16 | Mar. 2, 1942 | -- | RR | Screen in sand at 196-234 feet. Drawdown 24 feet while pumping 120 gallons a minute when drilled. See log. |
| 330 | d/ 23 | Apr. 26, 1942 | T,E,<br>50 | Ind | Screen in sand at 199-229 feet. Gravel-walled. See log. |
| 331 | d/ 30 | Apr. 14, 1942 | T,E,<br>50 | Ind | Screen in sand at 211-235 feet. Gravel-walled. Drawdown 75 feet after pumping 300 gallons a minute for 24 hours |
| 332 | d/ 13 | Feb. 13, 1942 | T,E,<br>50 | Ind | Screen in sand at 199-225 feet. Gravel-walled. Drawdown 43 feet after pumping 100 gallons a minute for 24 hours when drilled. See log. |
| 333 | d/ 10 | Jan. 30, 1942 | T,E,<br>50 | Ind | Screen in sand at 175-222 feet. Gravel-walled. Drawdown 14 feet while pumping 520 gallons a minute when drilled. See log. |
| 334 | -- | -- | T,E,<br>-- | Ind | Screens in sands between 152 and 237 feet. Gravel-walled. See log. |
| 335 | -- | -- | T,E,<br>50 | Ind | Screen in sand at 204-239 feet. Gravel-walled. Drawdown 46 feet after pumping 455 gallons a minute for 24 hours |
| 336 | d/+ 4 | July 24, 1942 | T,E | Ind | Screen in sands between 902 and 1,062 feet. Gravel-walled. Drawdown 34 feet after pumping 800 gallons a minute for 24 hours when drilled. Temperature 84° F. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Velasco | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 337 | 3¼ miles northwest | Defense Plant Corp. No. 8 | Layne-Texas Co. | 1942 | 1,065 | 12, 8 | -- |
| 338 | 3¾ miles northwest | Defense Plant Corp. | do. | 1942 | 239 | 12, 6 | -- |
| 339 | 4 miles northwest | do. | do. | 1942 | 203 | 12, 6 | -- |
| 340 | 3½ miles northwest | do. | do. | 1942 | 230 | 10, 7 | -- |
| 341 | 4 miles northwest | Defense Plant Corp. No. 8 | do. | 1943 | 233 | 8 | -- |
| 342 | 4½ miles northwest | Defense Plant Corp. No. 10 | do. | 1943 | 234 | 8 | -- |
| 343 | 4¼ miles northwest | Defense Plant Corp. No. 9 | do. | 1943 | 230 | 8 | -- |
| 344 | 9 miles northwest | The Dow Chemical Co. No. 2 | do. | 1946 | 188 | 4½ | -- |
| 345 | 9½ miles northwest | City of Lake Jackson No. 4 | do. | 1943 | 190 | 3½ | -- |
| 346 | In Lake Jackson | City of Lake Jackson No. 3 | L. Patterson | 1942 | 202 | 4 | -- |
| 347 | do. | City of Lake Jackson No. 2 | Layne-Texas Co. | 1943 | 234 | 16, 8 | -- |
| 348 | do. | City of Lake Jackson No. 1 | do. | 1942 | 195 | 16, 8 | -- |
| 349 | 6½ miles northwest | Mrs. R. E. L. Stringfellow | -- | -- | 184 | 2 | -- |
| 350 | do. | do. | Henry Lane | 1941 | 745 | 2 | -- |
| 351 | 5½ miles northwest | C. L. Cobb | Lee Cobb | 1938 | 234 | 2, 1¼ | 0.4 |
| 352 | 7 miles northwest | The Texas Co. | The Texas Co. | 1920 | 2,335 | -- | -- |
| 353 | 6 miles northwest | F. A. Brock | W. E. Patterson | 1927 | 801 | 2 | -- |
| 354 | 5½ miles northwest | do. | do. | 1927 | 446 | 2 | -- |
| 355 | 7 miles north | J. T. Stratton | L. Patterson | 1927 | 578 | 2 | -- |
| 356 | do. | The Dow Chemical Co. | -- | 1946 | 145 | 6 | 3.0 |
| 357 | do. | F. A. Brock | L. Patterson | 1938 | 847 | 4 | -- |
| *358 | 9 miles northwest | Mrs. R. E. L. Stringfellow | Henry Lane | 1941 | 292 | 4 | .9 |

* For record of well 359, see pages 54 and 55,

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 337 | -- | -- | T,E, 60 | Ind | Screen in sands below 924 feet. Gravel-walled. Yield 810 gallons a minute when drilled. Temperature 82° F. See log. |
| 338 | d/ 10 | Feb. 26, 1942 | T,E, 25 | N | This well and wells 339 and 340 furnished water for temporary housing project known as Camp Chemical No. 1. |
| 339 | d/ 15 | Feb. 25, 1942 | T,E, 20 | Ind | Screen in sands at 115-203 feet. Known as Camp Chemical No. 2. See log. |
| 340 | d/ 44 | Aug. 19, 1942 | T,E | Ind | Screen in sand at 198-230 feet. Known as Camp Chemical No. 3. See log. |
| 341 | -- | -- | T,E, 50 | Ind | Wells 341 to 343 operated by Dow Styrene Corporation for government during war. Screen in sand at 211-231 feet. Gravel-walled. See log. |
| 342 | -- | -- | T,E, 50 | Ind | Screen in sand at 200-230 feet. Gravel-walled. See log. |
| 343 | d/ 48 | June 22, 1943 | T,E, 50 | Ind | Screen in sand at 200-227 feet. Gravel-walled. See log. |
| 344 | d/ 15 | July 30, 1946 | J,E | D,Ind | Screen in sand at 143-185 feet. See log. |
| 345 | d/ 9.5 | Jan. 1, 1943 | J,E, 1 | P | Screen in sand at 145-179 feet. See log. |
| 346 | d/ 14 | July 12, 1942 | None | N | Abandoned after supplying water during construction. Screen at 178-202 feet. |
| 347 | d/ 30 | July 8, 1943 | T,E, 30 | P | This well and well 348 furnish the Lake Jackson public supply. Screen in sands between 164 and 230 feet. Gravel-walled. See log. |
| 348 | d/ 57<br>d/ 37 | Sept. 12, 1942<br>June 1946 | T,E, 30 | P | Screen in sand at 159-179 feet. Gravel-walled. Drawdown 38 feet while pumping 300 gallons a minute when drilled. See log. |
| 349 | d/ 10 | July 1941 | C,W | D,S | |
| 350 | -- | -- | -- | -- | Not completed when visited in 1941. See log. |
| 351 | 8.6 | May 27, 1939 | C,H | D | Screened bottom 8 feet. |
| 352 | -- | -- | -- | -- | Oil test, Cochran and McClure lease. See partial log. |
| 353 | + | May 25, 1939 | Flows | D | Flow 6 gallons a minute 5 feet above ground on May 25, 1939. |
| 354 | -- | -- | C,W | S | |
| 355 | + | May 25, 1939 | Flows C,W | D | Flowed 1½ feet above ground on May 25, 1939. |
| 356 | 21.4 | Oct. 7, 1946 | -- | -- | Just completed when visited. |
| 357 | + | May 25, 1939 | Flows | S | Flow 25 gallons a minute on May 25, 1939. |
| 358 | 9.8 | July 11, 1941 | C,W | S | |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Angleton | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| | | (Wells east of Brazos River) | | | | | |
| 400 | 10½ miles northwest | Texas Prison System Ramsey State Farm | -- | -- | 700± | 4 | -- |
| 401 | 12 miles northwest | do. | Tom Worrel | 1940 | 660 | 6, 4 | .0 |
| 402 | 10½ miles northwest | do. | do. | 1938 | 660± | 8, 4 | .0 |
| 403 | do. | do. | -- | 1931 | 650± | 6 | .0 |
| 404 | 8 miles northwest | The Dow Chemical Co. | -- | 1943 | 300 | -- | -- |
| 405 | do. | do. | -- | 1943 | 300 | -- | -- |
| 406 | do. | do. | -- | 1943 | 300 | -- | -- |
| 407 | 7 miles northwest | Texas Prison System Ramsey State Farm | Tom Worrel | 1931 | 650 | 4, 2½ | -- |
| 408 | 8 miles north | Texas Pipe Line Co. | L. Patterson | 1943 | 520 | 4 | -- |
| 409 | 9½ miles north | F. W. Turner, Jr. | do. | 1944 | 398 | 4 | 1.0 |
| 410 | 10 miles north | Dr. B. W. Turner | do. | 1943 | 918 | 4 | -- |
| 411 | do. | do. | Layne-Texas Co. | 1926 | 923 | 24, 16, 10 | 1.5 |
| 412 | 9½ miles north | Arney Estate | do. | 1933 | 1,168 | 24, 12 | 1.5 |
| 413 | 9 miles northeast | Humble Oil and Refining Co. | L. Patterson | 1940 | 312 | 4 | 2.2 |
| 414 | do. | do. | do. | 1942 | 250 | 5 | -- |
| 415 | 9½ miles northeast | do. | do. | 1936 | 400± | 4 | 1.7 |
| 416 | 10 miles northeast | do. | do. | 1936 | 311 | 6, 4 | 3.7 |
| 417 | 9½ miles northeast | do. | do. | 1943 | 315 | 4 | 1.9 |
| 418 | 9 miles northeast | do. | do. | 1944 | 514 | 4 | 2.6 |
| 419 | 8½ miles northeast | do. | do. | 1946 | 422 | 4 | -- |
| 420 | 9 miles northeast | do. | do. | 1944 | 441 | 4 | 4.2 |
| 421 | 10 miles northeast | do. | do. | 1945 | 309 | 4 | 2.7 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 400 | — | -- | C,W,G | S | Flowed 4 gallons a minute 44 inches above ground on April 13, 1931. Ceased to flow in 1931 or 1932. |
| 401 | d/ 12 | 1940 | C,E | P | At unit 2. |
| 402 | d/ 7<br>d/ 9 | 1938<br>1945 | T,E | P | At unit 1. Screened bottom 38 feet. Yield 50 gallons a minute. |
| 403 | d/ 15 | 1946 | T,G | Irr | At unit 1. Vegetable shed. Screened bottom 20 feet. |
| 404 | -- | -- | -- | -- | Core test 1 of 11 at reservoir site. See log. |
| 405 | -- | -- | -- | -- | Core test 5. See log. |
| 406 | -- | -- | -- | -- | Core test 11. See log. |
| 407 | + | Oct. 8, 1946 | Flows | S | Flow 1 gallon a minute 1 foot above ground. Temperature 74½° F. |
| 408 | -- | -- | T,E, | D,S, Ind | Screen at 496-520 feet. See log. |
| 409 | 14.7 | Nov. 15, 1946 | J,E | D,S | Screen at 382-398 feet. |
| 410 | -- | -- | T,E, 3 | D,S | Screen at 898-918 feet. See log. |
| 411 | 2.6<br>12.1 | Apr. 13, 1931<br>Nov. 15, 1946 | None | N | Used to irrigate rice until 1944. Deepened from 528 to 923 feet in 1938. Screens in 8 sands between 191 and 916 feet. Drawdown 60 feet while pumping 1,200 gallons a minute in 1928. See log. |
| 412 | c/+<br>11.4 | Mar. 7, 1933<br>Nov. 15, 1946 | T,G, 120 | Irr | Used for rice irrigation. Screens in 8 sands between 242 and 1,164 feet. Yield to pump 2,100 gallons a minute with pumping level 127 feet, flowed when drilled. See log. |
| 413 | 2.4 | July 29, 1946 | None | N | Wells 413-422 supplied drilling rigs. Screen at 289-312 feet. B. Blakely lease. See log. |
| 414 | d/ 10 | Sept. 2, 1942 | None | N | Casing pulled. B. Blakely B-lease. Screen 227-250 feet. See log. |
| 415 | 1.1 | July 29, 1946 | None | N | W. A. Moller lease. |
| 416 | 1.9 | do. | None | N | W. A. Moller lease. Screen at 265-306 feet. See log. |
| 417 | + 0.9 | do. | None | N | B. Blakely D lease. Screen at 289-310 feet. See log. |
| 418 | 26.8 | do. | None | N | B. Blakely D lease. Screen at 491-514 feet. See log. |
| 419 | -- | -- | None | N | Failed to furnish enough water. W. L. Clayton lease. Screen at 397-421 feet. |
| 420 | 29.9 | July 29, 1946 | None | N | F. Schmidt lease. Screen at 418-441 feet. See log. |
| 421 | 2.5 | do. | None | N | C. Dvorsky lease. Screen at 285-309 feet. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Angleton | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 422 | 10½ miles northeast | Humble Oil and Refining Co. | L. Patterson | 1944 | 355 | 4 | 1.0 |
| 423 | 9 miles northeast | Joe Vrazel | Joe Vrazel | 1923 | 20 | 24 | -- |
| 424 | do. | Walter Peltier | -- Weinbrenner | 1931 | 140 | 2 | -- |
| 425 | 7 miles northeast | J. M. Skrabanek | Layne-Texas Co. | 1927 | 960 | 24, 16, 12 | 0.5 |
| 426 | In Danbury | Danbury School | -- | 1931 | 96 | 2 | -- |
| 427 | do. | Danbury Townsite | South Texas Development Co. | 1907 | 600± | 6 | 2.8 |
| 428 | 4¾ miles northeast | Ed Berry No. 2 | Otto Michelson | 1946 | 327 | 18, 12 | -- |
| 429 | 4 miles northeast | Ed Berry No. 1 | do. | 1946 | 324 | 18, 12 | 0.3 |
| 430 | 3 miles northeast | Texas Agricultural Experiment Station | Eberspacher Bros. | 1940 | 324 | 4 | 0.0 |
| 431 | 6½ miles northeast | Louis Klever | -- Glosnich | 1927 | 196 | 2 | -- |
| 432 | 4 miles north | Humble Oil and Refining Co. | L. Patterson | 1945 | 618 | 4 | 3.0 |
| 433 | 6 miles north | Joe Bingham | Gus Warnecke | 1914 | 1,300± | 4 | 0.0 |
| 434 | In Anchor | Missouri Pacific Ry. Co. | L. Patterson | 1910 | 635 | 4, 2 | 2.1 |
| 435 | 4 miles northwest | A. L. Hollins | Matula Bros. | 1939 | 138 | 2 | -- |
| 436 | 2¾ miles northwest | R. H. Carr | R. H. Carr | 1935 | 206 | 2 | 0.0 |
| 437 | 2½ miles northwest | Humble Oil and Refining Co. | L. Patterson | 1939 | 793 | 4 | 0.5 |
| 438 | 2¾ miles northwest | do. | do. | 1943 | 807 | 4 | 2.5 |
| 439 | 2½ miles northwest | do. | do. | 1939 | 628 | 4, 3 | -- |
| 440 | 4½ miles west | McCarthy Oil and Gas Corp. | do. | 1946 | 812 | 4½ | 0.0 |
| 441 | 6 miles west | -- | -- | -- | 600± | 4 | 4.0 |
| 442 | 6½ miles west | Zoinville Oil Co. | Zoinville Oil Co. | -- | 3,160 | -- | -- |
| 443 | 10 miles southwest | McCarthy Oil and Gas Corp. | -- | -- | 4,384 | -- | -- |
| 444 | 9 miles southwest | R. S. Stanger | O. Eberspacher | 1933 | 180 | 2 | -- |
| 445 | do. | do. | L. Patterson | 1929 | 1,000 | 2 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water a/ | Remarks |
|---|---|---|---|---|---|
| 422 | 2.9 | July 29, 1946 | None | N | South Texas Rice Prod. Co. lease. Screen at 332-355 feet. See log. |
| 423 | -- | -- | C,W,G, 2½ | D,S | Dug. Tile curbing. |
| 424 | -- | -- | C,W | D | |
| 425 | 31.3 | Aug. 28, 1946 | None | N | Used for rice irrigation until 1935. Screens in 5 sands between 499 and 870 feet. Flow 50 gallons a minute, pump yield 850 gallons a minute when drilled. See log. |
| 426 | -- | -- | C,E, 1 | P | |
| 427 | g/ 14<br>19.4 | 1935<br>May 18, 1939 | C,E, ½ | P | Converted oil test. Flowed until 1927. |
| 428 | -- | -- | T,E, 60 | Irr | Used for rice irrigation. Casing slotted opposite all sands below about 60 feet. Yield 1,800 gallons a minute. |
| 429 | 5.7 | Nov. 14, 1946 | T,E, 60 | Irr | Do. |
| 430 | j/ 14<br>e/ 11 | May 1940<br>1946 | J,E, ½ | D,S | Screen at 280-314 feet. See log. |
| 431 | -- | -- | C,H,G, 1 | D,S | |
| 432 | 8.8 | Oct. 7, 1946 | None | N | Supplied drilling rig, M. W. Mettler lease. Screen at 594-617 feet. See log. |
| 433 | + | May 29, 1939 | Flows C,G | D,S | Flows small stream. |
| 434 | 0.5 | Apr. 14, 1931 | C,H | D | Flowed until 1929. |
| 435 | -- | -- | C,H | D | |
| 436 | d/ 18 | -- | C,W | D,S | Water from sand at 186-206 feet. |
| 437 | 12.2 | Oct. 7, 1946 | None | N | Wells 437-41 supplied drilling rigs. Screen at 759-791 feet. R. H. Carr |
| 438 | 13.2 | do. | None | N | Galaznick and Taylor lease. Screen at 785-807 feet. See log. |
| 439 | -- | -- | None | N | M. W. Mettler lease. Screen at 588-621 feet. See log. |
| 440 | d/ 8 | Sept. 1946 | A | Ind | Nichels lease. Screen at 788-812 feet. |
| 441 | 13.9 | Oct. 16, 1946 | None | N | |
| 442 | -- | -- | None | N | Oil test on J. W. Sparks lease. See partial log. |
| 443 | -- | -- | None | N | Oil test. Electric log indicates sands at 96-140, 240-295, 350-410 and 670-830 feet. |
| 444 | -- | -- | C,W | D,S | |
| 445 | -- | -- | None | N | Flowed until 1937. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Angleton | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 446 | 7 miles southwest | Texas Prison System Retrieve State Farm | Tom Worrel | 1939 | 739 | 2 | -- |
| 447 | 6 miles southwest | do. | L. Patterson | -- | 450± | 2 | -- |
| 448 | 5½ miles southwest | do. | Tom Worrel | 1938 | 900± | 6, 4 | -- |
| 449 | 6 miles southwest | do. | -- | Old | 900± | 3½ | 2.5 |
| 450 | 3 miles southwest | B. M. Jamison | Eberspacher Bros. | -- | 735± | 2 | -- |
| 451 | 3¼ miles southeast | E. L. Coale | American Water Co. | 1946 | 490± | -- | -- |
| 452 | 2¾ miles southeast | Otto Eberspacher | Otto Eberspacher | 1929 | 260 | 2 | 0.0 |
| 453 | 1 mile southwest | B. M. Jamison | -- | -- | 160 | 2 | -- |
| 454 | In Angleton | Texas and Louisiana Power Co. | L. Patterson | 1923 | 336 | 6 | 1.5 |
| 455 | do. | City of Angleton No 2 | do. | 1938 | 413 | 6 | 1.2 |
| 456 | do. | City of Angleton No. 3 | Layne-Texas Co. | 1940 | 1,012 | 10, 5 | -- |
| 457 | do. | City of Angleton No. 4 | do. | 1944 | 933 | 10, 6 | -- |
| 458 | 4 miles east | Pratt Well | do. | 1912 | 911 | 24, 10 | -- |
| 459 | 5 miles southeast | A. E. Peterson | Otto Eberspacher | 1915 | 70 | 2 | -- |
| 460 | do. | L. H. Follett | L. Patterson | 1940 | 301 | 4 | 0.0 |
| 461 | do. | E. E. White | -- | 1917 | 300 | 2 | -- |
| 462 | 6 miles southeast | do. | -- | 1928 | 300± | 2 | -- |
| 463 | 6½ miles southeast | Otto Eberspacher | Otto Eberspacher | 1925 | 740 | -- | -- |
| 464 | 4¾ miles east | Dan Cico | John Zalenak | 1935 | 211 | 2 | -- |
| 465 | 7 miles east | Rapid City Development Co. | Rycade-Amerada | -- | 6,284 | -- | -- |
| 466 | do. | C. M. Lemons | Layne-Texas Co. | Old | 911 | 24, 8 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 446 | -- | -- | C,W | S | Flowed when drilled. Screen at 725-739 feet. |
| 447 | -- | -- | C,E | D | |
| 448 | -- | -- | C,G | D,S | Flowed until about 1942. Thirty feet of screen on bottom. |
| 449 | + 4.2 | July 1, 1941<br>Nov. 8, 1946 | C,G | Ind | Supplies water for cotton gin. Flow 2 gallons a minute 3⅓ feet above ground on July 1, 1941. |
| 450 | -- | -- | C,W | D,S | Flowed when drilled. |
| 451 | -- | -- | T,G | Irr | Drilled for rice irrigation. Sanded up and was not used much in 1946. |
| 452 | d/ 6.0 | 1939 | C,W | D,S | Water from sand at 240-260 feet. |
| 453 | -- | -- | C,W | D,S | |
| 454 | 16.0 | Apr. 14, 1931 | A | Ind | At ice plant. Furnished Angleton public supply until 1935. |
| 455 | 15.3 | Oct. 10, 1946 | None | N | Drilled to 1,000 feet as test and filled to 413 feet. Screen at 393-413 feet. See log. |
| 456 | d/ 14.0<br>d/ 20 | Nov. 1, 1940<br>Oct. 1946 | T,E | P | Tested at 375 gallons a minute, operated at 250 gallons a minute. Gravel-walled. See log. |
| 457 | d/ 21<br>d/ 20 | Nov. 6, 1944<br>Oct. 1946 | T,E | P | Drawdown 43 feet after pumping 250 gallons a minute for 24 hours when drilled. Screens in sands between 745 and 929 feet. Gravel-walled. See log. |
| 458 | d/+ | Aug. 1912 | None | N | Formerly used for rice irrigation. Flow 300 gallons a minute, and yield to pump 2,000 gallons a minute when drilled. Screens in sands between 73 and 905 feet. See log. |
| 459 | + | May 25, 1939 | Flows | S | |
| 460 | d/ 1.0 | Nov. 1940 | T,E, l | D,S | Screen at 280-301 feet. See log. |
| 461 | + | May 25, 1939 | Flows | S | |
| 462 | + | do. | Flows | S | |
| 463 | + | do. | Flows | S | Flow ¾-inch stream 2 feet above ground on May 25, 1939. |
| 464 | -- | -- | C,W | D,S | |
| 465 | -- | -- | -- | -- | Oil test. See partial log. |
| 466 | -- | -- | -- | -- | Formerly used for rice irrigation. Flowed when drilled. Screens in sands between 69 and 905 feet. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Angleton | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 467 | 10½ miles east | Freeport Sulphur Co. No. 18 | Layne-Texas Co. | 1927 | 623 | 24, 15, 10 | -- |
| 468 | do. | Freeport Sulphur Co. No. 20 | do. | 1927 | 241 | 24, 12 | -- |
| 469 | do. | Freeport Sulphur Co. No. 19 | do. | 1927 | 614 | 24,15 10 | -- |
| 470 | do. | Freeport Sulphur Co. No. 25 | Freeport Sulphur Co. | 1944 | 239 | 10 | -- |
| 471 | do. | Freeport Sulphur Co. No. 22 | do. | 1942 | 628 | 10 | -- |
| 472 | do. | Freeport Sulphur Co. No. 23 | do. | 1942 | 235 | 10 | -- |
| 473 | do. | Freeport Sulphur Co. No. 24 | do. | 1943 | 245 | 16, 8 | -- |
| 474 | do. | Freeport Sulphur Co. No. 12 | -- | 1925 | 592 | 10, 6 | -- |
| 475 | do. | Freeport Sulphur Co. test No. 4 | Layne-Texas Co. | 1925 | 753 | -- | -- |
| 476 | 11 miles east | Freeport Sulphur Co. No. 28 | Freeport Sulphur Co. | 1946 | 240 | 10 | -- |
| 477 | do. | Freeport Sulphur Co. No. 26 | do. | 1944 | 238 | 10 | -- |
| *478 | do. | Freeport Sulphur Co. No. 27 | do. | 1945 | 243 | 10 | -- |
| | Distance from Alvin | (Wells east of the Brazos River) | | | | | |
| 500 | 21 miles southwest | J. E. Fairfield | L. Patterson | 1937 | 325 | 8 | -- |
| 501 | do. | do. | F. Turner | 1919 | 315 | 2 | -- |
| 502 | do. | C. W. Chapman | -- Meyer | 1918 | 364 | 2 | -- |
| 503 | 19 miles southwest | do. | F. Turner | 1927 | 420 | 2 | 1.5 |
| 504 | 18 miles southwest | Sadie Lockridge | -- | 1912 | 400 | 2 | -- |

* For record of well 479, see pages 54 and 55.

| Well | WATER LEVEL (above (+) or below land surface (ft.)) | Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 467 | d/ 27 | June 23, 1927 | T,E | Ind | Combined average daily yield of wells 467 to 478 was 3,300,000 gallons in 1946. Yield 480 gallons a minute. |
| 468 | -- | -- | T,E | Ind | Screens in sands between 126 and 241 feet. Yield 550 gallons a minute. |
| 469 | d/ 29 | July 19, 1927 | None | N | Screens in sands between 215 and 610 feet. See log. |
| 470 | d/ 50 | Sept. 1945 | T,E | Ind | Screen at 199-239 feet. Pumping level 108 feet after many hours pumping 315 gallons a minute on October 4, 1946. |
| 471 | d/ 50 | Sept. 1945 | T,E | Ind | Screens at 225-235 and 590-620 feet. Pumping level 150 feet after many hours pumping 185 gallons a minute on |
| 472 | d/ 50 | Sept. 1945 | T,E | Ind | Screen at 195- Oct. 4, 1946. See log. 235 feet. Pumpin level 133 feet after many hours pumping 230 gallons a min- |
| 473 | d/ 50 | Sept. 1945 | T,E | Ind | Screen at 195- ute on Oct. 4, 1946. 235 feet. Pumping level 92 feet after many hours pumping 160 gallons a minute on October 4, 1946. Temperature |
| 474 | d/ 50 | Sept. 1945 | T,E | Ind | Screen at 552-592 73° F. See log. feet. Pumping level 79 feet after many hours pumping 80 gallons a minute on October 4, 1946. Temperature |
| 475 | -- | -- | -- | -- | Water level 29 feet on test 78½° F. of sand at 113-160 feet; water level 55 feet on test of sand at 198-230 feet when drilled. See log. |
| 476 | -- | -- | T,E | Ind | Screens at 192-212 and 220-240 feet. Pumping level 134 feet after many hours pumping 315 gallons a minute on October 4, 1946. Temperature 74° F. |
| 477 | d/ 50 | Sept. 1945 | T,E | Ind | Screens at 104-144 and 198-238 feet. Pumping level 105 feet after many hours pumping 380 gallons a minute on |
| 478 | -- | -- | T,E | Ind | Screens at 116-148 October 4, 1946. and 208-248 feet. Pumping level 128 feet after many hours pumping 315 gallons a minute on October 4, 1946. |

| | | | | | |
|---|---|---|---|---|---|
| 500 | -- | -- | -- | -- | Water from pea gravel at 270-325 feet. |
| 501 | d/ 15 | -- | C,E, 1 | D,S | |
| 502 | -- | -- | C,W | D,S | |
| 503 | 1.5<br>7.8 | Apr. 13, 1931<br>May 23, 1939 | None | N | Formerly supplied school |
| 504 | 1/ 9 | -- | C,E | D,S | |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Alvin | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 505 | 18 miles southwest | Ray D. Moyle | L. Patterson | 1931 | 579 | -- | 0.0 |
| 506 | 17 miles southwest | J. A. Fite | do. | 1912 | 598 | 6 | 1.5 |
| 507 | 18½ miles west | Texas Prison System Darrington State Farm | Tom Worrel | 1939 | 655± | 6, 2 | -- |
| 508 | 15 miles west | Hamilton Estate | -- | -- | 511 | 5 | 0.0 |
| 509 | do. | do. | -- | -- | 220 | 4 | 0.5 |
| 510 | 14½ miles west | House and Brown | -- | -- | 300± | 1 | 2.5 |
| 511 | do. | Judge Tigner | -- | -- | 40 | -- | -- |
| 512 | 15 miles west | Texas Prison System Darrington State Farm | Tom Worrel | 1938 | 1,371 | 6, 4 | -- |
| 513 | 14 miles west | H. L. Trammel | L. Patterson | -- | 300 | 2 | 1.0 |
| 514 | 14½ miles southwest | Otto Sens Club | do. | 1925 | 792 | 2 | 1.5 |
| 515 | do. | do. | do. | 1923 | 900± | 2 | 0.2 |
| 516 | do. | do. | do. | 1923 | 600± | 2 | 0.4 |
| 517 | In Rosharon | China Grove School | do. | 1936 | 792 | 2 | -- |
| 518 | 12 miles southwest | J. A. Fite | -- | 1934 | 350± | 4 | -- |
| 519 | do. | do. | -- | 1934 | 350± | 4 | 4.5 |
| 520 | do. | Crown Petroleum Corp. | Bob O'Day | 1945 | 350± | 4 | 1.0 |
| 521 | 12½ miles southwest | J. A. Fite | -- | 1934 | 350± | 4 | 1.5 |
| 522 | 11½ miles west | C. Martin | Layne-Texas Co. | 1923 | 906 | 26, 10 | 0.0 |
| 523 | 10 miles west | Bert Pritchett | Bert Pritchett | 1933 | 30 | 2 | 1.5 |
| 524 | 9½ miles west | Frank Prachar | Frank Prachar | 1932 | 27 | 1¼ | -- |
| 525 | 4 miles southwest | Isaac Estate | T. W. Kettler | 1927 | 30 | 4 | -- |
| 526 | 2½ miles southwest | Humble Oil and Refining Co. | L. Patterson | 1941 | 666 | 4 | 1.8 |
| 527 | 2 miles southwest | R. L. Colley | R. L. Colley | 1925 | 54 | 2 | -- |
| 528 | 1¼ miles northwest | W. L. Heller | W. L. Heller | 1916 | 151 | 4 | -- |
| 529 | In Alvin | Gulf States Utilities Co. | -- | 1922 | 158 | 10 | 1.5 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 505 | a/ 15 | 1931 | C,H | D | Screen at 549-579 feet. |
| 506 | 3.5<br>7.4 | Apr. 13, 1931<br>May 23, 1939 | C,H | D | Screen at 558-598 feet. Flowed until 1930. |
| 507 | a/ 12 | 1939 | C,W | S | Screened bottom 12 feet. |
| 508 | 15.4 | Apr. 10, 1931 | C,H | D,S | |
| 509 | 7.6 | do. | C,W | S | |
| 510 | 17.4 | do. | C,W | D,S | |
| 511 | -- | -- | C,H | D,S | |
| 512 | a/ 19 | 1938-1939 | T,E, 10 | D,S | Screen at 1,331-1,371 feet. |
| 513 | 14.7 | Apr. 13, 1931 | C,E, ½ | D | |
| 514 | 8.7<br>7.1 | Apr. 13, 1931<br>July 31, 1946 | None | N | |
| 515 | 9.9<br>19.1 | May 22, 1939<br>July 31, 1946 | None | N | |
| 516 | 4.5 | July 31, 1946 | C,W | D | |
| 517 | a/ 14 | -- | C,E | P | Screen at 772-792 feet. |
| 518 | 17.0 | July 31, 1946 | None | N | Supplied drilling rig. |
| 519 | 17.1 | do. | None | N | Do. |
| 520 | 17.0 | do. | None | N | Do. |
| 521 | 24.4 | do. | None | N | Do. |
| 522 | 7.9<br>17.4<br>23.0 | Apr. 10, 1931<br>May 22, 1939<br>July 31, 1946 | T,- | N | Used for rice irrigation until 1936. Screens in sands between 361 and 904 feet. Yield 2,200 gallons a minute when drilled. See log. |
| 523 | 5.6 | May 22, 1939 | C,E | D | |
| 524 | -- | -- | C,H | D | |
| 525 | -- | -- | C,W | D,S | |
| 526 | 28.9 | Aug. 27, 1946 | None | N | Supplied drilling rig, R. L. Colley lease. Screen at 631-663 feet. See log. |
| 527 | -- | -- | C,E, ½ | D,S | |
| 528 | a/ 10 | -- | C,E, ½ | D,Irr | Screen at 135-151 feet. Yield 25 gallons a minute. |
| 529 | 26.4 | Apr. 16, 1931 | A | Ind | Formerly furnished part of the Alvin public supply. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Alvin | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 530 | In Alvin | City of Alvin No. 1 | -- | 1909 | 750 | 8 | 2.0 |
| 531 | do. | City of Alvin No. 2 | Layne-Texas Co. | 1936 | 722 | 13, 6 | -- |
| 532 | do. | Santa Fe Ry. Co. | do. | 1945 | 191 | 26, 10 | -- |
| 533 | 2 miles south | Phillips Petroleum Co. | Pat O'Day | 1945 | 156 | 4 | -- |
| 534 | 2¼ miles southwest | John Savage | John Savage | 1928 | 16 | 1¼ | -- |
| 535 | 4½ miles south | G. F. Plummer | L. Patterson | 1930 | 843 | 2 | 0.0 |
| 536 | 5½ miles scuthwest | Rowan Drilling Co. | -- | 1943 | 485 | 4 | 0.0 |
| 537 | 6 miles southwest | Humble Oil and Refining Co. | L. Patterson | 1940 | 473 | 4 | 5.7 |
| 538 | do. | C. and L. Knape | Pat O'Day | 1930 | 1,118 | 4 | 2.6 |
| 539 | do. | C. C. Waits | C. C. Waits | 1931 | 20 | 1¼ | -- |
| 540 | 6½ miles southwest | W. Russel | -- | -- | 600 | 10 | -- |
| 541 | 7 miles southwest | Boy Scouts of America | L. Patterson | 1936 | 350± | 2 | -- |
| 542 | do. | do. | do. | 1930 | 550± | 2 | 1.2 |
| 543 | 7½ miles southwest | Pan-American Prod. Co. | do. | 1946 | 998 | 4 | 3.6 |
| 544 | 10 miles southwest | W. G. Simpson | American Water Co. | 1945 | 700 | 18, 12 | 11.0 |
| 545 | In Liverpool | H. Clement | -- | 1925 | 26 | 1¼ | -- |
| 546 | do. | Liverpool School | -- Brandon | 1929 | 500 | 2 | -- |
| 547 | 10 miles south | J. H. Clement | do. | 1934 | 183 | 2 | -- |
| 548 | 12 miles south | South Texas Water Co. | Gray Bros. | 1938 | 98 | 1¼ | -- |
| 549 | 11 miles south | John Beckett | John Beckett | 1917 | 30 | 4 | -- |
| 550 | 9 miles south | Hans Peterson | -- | 1938 | 65 | 4 | -- |
| 551 | 8 miles south | Chocolate Bayou School | E. J. Joseph | 1946 | 220 | 2 | -- |

| Well | WATER LEVEL: Above (+) or below (-) land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 530 | 40.6<br>d/ 65.5<br>d/ 98.0 | Apr. 16, 1931<br>Nov. 1939<br>May 1946 | A | P | Yield 100 gallons a minute in 1946. |
| 531 | d/ 52.5<br>d/100.0 | Jan. 20, 1937<br>May 1946 | T,E, 15 | P | Screen in sand at 590-715 feet. Gravel-walled. Drawdown 37½ feet after pumping 330 gallons a minute for 24 hours when drilled. See log. |
| 532 | d/ 30 | Jan. 15, 1945 | -- | RR | Screen at 128-188 feet. Drawdown 55 feet while pumping 265 gallons a minute when drilled. See log. |
| 533 | -- | -- | T,E, 2 | P | Supplies oil field camp. Screen at 132-152 feet. See log. |
| 534 | -- | -- | C,H | D,S | |
| 535 | d/ 20<br>d/ 62 | July 1930<br>Fall 1945 | C,W | D,S | |
| 536 | d/ 21 | Spring 1945 | A | D,S | Supplied drilling rigs, Bradbury lease. |
| 537 | 22.9 | July 30, 1946 | A | D,S | Supplied drilling rigs, Hubbard lease. Screen at 441-473 feet. See log. |
| 538 | + 8<br>5.4<br>6.8 | Apr. 16, 1931<br>May 19, 1939<br>Aug. 29, 1946 | None | N | Flow 4 gallons a minute on April 16, 1931. Ceased to flow in 1938. Temperature 79° F. |
| 539 | -- | -- | C,G, 2½ | D,S | |
| 540 | -- | -- | C,W | D | Ceased to flow in 1937. |
| 541 | -- | -- | A | P | Supplies camp and swimming pool at Mohawk Camp. |
| 542 | 23.0 | Aug. 29, 1946 | C,H | D,S | Flowed for several years. |
| 543 | 24.8 | do. | None | N | Supplied drilling rig, Callahan lease. Casing slotted at 978-998 feet. |
| 544 | d/ 8<br>13.8 | July 1945<br>Aug. 29, 1946 | T,G, 80 | Irr | Drilled for rice irrigation. Sanded up and was used very little in 1946. |
| 545 | -- | -- | C,H | D | See log. |
| 546 | -- | -- | C,W | P | |
| 547 | -- | -- | C,H | D,S | Water from sand at 168-183 feet. |
| 548 | -- | -- | C,H | D,S | |
| 549 | -- | -- | C,W | S | |
| 550 | -- | -- | T,G 12 | D,Irr | Irrigates nursery. |
| 551 | -- | -- | J,E | P | Casing perforated bottom 10 feet. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Alvin | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 552 | 8 miles south | Stanolind Oil and Gas Co. | Henry Lane | 1945 | 226 | 4 | 0.8 |
| 553 | 7 miles south | Phillips Petroleum Co. | L. Patterson | -- | 600± | 4 | 3.9 |
| 554 | do. | do. | do. | 1945 | 400± | 4 | 1.5 |
| 555 | 6½ miles south | do. | do. | 1945 | 700± | 4 | -- |
| 556 | 6 miles south | do. | do. | 1945 | 700± | 4 | 4.2 |
| 557 | 6½ miles southeast | do. | Pat O'Day | 1946 | 96 | 4 | 0.0 |
| 558 | 6 miles southeast | Pan-American Gas Co. | -- | -- | 100± | 4 | -- |
| 559 | do. | Dr. E.W.K. Andrau | Layne-Texas Co. | 1939 | 1,185 | 16, 10 | 1.0 |
| 560 | 4½ miles south | Phillips Petroleum Co. | L. Patterson | 1946 | 745± | 4 | 2.5 |
| 561 | 4½ miles southeast | Mustang School | Gray Bros. | -- | 60 | -- | -- |
| 562 | 5 miles southeast | Fred Trantow | Fred Trantow | 1927 | 90 | 2½ | -- |
| 563 | 6 miles southeast | Southern Methodist University | A. A. Tourea | 1935 | 25 | 2½ | -- |
| 564 | 7½ miles southeast | The Texas Co. | L. Patterson | 1945 | 684 | 4 | -- |
| 565 | do. | do. | do. | 1944 | 640 | 4 | -- |
| 566 | do. | do. | do. | 1945 | 636 | 4 | 2.2 |
| 567 | 14 miles southeast | J. D. Hughes | -- | -- | 180 | 2½ | 0.2 |
| 568 | do. | do. | A. Tacguard | 1919 | 189 | 3 | 0.2 |
| 569 | do. | Humble Oil and Refining Co. | L. Patterson | 1943 | 557 | 4 | -- |
| 570 | 17 miles southeast | Joe D. Hughes | Joe D. Hughes | 1938 | 75 | 2 | -- |
| 571 | 16 miles southeast | Humble Oil and Refining Co. | L. Patterson | 1942 | 972 | 4 | -- |
| 572 | 16½ miles southeast | The Texas Co. | -- | 1926 | 1,387 | -- | -- |
| *573 | 17½ miles southeast | Amarada Petroleum Co. | -- | -- | 584 | 8 | -- |

* For records of wells 574 and 575, see pages 54 and 55.

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 552 | 8.0 | July 19, 1946 | None | N | Wells 552 to 556 supplied drilling rigs, Houston Farms Dev. Co. B lease. Casing perforated at 201-226 feet. |
| 553 | 23.1 | July 25, 1946 | None | N | |
| 554 | 24.8 | do. | None | N | Houston Farms Dev. Co. A lease. |
| 555 | -- | -- | A | Ind | Bernard lease. Yield 100 gallons a minute. |
| 556 | 21.7 | July 25, 1946 | None | N | Smiley lease. |
| 557 | d/ 2 | Mar. 1946 | J,E | D,S, Ind | |
| 558 | -- | -- | C,E | D,S, Ind | |
| 559 | d/ 13<br>46.3 | May 16, 1939<br>Aug. 28, 1946 | None | N | Used for rice irrigation until 1942. Screens in sands between 344 and 906 feet. Drawdown 110 feet after pumping 980 gallons a minute for 24 hours when drilled. See log. |
| 560 | 76.2 | July 25, 1946 | None | N | Supplied drilling rig, Arm lease. |
| 561 | -- | -- | C,H | P | |
| 562 | -- | -- | C,H | S | |
| 563 | -- | -- | C,E,G | D,S | |
| 564 | d/ 78 | May 1945 | J,E, l | D,S | Supplies water for oil field camp. Screen at 659-684 feet. See log. |
| 565 | d/ 51 | May 1945 | A | Ind | Supplied drilling rig, Wieting lease. |
| 566 | d/ 55<br>73.2 | Apr. 1945<br>July 18, 1946 | None | N | Do. |
| 567 | 6.9 | May 1, 1939 | C,W | S | |
| 568 | 3.0 | do. | C,W | D,S | |
| 569 | -- | -- | T,E | D,Ind | Supplies water for oil field camp. Screen at 532-557 feet. See log. |
| 570 | -- | -- | C,W | S | |
| 571 | d/ 32 | June 9, 1942 | None | N | Supplied drilling rig, Houston Farms Dev. Co. lease. Screen at 950-972 feet. |
| 572 | -- | -- | -- | -- | Core test on Sweet lease. See log. See log. |
| 573 | + | May 1, 1939 | Flows | -- | Flow 6 gallons a minute on May 1, 1939. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Pearland | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| | | (Wells east of the Brazos River) | | | | | |
| 600 | 8 miles west | Ray Fogle | -- | -- | 50 | 2 | -- |
| 601 | 5 miles west | R. O. Wood | Pete Rogers | 1931 | 87 | 3 | -- |
| 602 | 3½ miles west | Frank Doherty | do. | -- | 80 | 2 | -- |
| 603 | 3½ miles southwest | John Doherty | do. | 1931 | 54 | 2 | -- |
| 604 | do. | do. | do. | 1924 | 25± | 2 | -- |
| 605 | do. | C. W. Massey | -- | -- | 100 | 6 | -- |
| 606 | 4 miles southwest | H. Richards | H. Richards | -- | 25 | 6 | -- |
| 607 | 4½ miles southwest | Midstates Oil Corp. | -- | -- | 200± | 4 | 2.5 |
| 608 | 4¾ miles southwest | The Texas Co. | L. Patterson | 1934 | 632 | 7 | 5.8 |
| 609 | 3¾ miles southwest | C. W. Massey | -- | -- | 30± | 3 | -- |
| 610 | 1¾ miles southwest | T. P. Mahaney | -- | -- | 20 | 2 | -- |
| 611 | 2¼ miles southwest | Floyd Dimitt | Floyd Dimitt | 1927 | 90 | 2 | -- |
| 612 | ½ mile north | C. H. Alexander | C. H. Alexander | 1946 | 1,773 | 20, 14 | 4.0 |
| 613 | In Pearland | Santa Fe Ry. Co. | F. Standard | 1916 | 507 | 8, 6 | 2.5 |
| 614 | do. | Pearland School | Pat O'Day | 1938 | 535 | 6, 4 | -- |
| 615 | do. | C. W. Massey | -- | -- | 140 | 12 | -- |
| 616 | 3¼ miles southeast | Magnolia Fruit Farm | Fred Standard | 1908 | 512 | 6 | 1.0 |
| 617 | 4 miles southeast | Dixie Fig Farm | -- | 1909 | 475 | 4 | -- |
| 618 | 4¼ miles southeast | A. W. Brown | -- Rutherford | -- | 140 | 3 | -- |
| 619 | do. | do. | Pat O'Day | -- | 140 | 6 | -- |
| 620 | 3¼ miles southeast | L. L. Barnes | do. | 1946 | 352 | 4 | -- |
| 621 | 4½ miles southeast | Cecil Brown | Layne-Texas Co. | 1931 | 560 | 8, 6 | -- |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | Date of measurement | Method of lift b/ | Use of water b/ | Remarks |
|---|---|---|---|---|---|
| 600 | -- | -- | C,W | D,S | |
| 601 | c/ 10 | -- | C,W | D,S | |
| 602 | -- | -- | C,W | D,S | |
| 603 | -- | -- | C,G, 1½ | D,S | |
| 604 | -- | -- | C,H | S | |
| 605 | -- | -- | C,W | S | |
| 606 | -- | -- | C,H | D,S | |
| 607 | 7.8 | July 19, 1946 | C,W | D,S, Ind | Supplies oil field camp on F. Hart lease. |
| 608 | 102.3 | do. | None | N | Supplied drilling rig, Morrison lease. Screen at 564-632 feet. Yield was 150 gallons a minute. See log. |
| 609 | -- | -- | C,H | D,S | |
| 610 | -- | -- | C,H | D,S | |
| 611 | -- | -- | C,H | D | |
| 612 | 82.6 | Nov. 15, 1946 | T,G | Irr | Used for rice irrigation. Casing perforated opposite all sands between 350 and 1,300 feet. Gravel-walled. Drawdown 32 feet after pumping about 1,200 gallons a minute for 65 minutes. |
| 613 | 47.5<br>53.9<br>97.5 | Apr. 16, 1931<br>Apr. 11, 1936<br>May 30, 1946 | C,G, 10 | RR | Designated as Brazoria County well 10 in Geological Survey water level reports. Screen at 477-507 feet. See log. |
| 614 | -- | -- | C,E, 3 | D | |
| 615 | -- | -- | C,H | D,S | |
| 616 | 12.7<br>9.4 | May 24, 1939<br>June 25, 1946 | C,W | D | |
| 617 | -- | -- | A,G | D | |
| 618 | -- | -- | T,G | D | Yield 75 gallons a minute. |
| 619 | 15.3 | Feb. 16, 1939 | T,G | S,Irr | Screen at 118-138 feet. Yield about 250 gallons a minute. |
| 620 | d/ 55 | May 1946 | J,E, 1 | D,S | Screen at 332-352 feet. |
| 621 | d/ 40 | Dec. 29, 1931 | T,E, 20 | D,S, Irr | Screens in sands between 446 and 560 feet. Yield 558 gallons a minute when drilled. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Pearland | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 622 | 4¾ miles southeast | Humble Oil and Refining Co. | L. Patterson | 1936 | 495 | 4 | 3.0 |
| 623 | 4 miles southeast | Stanolind Oil and Gas Co. | -- | 1936 | 591 | 8, 6 | 1.2 |
| 624 | 4½ miles southeast | Humble Oil and Refining Co. | L. Patterson | 1936 | 516 | 6 | -- |
| 625 | 5½ miles southeast | Stanolind Oil and Gas Co. | -- | 1936 | 417 | 8, 6 | 0.7 |
| 626 | do. | do. | -- | 1936 | 383 | 6 | 0.0 |
| 627 | 6 miles southeast | do. | -- | 1936 | 610 | 8, 6 | 0.0 |
| 628 | 5 miles southeast | do. | Layne-Texas Co. | 1945 | 536 | 10, 4 | 2.7 |
| 629 | do. | do. | -- | 1936 | 591 | 8, 6 | -- |
| 630 | do. | Humble Oil and Refining Co. | L. Patterson | 1935 | 410 | 4 | 1.0 |
| 631 | 6 miles south | Frank Cisco | -- | -- | 20 | 5 | -- |
| 632 | 7 miles southwest | F. A. Goedecke | -- | -- | 37 | 1¼ | -- |
| 633 | 7½ miles southwest | A. Huepper | -- | -- | 18 | 1¼ | -- |
| 634 | do. | A. J. Hicks | -- McColley | 1920 | 90 | 2 | -- |
| 635 | do. | L. O. Callihan | Loran Davis | -- | 62 | 1¼ | -- |
| 636 | 7 miles southwest | do. | do. | -- | 35 | 1½ | -- |
| 637 | 6½ miles southwest | Mrs. C. Marasckin | -- | 1932 | 52 | 1 | -- |
| 638 | 7 miles southwest | Joe Corce | -- | -- | 54 | 1½ | -- |
| 639 | 6 miles southwest | Gulf Oil Corp. | -- | 1936 | 480 | 6 | 2.3 |
| 640 | do. | The Texas Co. | -- | 1936 | 1,229 | 10 | -- |
| 641 | do. | do. | L. Patterson | 1935 | 776 | 7, 5 | -- |
| 642 | 5½ miles southwest | C. Matali | -- | -- | 60 | 2 | -- |
| 643 | do. | The Texas Co. No. 1 | L. Patterson | 1932 | 300± | 6 | 5.0 |
| 644 | do. | The Texas Co. No. 2 | do. | 1933 | 194 | 9 | 1.5 |
| 645 | do. | The Texas Co. No. 3 | do. | 1937 | 195 | 8, 6 | 5.0 |

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 622 | 89.9 | July 1, 1946 | None | N | Wells 622 to 630 supplied drilling rigs, C. Brown A lease. Screen at |
| 623 | 94.0 | June 21, 1946 | None | N | Thornton lease. 452-482 feet. See log. Has 67 feet of screen. |
| 624 | -- | -- | T,E | D,Ind | Ford lease. Screen at 468-511 feet. Supplies oil field camp. See log. |
| 625 | 67.2 | June 21, 1946 | None | N | Miller lease. Has 67 feet of screen. |
| 626 | 20.8 | do. | None | N | Surface lease. Screen at 343-383 feet. |
| 627 | 94.5 | do. | None | N | Barrett lease. Has 60 feet of screen. |
| 628 | 93.1 | do. | T,E, 30 | D,Ind | Randall lease. Screen in sands between 472 and 538 feet. Yield 300 |
| 629 | -- | -- | T,E | D,Ind | Drake gallons a minute. See log. lease. Screen at 524-591 feet. Sup- |
| 630 | d/ 20<br>65.4 | Aug. 27, 1935<br>July 1, 1946 | None | N | Cannan lease. plies oil field camp. Screen at 341-371 feet. See log. |
| 631 | -- | -- | C,H | D,S | |
| 632 | -- | -- | C,H | D | |
| 633 | -- | -- | C,H | D,S | |
| 634 | d/ 8 | -- | C,H,W | D | |
| 635 | -- | -- | C,H | D,S | Screen at 58-62 feet. |
| 636 | -- | -- | C,H | D,S | |
| 637 | -- | -- | C,W | D,S | |
| 638 | -- | -- | C,W | D,S | |
| 639 | 58.5 | July 19, 1946 | C,G, 20 | D,S, Ind | Supplied drilling rigs, Colby lease. Screen at 440-480 feet. |
| 640 | -- | -- | T,E | D,S, Ind | Oil test on Belcher B lease converted for water in 1940. Gun perforated at |
| 641 | -- | -- | None | N | Supplied 980-1,000 feet. See log. drilling rigs, Belcher B lease. First screened at 207-233 feet, then deepened and screen at 734-776 feet. See |
| 642 | -- | -- | C,H | D,S | log. |
| 643 | 3.6 | July 18, 1946 | None | N | Wells 643 to 645 supplied drilling rigs, Belcher A lease. |
| 644 | 12.3 | do. | None | N | Screen at 172-194 feet. Yield 250 gallons a minute when drilled. See |
| 645 | 10.2 | do. | None | N | Screen at 159-195 feet. Yield log. 200 gallons a minute when drilled. See log. |

Records of wells and springs in Brazoria County -- Continued

| Well | Distance from Pearland | Owner | Driller | Date completed | Depth of well (ft.) | Diameter of well (in.) | Height of measuring point above ground (ft.) a/ |
|---|---|---|---|---|---|---|---|
| 646 | 5½ miles southwest | The Texas Co. No. 4 | L. Patterson | 1943 | 618 | 6 | -- |
| 647 | 6 miles southwest | The Texas Pipe Line Co. | do. | 1944 | 812 | 4 | -- |
| 648 | 6½ miles southwest | Victor Del Bello | Loran Davis | -- | 50 | 1¼ | -- |
| 649 | 7½ miles southwest | J. W. Lewis | -- | -- | 27 | 2 | -- |
| 650 | do. | Manvel School | Pat O'Day | 1937 | 165 | 4 | -- |
| 651 | In Manvel | M. Pavlovich | -- | -- | 65 | -- | -- |
| 652 | 9 miles southwest | M. H. Peters | M. H. Peters | 1934 | 36 | 1¼ | -- |
| *653 | 10 miles southwest | Donald Ford | Pete Rogers | 1938 | 60 | -- | -- |

a/ Measuring point is usually above ground at top of casing, pump base, pipe clamp or well curb. If below ground the figures are preceded by a minus (-) sign.

b/ T, turbine; C, cylinder; J, jet type; A, air or gas lift; E, electric; G, gasoline or diesel; W, windmill; H, hand. Number indicates horsepower.

* For records of wells 654 and 655, see pages 54 and 55.

| Well | WATER LEVEL: Above (+) or below land surface (ft.) | WATER LEVEL: Date of measurement | Method of lift b/ | Use of water c/ | Remarks |
|---|---|---|---|---|---|
| 646 | -- | -- | A | Ind | Screen at 594-618 feet. Yield 200 gallons a minute when drilled. See log. |
| 647 | -- | -- | A | D,Ind | Screen at 766-812 feet. See log. |
| 648 | -- | -- | C,H,W | D,S | |
| 649 | -- | -- | C,H | D,S | |
| 650 | -- | -- | C,E, 2 | P | Screen at 145-165 feet. |
| 651 | -- | -- | C,G | D,S | |
| 652 | -- | -- | C,W | D,S | |
| 653 | -- | -- | C,W | D | |

b/ Ind, industrial; P, public supply; RR, railroad; D, domestic; S, stock; Irr, irrigation; N, not used.

d/ Water level reported by owner or driller.

Records of wells and springs in Brazoria County -- Continued

| Well | Location | Owner | Date completed | Depth of well (ft.) |
|---|---|---|---|---|
| 64 | 12 miles northwest of West Columbia | General Crude Oil Co., Wisdom No. 1 | 1943 | 4,845± |
| 65 | 8 miles west of West Columbia | Humble Oil and Refining Co., M. M. McFarland No. 1 | 1946 | 6,910± |
| 164 | 4 miles scuth of Brazoria | Grabowski and Capps, D. I. Lowe No. 1 | 1941 | 1,018± |
| 359 | 8 miles northeast of Velasco | Sterling Oil and Refining Co., Shank No. 1 | 1941 | 2,790± |
| 479 | 10 miles northeast of Angleton | Humble Oil and Refining Co., Moller No. 1 | 1936 | 3,000± |
| 574 | 8 miles southeast of Alvin | McCarthy Drilling Co., Houston Farms Development Co. No. 2 | 1939 | 3,498 |
| 575 | 13 miles southeast of Alvin | Strake Petroleum Co., Inc., Griffith No. 1 | 1940 | 2,375+ |
| 654 | 5 miles scutheast of Pearland | Stanolind Oil and Gas Co., Drake No. 7 | 1936 | 1,781+ |
| 655 | 9 miles southwest of Pearland | J. W. Frazier Drilling Co., J. C. Thompson et.al,No.1 | 1945 | 6,054 |

| Well | Remarks |
|---|---|
| 64 | Oil test. Electrical log from 32 to 4,845 feet indicates fresh water in sands from 70 to 160, and 770 to 805 feet, and brackish water in sands from 620 to 730 and 805 to 1,175 feet. Salty water in sands below 1,175 feet. |
| 65 | Oil test. Electrical log from 38 to 6,910 feet indicates fresh water in sands between 38 and 150 feet; brackish water in sands from 304 to 340, 410 to 470, 600 to 700 and 740 to 830 feet. Salty water in sands below 830 feet. |
| 164 | Oil test. Electrical log from 83 to 1,018 feet indicates fresh water in sands from 98 to 107, 150 to 168, and 316 to 356 feet, and brackish water in sands from 525 to 560 feet. Salty water in sands below 560 feet. |
| 359 | Oil test. Electrical log from 28 to 2,790 feet indicates fresh water in sands from 280 to 308 feet, brackish water in sand from 110 to 130 feet. Salty water in sands below 308 feet. |
| 479 | Oil test. Electrical log from 143 to 3,000 feet indicates fresh water in sands from 250 to 300, 420 to 490, 590 to 630 feet; slightly brackish to brackish water in sands from 900 to 990 feet; salty water in sands below 990 feet. |
| 574 | Oil test. Electrical log from 47 to 3,498 feet indicates fresh water in sands from 105 to 125, 140 to 187, 390 to 405, 480 to 525, 605 to 618, and 670 to 825 feet; brackish water in sands from 1,035 to 1,075, 1,139 to 1,152 and 1,180 to 1,217 feet. Salty water in sands below 1,217 feet. |
| 575 | Oil test. Electrical log from 73 to 2,373 feet indicates fresh water in sands from 80 to 130, 410 to 424, 520 to 540, and 719 to 840 feet; brackish to salty water in sands from 840 to 1,106 feet and salty water in sands below 1,106 feet. |
| 654 | Oil test. Electrical log from 107 to 1,784 feet indicates fresh water in sands from 240 to 255, 335 to 365, 385 to 405 and 495 to 775 feet; brackish water in sands and sand zones from 780 to 806, 825 to 870, 1,005 to 1,140 feet; and brackish to salty water in sands below 1,142 feet. |
| 655 | Oil test. Electrical log from 603 to 6,054 feet indicates fresh water in sands from 785 to 860, 885 to 910, 950 to 1,030, 1,130 to 1,210 and 1,270 to 1,328 feet; slightly brackish to brackish water in sands from 1,334 to 1,480, 1,565 to 1,620, 1,670 to 1,720 and 1,745 to 1,780 feet. Salty water in sands below 1,780 feet. |

Table of drillers' logs, Brazoria County, Texas

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 1, partial log** | | |
| L. and M. Production Co. No. 3, on Mrs. Belle Wisdom lease, 12½ miles northwest of West Columbia. | | |
| Surface soil | 6 | 6 |
| Clay | 34 | 40 |
| Sand | 20 | 60 |
| Clay | 5 | 65 |
| Stiff clay | 50 | 115 |
| Sandy clay | 30 | 145 |
| Gumbo | 80 | 225 |
| Sand and boulders | 30 | 255 |
| Gumbo | 35 | 290 |
| Sand and boulders | 20 | 310 |
| Gumbo | 30 | 340 |
| Sand and boulders | 20 | 360 |
| Gumbo | 35 | 395 |
| Sand and boulders | 20 | 415 |
| Gumbo | 50 | 465 |
| Sand, shale, and boulders | 40 | 505 |
| Gumbo | 15 | 520 |
| Blue gumbo | 63 | 583 |
| Tough blue gumbo | 42 | 625 |
| Gumbo and lime | 72 | 697 |
| Broken rock | 2 | 699 |
| Water sand | 72 | 771 |
| Gumbo | 8 | 779 |
| Water sand | 5 | 784 |
| Fine sand | 30 | 814 |
| Hard sand | 4 | 818 |
| Fine sand | 17 | 835 |
| Sand rock | 3 | 838 |
| Gumbo | 25 | 863 |
| Hard sandy lime rock | 2 | 865 |
| Broken sandy lime rock | 19 | 884 |
| Gumbo | 1 | 885 |
| Blue gumbo | 50 | 935 |
| Gumbo | 5 | 940 |
| Water sand | 12 | 952 |
| Sandy lime rock | 11 | 963 |
| Gumbo | 15 | 978 |
| Gray lime rock | 2 | 980 |
| Sand | 2 | 982 |
| Water sand | 16 | 998 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 1, partial log -- continued** | | |
| Gumbo | 22 | 1020 |
| Water sand | 4 | 1024 |
| Hard sand | 6 | 1030 |
| Gumbo | 24 | 1054 |
| Water sand | 3 | 1057 |
| Sandy lime and shale | 29 | 1086 |
| Gummy lime | 30 | 1116 |
| Hard sand | 8 | 1124 |
| Fine sand | 31 | 1155 |
| Gumbo | 3 | 1158 |
| Hard sand | 2 | 1160 |
| Gumbo and lime | 58 | 1218 |
| Sand | 4 | 1222 |
| Gumbo, lime, and boulders | 43 | 1265 |
| Sandy lime rock | 1 | 1266 |
| Dark shale | 6 | 1272 |
| Dark lime rock | 4 | 1276 |
| Lime rock | 5 | 1281 |
| Hard shale | 3 | 1284 |
| Sticky shale and lime | 7 | 1291 |
| Sand and shale | 42 | 1333 |
| Sandy shale | 4 | 1337 |
| Shale and lime | 3 | 1340 |
| Sand and shale | 3 | 1343 |
| Sticky gumbo and lime nodules | 7 | 1350 |
| Sticky blue gumbo and lime | 15 | 1365 |
| Gumbo, sand, and lime | 10 | 1375 |
| Tough blue gumbo | 12 | 1387 |
| Tough blue gumbo and lime streaks | 18 | 1405 |
| Gumbo, sand, and lime | 22 | 1427 |
| Tough blue gumbo and lime nodules | 48 | 1475 |
| Shale and lime | 2 | 1477 |
| Crystallized lime and sand | 8 | 1485 |
| Crystallized lime rock | 69 | 1554 |
| Sticky blue gumbo and lime streaks | 16 | 1570 |
| Flaky shale, pyrite and lime | 25 | 1595 |
| TOTAL DEPTH | | 2745 |

Table of drillers' logs, Brazoria County -- Continued

### Well 5

Sinclair Refining Co., 10½ miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Grass roots | 4 | 4 |
| Red clay | 13 | 17 |
| Red sand | 16 | 33 |
| Chalk | 46 | 79 |
| Sand rock | 4 | 83 |
| White packsand | 9 | 92 |
| Water sand | 10 | 102 |

### Well 18

Humble Oil and Refining Co., on L. T. Lambert lease, 11 miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface | 24 | 24 |
| Sand | 17 | 41 |
| Shale | 24 | 65 |
| Sand | 67 | 132 |
| Shale | 26 | 158 |
| Sand and shale | 11 | 169 |
| Shale | 138 | 307 |
| Sand | 18 | 325 |
| Shale | 98 | 423 |
| Sand and shale | 5 | 428 |
| Shale | 16 | 444 |
| Sand | 29 | 473 |

### Well 29

Humble Oil and Refining Co., on McFarland lease, 8 miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface | 26 | 26 |
| Sand | 21 | 47 |
| Sand and shale | 22 | 69 |
| Sand | 64 | 133 |
| Shale | 132 | 265 |
| Shale and sand | 22 | 287 |
| Shale | 22 | 309 |
| Sand | 22 | 331 |
| Shale | 77 | 408 |
| Sand | 44 | 452 |

### Well 31

Humble Oil and Refining Co., on Williams and Woodson lease, 9 miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface material | 24 | 24 |
| Sand | 19 | 43 |
| Shale | 14 | 57 |
| Sand | 22 | 79 |
| Shale | 24 | 103 |
| Sand | 50 | 153 |
| Shale | 58 | 211 |
| Sand | 36 | 247 |
| Shale | 82 | 329 |
| Sand | 22 | 351 |
| Shale | 42 | 393 |
| Sand | 8 | 401 |
| Shale | 92 | 493 |
| Sand | 21 | 514 |
| Shale | 60 | 574 |
| Sand | 44 | 618 |

### Well 47

The Texas Co., on W. H. Abrams lease, 2 miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Sand | 17 | 17 |
| Sand and clay | 69 | 86 |
| Clay | 20 | 106 |
| Sand | 3 | 109 |
| Gumbo | 39 | 148 |
| Sand | 8 | 156 |
| Gumbo | 144 | 300 |
| Water sand | 23 | 323 |
| Gumbo | 19 | 342 |
| Fine-grained sand | 16 | 358 |
| Gumbo | 52 | 410 |
| Fine-grained sand | 23 | 433 |
| Gumbo | 59 | 492 |
| Sand | 22 | 514 |
| Gumbo | 17 | 531 |
| Water sand | 44 | 575 |
| Gumbo | 2 | 577 |

Table of drillers' logs, Brazoria County -- Continued

### Well 49

The Texas Co., on W. C. Hogg lease, 1¼ miles northwest of West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface soil | 25 | 25 |
| Shale | 36 | 61 |
| Sand | 8 | 69 |
| Shale | 25 | 94 |
| Sand | 28 | 122 |
| Shale | 94 | 216 |
| Sand | 77 | 293 |
| Shale | 32 | 325 |
| Sand | 28 | 353 |
| Shale | 12 | 365 |
| Sand | 16 | 381 |
| Shale | 9 | 390 |
| Sand | 12 | 402 |
| Shale | 24 | 426 |
| Sand | 17 | 443 |
| Shale | 37 | 480 |
| Sand | 44 | 524 |

### Well 51

Equitable Mining Co., in West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| White clay | 2 | 2 |
| Red clay | 8 | 10 |
| Gray sand | 15 | 25 |
| White clay | 1 | 26 |
| Quicksand | 24 | 50 |
| Yellow clay | 10 | 60 |
| Quicksand | 1 | 61 |
| Gray sand | 23 | 84 |
| Lignite | 6 | 90 |
| White clay | 15 | 105 |
| Soapstone | 15 | 120 |
| Blue shale | 14 | 134 |
| Blue clay | 18 | 152 |
| Rock | 4 | 156 |
| Blue sand, clay, and streaks of rock | 112 | 268 |
| Rock | 1 | 269 |
| Sand | 1 | 270 |
| Blue clay | 18 | 288 |
| Hard rock | 7 | 295 |
| Blue clay | 19 | 314 |
| Quicksand | 6 | 320 |

### Well 51 -- continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Blue shale | 38 | 358 |
| Rock | 1 | 359 |
| Sand | 1 | 360 |
| Blue sand | 20 | 380 |
| Sand | 120 | 500 |
| Water-bearing rock | | 500 |

### Well 54

City of West Columbia No. 1, in West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Soil | 1 | 1 |
| Red clay | 6 | 7 |
| Red and brown sand | 43 | 50 |
| Gray sand | 10 | 60 |
| Clay, streaks of sand | 16 | 76 |
| Coarse-grained sand and fine gravel | 45 | 121 |
| Streaks clay and sand | 22 | 143 |
| Clay | 24 | 167 |
| Sand | 10 | 177 |
| Clay, streaks of sand | 12 | 189 |
| Clay, sand breaks | 133 | 322 |
| Rock | 1 | 323 |
| Clay | 9 | 332 |
| Sand | 20 | 352 |
| Sand, shale breaks | 34 | 356 |
| Fine-grained sand, shale streaks | 74 | 460 |
| Blue shale | 21 | 481 |
| Sandy shale | 13 | 494 |
| Fine-grained white sand | 22 | 516 |
| Shale | 18 | 534 |
| Sand with shale streaks | 6 | 540 |
| Coarse-grained sand | 8 | 548 |
| Shale | 23 | 571 |
| Sand and shale breaks | 40 | 611 |
| Shale | 13 | 624 |
| Sand (good) | 25 | 649 |
| Tough shale | 10 | 659 |

Table of drillers' logs, Brazoria County -- Continued

### Well 55

City of West Columbia No. 2, in West Columbia.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface material | 27 | 27 |
| Shale | 37 | 64 |
| Sand | 86 | 150 |
| Shale | 20 | 170 |
| Sand | 10 | 180 |
| Shale | 146 | 326 |
| Sand | 30 | 356 |
| Sand and shale | 9 | 365 |
| Shale | 25 | 390 |
| Sandy shale | 27 | 417 |
| Sand | 5 | 422 |
| Sandy shale | 9 | 431 |
| Sand | 16 | 447 |
| Shale | 48 | 495 |
| Sand | 35 | 525 |
| Shale | 8 | 533 |
| Sand | 15 | 548 |
| Shale | 3 | 551 |
| Sand | 5 | 556 |
| Shale | 19 | 575 |
| Sand | 40 | 615 |

### Well 100

Defense Plant Corp. test 1, 11 miles west of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface clay | 11 | 11 |
| Good sand and thin layers of clay | 49 | 60 |
| Soft clay | 17 | 77 |
| Good sand | 20 | 97 |
| Clay | 5 | 102 |
| Good sand | 54 | 156 |
| Clay | 41 | 197 |
| Coarse-grained sand | 8 | 205 |
| Sandy clay | 52 | 257 |
| Broken sand | 19 | 276 |
| Clay | 10 | 286 |
| Sand | 33 | 319 |
| Clay | 23 | 342 |
| Sandy clay | 6 | 348 |
| Fine-grained sand | 10 | 358 |
| Clay | 15 | 373 |
| Sand | 4 | 377 |
| Clay | 63 | 440 |
| Sand | 19 | 459 |

### Well 100 -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Tough clay | 24 | 483 |
| Sand | 7 | 490 |
| Clay | 2 | 492 |
| Sand | 11 | 503 |
| Tough clay | 28 | 531 |
| Sand | 5 | 536 |
| Clay | 4 | 540 |
| Sand | 5 | 545 |
| Clay | 34 | 579 |
| Sand | 15 | 594 |
| Clay | 27 | 621 |
| Sandy clay | 25 | 646 |
| Sand | 25 | 671 |
| Clay | 4 | 675 |
| Sand | 30 | 705 |
| Clay | 27 | 732 |
| Sand | 7 | 739 |
| Clay | 9 | 748 |
| Sand | 13 | 761 |
| Clay | 13 | 774 |

### Well 101

Defense Plant Corp. test 2, 11 miles west of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface clay | 14 | 14 |
| Sand | 17 | 31 |
| Clay | 4 | 35 |
| Sand and thin layers of clay | 19 | 54 |
| Clay | 12 | 66 |
| Sandy clay | 11 | 77 |
| Clay | 11 | 88 |
| Sand and clay layers | 22 | 110 |
| Clean sand | 9 | 119 |
| Clay | 2 | 121 |
| Clean coarse-grained sand | 35 | 156 |
| Clay | 5 | 161 |

### Well 102

Defense Plant Corp. No. 3, 10½ miles west of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface material | 11 | 11 |
| Sand | 61 | 72 |
| Shale | 24 | 96 |
| Sand | 68 | 164 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 103** | | |
| Defense Plant Corp. No. 1, 11 miles west of Brazoria. | | |
| Black surface soil | 4 | 4 |
| Red clay | 8 | 12 |
| Sand | 15 | 27 |
| Few streaks sand - red clay and layers | 41 | 68 |
| Red clay | 24 | 92 |
| Sand | 45 | 137 |
| Coarse-grained sand | 18 | 155 |
| Tough clay | 4 | 159 |
| **Well 104** | | |
| Defense Plant Corp. No. 5, 11 miles west of Brazoria. | | |
| Surface material | 12 | 12 |
| Sand | 28 | 40 |
| Shale | 55 | 95 |
| Sand | 75 | 170 |
| Shale | 21 | 291 |
| Sand | 16 | 307 |
| Shale | 43 | 350 |
| Sand | 28 | 378 |
| Shale | 50 | 428 |
| Sand | 75 | 503 |
| Shale | 39 | 542 |
| Sand | 16 | 558 |
| Shale | 30 | 588 |
| Sand | 15 | 603 |
| Shale | 59 | 662 |
| Sand | 21 | 683 |
| Shale | 2 | 685 |
| Sand | 30 | 715 |
| Shale | | - |
| **Well 105** | | |
| Defense Plant Corp. No. 2, 11 miles west of Brazoria. | | |
| Surface material | 12 | 12 |
| Sand | 62 | 74 |
| Shale | 21 | 95 |
| Sand | 69 | 164 |
| Shale | 2 | 166 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 106** | | |
| Defense Plant Corp. No. 4, 11 miles west of Brazoria. | | |
| Surface material | 12 | 12 |
| Sand | 58 | 70 |
| Shale | 28 | 98 |
| Sand | 71 | 169 |
| **Well 107** | | |
| J. S. Abercrombie Co., on Larsen-Edling lease, 10 miles west of Brazoria. | | |
| Surface soil | 3 | 3 |
| Surface clay | 9 | 12 |
| Surface sand | 58 | 70 |
| Shale | 42 | 112 |
| Sand | 28 | 140 |
| **Well 109** | | |
| J. S. Abercrombie Co., on Armstrong Lake, 11 miles west of Brazoria. | | |
| Surface dirt | 2 | 2 |
| Clay | 5 | 7 |
| Surface sand | 33 | 40 |
| Shale | 19 | 59 |
| Sand | 21 | 80 |
| Shale | 17 | 97 |
| Sand and sandstone rock | 61 | 158 |
| **Well 110** | | |
| J. S. Abercrombie Co., on Armstrong Lake, 11 miles west of Brazoria. | | |
| Dirt | 2 | 2 |
| Surface clay | 8 | 10 |
| Surface sand | 23 | 33 |
| Blue clay | 22 | 55 |
| Sandy shale | 50 | 105 |
| Sand | 51 | 156 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 111** | | |
| J. S. Abercrombie Co., on Armstrong Lake, 11 miles west of Brazoria. | | |
| Surface soil | 14 | 14 |
| Sand | 32 | 46 |
| Sand and shale streaks | 57 | 103 |
| Sand | 53 | 156 |
| **Well 112** | | |
| J. S. Abercrombie Co., on Armstrong Lake, 11 miles west of Brazoria. | | |
| Surface soil | 14 | 14 |
| Sand | 32 | 46 |
| Sand and shale streaks | 57 | 103 |
| Sand | 53 | 156 |
| **Well 113** | | |
| J. S. Abercrombie Co., on Armstrong Lake, 10½ miles west of Brazoria. | | |
| Surface | 10 | 10 |
| Sand | 50 | 60 |
| Shale | 20 | 80 |
| Sandy shale | 10 | 90 |
| Sand | 50 | 140 |
| Shale | 13 | 153 |
| Sand | 27 | 180 |
| **Well 116** | | |
| J. S. Abercrombie Co., 11 miles west of Brazoria. | | |
| Surface soil | 10 | 10 |
| Shale | 12 | 22 |
| Sand | 22 | 44 |
| Sand and shale | 22 | 66 |
| Shale | 54 | 120 |
| Sand | 24 | 144 |
| **Well 117** | | |
| J. S. Abercrombie Co., on P. J. Reeves lease, 13 miles west of Brazoria. | | |
| Surface soil | 4 | 4 |
| Surface clay | 16 | 20 |
| Surface sand | 4 | 24 |
| Shale | 32 | 56 |
| Sand and gravel | 44 | 100 |
| **Well 118** | | |
| J. S. Abercrombie Co., on Mueller-Moline lease, 11½ miles southwest of Brazoria. | | |
| Clay | 73 | 73 |
| Sand and gravel | 62 | 135 |
| **Well 119, partial log** | | |
| Transcontinental Oil Co., 10½ miles west of Brazoria. | | |
| Sand | 133 | 133 |
| Clay | 46 | 179 |
| Water sand | 132 | 311 |
| Gumbo | 8 | 319 |
| Sand | 15 | 334 |
| Gumbo | 35 | 369 |
| Gravel | 15 | 384 |
| Red clay | 148 | 532 |
| Packed sand | 33 | 565 |
| Gumbo | 169 | 734 |
| Sand | 20 | 754 |
| Gumbo | 40 | 794 |
| Packed sand | 80 | 874 |
| Gumbo | 96 | 970 |
| Packed sand | 60 | 1030 |
| Soft gumbo | 40 | 1070 |
| Sand and gravel | 220 | 1290 |
| Chalk | 60 | 1350 |
| Gumbo | 30 | 1380 |
| Broken lime | 40 | 1420 |
| Gumbo | 75 | 1495 |
| Broken lime | 25 | 1520 |
| Gumbo | 15 | 1535 |
| Broken lime | 10 | 1545 |
| Sandy lime | 10 | 1555 |
| Gumbo | 38 | 1593 |
| Sand and boulders | 20 | 1613 |
| Chalky lime | 40 | 1653 |
| Gumbo | 52 | 1705 |
| Sand and boulders | 20 | 1725 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 119, partial log--continued** | | |
| Broken lime | 25 | 1750 |
| Rock | 1 | 1751 |
| Gumbo | 70 | 1821 |
| Sand and boulders | 20 | 1841 |
| Gumbo | 9 | 1850 |
| Sand and boulders | 11 | 1861 |
| Packed sand and rock | 24 | 1885 |
| Sand rock | 5 | 1890 |
| Gumbo and gypsum | 31 | 1921 |
| Gumbo | 125 | 2046 |
| Lime | 24 | 2070 |
| Water sand | 44 | 2114 |
| Gumbo | 34 | 2148 |
| Water sand | 30 | 2178 |
| Gumbo | 50 | 2228 |
| Shale | 24 | 2252 |
| Soft gumbo | 50 | 2302 |
| Gumbo | 166 | 2468 |
| Sandy shale | 35 | 2503 |
| Sandy shale and boulders | 35 | 2538 |
| Pink gumbo | 147 | 2685 |
| Sandy shale | 7 | 2692 |
| Pink gumbo | 92 | 2784 |
| Gumbo and boulders | 26 | 2810 |
| Sand and boulders | 10 | 2820 |
| Gumbo | 22 | 2842 |
| Sandy shale and boulders | 38 | 2880 |
| Gumbo and boulders | 15 | 2895 |
| Sand and boulders | 15 | 2910 |
| Gumbo | 15 | 2925 |
| Sand and boulders | 28 | 2953 |
| Gumbo | 7 | 2960 |
| Gumbo and boulders | 48 | 3008 |
| TOTAL DEPTH | | 4783 |

**Well 120**

J. S. Abercrombie Co., 9 miles west of Brazoria.

| | | |
|---|---|---|
| Surface | 10 | 10 |
| Sand | 20 | 30 |
| Shale | 95 | 125 |
| Sand | 25 | 150 |

**Well 125**

The Texas Co., on H. L. Walker lease, 7½ miles west of Brazoria.

| | | |
|---|---|---|
| Surface sand and clay | 24 | 24 |
| Sand | 44 | 68 |
| Shale | 66 | 134 |
| Sand | 16 | 150 |
| Shale | 296 | 446 |
| Sand | 27 | 473 |

**Well 144**

Jefferson Lake Sulphur Co.,Inc., Patterson test 1, 3 miles south of Brazoria.

| | | |
|---|---|---|
| Surface clay | 53 | 53 |
| Coarse-grained sand | 31 | 84 |
| Shale | 365 | 449 |
| Coarse-grained sand | 47 | 496 |
| Shale | 194 | 690 |
| Coarse-grained sand | 54 | 744 |
| Shale | 2 | 746 |

**Well 146**

Jefferson Lake Sulphur Co., Inc., Weims No. 2, 3 miles south of Brazoria.

| | | |
|---|---|---|
| Clay | 56 | 56 |
| Sand | 34 | 90 |
| Shale | 366 | 456 |
| Sand | 12 | 468 |
| Shale | 3 | 471 |
| Sand | 1 | 472 |
| Shale | 1 | 473 |
| Sand | 18 | 491 |
| Shale | 9 | 500 |

**Well 147**

Jefferson Lake Sulphur Co., Inc., Weims No. 1, 3 miles south of Brazoria.

| | | |
|---|---|---|
| Clay | 56 | 56 |
| Sand | 29 | 85 |
| Shale | 365 | 450 |
| Sand | 45 | 495 |

Table of drillers' logs, Brazoria County -- Continued

### Well 149

Jefferson Lake Sulphur Co., Inc., Ring No. 1, 3 miles south of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Rotary above ground | 5 | 5 |
| Surface clay | 45 | 50 |
| Sand | 26 | 76 |
| Shale | 29 | 105 |
| Sand | 12 | 117 |
| Shale | 141 | 258 |
| Sand | 27 | 285 |
| Shale | 32 | 317 |
| Sand | 13 | 330 |
| Sandy shale | 74 | 404 |
| Sand | 13 | 417 |
| Shale | 48 | 465 |
| Shale and boulders | 8 | 473 |
| Sand and shale | 11 | 484 |
| Sand | 16 | 500 |
| Shale | 4 | 504 |

### Well 150

Jefferson Lake Sulphur Co.,Inc., Marcus Weims No. 1, 3 miles south of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Rotary above ground | 5 | 5 |
| Clay | 49 | 54 |
| Sand | 17 | 71 |
| Gumbo | 28 | 99 |
| Shale | 6 | 105 |
| Sand and gravel | 75 | 180 |
| Shale | 27 | 207 |
| Sand | 10 | 217 |
| Shale | 92 | 309 |
| Sand | 8 | 317 |
| Gumbo | 10 | 327 |
| Sandy shale | 84 | 411 |
| Sandy shale and boulders | 43 | 454 |
| Shale | 8 | 462 |
| Sand | 2 | 464 |
| Shale | 5 | 469 |
| Sand | 37 | 506 |
| Shale | 5 | 511 |

### Well 151, partial log

Roxana Petroleum Corp., on Clemens State Farm, 3½ miles southeast of Brazoria.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Black, surface soil | 4 | 4 |
| Red surface soil | 3 | 7 |
| Red water sand | 35 | 42 |
| Red clay | 100 | 142 |
| Sand and gravel | 15 | 157 |
| Red gumbo | 35 | 192 |
| Red water sand | 22 | 214 |
| Gumbo | 170 | 384 |
| Blue gumbo | 61 | 445 |
| Water sand and gravel | 15 | 460 |
| Red gumbo | 153 | 613 |
| Blue shale and fossils | 12 | 625 |
| Blue gumbo | 107 | 732 |
| Sand and fossils | 10 | 742 |
| Red gumbo and lime | 56 | 798 |
| Red gumbo | 35 | 833 |
| Water sand | 5 | 838 |
| Red gumbo | 4 | 842 |
| Gravel, sandy shale, and fossils | 44 | 886 |
| Pink gumbo | 46 | 932 |
| Shale, fossils, and gravel | 24 | 956 |
| Blue gumbo | 6 | 962 |
| Shale, fossils, and gravel | 28 | 990 |
| Blue gumbo | 28 | 1018 |
| Water sand and gravel | 37 | 1055 |
| Blue gumbo | 4 | 1059 |
| Sand, gravel, and boulders | 134 | 1193 |
| Blue gumbo | 34 | 1227 |
| Water sand and gravel | 42 | 1269 |
| Blue gumbo | 10 | 1279 |
| Rock | 1 | 1280 |
| Boulders, shale, and sandy gravel | 27 | 1307 |
| Blue gumbo | 26 | 1333 |
| Shale and boulders | 15 | 1348 |
| Blue gumbo | 21 | 1369 |
| Sandy gravel, boulders, and shale | 33 | 1402 |
| Blue gumbo and lime | 67 | 1469 |
| Red and blue shale and boulders | 18 | 1487 |
| Blue gumbo | 12 | 1499 |
| Water sand and gravel | 25 | 1524 |
| Reddish-blue shale and boulders | 25 | 1549 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

Well 151, partial log - continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Water sand and boulders | 18 | 1567 |
| Blue gumbo | 16 | 1583 |
| Water sand and boulders | 35 | 1618 |
| Blue gumbo | 65 | 1683 |
| Blue gumbo and lime | 47 | 1730 |
| Water sand | 3 | 1733 |
| Sand and boulders | 20 | 1753 |
| Blue gumbo | 57 | 1810 |
| Blue gumbo and boulders | 23 | 1833 |
| Water sand | 2 | 1835 |
| Sandy gravel and fossils | 3 | 1838 |
| Blue gumbo | 6 | 1844 |
| Sandy lime | 2 | 1846 |
| Shaly lime and blue and red boulders | 45 | 1891 |
| Gumbo and blue lime | 10 | 1901 |
| Sand and boulders | 12 | 1913 |
| Blue gumbo | 11 | 1924 |
| Pink and blue gumbo | 64 | 1988 |
| Sandy lime and boulders | 6 | 1994 |
| Shale and boulders | 4 | 1998 |
| Hard sand rock | 18 | 2016 |
| Hard sand rock and pyrite | 12 | 2028 |
| Hard rock and streaks of soft rock | 13 | 2041 |
| Hard rock | 1 | 2042 |
| Blue gumbo and boulders | 10 | 2052 |
| Blue water sand | 2 | 2054 |
| Blue gumbo and boulders | 7 | 2061 |
| Blue gumbo, lime, and boulders | 40 | 2101 |
| Blue water sand | 4 | 2105 |
| Blue water sand, boulders, and streaks of shale | 39 | 2144 |
| Hard blue water sand, shale and boulders | 11 | 2155 |
| Hard sandy lime and pyrite | 4 | 2159 |
| Hard sandy lime, calcite, and pyrite | 6 | 2165 |
| Hard, sandy lime and pyrite | 10 | 2175 |
| Blue gumbo and lime | 10 | 2185 |
| Hard, sandy lime and pyrite | 3 | 2188 |
| Blue shale | 11 | 2199 |
| Sand and shale | 2 | 2201 |
| Hard lime and blue shale | 3 | 2204 |
| Blue gumbo and lime | 33 | 2237 |
| Blue water sand and shale | 6 | 2243 |
| Rock | 6 | 2249 |

Well 151, partial log - continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Hard lime rock | 1 | 2250 |
| Blue shale and boulders | 21 | 2271 |
| Blue gumbo and boulders | 15 | 2286 |
| Hard, sandy lime rock | 10 | 2296 |
| Hard sand rock | 6 | 2302 |
| Blue gumbo and lime | 3 | 2305 |
| Hard sand rock | 16 | 2321 |
| Hard sand and pyrite | 38 | 2359 |
| Hard, sandy lime and pyrite | 28 | 2387 |
| Hard, sandy shale and lime | 17 | 2404 |
| Blue shale | 2 | 2406 |
| Hard, blue shale | 12 | 2418 |
| Gummy blue shale | 60 | 2478 |
| Gummy blue shale and lime | 10 | 2488 |
| Gummy blue shale | 13 | 2501 |
| TOTAL DEPTH | | 3102 |

Well 205, partial log

Shell Oil Co.,Inc., on T. J. Poole lease, 13½ miles west of Freeport.

| | | |
|---|---|---|
| Surface soil | 12 | 12 |
| Surface sand | 6 | 18 |
| Clay | 45 | 63 |
| Water sand | 175 | 238 |
| Gumbo | 75 | 313 |
| Sand | 43 | 356 |
| Sandy shale | 60 | 416 |
| Shale | 61 | 477 |
| Sticky shale | 19 | 496 |
| Shale and boulders | 11 | 507 |
| Sticky shale | 70 | 577 |
| Shale and boulders | 16 | 593 |
| Sticky shale | 31 | 624 |
| Sand, fossils, and boulders | 62 | 686 |
| Sticky blue shale | 14 | 700 |
| Sandy shale and boulders | 22 | 722 |
| Gumbo | 23 | 745 |
| Shale and fossils | 47 | 792 |
| Sand and gravel | 50 | 842 |
| Shale and fossils | 34 | 876 |
| Sticky shale | 66 | 942 |
| Shale and boulders | 78 | 1020 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 205, partial log - Continued** | | |
| Blue gumbo | 19 | 1039 |
| Sand | 2 | 1041 |
| Sandy shale and fossils | 20 | 1061 |
| Blue gumbo | 23 | 1084 |
| Shale and boulders | 6 | 1090 |
| Blue gumbo | 99 | 1189 |
| Sandy gumbo | 24 | 1213 |
| Water sand | 2 | 1215 |
| Sand and boulders | 17 | 1232 |
| Sandy shale and boulders | 145 | 1377 |
| Shale and fossils | 32 | 1409 |
| Sandy shale and fossils | 5 | 1414 |
| Sandy shale and boulders | 6 | 1420 |
| Shale and boulders | 70 | 1490 |
| Blue gumbo | 30 | 1520 |
| Gummy shale and fossils | 31 | 1551 |
| Sand | 1 | 1552 |
| Sandy lime | 1 | 1553 |
| Sand and shale | 24 | 1577 |
| Shale and boulders | 9 | 1586 |
| Blue gumbo | 44 | 1630 |
| Lime and calcite | 6 | 1636 |
| Sand and shale | 6 | 1642 |
| Sandy shale | 18 | 1660 |
| Lime rock | 7 | 1667 |
| Lime and calcite | 12 | 1679 |
| Hard shale and lime rock | 11 | 1690 |
| Hard sandy shale | 40 | 1730 |
| Shale and lime | 70 | 1800 |
| Gumbo and pink lime | 30 | 1880 |
| Gumbo and lime | 30 | 1860 |
| Shale and lime | 33 | 1893 |
| Water sand | 11 | 1904 |
| Sandy shale | 30 | 1934 |
| Salt water sand | 21 | 1955 |
| Sticky gumbo | 67 | 2022 |
| TOTAL DEPTH | | 5958 |

**Well 211, partial log**

Roxana Petroleum Corp., 12½ miles west of Freeport.

| | | |
|---|---|---|
| River bed sand | 10 | 10 |
| Gummy shale and shells | 92 | 102 |
| Gummy red shale | 111 | 213 |
| Gummy shale | 302 | 515 |
| Water sand | 35 | 550 |
| Shale and shells | 100 | 650 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 211, partial log - Continued** | | |
| Gumbo | 86 | 736 |
| Shale | 38 | 774 |
| Shale and lime | 20 | 794 |
| Shale and shells | 56 | 850 |
| Gumbo | 65 | 915 |
| Shells | 5 | 920 |
| Fresh water sand | 2 | 922 |
| Sand and lime | 28 | 950 |
| Gummy shale and shells | 50 | 1000 |
| Gumbo | 50 | 1050 |
| Sandy shale | 2 | 1052 |
| Blue sandy shale and shells | 2 | 1054 |
| Shale and shells | 12 | 1066 |
| Gumbo | 34 | 1100 |
| Shale and shells | 9 | 1109 |
| Blue water sand | 26 | 1135 |
| Blue gumbo | 10 | 1145 |
| Brown and blue sandy shale | 70 | 1215 |
| Rock | 1 | 1216 |
| Dark blue shale and lime | 4 | 1220 |
| Blue gumbo | 16 | 1236 |
| Hard sand and shells | 42 | 1278 |
| Blue shale and lime streaks | 44 | 1322 |
| Blue shale, lime streaks, and shells | 26 | 1348 |
| Gummy blue shale | 24 | 1372 |
| Lime rock | 8 | 1380 |
| Lime and shells | 11 | 1391 |
| Blue gumbo | 34 | 1425 |
| Gummy blue shale and shells | 70 | 1495 |
| Blue water sand | 14 | 1509 |
| Blue shale and shells | 56 | 1565 |
| Blue gumbo | 45 | 1610 |
| Water sand | 10 | 1620 |
| Blue gumbo | 59 | 1679 |
| Tough brown and blue gumbo | 179 | 1858 |
| Blue water sand | 5 | 1863 |
| Blue gumbo | 21 | 1884 |
| Blue and brown gumbo | 46 | 1930 |
| Blue gumbo | 159 | 2089 |
| Blue gumbo and lime | 42 | 2131 |
| Blue gumbo | 25 | 2156 |
| Blue gumbo and lime | 44 | 2200 |
| Water sand | 5 | 2205 |
| Hard blue water sand | 11 | 2216 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 211, partial log - continued** | | |
| Blue water sand | 19 | 2235 |
| Blue gumbo | 34 | 2269 |
| Blue water sand and lime streaks | 11 | 2280 |
| Blue gumbo | 15 | 2295 |
| Sand and lime | 2 | 2297 |
| Blue sand and shale | 15 | 2312 |
| Blue gumbo | 56 | 2368 |
| Blue shale, calcite, and lime | 11 | 2379 |
| Blue gumbo | 53 | 2432 |
| Hard sandy lime rock | 11 | 2443 |
| Water sand | 3 | 2446 |
| Blue gumbo | 13 | 2459 |
| Blue gumbo and lime | 105 | 2564 |
| Blue and brown gumbo | 92 | 2656 |
| Blue gumbo | 28 | 2684 |
| Lime and sand | 6 | 2690 |
| Blue gumbo | 80 | 2770 |
| Blue gumbo and lime | 39 | 2809 |
| Blue water sand | 11 | 2820 |
| Blue gumbo | 20 | 2840 |
| Lime rock | 8 | 2848 |
| Hard sand and blue shale | 2 | 2850 |
| Hard water sand | 5 | 2855 |
| Hard blue sand | 3 | 2858 |
| Hard blue sand rock | 22 | 2880 |
| Sand and blue shale | 20 | 2900 |
| Hard sand and pyrite | 2 | 2902 |
| Lime rock | 3 | 2905 |
| TOTAL DEPTH | | 5337 |

**Well 221**

Freeport Sulphur Co., 5½ miles northwest of Freeport.

| | | |
|---|---|---|
| Clay | 10 | 10 |
| Fine-grained sand | 40 | 50 |
| Clay | 10 | 60 |
| Sand | 62 | 122 |
| Clay | 37 | 159 |
| Sand and gravel | 35 | 194 |
| Gumbo | 2 | 196 |

**Well 222**

Freeport Sulphur Co., 4½ miles northwest of Freeport.

| | | |
|---|---|---|
| Clay | 20 | 20 |
| Fine-grained sand | 15 | 35 |
| Clay | 20 | 55 |
| Fine-grained sand | 20 | 75 |
| Gumbo | 10 | 85 |
| Fine-grained sand | 20 | 105 |
| Gumbo | 67 | 172 |
| Sand and gravel | 36 | 208 |
| Gumbo | 2 | 210 |

**Well 228**

Freeport Sulphur Co., 4½ miles west of Freeport.

| | | |
|---|---|---|
| Clay | 75 | 75 |
| Fine-grained sand | 15 | 90 |
| Gumbo | 80 | 170 |
| Sand and gravel | 34 | 204 |
| Gumbo | 3 | 207 |

**Well 230**

Freeport Sulphur Co., 4½ miles southwest of Freeport.

| | | |
|---|---|---|
| Clay | 33 | 33 |
| Gumbo | 142 | 175 |
| Sand and gumbo | 25 | 200 |
| Gumbo | 3 | 203 |

**Well 231**

Freeport Sulphur Co., 4½ miles southwest of Freeport.

| | | |
|---|---|---|
| Clay and gumbo | 175 | 175 |
| Fine-grained sand | 5 | 180 |
| Coarse-grained sand | 15 | 195 |
| Gravel | 9 | 204 |
| Gumbo | 3 | 207 |

**Well 232**

U. S. Engineers, 4½ miles southwest of Freeport.

| | | |
|---|---|---|
| Clay | 41 | 41 |
| Gray sand and clay layers | 19 | 60 |
| Clay | 144 | 204 |
| Gray sand and gravel | 31 | 235 |
| Clay | 6 | 241 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 300** | | |
| U. S. Engineers, 4½ miles southwest of Velasco. | | |
| Red and blue clay | 100 | 100 |
| Clay | 42 | 142 |
| Sandy clay | 48 | 190 |
| Coarse-grained gray sand | 34 | 224 |
| Clay | 6 | 230 |
| **Well 301** | | |
| Known as Reed well, 3 miles southwest of Velasco. | | |
| Black asphaltic soil | 30 | 30 |
| Yellow clay | 12 | 42 |
| Quicksand | 20 | 62 |
| Yellow clay | 25 | 87 |
| Black clay | 5 | 92 |
| Black clay and red ferruginous spots | 70 | 162 |
| Black clay and minute white shells | 27 | 189 |
| Quicksand | 21 | 210 |
| Blue quicksand | 16 | 226 |
| Black clay, and altered lime and iron | 18 | 244 |
| Black clay and shale | 3 | 247 |
| Black shale and sand | 28 | 275 |
| Black shale | 55 | 330 |
| Black shale and gravel | 15 | 345 |
| Soft black clay and thin layer of hard rock | 60 | 405 |
| Soft blue and yellow clay | 62 | 467 |
| Yellow clay, sand, and shale | 82 | 549 |
| Sand, pebbles, and shale | 8 | 557 |
| Yellow clay, sand, and shale | 30 | 587 |
| Hard rock | 2 | 589 |
| Sand and large pebbles | 2 | 591 |
| Gravel and flint | 4 | 595 |
| Black clay and shale | 2 | 597 |
| Hard rock | 1 | 598 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 303** | | |
| Defense Plant Corp. No. 7, 2¼ miles southwest of Velasco. | | |
| Black surface soil | 3 | 3 |
| Red clay | 20 | 23 |
| Fine-grained red sand | 17 | 40 |
| Red clay and fine-grained red sand | 36 | 76 |
| Gray shale | 23 | 99 |
| Fine-grained gray sand | 12 | 111 |
| Gray shale | 73 | 184 |
| Gray sand-good | 33 | 217 |
| Shale | 7 | 224 |
| **Well 304** | | |
| The Dow Chemical Co. No. 7, 2 miles southwest of Velasco. | | |
| Fill and muck | 12 | 12 |
| Clay | 11 | 23 |
| Clay and streaks of sand | 27 | 50 |
| Fine-grained sand | 5 | 55 |
| Soft clay | 19 | 74 |
| Fine-grained blue sand | 12 | 86 |
| Clay | 23 | 109 |
| Clay and sand | 46 | 155 |
| White sand | 20 | 175 |
| Clay | 40 | 215 |
| Coarse-grained sand and gravel | 32 | 247 |
| Clay | 6 | 253 |
| **Well 305** | | |
| The Dow Chemical Co. No. 6, 1½ miles southwest of Velasco. | | |
| Surface soil | 2 | 2 |
| Muck | 23 | 25 |
| Clay | 9 | 34 |
| Fine-grained sand | 10 | 44 |
| Clay, streaks of sand | 47 | 91 |
| Blue clay | 11 | 102 |
| Fine-grained sand | 14 | 116 |
| Red clay | 5 | 121 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 305 --continued** | | |
| Fine-grained brown sand | 26 | 147 |
| Clay | 74 | 221 |
| Coarse-grained sand and gravel | 27 | 248 |
| Tough clay | 6 | 254 |
| **Well 306** | | |
| The Dow Chemical Co. No. 13, in Freeport. | | |
| Surface soil | 12 | 12 |
| Sand | 14 | 26 |
| Clay | 14 | 40 |
| Sand | 21 | 61 |
| Clay | 19 | 80 |
| Sand | 15 | 95 |
| Clay | 21 | 116 |
| Sandy clay | 18 | 134 |
| Clay | 20 | 154 |
| Sand | 34 | 188 |
| Tough shale | 17 | 205 |
| Shale | 65 | 270 |
| Tough shale | 7 | 277 |
| **Well 307** | | |
| The Dow Chemical Co. No. 14, in Freeport. | | |
| Clay, surface material | 15 | 15 |
| Clay | 25 | 40 |
| Red Sand | 18 | 58 |
| Clay | 21 | 79 |
| Sandy clay | 20 | 99 |
| Sand | 10 | 109 |
| Clay | 9 | 118 |
| Red sand | 5 | 123 |
| Sandy clay | 10 | 133 |
| Clay | 20 | 153 |
| Sandy clay | 26 | 179 |
| Sand | 51 | 230 |
| **Well 308** | | |
| City of Freeport No. 6, in Freeport | | |
| Surface Soil | 3 | 3 |
| Red clay | 54 | 57 |
| Soft red clay | 120 | 177 |
| Sticky red clay | 29 | 206 |
| Good coarse-grained sand | 24 | 230 |
| Shale | 2 | 232 |
| Fine-grained sand | 15 | 247 |
| Shale | 2 | 249 |
| **Well 309** | | |
| City of Freeport No. 7, in Freeport. | | |
| Surface soil | 3 | 3 |
| Red clay | 54 | 57 |
| Soft red clay | 120 | 177 |
| Sticky red clay | 29 | 206 |
| Good water sand | 24 | 230 |
| Shale | 2 | 232 |
| Coarse sand and gravel | 15 | 247 |
| Shale | 2 | 249 |
| **Well 310** | | |
| City of Freeport No. 3, in Freeport. | | |
| Red and blue clay | 20 | 20 |
| Sand | 8 | 28 |
| Red and blue clay | 74 | 102 |
| Shale and shell | 23 | 125 |
| Blue clay | 25 | 150 |
| Sand, shale, and shell | 22 | 172 |
| Blue clay | 53 | 225 |
| Coarse-grained sand | 25 | 250 |
| Blue clay | 1 | 251 |
| **Well 311** | | |
| City of Freeport No. 4, in Freeport. | | |
| Red and yellow clay | 15 | 15 |
| Fine-grained sand | 10 | 25 |
| Coarse-grained sand | 10 | 35 |
| Yellow and blue clay | 65 | 100 |
| Shale and shell | 25 | 125 |
| Blue clay | 25 | 150 |
| Sand, shale, and shell | 22 | 172 |
| Blue clay | 53 | 225 |
| Coarse-grained sand | 25 | 250 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 312** | | |
| City of Freeport No. 5, in Freeport. | | |
| Surface soil | 5 | 5 |
| Clay | 3 | 8 |
| Fine-grained sandy clay | 15 | 23 |
| Sand and shells | 8 | 31 |
| Clay | 69 | 100 |
| Sticky shale | 26 | 126 |
| Sticky clay | 11 | 137 |
| Soft shale and shells | 38 | 175 |
| Sticky clay | 51 | 226 |
| Sand | 23 | 249 |
| Clay | 1 | 250 |
| **Well 313** | | |
| The Dow Chemical Co. No. 5, 1¾ miles southeast of Velasco. | | |
| Soil | 2 | 2 |
| Clay | 15 | 17 |
| White sand | 18 | 33 |
| Sand, layers of clay | 46 | 79 |
| Blue clay | 12 | 91 |
| Sand, layers of clay | 21 | 112 |
| Clay | 10 | 122 |
| Sand, layers of clay | 89 | 211 |
| Sand and gravel | 32 | 243 |
| Clay | 9 | 252 |
| **Well 314** | | |
| The Dow Chemical Co. No. 11, 2¼ miles southeast of Velasco. | | |
| Fill | 9 | 9 |
| Soft clay | 8 | 17 |
| Sand | 15 | 32 |
| Soft clay | 27 | 59 |
| Clay | 22 | 81 |
| Sticky clay | 12 | 93 |
| Blue clay | 57 | 150 |
| Sand and shell breaks | 33 | 183 |
| Soft clay | 45 | 228 |
| Fine-grained gray sand | 26 | 254 |
| Coarse-grained sand | 10 | 264 |
| Clay | 5 | 269 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 315** | | |
| The Dow Chemical Co. No. 2, 2¼ miles southeast of Velasco. | | |
| Sand | 48 | 48 |
| Soft clay and shell | 30 | 78 |
| Sand | 13 | 91 |
| Clay | 20 | 111 |
| Sand | 15 | 126 |
| Red and blue clay, streaks of sand | 27 | 153 |
| Blue clay | 33 | 186 |
| Fine-grained gray sand | 21 | 207 |
| Red clay | 6 | 213 |
| Sand | 43 | 256 |
| Clay | 9 | 265 |
| **Well 316** | | |
| The Dow Chemical Co. No. 12, 2½ miles southeast of Velasco. | | |
| Sand and shell | 36 | 36 |
| Clay | 11 | 47 |
| Sand and fine-grained sand | 74 | 121 |
| Sand (layers) | 25 | 146 |
| Sandy shale | 39 | 185 |
| Blue clay | 33 | 218 |
| Sand | 35 | 253 |
| Shale | 33 | 286 |
| Shale and sand layers | 48 | 334 |
| Sticky shale | 20 | 354 |
| Soft shale | 8 | 362 |
| Sticky shale | 78 | 440 |
| Shale, soft, sandy | 35 | 475 |
| Shale | 110 | 585 |
| Sand | 16 | 601 |
| Sandy shale | 10 | 611 |
| Shale | 37 | 648 |
| Good sand | 10 | 658 |
| Soft shale | 12 | 670 |
| Sand | 15 | 685 |
| Sandy shale | 11 | 696 |
| Sand | 27 | 723 |
| Shale | 39 | 762 |
| Sticky shale | 32 | 794 |
| Hard shale | 10 | 804 |
| Sticky shale | 161 | 965 |
| Sand | 165 | 1130 |

Table of drillers' logs, Brazoria County -- Continued

### Well 317

The Dow Chemical Co. No. 9, 2¼ miles southeast of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Sand | 4 | 4 |
| Blue clay | 13 | 17 |
| Sand | 21 | 38 |
| Blue clay | 9 | 47 |
| Soft blue shale, shell | 92 | 139 |
| Fine-grained sand | 32 | 171 |
| Soft blue shale | 45 | 216 |
| Good water sand | 26 | 244 |
| Fine-grained sand | 2 | 246 |
| Shale, thin layers sand | 38 | 284 |
| Sand, layers shale | 26 | 310 |
| Shale | 10 | 320 |
| Sandy shale and sand | 14 | 334 |
| Shale | 7 | 341 |
| Sand and shale | 5 | 346 |
| Shale | 27 | 373 |
| Shale, sandy shale and shell | 37 | 410 |
| Sticky shale | 31 | 441 |
| Shale and sandy shale | 4 | 445 |
| Fine-grained sand, shale and shell | 45 | 490 |
| Sandy shale and shell | 22 | 512 |
| Sandy shale, shell | 59 | 571 |
| Sand and shale | 94 | 665 |
| Good sand | 14 | 679 |
| Soft shale | 20 | 699 |
| Soft shale, layers and sticky shale | 87 | 786 |
| Sand,, shell, and shale layers | 25 | 811 |
| Shale | 12 | 823 |
| Layers soft shale, some sand and shell | 67 | 890 |
| Sand - good | 21 | 911 |
| Sticky shale | 55 | 966 |
| Soft shale,sand layers | 21 | 987 |
| Sand, 1076 to 1116 good, top finer than bottom | 137 | 1124 |
| Shale | 3 | 1127 |

### Well 318

The Dow Chemical Co. No. 1, 2¼ miles southeast of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Mud and sand | 8 | 8 |
| Soft red and blue clay | 12 | 20 |
| Sand | 15 | 35 |
| Soft red clay | 30 | 65 |
| Clay | 23 | 88 |
| Hard blue clay and shells | 49 | 137 |
| Fine-grained gray sand | 20 | 157 |
| Soft clay | 41 | 198 |
| Gray sand | 25 | 223 |
| Coarse-grained gray sand | 12 | 235 |
| Clay | 6 | 241 |

### Well 319

The Dow Chemical Co. No. 10, 2¼ miles southeast of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Blue clay | 26 | 26 |
| Fine-grained sand and clay | 20 | 46 |
| Soft blue clay | 30 | 76 |
| Soft blue shale | 35 | 111 |
| Sand | 55 | 166 |
| Soft shale - fine-grained sand | 22 | 188 |
| Good water sand | 23 | 211 |
| Sandy shale | 15 | 226 |
| Good shale | 18 | 244 |
| Shale, sand layers | 86 | 330 |
| Sticky shale | 15 | 345 |
| Soft shale, some shell | 12 | 357 |
| Sticky shale | 78 | 435 |
| Soft shale | 39 | 474 |
| Soft shale-layers of sticky shale, sand | 153 | 627 |
| Sand and shale layers | 27 | 654 |
| Good sand | 16 | 670 |
| Sticky shale | 12 | 682 |
| Sandy shale, fine-grained sand and shale | 55 | 737 |
| Shale | 12 | 749 |
| Sticky shale | 62 | 811 |
| Soft shale | 60 | 871 |
| Sand | 5 | 876 |
| Sticky shale, layers sandy shale, some shell | 78 | 954 |
| Sandy shale and sand | 27 | 981 |
| Fine-grained sand | 30 | 1011 |

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Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 319 --continued** | | |
| Good water sand | 64 | 1075 |
| Sticky shale | 21 | 1096 |
| Good sand | 39 | 1135 |
| Shale | 2 | 1137 |
| **Well 320** | | |
| The Dow Chemical Co. No. 3, 2¼ miles southeast of Velasco. | | |
| Soil | 2 | 2 |
| Fine-grained sand | 21 | 23 |
| Clay | 30 | 53 |
| Fine-grained sand | 11 | 64 |
| Soft clay | 20 | 84 |
| Clay | 31 | 115 |
| Fine-grained sand and streaks of clay | 60 | 175 |
| Sandy clay | 8 | 183 |
| Sandy clay and shells | 16 | 199 |
| Soft clay | 6 | 205 |
| Hard clay | 21 | 226 |
| White sand | 23 | 246 |
| Hard clay | 6 | 252 |
| **Well 321** | | |
| The Dow Chemical Co. No. 4, 2¾ miles southeast of Velasco. | | |
| Sand | 18 | 18 |
| Soft clay | 7 | 25 |
| Soft clay and sand | 18 | 43 |
| Sand | 22 | 65 |
| Soft clay and sand streaks | 44 | 109 |
| Fine-grained blue sand and clay breaks | 21 | 130 |
| Fine-grained blue sand | 31 | 161 |
| Clay and sand breaks | 15 | 176 |
| Soft clay and layers sand | 16 | 192 |
| Clay | 5 | 197 |
| Red and blue clay with layers of sand | 23 | 220 |
| Sand with shale breaks | 6 | 226 |
| Good sand | 37 | 263 |
| Shale | 10 | 273 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 322** | | |
| The Dow Chemical Co. No. 8, 3 miles southeast of Velasco. | | |
| Sand, clay and fill | 10 | 10 |
| Yellow clay | 101 | 111 |
| Sandy shale | 20 | 131 |
| Soft shale and shells | 52 | 183 |
| Sticky shale | 46 | 229 |
| Fine-grained sand | 12 | 241 |
| Coarse-grained sand | 6 | 247 |
| Tough clay | 16 | 263 |
| **Well 323** | | |
| U. S. Army, 3½ miles southeast of Velasco. | | |
| Surface sand | 24 | 24 |
| Sand | 22 | 46 |
| Shale | 179 | 225 |
| Sand | 32 | 257 |
| **Well 326** | | |
| Missouri Pacific Ry. Co., ¾ mile northeast of Velasco. | | |
| Sub-soil | 16 | 16 |
| Red clay | 24 | 40 |
| Fine sand | 30 | 70 |
| Blue clay | 40 | 110 |
| Sand and shell | 25 | 135 |
| Blue clay and shell | 42 | 177 |
| Sand | 8 | 185 |
| Gumbo | 59 | 244 |
| Coarse sand | 23 | 267 |
| **Well 327** | | |
| City of Velasco No. 2, in Velasco. | | |
| Soil | 2 | 2 |
| Clay | 90 | 92 |
| Fine-grained sand and shells | 12 | 104 |
| Soft clay | 114 | 218 |
| Coarse-grained sand and gravel | 27 | 245 |
| Clay | 10 | 255 |

Table of driller's logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 328** | | |
| City of Velasco No. 1, in Velasco. | | |
| Surface soil | 9 | 9 |
| Fine-grained red sand | 8 | 17 |
| Red clay | 100 | 117 |
| Fine-grained sand and clay | 31 | 148 |
| Soft clay | 68 | 216 |
| Coarse-grained sand | 47 | 263 |
| Soft shale | 3 | 266 |
| **Well 329** | | |
| Missouri Pacific Ry. Co., 3¾ miles northwest of Velasco. | | |
| Clay | 15 | 15 |
| Sand | 25 | 40 |
| Clay | 78 | 118 |
| Sand | 17 | 135 |
| Clay | 61 | 196 |
| Sand | 38 | 234 |
| Clay | 6 | 240 |
| **Well 330** | | |
| Defense Plant Corp. No. 5, 3¾ miles northwest of Velasco. | | |
| Surface material | 16 | 16 |
| Sand | 28 | 44 |
| Clay | 7 | 51 |
| Sandy clay | 22 | 73 |
| Clay | 76 | 149 |
| Sandy clay | 23 | 172 |
| Clay | 27 | 199 |
| Sand | 30 | 229 |
| Clay | 10 | 239 |
| **Well 331** | | |
| Defense Plant Corp. No. 2, 3½ miles northwest of Velasco. | | |
| Surface material | 10 | 10 |
| Clay | 8 | 18 |
| Sand | 2 | 20 |
| Clay and sand | 10 | 30 |
| Sand | 19 | 49 |
| Sand, clay and shell | 87 | 136 |
| Clay and sand | 23 | 159 |
| Sand, good | 29 | 188 |
| Clay | 23 | 211 |
| Shale | 24 | 235 |
| Sand and clay | 13 | 248 |
| **Well 332** | | |
| Defense Plant Corp. No. 1, 2⅝ miles northwest of Velasco. | | |
| Clay | 45 | 45 |
| Sand | 20 | 65 |
| Clay | 115 | 180 |
| Sand | 2 | 182 |
| Clay | 17 | 199 |
| Sand | 26 | 225 |
| **Well 333** | | |
| Defense Plant Corp. No. 3, 3¼ miles northwest of Velasco. | | |
| Clay | 40 | 40 |
| Sand | 10 | 50 |
| Hard packed sand | 22 | 72 |
| Clay and sand | 21 | 93 |
| Brown sand | 33 | 126 |
| Clay | 19 | 145 |
| Sand | 22 | 167 |
| Clay | 8 | 175 |
| Sand | 47 | 222 |
| Clay | 1 | 223 |
| **Well 334** | | |
| Defense Plant Corp. No. 6, 3¼ miles northwest of Velasco. | | |
| Surface material | 10 | 10 |
| Sandy clay | 20 | 30 |
| Sand | 9 | 39 |
| Clay | 47 | 86 |
| Sandy clay | 8 | 94 |
| Sand | 20 | 114 |
| Clay | 38 | 152 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 334 --continued** | | |
| Coarse-grained sand | 23 | 175 |
| Shale | 8 | 183 |
| Sand | 54 | 237 |
| **Well 335** | | |
| Defense Plant Corp. No. 4, 3¼ miles northwest of Velasco. | | |
| Clay | 42 | 42 |
| Sand | 17 | 59 |
| Clay | 32 | 91 |
| Sandy clay | 23 | 114 |
| Clay | 47 | 161 |
| Sand | 25 | 186 |
| Clay | 5 | 191 |
| Sand | 5 | 196 |
| Clay | 8 | 204 |
| Sand | 35 | 239 |
| Clay | 2 | 241 |
| **Well 336** | | |
| Defense Plant Corp. No. 9, 3 miles northwest of Velasco. | | |
| Soft clay with sand breaks | 173 | 173 |
| Fine-grained sand | 18 | 191 |
| Sand and shale | 15 | 206 |
| Good water sand | 23 | 229 |
| Shale | 30 | 259 |
| Fine-grained sand | 10 | 269 |
| Soft shale | 44 | 513 |
| Good water sand | 21 | 534 |
| Soft shale | 45 | 579 |
| Sand | 19 | 598 |
| Shale | 27 | 625 |
| Tough shale, few soft streaks | 45 | 670 |
| Sandy shale and shell | 232 | 902 |
| Fine-grained sand | 34 | 936 |
| Good sand | 101 | 1037 |
| Shale and sandy shale | 25 | 1062 |
| Good sand | 165 | 1227 |
| Hard sand | 10 | 1237 |
| Hard sand rock | 1 | 1238 |
| **Well 337** | | |
| Defense Plant Corp. No. 8, 3¼ miles northwest of Velasco. | | |
| Surface material | 6 | 6 |
| Clay, sandy clay, sand breaks | 97 | 103 |
| Sand, clay breaks | 20 | 123 |
| Clay, some sandy breaks | 81 | 204 |
| Good water sand | 31 | 235 |
| Clay | 30 | 265 |
| Fine-grained sand, shale breaks | 24 | 289 |
| Shale, some sandy breaks | 236 | 525 |
| Sand | 16 | 541 |
| Shale | 25 | 566 |
| Sand, shale | 40 | 606 |
| Shale, some sandy breaks | 184 | 790 |
| Sand and shale | 60 | 850 |
| Shale | 33 | 883 |
| Sand | 4 | 887 |
| Tough shale | 110 | 997 |
| Shale and sandy shale | 14 | 1011 |
| Sand(good,top part fine-grained) | 49 | 1060 |
| Shale | 5 | 1065 |
| **Well 338** | | |
| Defense Plant Corp., Camp Chemical No. 1, 3¾ miles north of Velasco. | | |
| Soil | 2 | 2 |
| Shale and sand layers | 102 | 104 |
| Shale | 14 | 118 |
| Sand | 9 | 127 |
| Shale | 43 | 170 |
| Sand and gravel | 24 | 194 |
| Sticky shale | 8 | 202 |
| Coarse-grained sand and gravel | 37 | 239 |
| **Well 339** | | |
| Defense Plant Corp., Camp Chemical No. 2, 4 miles northwest of Velasco. | | |
| Sandy clay | 27 | 27 |
| Sand | 23 | 50 |
| Sandy clay | 43 | 93 |
| Sand | 10 | 103 |
| Clay | 12 | 115 |
| Sand | 88 | 203 |

Table of drillers' logs, Brazoria County -- Continued

### Well 340

Defense Plant Corp., Camp Chemical No.3 (1), 3½ miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface material | 5 | 5 |
| Clay | 5 | 10 |
| Sand | 20 | 30 |
| Sandy clay | 25 | 55 |
| Red sand | 5 | 60 |
| Clay | 20 | 80 |
| Sandy clay | 76 | 156 |
| Sand and clay | 10 | 166 |
| Sand | 20 | 186 |
| Clay | 12 | 198 |
| Sand | 32 | 230 |

### Well 341

Defense Plant Corp. No. 8, 4 miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Black surface soil | 2 | 2 |
| Clay | 50 | 52 |
| Brown sand | 14 | 66 |
| Blue and red shale | 96 | 162 |
| Coarse-grained sand and gravel | 18 | 180 |
| Sticky shale | 31 | 211 |
| Sand (fair) | 20 | 231 |
| Sticky shale | 2 | 233 |

### Well 342

Defense Plant Corp. No. 10, 4½ miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Black surface soil | 2 | 2 |
| Clay | 32 | 34 |
| Brown sand | 23 | 57 |
| Blue and red shale | 118 | 175 |
| Sand (fair) | 15 | 190 |
| Sticky shale | 10 | 200 |
| Sand and gravel | 30 | 230 |
| Sticky shale | 4 | 234 |

### Well 343

Defense Plant Corp. No. 9, 4¼ miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Black surface soil | 6 | 6 |
| Clay | 10 | 16 |
| Sandy clay | 50 | 66 |
| Shale and layers of sand | 102 | 168 |
| Sand and gravel | 16 | 184 |
| Sticky shale | 16 | 200 |
| Sand and gravel | 27 | 227 |
| Sticky shale | 3 | 230 |

### Well 344

The Dow Chemical Co. No. 2 at Jackson Lake Pumping Station, 9 miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Top soil | 3 | 3 |
| Red clay | 10 | 13 |
| Blue clay | 7 | 20 |
| Sand | 2 | 22 |
| Blue clay | 23 | 45 |
| Blue clay, some lime | 88 | 133 |
| Sandy blue clay | 10 | 143 |
| Coarse-grained sand | 42 | 185 |
| Clay | 3 | 188 |

### Well 345

City of Lake Jackson No. 4, 9½ miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Red clay | 37 | 37 |
| Clay and sand | 108 | 145 |
| Sand and gravel | 34 | 179 |
| Clay | 11 | 190 |

### Well 346

City of Lake Jackson No. 3, in Lake Jackson.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface material | 23 | 23 |
| Shale | 147 | 170 |
| Sand | 32 | 202 |

Table of drillers' logs, Brazoria County -- Continued

### Well 347

City of Lake Jackson No. 2, in Lake Jackson.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Black soil | 3 | 3 |
| Clay | 32 | 35 |
| Fine-grained sand | 25 | 60 |
| Clay, few sand breaks | 104 | 164 |
| Good sand | 16 | 180 |
| Sticky shale | 24 | 204 |
| Sand and gravel | 26 | 230 |
| Sticky shale | 4 | 234 |

### Well 348

City of Lake Jackson No. 1, in Lake Jackson.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface soil | 5 | 5 |
| Clay | 27 | 32 |
| Fine-grained sand | 25 | 57 |
| Clay-few small sandy breaks | 102 | 159 |
| Sand-good | 20 | 179 |
| Clay | 16 | 195 |

### Well 350

Mrs. R. E. L. Stringfellow, 6½ miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Surface soil | 3 | 3 |
| Clay | 37 | 40 |
| Surface sand | 30 | 70 |
| Shale | 60 | 130 |
| Sand | 50 | 180 |
| Shale | 50 | 230 |
| Sand | 13 | 243 |
| Shale | 102 | 345 |
| Sand | 15 | 360 |
| Blue shale | 105 | 465 |
| Fine-grained sand | 25 | 490 |
| Gray shale | 47 | 537 |
| Oyster shells | 38 | 575 |
| Sand | 15 | 590 |
| Gray shale | 118 | 708 |
| Sand | 37 | 745 |

### Well 352, partial log

The Texas Co., on Cochran and McClure lease, 7 miles northwest of Velasco.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Brown clay | 20 | 20 |
| White sand | 7 | 27 |
| Brown clay | 33 | 60 |
| Dark sand | 15 | 75 |
| Dark clay | 55 | 130 |
| White sand | 16 | 146 |
| Brown clay | 26 | 172 |
| Sand | 14 | 186 |
| Clay | 59 | 245 |
| White and black sand | 21 | 266 |
| Red clay | 119 | 385 |
| Sand and boulders | 33 | 418 |
| Pink gumbo | 22 | 440 |
| Chalk rock | 72 | 512 |
| Sand and boulders | 144 | 656 |
| Blue gumbo | 49 | 705 |
| Sticky shale | 23 | 728 |
| Packed sand | 36 | 764 |
| Blue gumbo | 154 | 918 |
| Packed sand | 22 | 940 |
| Brown clay and gumbo | 176 | 1116 |
| Red sand | 21 | 1137 |
| Pink gumbo | 34 | 1171 |
| Blue gumbo and shale | 177 | 1348 |
| TOTAL DEPTH | | 2335 |

### Well 404

The Dow Chemical Co., core test 1, 8 miles northwest of Angleton.

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Silt | 2 | 2 |
| Black gumbo | 2 | 4 |
| Silt | 4 | 8 |
| Sandy clay | 1 | 9 |
| Black gumbo | 4 | 13 |
| Silt | 2 | 15 |
| Sandy clay | 4 | 19 |
| Heavy red clay | 9 | 28 |
| Shale | 2 | 30 |
| Unctuous clay | 3 | 33 |
| Shale | 6 | 39 |
| Unctuous clay | 4 | 43 |
| Shale | 14 | 57 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 404 --continued** | | |
| Heavy red clay | 8 | 65 |
| Shale | 3 | 68 |
| Heavy red clay | 4 | 72 |
| Sand | 77 | 149 |
| Sandy clay | 6 | 155 |
| Sand | 13 | 168 |
| Heavy red clay | 44 | 216 |
| Light blue clay | 2 | 218 |
| Red clay and fine gravel | 9 | 227 |
| Light blue clay | 21 | 248 |
| Gray clay | 19 | 267 |
| Sand | 27 | 294 |
| Light blue clay | 6 | 300 |
| **Well 405** | | |
| The Dow Chemical Co., core test 5, 8 miles northwest of Angleton. | | |
| Silt | 19 | 19 |
| Sand | 43 | 62 |
| Fine gravel | 30 | 92 |
| Sand | 25 | 117 |
| Fine gravel | 4 | 121 |
| Sand | 29 | 150 |
| Heavy red clay | 14 | 164 |
| Sand | 8 | 176 |
| Heavy red clay | 23 | 199 |
| Silt | 8 | 207 |
| Heavy red clay | 3 | 210 |
| Light blue clay | 18 | 228 |
| Sand | 9 | 237 |
| Heavy red clay | 27 | 264 |
| Light blue clay | 19 | 283 |
| Silt | 17 | 300 |
| **Well 406** | | |
| The Dow Chemical Co., core test 11, 8 miles northwest of Angleton. | | |
| Black gumbo | 3 | 3 |
| Silt | 1 | 4 |
| Heavy red clay | 5 | 9 |
| Unctuous red clay | 11 | 20 |
| Heavy red clay | 21 | 41 |
| Unctuous red clay | 4 | 45 |
| Heavy red clay | 6 | 51 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 406 --continued** | | |
| Unctuous red clay | 5 | 56 |
| Heavy red clay | 5 | 61 |
| Sand | 29 | 90 |
| Unctuous red clay | 4 | 94 |
| Red clay and fine gravel | 3 | 97 |
| Sand | 3 | 100 |
| Sandy clay | 7 | 107 |
| Silt | 2 | 109 |
| Shale | 1 | 110 |
| Light blue clay | 8 | 118 |
| Shale | 2 | 120 |
| Sandy clay | 10 | 130 |
| Sand | 34 | 164 |
| Heavy red clay | 3 | 167 |
| Light blue clay | 3 | 170 |
| Shale | 10 | 180 |
| Sand | 25 | 205 |
| Shale | 3 | 208 |
| Sand | 2 | 210 |
| Shale | 2 | 212 |
| Light blue clay | 2 | 214 |
| Heavy red clay | 2 | 216 |
| Light blue clay | 1 | 217 |
| Unctuous red clay | 4 | 221 |
| Shale | 9 | 230 |
| Light blue clay | 5 | 235 |
| Sandy black gumbo | 4 | 239 |
| Unctuous red clay | 6 | 245 |
| Light blue clay | 5 | 250 |
| Sandy clay | 4 | 254 |
| Unctuous red clay | 6 | 260 |
| Silt | 4 | 264 |
| Gray clay | 6 | 270 |
| Light blue shale | 8 | 278 |
| Shale | 3 | 281 |
| Sand | 19 | 300 |
| **Well 408** | | |
| Texas Pipe Line Co., 8 miles north of Angleton. | | |
| Surface sand | 24 | 24 |
| Sand | 16 | 40 |
| Shale | 28 | 68 |
| Sand | 43 | 111 |
| Sand and shale | 21 | 132 |
| Sand | 44 | 176 |
| Shale | 51 | 227 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 408 --continued** | | |
| Sand | 12 | 239 |
| Shale | 226 | 465 |
| Sand | 55 | 520 |
| **Well 410** | | |
| Dr. B. W. Turner, 10 miles north of Angleton. | | |
| Surface material | 22 | 22 |
| Shale | 23 | 45 |
| Sand | 104 | 149 |
| Shale | 16 | 165 |
| Sand | 16 | 181 |
| Shale | 127 | 308 |
| Sand | 13 | 321 |
| Shale | 77 | 398 |
| Sand | 16 | 414 |
| Shale | 74 | 488 |
| Sand | 26 | 514 |
| Shale | 118 | 632 |
| Sand | 18 | 650 |
| Shale | 115 | 765 |
| Sand | 3 | 768 |
| Shale | 37 | 805 |
| Sand | 45 | 850 |
| Shale | 28 | 878 |
| Sand | 40 | 918 |
| **Well 411** | | |
| Dr. B. W. Turner, 10 miles north of Angleton. | | |
| Rotary to ground | 4 | 4 |
| Clay | 25 | 29 |
| Sand | 2 | 31 |
| Clay | 12 | 43 |
| Sand | 74 | 117 |
| Clay | 122 | 239 |
| Sand | 77 | 316 |
| Clay | 11 | 327 |
| Gray water sand | 113 | 440 |
| Gumbo | 16 | 456 |
| Coarse sand | 30 | 486 |
| Gumbo | 12 | 498 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 411 --continued** | | |
| Sand | 14 | 512 |
| Gumbo | 16 | 528 |
| Well deepened in February, 1928 Rotary to bottom of 10-inch well | -- | 529 |
| Clay | 34 | 563 |
| Sand | 35 | 598 |
| Clay | 6 | 604 |
| Sand | 14 | 618 |
| Shale | 19 | 637 |
| Gumbo | 58 | 695 |
| Sand | 8 | 703 |
| Gumbo | 58 | 761 |
| Sand | 23 | 784 |
| Gumbo | 22 | 806 |
| Sand | 36 | 842 |
| Gumbo | 22 | 864 |
| Sand | 19 | 883 |
| Gumbo | 3 | 886 |
| Sand | 33 | 919 |
| Gumbo | 4 | 923 |
| **Well 412** | | |
| Arney Estate, 9½ miles north of Angleton. | | |
| Surface soil | 22 | 22 |
| Red clay | 30 | 52 |
| Sand | 10 | 62 |
| Clay | 18 | 80 |
| Sand | 15 | 95 |
| Clay | 25 | 120 |
| Sand | 22 | 142 |
| Clay | 89 | 231 |
| Good sand | 57 | 288 |
| Clay | 60 | 348 |
| Sand-hard layers | 25 | 373 |
| Clay | 11 | 384 |
| Sand | 26 | 410 |
| Gumbo | 52 | 462 |
| Sand | 68 | 530 |
| Clay | 50 | 580 |
| Sand | 10 | 590 |
| Clay | 52 | 642 |
| Sand and boulders | 6 | 648 |
| Sand and clay | 15 | 663 |
| Clay | 34 | 697 |
| Sand | 27 | 724 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

Well 412 --continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| Gumbo | 29 | 753 |
| Sand | 35 | 788 |
| Clay | 22 | 810 |
| Sand | 30 | 840 |
| Sandy shale | 30 | 870 |
| Sand | 80 | 950 |
| Clay | 6 | 956 |
| Sand | 20 | 976 |
| Blue shale | 40 | 1016 |
| Sand | 18 | 1034 |
| Blue gumbo | 12 | 1046 |
| Sand | 122 | 1168 |

Well 413

Humble Oil and Refining Co., on B. Blakely lease, 9 miles northeast of Angleton.

| | | |
|---|---|---|
| Surface material | 25 | 25 |
| Clay | 35 | 60 |
| Sand | 32 | 92 |
| Shale | 6 | 98 |
| Sand | 15 | 113 |
| Shale | 7 | 120 |
| Sand | 30 | 150 |
| Shale | 33 | 183 |
| Sand | 15 | 198 |
| Shale | 72 | 270 |
| Sand | 42 | 312 |

Well 414

Humble Oil and Refining Co., on B. Blakely B lease, 9 miles northeast of Angleton.

| | | |
|---|---|---|
| Surface material | 25 | 25 |
| Shale | 55 | 80 |
| Sand | 28 | 108 |
| Shale | 14 | 122 |
| Sand | 24 | 146 |
| Shale | 81 | 227 |
| Sand | 23 | 250 |

Well 416

Humble Oil and Refining Co., on W. A. Moller lease, 10 miles northeast of Angleton.

| | | |
|---|---|---|
| Clay | 17 | 17 |
| Sand | 3 | 20 |
| Shale | 45 | 65 |
| Sand | 63 | 128 |
| Shale | 99 | 227 |
| Sandy shale | 48 | 275 |
| Shale | 11 | 286 |
| Sand | 22 | 308 |
| Shale | 3 | 311 |

Well 417

Humble Oil and Refining Co., on B. Blakely D lease, 9½ miles northeast of Angleton.

| | | |
|---|---|---|
| Surface | 24 | 24 |
| Sand and shale | 21 | 45 |
| Shale | 42 | 87 |
| Sand | 15 | 102 |
| Shale | 94 | 196 |
| Sand and shale | 20 | 216 |
| Shale | 56 | 272 |
| Sand | 43 | 315 |

Well 418

Humble Oil and Refining Co., on B. Blakely D lease, 9 miles northeast of Angleton.

| | | |
|---|---|---|
| Surface material | 23 | 23 |
| Sand | 23 | 46 |
| Shale | 90 | 156 |
| Sand | 25 | 181 |
| Shale | 100 | 281 |
| Sand | 9 | 290 |
| Shale | 43 | 333 |
| Sand and shale | 23 | 356 |
| Shale | 54 | 410 |
| Sand | 14 | 424 |
| Shale | 65 | 489 |
| Sand | 25 | 514 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 419** | | |
| Humble Oil and Refining Co., on W. L. Clayton lease, 8½ miles northeast of Angleton. | | |
| Surface material | 26 | 26 |
| Shale | 21 | 47 |
| Sand and shale | 44 | 91 |
| Shale | 43 | 134 |
| Sand and shale | 22 | 156 |
| Shale | 107 | 263 |
| Sand and shale | 25 | 288 |
| Shale | 97 | 385 |
| Sand | 37 | 422 |
| **Well 420** | | |
| Humble Oil and Refining Co., on F. Schmidt lease, 9 miles northeast of Angleton. | | |
| Surface material | 23 | 23 |
| Shale | 67 | 90 |
| Sand | 8 | 98 |
| Shale | 103 | 201 |
| Sand | 8 | 209 |
| Shale | 202 | 411 |
| Sand | 30 | 441 |
| **Well 421** | | |
| Humble Oil and Refining Co., on C. Dvorsky lease, 10 miles northeast of Angleton. | | |
| Surface material | 23 | 23 |
| Shale | 22 | 45 |
| Sand | 67 | 112 |
| Shale | 28 | 140 |
| Sand | 22 | 162 |
| Shale | 64 | 226 |
| Sandy shale | 24 | 250 |
| Shale | 24 | 274 |
| Sand | 35 | 309 |
| **Well 422** | | |
| Humble Oil and Refining Co., on South Texas Rice Prod. Co. lease, 10½ miles northeast of Angleton. | | |
| Surface material | 24 | 24 |
| Shale | 44 | 68 |
| Sand | 43 | 111 |
| Shale | 89 | 200 |
| Sand and shale | 109 | 309 |
| Sand | 46 | 355 |
| **Well 425** | | |
| J. M. Skrabanek, 7 miles northeast of Angleton. | | |
| Clay | 67 | 67 |
| Fine-grained sand | 25 | 92 |
| Sand | 30 | 122 |
| Clay | 53 | 175 |
| Sand | 10 | 185 |
| Clay | 5 | 190 |
| Sand | 6 | 196 |
| Clay | 71 | 267 |
| Sandy clay | 26 | 293 |
| Gumbo | 199 | 492 |
| Soft shale | 24 | 516 |
| Gumbo | 150 | 666 |
| Sand | 23 | 689 |
| Gumbo | 44 | 733 |
| Sand | 28 | 761 |
| Gumbo | 4 | 765 |
| Sand | 9 | 774 |
| Soft gumbo | 10 | 784 |
| Good sand | 68 | 852 |
| Gumbo | 13 | 865 |
| Sand | 9 | 874 |
| Gumbo | 74 | 948 |
| Sand | 10 | 958 |
| Gumbo | 2 | 960 |
| **Well 430** | | |
| Texas Agricultural Exp. Sta., 3 miles northeast of Angleton. | | |
| Gumbo | 28 | 28 |
| Fine-grained sand | 1 | 29 |
| Gumbo and shale | 91 | 120 |
| Fine-grained sand | 10 | 130 |
| Gumbo | 10 | 140 |
| Shale | 6 | 146 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 430 --continued** | | |
| Gumbo | 14 | 160 |
| Sandy shale | 40 | 200 |
| Medium-grained sand | 10 | 210 |
| Hard tough gumbo | 70 | 280 |
| Fine-grained sand | 15 | 295 |
| Medium-grained sand and shells | 19 | 314 |
| Tough gumbo | 10 | 324 |
| **Well 432** | | |
| Humble Oil and Refining Co., on M. W. Mettler lease, 4 miles north of Angleton. | | |
| Surface material | 23 | 23 |
| Sand | 30 | 53 |
| Shale | 120 | 173 |
| Sand | 21 | 194 |
| Shale | 48 | 242 |
| Sand | 8 | 250 |
| Shale | 6 | 256 |
| Sand | 5 | 261 |
| Shale | 119 | 380 |
| Sand | 21 | 401 |
| Shale | 159 | 560 |
| Sand | 22 | 582 |
| Shale | 3 | 585 |
| Sand | 33 | 618 |
| **Well 437** | | |
| Humble Oil and Refining Co., on R. H. Carr lease, 2½ miles northwest of Angleton. | | |
| Surface material | 24 | 24 |
| Shale | 175 | 199 |
| Sand | 21 | 220 |
| Shale | 226 | 446 |
| Sand | 4 | 450 |
| Shale | 149 | 599 |
| Sand | 47 | 636 |
| Shale | 104 | 740 |
| Sand | 53 | 793 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 438** | | |
| Humble Oil and Refining Co., on Galaznick and Taylor lease, 2¾ miles northwest of Angleton. | | |
| Surface material | 25 | 25 |
| Sand and shale | 196 | 221 |
| Sandy shale | 42 | 263 |
| Sand and shale | 347 | 610 |
| Sandy shale | 6 | 616 |
| Sand and shale | 186 | 802 |
| Shale | 5 | 807 |
| **Well 439** | | |
| Humble Oil and Refining Co., on northwest Mettler lease, 2½ miles northwest of Angleton. | | |
| Surface clay | 23 | 23 |
| Sand | 57 | 80 |
| Shale | 75 | 155 |
| Sand | 15 | 170 |
| Shale | 60 | 230 |
| Sand | 23 | 253 |
| Shale | 145 | 398 |
| Sand | 13 | 411 |
| Shale | 79 | 590 |
| Sand | 35 | 625 |
| Shale | 3 | 628 |
| **Well 442, partial log** | | |
| Zoinville Oil Co., on J. W. Sparks lease, 6½ miles west of Angleton. | | |
| Surface soil | 10 | 10 |
| Red clay | 50 | 60 |
| Sand and gravel | 140 | 200 |
| Gumbo | 10 | 210 |
| Gravel | 15 | 225 |
| Blue shale | 65 | 290 |
| Sandy gumbo | 100 | 390 |
| Blue shale and gumbo | 25 | 415 |
| Sandy gumbo | 10 | 425 |
| Gumbo | 60 | 485 |
| Red gumbo | 43 | 528 |
| Lime rock | 12 | 540 |
| Gumbo and lime | 50 | 590 |
| Sandy gumbo | 33 | 623 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 442, partial log -- continued** | | |
| Sandy blue shale | 33 | 656 |
| Gumbo and lime | 59 | 715 |
| Artesian water sand | 60 | 775 |
| Gumbo and lime | 20 | 795 |
| Blue sandy lime | 55 | 850 |
| Brown shale | 24 | 874 |
| Hard lime | 14 | 888 |
| Gumbo and boulders | 20 | 908 |
| Red gumbo | 10 | 918 |
| Lime rock | 6 | 924 |
| Gumbo | 5 | 929 |
| Water sand | 136 | 1065 |
| Gumbo | 8 | 1073 |
| Sand and boulders | 7 | 1080 |
| Gumbo and boulders | 8 | 1088 |
| Hard sand | 27 | 1115 |
| Sandy gumbo | 29 | 1144 |
| Rock | 6 | 1150 |
| Sand and boulders | 56 | 1206 |
| Hard sandy lime | 31 | 1237 |
| Gumbo | 6 | 1243 |
| Sand | 11 | 1254 |
| Hard sand and boulders | 31 | 1285 |
| Gumbo and boulders | 30 | 1315 |
| Sand and boulders | 33 | 1348 |
| Gumbo | 3 | 1351 |
| Sandy lime and boulders | 44 | 1395 |
| Gumbo | 6 | 1401 |
| Salty sand | 19 | 1420 |
| Gumbo | 18 | 1438 |
| TOTAL DEPTH | | 3160 |

**Well 455**

City of Angleton No. 2, in Angleton.

| | | |
|---|---|---|
| Clay | 7 | 7 |
| Sand | 46 | 63 |
| Shale | 25 | 88 |
| Sand | 32 | 120 |
| Shale | 43 | 163 |
| Sand | 10 | 173 |
| Shale | 42 | 215 |
| Sand | 15 | 230 |
| Shale | 123 | 353 |
| Sand | 2 | 355 |
| Shale | 41 | 396 |
| Sand | 21 | 417 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 455 -- continued** | | |
| Shale | 31 | 448 |
| Sand | 5 | 453 |
| Shale | 83 | 536 |
| Sand | 4 | 540 |
| Shale | 110 | 650 |
| Sandy shale | 27 | 677 |
| Shale | 54 | 731 |
| Sand | 18 | 749 |
| Shale | 31 | 780 |
| Sand | 4 | 784 |
| Shale | 41 | 825 |
| Sand | 17 | 842 |
| Shale | 29 | 871 |
| Sand | 4 | 875 |
| Shale | 41 | 916 |
| Sand | 74 | 990 |
| Shale | 10 | 1000 |

**Well 456**

City of Angleton No. 3, in Angleton.

| | | |
|---|---|---|
| Soil | 8 | 8 |
| Sand | 52 | 60 |
| Clay | 23 | 83 |
| Streaks of sand and clay | 105 | 188 |
| Clay | 17 | 205 |
| Sand | 19 | 224 |
| Clay, streaks of mealy clay | 78 | 302 |
| Clay | 31 | 333 |
| Mealy clay | 22 | 355 |
| Clay | 38 | 393 |
| Broken clay and sand | 112 | 505 |
| Sand, streaks of clay | 83 | 588 |
| Clay | 70 | 658 |
| Sand, layers of clay | 70 | 728 |
| Fine-grained sand | 24 | 752 |
| Clay | 21 | 773 |
| Sand, layers of clay | 26 | 799 |
| Clay | 26 | 825 |
| Sand | 18 | 843 |
| Clay | 30 | 873 |
| Broken sand and clay | 39 | 912 |
| Sand | 22 | 934 |
| Clay | 41 | 975 |
| Sand, layers of clay | 27 | 1002 |
| Clay | 10 | 1012 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 457** | | |
| City of Angleton No. 4, in Angleton. | | |
| Clay | 11 | 11 |
| Sand and layers clay | 47 | 58 |
| Clay | 26 | 84 |
| Sand and layers clay | 28 | 112 |
| Clay | 56 | 168 |
| Sand | 4 | 172 |
| Clay and sandy clay | 37 | 209 |
| Sand | 11 | 220 |
| Hard clay and layers sandy clay | 117 | 337 |
| Shaly sand | 8 | 345 |
| Clay | 49 | 394 |
| Sand | 16 | 410 |
| Clay | 10 | 420 |
| Sand | 3 | 423 |
| Clay | 21 | 444 |
| Sand | 6 | 450 |
| Clay and sandy clay | 80 | 530 |
| Broken sand | 8 | 538 |
| Clay | 40 | 578 |
| Clay and sandy clay | 50 | 628 |
| Sandy clay | 12 | 640 |
| Sand and shale breaks | 44 | 684 |
| Clay | 23 | 707 |
| Sand | 4 | 711 |
| Clay | 18 | 729 |
| Sand | 16 | 745 |
| Clay | 23 | 768 |
| Sandy clay | 7 | 775 |
| Sand | 4 | 779 |
| Clay and layers sand | 23 | 802 |
| Sand | 7 | 809 |
| Clay | 9 | 818 |
| Fine-grained sand | 19 | 837 |
| Tough clay | 35 | 872 |
| Sand | 2 | 874 |
| Tough clay | 27 | 901 |
| Sand | 28 | 929 |
| Clay | 4 | 933 |
| **Well 458** | | |
| Pratt well, 4 miles east of Angleton. | | |
| Soil and clay | 73 | 73 |
| Fine-grained sand | 55 | 128 |
| Gumbo and shale | 207 | 335 |
| Sand rock | 14 | 349 |
| Gumbo | 33 | 382 |
| Sand rock | 25 | 407 |
| Gumbo and shale | 54 | 461 |
| Sand rock | 26 | 487 |
| Gumbo | 27 | 514 |
| Rock | 1 | 515 |
| Gumbo | 212 | 727 |
| Packed sand | 41 | 768 |
| Gumbo | 34 | 802 |
| Sand rock | 12 | 814 |
| Clay | 2 | 816 |
| Sand and sand rock | 89 | 905 |
| Gumbo | 6 | 911 |
| **Well 460** | | |
| L. H. Follett, 5 miles southeast of Angleton. | | |
| Surface soil | 25 | 25 |
| Sand | 6 | 31 |
| Shale | 9 | 40 |
| Sand | 8 | 48 |
| Shale | 26 | 74 |
| Sand | 7 | 81 |
| Shale | 19 | 100 |
| Sand | 8 | 108 |
| Shale | 12 | 120 |
| Sand and shale | 15 | 135 |
| Shale | 73 | 208 |
| Sand | 5 | 213 |
| Shale | 65 | 278 |
| Sand | 23 | 301 |
| **Well 465, partial log** | | |
| Rapid City Dev. Co., 7 miles east of Angleton. | | |
| Surface clay | 23 | 23 |
| Soft water sand | 28 | 51 |
| Clay | 244 | 295 |
| Red gumbo | 30 | 325 |
| Sand and gravel | 27 | 352 |
| Hard gumbo | 125 | 477 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 465, partial log -- continued** | | |
| Sand | 45 | 522 |
| Gumbo | 78 | 600 |
| Sand and boulders | 37 | 637 |
| Gumbo | 15 | 652 |
| Sand and boulders | 41 | 693 |
| Gumbo | 58 | 751 |
| Hard packed sand | 150 | 901 |
| Gumbo | 59 | 960 |
| Sand and boulders | 34 | 994 |
| Tough gumbo | 28 | 1022 |
| Hard sand | 12 | 1034 |
| Gumbo | 160 | 1194 |
| Sand | 3 | 1197 |
| Gummy shale | 46 | 1243 |
| Sand | 3 | 1246 |
| Gumbo | 17 | 1263 |
| TOTAL DEPTH | | 6284 |

**Well 466**

C. M. Lemons, 7 miles east of Angleton.

| | | |
|---|---|---|
| Clay | 69 | 69 |
| Sand | 61 | 130 |
| Clay | 7 | 137 |
| Sand | 12 | 149 |
| Clay and gumbo | 97 | 246 |
| Sand | 13 | 259 |
| Clay and gumbo | 70 | 329 |
| Sand | 21 | 350 |
| Clay and gumbo | 30 | 381 |
| Sand | 27 | 408 |
| Clay | 49 | 457 |
| Sand | 32 | 489 |
| Rock | 2 | 491 |
| Gumbo | 104 | 595 |
| No record | 69 | 664 |
| Sandy clay | 61 | 725 |
| Sand | 43 | 768 |
| Soft clay | 32 | 800 |
| Sand | 37 | 837 |
| Blue clay | 2 | 839 |
| Sand | 66 | 905 |
| Gumbo | 6 | 911 |

**Well 469**

Freeport Sulphur Co. No. 19, 10½ miles east of Angleton.

| | | |
|---|---|---|
| Surface soil | 9 | 9 |
| Clay | 37 | 46 |
| Sand | 12 | 58 |
| Clay and gumbo | 51 | 109 |
| Sand | 40 | 149 |
| Clay and gumbo | 51 | 200 |
| Sand | 48 | 248 |
| Clay and gumbo | 37 | 285 |
| Shale and sand | 31 | 316 |
| Gumbo | 29 | 345 |
| Shale and sand | 8 | 353 |
| Gumbo | 4 | 357 |
| Shale | 56 | 413 |
| Sand | 11 | 424 |
| Sand and shale | 54 | 478 |
| Clay | 63 | 541 |
| Sand | 69 | 610 |
| Gumbo | 4 | 614 |

**Well 471**

Freeport Sulphur Co. No. 22, 10½ miles east of Angleton.

| | | |
|---|---|---|
| Surface clay | 26 | 26 |
| Sand | 18 | 42 |
| Shale | 6 | 48 |
| Gumbo | 4 | 52 |
| Shale | 6 | 58 |
| Gumbo | 12 | 70 |
| Shale | 4 | 74 |
| Gumbo | 15 | 89 |
| Sand, fine-grained | 69 | 158 |
| Gumbo | 37 | 195 |
| Sand, coarse-grained | 45 | 240 |
| Gumbo | 10 | 250 |
| Shale | 12 | 262 |
| Gumbo | 16 | 278 |
| Shale | 7 | 285 |
| Sand | 8 | 297 |
| Sand and shale | 48 | 345 |
| Gumbo | 15 | 360 |
| Sand | 41 | 401 |
| Shale with streaks of sand and gumbo | 131 | 532 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 471 --continued** | | |
| Gumbo | 14 | 546 |
| Sand | 5 | 551 |
| Gumbo | 9 | 560 |
| Shale | 10 | 570 |
| Gumbo | 16 | 586 |
| Fine-grained sand | 37 | 623 |
| Gumbo | 5 | 628 |
| **Well 473** | | |
| Freeport Sulphur Co. No. 24, 10½ miles east of Angleton. | | |
| Clay and sand | 52 | 52 |
| Shale | 11 | 63 |
| Gumbo | 17 | 80 |
| Shale | 3 | 83 |
| Gumbo | 45 | 128 |
| Sand, fine-grained | 33 | 161 |
| Gumbo | 19 | 180 |
| Tough gumbo | 9 | 189 |
| Sand, coarse-grained | 51 | 240 |
| Gumbo | 5 | 245 |
| **Well 475** | | |
| Freeport Sulphur Co. test no. 4, 10½ miles east of Angleton. | | |
| Clay | 18 | 18 |
| Sand | 36 | 54 |
| Clay | 39 | 93 |
| Shale | 20 | 113 |
| Sand | 47 | 160 |
| Clay | 38 | 198 |
| Sand | 32 | 230 |
| Clay | 2 | 232 |
| Sand | 9 | 241 |
| Shale | 147 | 388 |
| Sand | 25 | 413 |
| Shale | 19 | 432 |
| Sand | 10 | 442 |
| Shale | 27 | 469 |
| Sand | 5 | 474 |
| Shale | 51 | 525 |
| Shale and gumbo | 46 | 571 |
| Sand | 5 | 576 |
| Gumbo | 53 | 629 |
| Sand | 4 | 633 |
| Gumbo | 120 | 753 |
| **Well 522** | | |
| C. Martin, 11½ miles west of Alvin. | | |
| Clay | 115 | 115 |
| Sand | 29 | 144 |
| Clay | 217 | 361 |
| Coarse sand | 65 | 426 |
| Clay | 4 | 430 |
| Sand | 33 | 463 |
| Clay | 43 | 506 |
| Good sand | 55 | 561 |
| Clay | 156 | 717 |
| Sand | 22 | 739 |
| Gumbo | 72 | 811 |
| Sand | 11 | 822 |
| Gumbo | 36 | 858 |
| Good sand | 46 | 904 |
| Gumbo | 2 | 906 |
| **Well 526** | | |
| Humble Oil and Refining Co., on R. L. Colley lease, 2½ miles southwest of Alvin. | | |
| Surface material | 24 | 24 |
| Sand | 21 | 45 |
| Shale | 77 | 122 |
| Sand | 23 | 145 |
| Shale | 157 | 302 |
| Sand | 10 | 312 |
| Shale | 10 | 322 |
| Fine-grained sand | 22 | 344 |
| Shale | 274 | 628 |
| Sand | 38 | 666 |
| **Well 531** | | |
| City of Alvin No. 2, in Alvin. | | |
| Soil | 4 | 4 |
| Clay | 16 | 20 |
| Sand and muck | 49 | 69 |
| Clay | 6 | 75 |
| Sand | 14 | 89 |
| Clay | 46 | 135 |
| Sand | 25 | 160 |
| Clay | 7 | 167 |
| Sand | 23 | 190 |
| Clay | 28 | 218 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 531 --continued** | | |
| Sand | 17 | 235 |
| Clay | 38 | 273 |
| Shale | 30 | 303 |
| Shale and sand | 23 | 326 |
| Tough clay | 64 | 390 |
| Sand and shale | 16 | 406 |
| Clay | 13 | 419 |
| Sandy shale | 23 | 441 |
| Tough clay | 149 | 590 |
| Sand | 125 | 715 |
| Clay | 7 | 722 |
| **Well 532** | | |
| Santa Fe Ry. Co., in Alvin. | | |
| Clay | 19 | 19 |
| Yellow sand | 38 | 57 |
| Sandy clay | 58 | 115 |
| Clay | 12 | 127 |
| Sand - few breaks of clay | 57 | 184 |
| Clay | 7 | 191 |
| **Well 533** | | |
| Phillips Petroleum Co., 2 miles south of Alvin. | | |
| Clay and quicksand | 128 | 128 |
| Water-bearing sand | 28 | 156 |
| **Well 537** | | |
| Humble Oil and Refining Co., on Hubbard lease, 6 miles southwest of Alvin. | | |
| Surface material | 25 | 25 |
| Sand | 10 | 35 |
| Shale | 73 | 108 |
| Sand | 6 | 114 |
| Shale | 7 | 121 |
| Sand | 5 | 126 |
| Shale | 34 | 160 |
| Sand | 3 | 163 |
| Shale | 51 | 214 |
| Sand | 8 | 222 |
| Shale | 32 | 254 |
| Sand | 9 | 263 |
| Shale | 58 | 321 |
| Sand | 9 | 330 |
| Shale | 111 | 441 |
| Sand | 32 | 473 |
| **Well 544** | | |
| W. G. Simpson, 10 miles southwest of Alvin. | | |
| Surface material | 10 | 10 |
| Sand and shale | 175 | 185 |
| Sticky shale | 20 | 205 |
| Sand | 5 | 210 |
| Shale | 5 | 215 |
| Sand | 70 | 285 |
| Shale | 25 | 310 |
| Sand | 35 | 445 |
| Shale | 5 | 450 |
| Sand | 15 | 465 |
| Shale | 15 | 480 |
| Sand | 20 | 500 |
| Sticky shale | 25 | 525 |
| Sand | 10 | 535 |
| Shale | 10 | 545 |
| Sand | 20 | 565 |
| Shale | 5 | 570 |
| Sand | 10 | 580 |
| Sticky shale | 50 | 630 |
| Sand | 70 | 700 |
| **Well 559** | | |
| Dr. E. W. K. Andrau, 6 miles southeast of Alvin. | | |
| Surface soil | 7 | 7 |
| Red clay | 23 | 30 |
| Sand and clay layers | 45 | 75 |
| Tough clay | 16 | 91 |
| Hard sand and layers shell | 31 | 122 |
| Sandy clay | 16 | 138 |
| Tough clay | 45 | 183 |
| Sand and clay layers | 15 | 198 |
| Clay | 15 | 213 |
| Sand and layers of clay | 10 | 223 |
| Tough clay | 8 | 231 |
| Sandy clay | 11 | 242 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 559 --continued** | | |
| Sand and clay layers | 26 | 268 |
| Clay | 54 | 322 |
| Fine-grained muddy sand | 22 | 344 |
| Sand and clay layers | 149 | 493 |
| Hard blue shale | 15 | 508 |
| Sandy shale | 10 | 518 |
| Tough blue shale | 100 | 618 |
| Fine-grained sand | 30 | 648 |
| Tough blue shale | 65 | 713 |
| Sand | 12 | 725 |
| Hard shale | 15 | 740 |
| Sand | 9 | 749 |
| Shale | 3 | 752 |
| Sand | 33 | 785 |
| Tough shale | 17 | 802 |
| Shale and streaks of sand | 12 | 814 |
| Brittle shale | 76 | 890 |
| Sand | 16 | 906 |
| Brittle shale | 8 | 914 |
| Sandy shale | 16 | 930 |
| Shale | 10 | 940 |
| Sand | 19 | 959 |
| Shale | 57 | 1016 |
| Fine-grained gray sand | 22 | 1038 |
| Loose shale and layers of fine-grained sand | 70 | 1108 |
| Sand | 5 | 1113 |
| Shale | 11 | 1124 |
| Sand | 6 | 1130 |
| Shale | 6 | 1136 |
| Sand | 42 | 1178 |
| Shale | 7 | 1185 |

**Well 564**

The Texas Co., on Weiting lease, 7½ miles southeast of Alvin.

| | | |
|---|---|---|
| Surface material | 25 | 25 |
| Shale | 66 | 91 |
| Sand and shale | 132 | 223 |
| Shale | 155 | 378 |
| Sand and shale | 21 | 399 |
| Shale | 65 | 464 |
| Sand and shale | 22 | 486 |
| Sand | 22 | 508 |
| Sand and shale | 21 | 529 |
| Shale | 86 | 615 |
| Sand | 69 | 684 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 569** | | |
| Humble Oil and Refining Co., 14 miles southeast of Alvin. | | |
| Surface sand and clay | 24 | 24 |
| Sand and shale | 22 | 46 |
| Shale | 23 | 89 |
| Sand | 23 | 112 |
| Shale | 196 | 308 |
| Sand and shale | 22 | 330 |
| Shale | 150 | 480 |
| Sand | 77 | 557 |
| **Well 571** | | |
| Humble Oil and Refining Co., 16 miles southeast of Alvin. | | |
| Surface material | 22 | 22 |
| Sand | 14 | 36 |
| Shale | 64 | 100 |
| Sand | 12 | 112 |
| Shale | 363 | 475 |
| Sand | 8 | 483 |
| Shale | 277 | 760 |
| Sand | 10 | 770 |
| Shale | 11 | 781 |
| Sand | 9 | 790 |
| Sandy shale | 9 | 799 |
| Shale | 6 | 805 |
| Sandy shale | 15 | 820 |
| Shale | 46 | 866 |
| Sand | 10 | 876 |
| Broken sand and shale | 62 | 938 |
| Sand | 35 | 973 |
| **Well 572** | | |
| The Texas Co., on Sweet lease, 16½ miles southeast of Alvin. | | |
| Soft brown soil | 1 | 1 |
| Stiff yellow clay and lime | 13 | 14 |
| Shell, sand and clay with salt water | 12 | 26 |
| Blue clay and shell | 68 | 94 |
| Gray sand, shell and gravel with fresh water | 32 | 126 |
| Soft blue gumbo | 81 | 207 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 572 --continued** | | |
| Sand, gravel and clay | 34 | 241 |
| Brown and blue gumbo | 140 | 381 |
| Soft gumbo and shell | 88 | 469 |
| Blue-gray-brown gumbo | 258 | 727 |
| Blue shale and shell | 24 | 751 |
| Tough gumbo | 11 | 762 |
| Sand, shell and sticky shale | 129 | 891 |
| Blue sandy shale | 56 | 947 |
| Shale, sand, gravel and shell | 77 | 1024 |
| Gray sand and shell | 41 | 1065 |
| Shale | 77 | 1142 |
| Brown sandy gumbo | 67 | 1209 |
| Shale, sand and gravel | 38 | 1247 |
| Gumbo | 14 | 1261 |
| Blue-gray sandy shale | 126 | 1387 |
| **Well 608** | | |
| The Texas Co., on Morrison lease, 4¾ miles southwest of Pearland. | | |
| Derrick floor | 2½ | 2½ |
| Clay | 187½ | 190 |
| Sand | 16 | 206 |
| Shale | 187 | 393 |
| Sandy shale | 23 | 416 |
| Shale | 46 | 462 |
| Sandy shale | 22 | 484 |
| Fine-grained sand | 22 | 506 |
| Shale | 33 | 539 |
| Medium coarse-grained sand | 93 | 632 |
| **Well 613** | | |
| Santa Fe Ry. Co., in Pearland. | | |
| Soil | 12 | 12 |
| Fine sand | 8 | 20 |
| Yellow clay | 60 | 80 |
| Fine sand | 12 | 92 |
| Red clay | 70 | 162 |
| Blue clay | 40 | 202 |
| Fine sand | 4 | 206 |
| Blue clay | 130 | 336 |
| Joint clay | 20 | 356 |
| Coarse sand | 15 | 371 |
| Blue clay | 90 | 461 |
| Artesian sand | 46 | 507 |
| **Well 621** | | |
| Cecil Brown, 4½ miles southeast of Pearland. | | |
| Rotary to surface | 3 | 3 |
| Soil | 2 | 5 |
| Red clay | 35 | 40 |
| Red sand | 5 | 45 |
| Clay | 46 | 91 |
| Sand | 3 | 94 |
| Clay | 5 | 99 |
| Sand | 12 | 111 |
| Clay | 103 | 214 |
| Fine-grained sand | 37 | 251 |
| Clay | 66 | 317 |
| Sand | 29 | 346 |
| Gumbo | 87 | 433 |
| Sand | 9 | 442 |
| Gumbo | 4 | 446 |
| Good sand | 114 | 560 |
| **Well 622** | | |
| Humble Oil and Refining Co., C. Brown A lease, 4¾ miles southeast of Pearland. | | |
| Surface material | 66 | 66 |
| Sand | 10 | 76 |
| Shale | 377 | 453 |
| Sand | 39 | 492 |
| Shale | 3 | 495 |
| **Well 624** | | |
| Humble Oil and Refining Co., on Ford lease, 4½ miles southeast of Pearland. | | |
| Surface sand and clay | 110 | 110 |

(Continued on next page)

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 624 --continued** | | |
| Sand | 10 | 120 |
| Shale | 90 | 210 |
| Sand | 30 | 240 |
| Shale | 65 | 305 |
| Sand and shale | 50 | 355 |
| Shale | 114 | 469 |
| Sand-white medium coarse | 46 | 515 |
| Shale | 1 | 516 |
| **Well 628** | | |
| Stanolind Oil and Gas Co., on Randall lease, 5 miles southeast of Pearland. | | |
| Black soil | 2 | 2 |
| Blue clay | 13 | 15 |
| Red clay | 78 | 93 |
| Fine sand | 4 | 97 |
| Clay | 11 | 108 |
| Sandy shale | 9 | 117 |
| Sand | 12 | 129 |
| Clay | 34 | 163 |
| Shale and sandy shale | 103 | 270 |
| Clay | 23 | 293 |
| Shale | 45 | 338 |
| Sand | 12 | 350 |
| Shale | 66 | 416 |
| Shale and layers of sand | 26 | 442 |
| Shale | 11 | 453 |
| Sand | 10 | 463 |
| Shale | 9 | 472 |
| Sand | 46 | 518 |
| Shale | 4 | 522 |
| Sand | 16 | 538 |
| **Well 630** | | |
| Humble Oil and Refining Co., on Cannan lease, 5 miles southeast of Pearland. | | |
| Clay | 83 | 83 |
| Shale | 21 | 104 |
| Sandy shale | 108 | 212 |
| Shale | 98 | 310 |
| Sand | 62 | 372 |
| Shale | 38 | 410 |

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 640** | | |
| The Texas Co., on Belcher B. lease, 6 miles southwest of Pearland. | | |
| Derrick floor | 9 | 9 |
| Clay | 18 | 27 |
| Sand | 12 | 39 |
| Clay | 70 | 109 |
| Sand | 15 | 124 |
| Clay | 80 | 204 |
| Sand and boulders | 71 | 275 |
| Clay | 90 | 365 |
| Sand and boulders | 70 | 435 |
| Clay and sand | 165 | 600 |
| Sand and boulders | 70 | 670 |
| Clay | 30 | 700 |
| Sand and boulders | 99 | 799 |
| Sand and clay | 96 | 895 |
| Sand and boulders | 29 | 924 |
| Sand and clay | 70 | 994 |
| Sand and boulders | 130 | 1124 |
| Gumbo | 105 | 1229 |
| **Well 641** | | |
| The Texas Co., on Belcher B. lease, 6 miles southwest of Pearland. | | |
| Surface material | 20 | 20 |
| Shale | 65 | 85 |
| Sand and shale | 22 | 107 |
| Sticky shale | 73 | 180 |
| Fine-grained brown sand | 58 | 238 |
| Shale | 151 | 389 |
| Fine-grained sand | 26 | 415 |
| Shale | 31 | 446 |
| Fine-grained sand | 14 | 460 |
| Shale | 190 | 650 |
| Fine-grained sand | 25 | 675 |
| Shale | 20 | 695 |
| Fine-grained sand | 18 | 713 |
| Shale | 21 | 734 |
| Sand - medium coarse-grained | 40 | 774 |
| Shale | 2 | 776 |

Table of drillers' logs, Brazoria County -- Continued

| | Thickness (feet) | Depth (feet) |
|---|---|---|
| **Well 644** | | |
| The Texas Co. No. 2, 5½ miles southwest of Pearland. | | |
| Clay | 7 | 7 |
| Sand | 27 | 34 |
| Shale | 58 | 92 |
| Sand | 22 | 114 |
| Shale | 50 | 164 |
| Sand | 26 | 190 |
| Shale | 4 | 194 |
| **Well 645** | | |
| The Texas Co. No. 3, 5½ miles southwest of Pearland. | | |
| Clay | 15 | 15 |
| Sand | 10 | 25 |
| Shale | 59 | 84 |
| Sand | 12 | 96 |
| Shale | 56 | 152 |
| Sand | 42 | 194 |
| Shale | 1 | 195 |
| **Well 646** | | |
| The Texas Co. No. 4, 5½ miles southwest of Pearland. | | |
| Surface material | 12 | 12 |
| Sand | 18 | 30 |
| Shale | 20 | 50 |
| Sand | 9 | 59 |
| Shale | 44 | 93 |
| Sand | 19 | 112 |
| Shale | 34 | 146 |
| Sand | 43 | 189 |
| Shale | 55 | 244 |
| Sand and shale | 12 | 256 |
| Sand | 12 | 268 |
| Shale | 27 | 295 |
| Sand | 18 | 313 |
| **Well 646 --continued** | | |
| Shale | 26 | 339 |
| Sand | 10 | 349 |
| Shale | 93 | 442 |
| Sand | 8 | 450 |
| Shale | 122 | 572 |
| Sand | 44 | 618 |
| **Well 647** | | |
| The Texas Pipe Line Co., 6 miles southwest of Pearland. | | |
| Surface material | 23 | 23 |
| Sand | 5 | 28 |
| Shale | 46 | 74 |
| Sand | 5 | 79 |
| Shale | 21 | 100 |
| Sand | 30 | 130 |
| Shale | 35 | 165 |
| Sand | 38 | 203 |
| Shale | 59 | 262 |
| Sand | 6 | 268 |
| Shale | 40 | 308 |
| Sand | 30 | 338 |
| Shale | 2 | 440 |
| Sandy shale | 23 | 463 |
| Shell | 130 | 593 |
| Sand | 16 | 609 |
| Shale | 48 | 657 |
| Sand | 24 | 681 |
| Shale | 52 | 733 |
| Sand | 25 | 758 |
| Shale | 10 | 768 |
| Sand | 44 | 812 |

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

Analyzed by the U. S. Geological Survey, Austin, Texas, under the direction of W. W. Hastings, District Chemist. Results are in parts per million. Well numbers correspond to numbers in table of well records.

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Lutman Lumber Co. | 110 | Oct. 12, 1936 | 547 | 68 | 18 | 123 | 372 | 29 | 126 | - | - | 246 |
| 3 | A. R. Eversole | 110 | do. | 650 | - | - | - | 458 | 31 | 148 | - | - | - |
| 4 | W. M. Terry | 160 | do. | 361 | - | - | - | 98 | 15 | 166 | - | - | - |
| 5 | Sinclair Refining Co. | 102 | Nov. 8, 1946 | - | - | - | - | 472 | 53 | 460 | - | 1.0 | b/473 |
| 6 | Antone Bosak | 60 | Nov. 6, 1936 | 614 | - | - | - | 592 | 27 | 58 | - | - | - |
| 7 | A. L. Bennett | 190 | do. | 574 | - | - | - | 342 | a/ | 188 | - | - | - |
| 8 | Mrs. Kitty Nash | 160 | Nov. 9, 1936 | 284 | - | - | - | 214 | a/ | 70 | - | - | - |
| 9 | do. | 138 | do. | 308 | - | - | - | 238 | a/ | 72 | - | - | - |
| 10 | Mrs. R. L. Nash | 250 | do. | 426 | - | - | - | 329 | a/ | 100 | - | - | - |
| 11 | Mrs. Kitty Nash | 110 | do. | 634 | 92 | 23 | 129 | 439 | a/ | 174 | - | - | 324 |
| 12 | A. Bertram | 56 | do. | 459 | - | - | - | 415 | a/ | 76 | - | - | - |
| 13 | Geo. Tinsley | 150 | Nov. 6, 1936 | 462 | - | - | - | 384 | a/ | 94 | - | - | - |
| 15 | R. N. Pollard | 80 | Oct. 10, 1936 | 524 | - | - | - | 439 | 23 | 84 | - | - | - |
| 16 | C. Matula | 65 | Oct. 12, 1936 | 437 | - | - | - | 415 | 12 | 51 | - | - | - |
| 17 | R. R. Farmer | 420 | Oct. 21, 1936 | 571 | - | - | - | 403 | a/ | 154 | - | - | - |
| 20 | O. L. Hodge, Jr. | 142 | Oct. 23, 1936 | 476 | - | - | - | 458 | a/ | 64 | - | - | - |
| 21 | Danciger Oil and Refining Co. | 585± | Nov. 7, 1946 | - | - | - | - | 364 | 3 | 590 | - | - | b/165 |
| 22 | do. | 156 | Oct. 23, 1936 | 314 | - | - | - | 139 | a/ | 102 | - | - | - |
| 23 | do. | 585 | Nov. 7, 1946 | - | - | - | - | 306 | 5 | 660 | - | - | b/180 |
| 24 | do. | 700± | Oct. 23, 1936 | 1,237 | 29 | 12 | 447 | 323 | a/ | 590 | - | - | 123 |
| 25 | do. | 139 | do. | 379 | 34 | 23 | 81 | 116 | a/ | 134 | - | - | 179 |
| 26 | Humble Oil and Refining Co. | 650± | do. | 1,288 | 54 | 16 | 435 | 342 | a/ | 615 | - | - | 200 |
| 27 | do. | 504 | Nov. 7, 1946 | - | - | - | - | 322 | 5 | 630 | - | - | b/174 |
| 32 | -- | Spring | Oct. 23, 1936 | 304 | - | - | - | 323 | a/ | 25 | - | - | - |
| 33 | B. N. Crouch | 365 | Oct. 21, 1936 | 1,035 | 55 | 21 | 326 | 311 | a/ | 480 | - | - | 223 |
| 34 | do. | 665 | do. | 713 | 14 | 6 | 270 | 397 | a/ | 228 | - | - | 59 |

a/ Sulfate less than 10 parts per million.
b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
d/ Analyzed in owner's laboratory.
e/ Analyzed in field by Samuel F. Turner.

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

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | R. R. Farmer, Jr. | 600± | Nov. 7, 1946 | - | - | - | - | 384 | 2 | 316 | - | - | b/108 |
| 36 | R. R. Farmer | 60 | Oct. 21, 1936 | 367 | - | - | - | 153 | 12 | 144 | - | - | - |
| 37 | do. | 613 | do. | 682 | - | - | - | 384 | a/ | 235 | - | - | - |
| 38 | do. | 100 | do. | 489 | - | - | - | 232 | 21 | 172 | - | - | - |
| 39 | W. G. Smith | 37 | do. | 896 | - | - | - | 464 | 66 | 270 | - | - | - |
| 40 | F. L. Wise | 320 | Oct. 14, 1936 | 743 | - | - | - | 439 | a/ | 245 | - | - | - |
| 41 | Texas Pipe Line Co. | 610 | Nov. 7, 1946 | - | - | - | - | 350 | 2 | 252 | - | - | b/ 90 |
| 42 | J. A. Rogers | 60 | Oct. 14, 1936 | 592 | - | - | - | 464 | 15 | 180 | - | - | - |
| 43 | F. N. Bullock | 750± | do. | 865 | 27 | 10 | 307 | 317 | a/ | 365 | - | - | 106 |
| 44 | do. | 762 | Oct. 13, 1936 | 1,175 | - | - | - | 317 | a/ | 585 | - | - | - |
| 45 | do. | 700± | Oct. 14, 1936 | 870 | - | - | - | 470 | a/ | 310 | - | - | - |
| 47 | The Texas Co. | 577 | Oct. 12, 1936 | 591 | 27 | 11 | 196 | 323 | 12 | 186 | - | - | 112 |
| 47 | do. | 577 | Nov. 7, 1946 | - | - | - | - | 295 | 2 | 194 | - | - | b/ 90 |
| 49 | do. | 524 | do. | - | - | - | - | 318 | 2 | 232 | - | - | b/ 84 |
| 50 | Humble Oil and Refining Co. | 640 | Oct. 13, 1936 | 455 | 26 | 10 | 49 | 311 | 15 | 202 | - | - | 106 |
| 52 | E. J. Hagemeier | 502 | do. | 664 | - | - | - | 275 | 12 | 270 | - | - | - |
| 53 | T. M. Smith | 495 | do. | 737 | 29 | 11 | 252 | 305 | a/ | 295 | - | - | 117 |
| 54 | City of West Columbia No. 1 | 659 | July 31, 1941 | 693 | 29 | 9.5 | 230 | 269 | 2 | 275 | 0.6 | 0.5 | 112 |
| 54 | do. | 659 | Oct. 15, 1946 | - | - | - | - | 270 | 2 | 312 | - | - | b/130 |
| 56 | Glen Ogden | 137 | Nov. 6, 1946 | - | - | - | - | 503 | 2 | 56 | - | 0.0 | b/282 |
| 57 | J. E. Huffman | 373 | do. | - | - | - | - | 386 | 2 | 222 | - | - | b/ 87 |
| 58 | Humble Oil and Refining Co. | 750± | Oct. 26, 1936 | 690 | 26 | 6 | 245 | 311 | a/ | 260 | - | - | 89 |
| 59 | do. | 750± | do. | 729 | 26 | 6 | 262 | 366 | a/ | 255 | - | - | 89 |
| 60 | T. M. Smith | 692 | Nov. 10, 1936 | 738 | - | - | - | 281 | a/ | 325 | - | - | - |
| 61 | Dr. M. A. Weams | 500± | do. | 730 | - | - | - | 366 | a/ | 275 | - | - | - |
| 62 | John Craig | 635 | do. | 787 | - | - | - | 275 | a/ | 360 | - | - | - |
| 63 | East Columbia School | 688 | do. | 858 | 43 | 12 | 281 | 268 | a/ | 390 | - | - | 158 |

a/ Sulfate less than 10 parts per million.
b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
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Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| c/100 | Defense Plant Corp. test 1 | 132-142 | Oct. --, 1942 | 941 | 91 | 31 | 121 | 498 | 4.5 | 145 | - | - | 355 |
| c/100 | do. | 302-311 | Oct. --, 1942 | 1,354 | 75 | 30 | 337 | 268 | 0.5 | 585 | - | - | 310 |
| c/100 | do. | 444-454 | Oct. --, 1942 | 1,542 | 54 | 20 | 438 | 334 | 5.4 | 630 | - | - | 216 |
| c/100 | do. | 697-707 | Oct. --, 1942 | 1,973 | 70 | 20 | 604 | 259 | 4.1 | 960 | - | - | 258 |
| 102 | Defense Plant Corp. No. 3 | 164 | Oct. 28, 1943 | 452 | 80 | 28 | 43 | 407 | 11 | 46 | 0.3 | - | 316 |
| 103 | Defense Plant Corp. No. 1 | 159 | Feb. --, 1943 | 507 | 89 | 33 | 60 | 473 | 8.5 | 63 | 0.8 | 0.0 | 358 |
| 103 | do. | 159 | Oct. 28, 1943 | 569 | 93 | 32 | 78 | 495 | 11 | 75 | 0.3 | - | 365 |
| 104 | Defense Plant Corp. No. 5 | 715 | do. | 1,544 | 72 | 23 | 452 | 294 | 7 | 711 | 0.6 | - | 273 |
| 105 | Defense Plant Corp. No. 2 | 166 | do. | 511 | 101 | 26 | 55 | 491 | 7 | 46 | 0.2 | - | 356 |
| 106 | Defense Plant Corp. No. 4 | 169 | do. | 495 | 91 | 25 | 55 | 483 | 5 | 34 | 0.3 | - | 329 |
| 108 | -- | 600± | Oct. 26, 1936 | 1,510 | - | - | - | 336 | a/ | 790 | - | - | - |
| d/110 | J.S.Abercrombie Co. | 156 | May 18, 1944 | 502 | 106 | 21 | 66 | 490 | 15 | 57 | - | - | - |
| d/111 | do. | 156 | May 11, 1944 | 508 | 117 | 20 | 57 | 492 | 34 | 43 | - | - | - |
| 116 | do. | 144 | Nov. 6, 1946 | - | - | - | - | 484 | 8 | 84 | - | 0.0 | b/321 |
| 121 | R. R. Ramey | 160 | Oct. 26, 1936 | 559 | 54 | 26 | 133 | 397 | 23 | 128 | - | - | 241 |
| 122 | A. K. Warters | 175 | do. | 758 | - | - | - | 409 | 23 | 250 | - | - | - |
| 123 | R. D. McDonald | 500 | do. | 1,322 | 60 | 26 | 424 | 268 | a/ | 680 | - | - | 256 |
| 124 | Clyde McKinney | 120 | do. | 477 | 43 | 35 | 101 | 415 | a/ | 94 | - | - | 252 |

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b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
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Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 | The Texas Co. | 473 | Nov. 4, 1946 | - | - | - | - | 256 | | 880 | - | - | b/318 |
| 127 | W. H. Burns | 510 | Nov. 15, 1936 | 1,434 | - | - | - | 231 | a/ | 770 | - | - | - |
| 128 | Chas. Brewer | 562 | Oct. 15, 1936 | 1,496 | - | - | - | 281 | a/ | 810 | - | - | - |
| 129 | A. J. Proebstle | 850 | Oct. 22, 1936 | 2,412 | - | - | - | 293 | a/ | 1,390 | - | - | - |
| 130 | do. | 125 | do. | 2,542 | - | - | - | 336 | a/ | 1,450 | - | - | - |
| 131 | J. O. Fossel | 460 | Nov. 15, 1936 | 1,214 | - | - | - | 397 | 15 | 555 | - | - | - |
| 132 | L. J. McNeill | 40 | Oct. 15, 1936 | 1,057 | - | - | - | 567 | 164 | 230 | - | - | - |
| 133 | J. S. Montgomery | 85 | do. | 1,340 | - | - | - | 598 | 158 | 400 | - | - | - |
| 134 | W. H. Brigance | 500 | do. | 1,206 | - | - | - | 354 | 12 | 575 | - | - | - |
| 135 | Smith Bros. Gin Co. | 822 | Oct. 14, 1936 | 2,424 | - | - | - | 268 | a/ | 1,410 | - | - | - |
| 136 | Brazoria Colored School | 125 | do. | 1,323 | 132 | 55 | 294 | 410 | 120 | 520 | - | - | 554 |
| 137 | Brazoria White School | 125 | do. | 625 | 73 | 27 | 138 | 531 | 54 | 72 | - | - | 292 |
| 138 | Brazoria County | 1,200± | do. | 7,291 | 146 | 56 | 2,630 | 281 | a/ | 4,320 | - | - | 595 |
| 139 | Stranger Bros. | 140 | Oct. 15, 1936 | 684 | - | - | - | 512 | 54 | 120 | - | - | - |
| 140 | J. S. Montgomery | 150 | do. | 758 | - | - | - | 458 | 43 | 206 | - | - | - |
| 141 | R. Prel | 126 | do. | 674 | - | - | - | 445 | 50 | 152 | - | - | - |
| 142 | H. C. Hayslip | 494 | Oct. 22, 1936 | 1,201 | - | - | - | 427 | 21 | 525 | - | - | - |
| 143 | -- Hinkle | 57 | do. | 865 | - | - | - | 470 | 58 | 255 | - | - | - |
| 144 | Jefferson Lake Sulphur Co.Inc. | 746 | do. | 2,622 | - | - | - | 281 | a/ | 1,530 | - | - | - |
| 145 | do. | 500± | May 20, 1937 | 1,424 | - | - | - | 403 | a/ | 700 | - | - | - |
| 148 | do. | 500± | do. | 1,395 | 36 | 13 | 504 | 407 | a/ | 645 | - | - | 143 |
| 153 | Texas Prison System Clemens State Farm | 253 | Nov. 14, 1946 | - | - | - | - | 567 | 67 | 398 | - | - | b/278 |
| 155 | S. S. Perry | 1,000± | Oct. 30, 1936 | 2,001 | - | - | - | 305 | a/ | 1,120 | - | - | - |
| 156 | -- | 700± | Nov. 19, 1936 | 870 | 108 | 34 | 190 | 586 | 20 | 230 | - | - | 411 |
| 157 | Kate Huntington | 487 | Oct. 30, 1936 | 1,241 | - | - | - | 293 | a/ | 640 | - | - | - |
| 158 | P. McNeill | 505 | Oct. 22, 1936 | 1,236 | - | - | - | 354 | a/ | 605 | - | - | - |

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Partial analyses of water from wells and springs in Brazoria County -- Continued
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| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159 | W. Martin | 535 | May 18, 1937 | 696 | - | - | - | 372 | a/ | 250 | - | - | - |
| 160 | G. C. Davis | 92 | Nov. 19, 1936 | 1,212 | - | - | - | 293 | 85 | 545 | - | - | - |
| 161 | do. | 40 | do. | 665 | - | - | - | 360 | 162 | 90 | - | - | - |
| 162 | M. N. Percy | 500± | May 18, 1937 | 1,403 | - | - | - | 281 | a/ | 750 | - | - | - |
| 163 | Craig Estate | 600± | do. | 717 | 13 | 5 | 274 | 397 | a/ | 230 | - | - | 53 |
| 200 | J. L. Ducroz | 542 | do. | 750 | - | - | - | 390 | a/ | 275 | - | - | - |
| 201 | T. J. Poole | 590 | do. | 1,415 | 29 | 11 | 519 | 317 | a/ | 700 | - | - | 117 |
| 202 | do. | 600 | do. | 1,364 | - | - | - | 329 | a/ | 700 | - | - | - |
| 203 | do. | 580 | do. | 852 | - | - | - | 390 | a/ | 340 | - | - | - |
| 204 | do. | 580 | do. | 790 | - | - | - | 372 | a/ | 310 | - | - | - |
| 206 | J. T. Hinkle | 560 | May 19, 1937 | 812 | 16 | 6 | 307 | 372 | a/ | 300 | - | - | 61 |
| 207 | do. | 568 | do. | 774 | - | - | - | 372 | a/ | 300 | - | - | - |
| 209 | E. D. Pearson | 485 | Oct. 27, 1936 | 981 | - | - | - | 348 | a/ | 445 | - | - | - |
| 210 | L. J. McNeill | 700± | do. | 1,171 | - | - | - | 445 | 12 | 505 | - | - | - |
| 212 | E. N. Krause | 578 | do. | 910 | - | - | - | 366 | a/ | 390 | - | - | - |
| 213 | T. J. Poole | 580 | do. | 1,344 | - | - | - | 641 | 15 | 510 | - | - | - |
| 214 | do. | 580 | do. | 1,408 | 13 | 8 | 546 | 567 | 12 | 550 | - | - | 65 |
| 215 | do. | 618 | do. | 938 | - | - | - | 390 | a/ | 395 | - | - | - |
| 216 | S. Allen | 1,000 | May 18, 1937 | 3,140 | - | - | - | 397 | 12 | 1,800 | - | - | - |
| 217 | Nelson Bell | 600 | Oct. 27, 1936 | 1,400 | - | - | - | 671 | 15 | 530 | - | - | - |
| 218 | T. J. Poole | 580 | May 18, 1937 | 1,739 | 14 | 13 | 673 | 689 | a/ | 700 | - | - | 88 |
| 219 | J. L. Ducroz | 580 | do. | 1,660 | 16 | 13 | 638 | 695 | 16 | 635 | - | - | 93 |
| 220 | Mrs. R. E. L. Stringfellow | 208 | July 11, 1941 | 764 | 48 | 24 | 228 | 512 | 10 | 202 | - | 0.3 | 218 |
| 223 | do. | 215 | do. | 758 | 59 | 19 | 246 | 585 | 11 | 155 | - | 0.0 | 176 |
| 224 | do. | 250 | do. | 771 | 36 | 19 | 245 | 525 | 18 | 178 | 0.4 | 0.3 | 168 |
| 225 | do. | 1,100± | do. | 2,820 | - | - | - | 274 | 2 | 1,620 | - | - | - |
| 226 | R.E.L.Stringfellow | 245 | do. | 1,483 | - | - | 443 | 590 | 97 | 535 | - | 0.0 | b/375 |

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Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 227 | Mrs. R. E. L. Stringfellow | 212 | July 11, 1941 | 910 | 47 | 26 | 282 | 530 | 31 | 262 | - | 0.5 | 224 |
| 229 | do. | 215 | do. | 832 | 34 | 18 | 273 | 546 | 18 | 303 | 0.3 | 0.0 | 159 |
| 232 | U. S. Engineers | 241 | June 4, 1943 | 1,371 | 56 | 33 | 438 | 528 | 2 | 562 | 0.0 | 0.0 | 276 |
| 300 | do. | 230 | do. | 1,315 | 46 | 29 | 433 | 520 | 2 | 530 | 0.0 | 0.0 | 234 |
| 302 | W. J. Bryan | 570 | Oct. 30, 1936 | 2,299 | - | - | - | 421 | a/ | 1,250 | - | - | - |
| 310 | City of Freeport No. 3 | 251 | do. | 814 | 20 | 12 | 302 | 610 | a/ | 180 | - | - | 97 |
| 311 | City of Freeport No. 4 | 250 | do. | 819 | 18 | 16 | 299 | 598 | a/ | 192 | - | - | 110 |
| 312 | City of Freeport No. 5 | 250 | do. | 802 | - | - | - | 665 | a/ | 164 | - | - | - |
| 312 | do. | 250 | June 20, 1941 | 808 | 21 | 12 | 291 | 624 | 1 | 155 | 0.6 | 2.6 | 102 |
| 315 | The Dow Chemical Co. No. 2 | 265 | do. | 892 | 21 | 13 | 324 | 687 | 1 | 175 | - | 0.0 | 106 |
| 318 | The Dow Chemical Co. No. 1 | 241 | do. | 893 | 24 | 12 | 323 | 668 | 1 | 185 | 0.6 | 0.0 | 109 |
| d/319 | The Dow Chemical Co. No. 10 | 1,137 | July 17, 1945 | 5,092 | 98 | 38 | 1,680 | 280 | - | 2,630 | - | - | - |
| d/321 | The Dow Chemical Co. No. 4 | 273 | Aug. 3, 1940 | 1,062 | 22 | 13 | 376 | 570 | - | 265 | - | - | - |
| 324 | -- | 600± | Oct. 30, 1936 | 1,725 | 27 | 13 | 647 | 525 | a/ | 780 | - | - | 123 |
| e/325 | C.H.Alexander, Jr. | 1,050 | Apr. 14, 1931 | - | - | - | - | - | 3 | 3,500 | - | - | 600 |
| 327 | City of Velasco No. 2 | 255 | Oct. 11, 1946 | - | - | - | - | 602 | 2 | 186 | - | - | 162 |
| 328 | City of Velasco No. 1 | 266 | do. | - | - | - | - | 596 | 4 | 188 | - | - | b/126 |
| c/347 | City of Lake Jackson No. 2 | 234 | Feb. 14, 1944 | - | 83 | 37 | 193 | 419 | 35 | 282 | - | - | - |

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Partial analyses of water from wells and springs in Brazoria County -- Continued
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| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| b/348 | City of Lake Jackson No. 1 | 195 | Feb. 20, 1943 | - | 39 | 16 | 241 | 437 | 23 | 217 | - | - | 164 |
| 348 | do. | 195 | Nov. 12, 1946 | - | - | - | - | 406 | 39 | 230 | - | 6.5 | b/264 |
| 349 | Mrs. R. E. L. Stringfellow | 184 | July 2, 1941 | 584 | 38 | 22 | 168 | 448 | 7.9 | 122 | - | 4.8 | 186 |
| 351 | C. L. Cobb | 234 | May 27, 1939 | 824 | 36 | 20 | 275 | 1,250 | 12 | 172 | - | - | 172 |
| 353 | F. A. Brock | 801 | May 25, 1939 | 2,673 | 65 | 24 | 957 | 750 | 1 | 1,440 | 0.5 | - | 260 |
| 355 | J. T. Stratton | 578 | do. | 2,157 | 86 | 27 | 739 | 702 | 1 | 1,130 | - | - | 277 |
| 357 | F. A. Brock | 847 | do. | 4,533 | 100 | 40 | 1,620 | 557 | 25 | 2,610 | 0.3 | - | 414 |
| 358 | Mrs. R. E. L. Stringfellow | 292 | July 11, 1941 | 669 | - | - | 215 | 508 | 31 | 126 | - | 0.3 | b/160 |
| d/400 | Texas Prison System Ramsey State Farm | 700± | Apr. 13, 1931 | - | - | - | - | - | 2 | 150 | - | - | 140 |
| 402 | do. | 660± | Oct. 3, 1946 | - | - | - | - | 264 | 2 | 130 | - | - | b/126 |
| 407 | do. | 650 | do. | - | - | - | - | 296 | 2 | 400 | - | - | b/165 |
| 408 | Texas Pipe Line Co. | 520 | July 30, 1946 | - | - | - | - | 312 | 2 | 108 | - | - | b/ 78 |
| 409 | F.W.Turner, Jr. | 398 | Nov. 15, 1946 | - | - | - | - | 306 | 2.0 | 96 | - | - | b/ 90 |
| 411 | Dr. E.W.Turner | 923 | Mar. 23, 1939 | 495 | 20 | 4.1 | 175 | 532 | 1 | 162 | 0.6 | - | 68 |
| 412 | Arney Estate | 1,168 | May 23, 1939 | 765 | 16 | 4.1 | 286 | 532 | 1 | 326 | 0.7 | - | 58 |
| 423 | Joe Vrazel | 20 | May 19, 1939 | 1,379 | 90 | 47 | 390 | 1,310 | 48 | 480 | 0.9 | - | 419 |
| 424 | Walter Peltier | 140 | May 18, 1939 | 867 | - | - | 134 | 412 | 8 | 320 | - | - | b/398 |
| 426 | Danbury School | 96 | May 19, 1939 | 600 | 102 | 31 | 90 | 823 | 11 | 162 | 0.4 | - | 384 |
| 427 | Danbury Townsite | 600± | May 18, 1939 | 836 | - | - | 331 | 602 | 2 | 205 | 1.3 | - | b/ 69 |
| 430 | Texas Agricultural Experiment Station | 324 | July 1, 1941 | 757 | - | - | 270 | 619 | 28 | 126 | - | 0.2 | b/128 |
| 431 | Louis Klever | 196 | May 23, 1939 | 680 | 80 | 28 | 149 | 799 | 15 | 210 | 0.4 | - | 318 |
| 433 | Joe Bingham | 1,300± | May 29, 1939 | 461 | 8.8 | 6.6 | 172 | 605 | 3 | 120 | 0.8 | - | 49 |
| 434 | Missouri Pacific Railway Co. | 635 | do. | 640 | 19 | 7.8 | 235 | 895 | 1 | 154 | 1.2 | - | 80 |
| 435 | A. L. Hollins | 138 | do. | 459 | 98 | 21 | 52 | 690 | 13 | 104 | - | - | 333 |
| 436 | R. H. Carr | 206 | do. | 388 | 65 | 22 | 59 | 702 | 12 | 56 | - | - | 254 |

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Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 440 | McCarthy Oil and Gas Corp. | 812 | Oct. 11, 1946 | - | - | - | - | 446 | 2 | 800 | - | 3.5 | b/ 96 |
| 444 | R. S. Stanger | 180 | May 29, 1939 | 472 | 89 | 16 | 74 | 678 | 15 | 110 | - | - | 290 |
| 447 | Texas Prison System Retrieve State Farm | 450± | July 1, 1941 | 912 | 78 | 33 | 234 | 440 | 40 | 308 | - | 2.0 | 330 |
| 448 | do. | 900± | do. | 2,476 | - | - | 920 | 376 | 2 | 1,350 | - | - | b/214 |
| 449 | do. | 900± | do. | 2,313 | - | - | 843 | 372 | 2 | 1,250 | - | - | b/237 |
| 450 | B. M. Jamison | 735± | July 2, 1941 | 759 | 14 | 5.2 | 284 | 428 | 2 | 224 | 1.3 | 0.8 | 56 |
| 452 | Otto Eberspacher | 260 | May 25, 1939 | 467 | 51 | 22 | 106 | 750 | 13 | 89 | - | - | 219 |
| 453 | B. M. Jamison | 160 | July 2, 1941 | 425 | - | - | 60 | 369 | 7 | 66 | - | 1.2 | b/243 |
| e/454 | Texas & Louisiana Power Co. | 336 | Apr. 14, 1931 | - | - | - | - | - | 5 | 75 | - | - | 300 |
| 455 | City of Angleton No. 2 | 413 | June 20, 1941 | 727 | 12 | 4.1 | 274 | 402 | 1 | 222 | - | 0.0 | 47 |
| 456 | City of Angleton No. 3 | 1,012 | do. | 805 | 12 | 4.3 | 305 | 384 | 1 | 278 | 1.0 | 0.0 | 48 |
| 459 | A. E. Peterson | 70 | May 25, 1939 | 623 | 72 | 28 | 136 | 408 | 28 | 134 | - | - | 298 |
| 460 | L. H. Follett | 301 | July 3, 1941 | 644 | 27 | 16 | 208 | 496 | 27 | 106 | 0.8 | 0.3 | 134 |
| 461 | E. E. White | 300 | May 25, 1939 | 585 | 32 | 18 | 183 | 944 | 18 | 100 | 0.8 | - | 151 |
| 463 | Otto Eberspacher | 740 | do. | 1,009 | 15 | 6.6 | 391 | 1,150 | 1 | 310 | - | - | 64 |
| 464 | Dan Cico | 211 | May 18, 1939 | 619 | - | - | 176 | 480 | 36 | 105 | 0.4 | - | b/198 |
| 473 | Freeport Sulphur Co. No. 24 | 245 | Oct. 10, 1946 | - | - | - | - | 468 | 23 | 206 | - | - | b/312 |
| 474 | Freeport Sulphur Co. No. 12 | 592 | do. | - | - | - | - | 526 | 2 | 572 | - | - | b/ 72 |
| 476 | Freeport Sulphur Co. No. 28 | 240 | do. | - | - | - | - | 492 | 18 | 155 | - | - | b/207 |
| 501 | J. E. Fairfield | 315 | May 23, 1939 | 347 | - | - | - | 617 | 1 | 58 | - | - | - |
| 502 | C. W. Chapman | 364 | do. | 333 | - | - | - | 629 | 1 | 46 | - | - | - |
| e/503 | do. | 420 | Apr. 13, 1931 | - | - | - | - | - | 5 | 70 | - | - | 140 |
| 504 | Sadie Lockridge | 400 | May 23, 1939 | 363 | 27 | 6.6 | 114 | 605 | 1 | 64 | 0.5 | - | 94 |

a/ Sulfate less than 10 parts per million.
b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
d/ Analyzed in owner's laboratory.
e/ Analyzed in field by Samuel F. Turner.

Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 505 | Ray D. Moyle | 579 | May 23, 1939 | 343 | 35 | 7.8 | 93 | 557 | 1 | 65 | - | - | 120 |
| 506 | J. A. Fite | 598 | do. | 335 | 37 | 6.6 | 91 | 545 | 1 | 64 | - | - | 119 |
| e/508 | Hamilton Estate | 511 | Apr. 10, 1931 | - | - | - | - | - | 2 | 120 | - | - | 180 |
| e/511 | Judge Tigner | 40 | do. | - | - | - | - | - | 30 | 1,600 | - | - | 2,000 |
| 512 | Texas Prison System Darrington State Farm | 1,371 | Oct. 8, 1946 | - | - | - | - | 500 | 5 | 460 | - | - | b/ 90 |
| 516 | Otto Sens Club | 600± | May 22, 1939 | 1,141 | 120 | 40 | 279 | 1,430 | 28 | 320 | - | - | 464 |
| 517 | China Grove School | 792 | do. | 628 | 36 | 11 | 197 | 387 | 3 | 285 | 0.5 | - | 137 |
| 523 | Bert Pritchett | 30 | do. | 612 | 80 | 13 | 142 | 956 | 15 | 120 | - | - | 271 |
| 524 | Frank Prachar | 27 | do. | 1,000 | 120 | 50 | 199 | 871 | 17 | 398 | - | - | 506 |
| 525 | Isaac Estate | 30 | May 19, 1939 | 434 | - | - | - | 762 | 8 | 69 | - | - | - |
| 527 | R. L. Colley | 54 | do. | 831 | - | - | - | 1,320 | 23 | 162 | - | - | - |
| 528 | W. L. Heller | 151 | May 24, 1939 | 935 | 106 | 45 | 194 | 1,110 | 20 | 250 | - | 44 | 447 |
| e/529 | Gulf States Utilities Co. | 158 | Apr. 16, 1931 | - | - | - | - | - | 10 | 100 | - | - | 260 |
| e/530 | City of Alvin No. 1 | 750 | do. | - | - | - | - | - | 5 | 270 | - | - | 75 |
| 530 | do. | 750 | June 20, 1940 | 725 | 17 | 5.4 | 263 | 342 | 1 | 250 | 1.0 | 0.0 | 65 |
| 531 | City of Alvin No. 2 | 722 | do. | 709 | 16 | 5.0 | 299 | 342 | 1 | 240 | 1.0 | 0.0 | 60 |
| 533 | Phillips Petroleum Co. | 156 | July 25, 1946 | - | - | - | - | 436 | 17 | 94 | - | 0.4 | b/288 |
| 534 | John Savage | 16 | May 19, 1939 | 521 | 71 | 24 | 108 | 1,020 | 10 | 56 | 0.4 | - | 275 |
| e/535 | G. F. Plummer | 843 | Apr. 16, 1931 | - | - | - | - | - | 5 | 290 | - | - | 75 |
| 536 | Rowan Drilling Co. | 485 | July 30, 1946 | - | - | - | - | 404 | 2 | 116 | - | - | b/ 75 |
| 537 | Humble Oil and Refining Co. | 473 | do. | - | - | - | - | 392 | 2 | 164 | - | - | b/ 57 |
| e/538 | C. and L. Knape | 1,118 | Apr. 16, 1931 | - | - | - | - | - | 25 | 290 | - | - | 60 |
| 538 | do. | 1,118 | May 19, 1939 | 703 | 16 | 4.1 | 264 | 714 | 10 | 232 | 0.5 | - | 58 |
| 539 | C. C. Waits | 20 | do. | 488 | 99 | 24 | 64 | 992 | 11 | 44 | - | - | 345 |
| 540 | W. Russel | 600 | do. | 506 | 20 | 4.1 | 181 | 605 | 1 | 150 | 0.9 | - | 68 |
| 541 | Boy Scouts of America | 350± | Aug. 29, 1946 | - | - | - | - | 550 | 40 | 126 | - | - | b/198 |

a/ Sulfate less than 10 parts per million.
b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
d/ Analyzed in owner's laboratory.
e/ Analyzed in field by Samuel F. Turner

Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 542 | Boy Scouts of America | 550± | Aug. 29, 1946 | - | - | - | - | 516 | 18 | 70 | - | - | b/ 78 |
| 543 | Pan-American Prod. Co. | 998 | 1946 | 808 | 14 | 0.9 | 308 | 123 | 26 | 411 | - | - | 38 |
| 545 | H. Clement | 26 | May 18, 1939 | 736 | - | - | 185 | 577 | 20 | 142 | - | 0.0 | b/292 |
| 546 | Liverpool School | 500 | do. | 595 | - | - | 236 | 433 | 2 | 143 | 1.3 | - | b/ 48 |
| 547 | J. H. Clement | 183 | do. | 769 | - | - | 257 | 618 | 18 | 142 | 0.8 | - | b/168 |
| 548 | South Texas Water Co. | 98 | do. | 763 | - | - | 171 | 436 | 36 | 250 | - | - | b/375 |
| 549 | John Beckett | 30 | May 17, 1939 | 2,106 | - | - | 394 | 508 | 122 | 945 | - | - | b/1,020 |
| 550 | Hans Peterson | 65 | do. | 588 | - | - | 87 | 494 | 10 | 100 | - | 1.5 | b/368 |
| 551 | Chocolate Bayou School | 220 | Aug. 28, 1946 | - | - | - | - | 578 | 40 | 130 | - | - | b/141 |
| 555 | Phillips Petroleum Co. | 700± | Aug. 25, 1946 | - | - | - | - | 284 | 2 | 220 | - | - | b/ 78 |
| 557 | do. | 96 | do. | - | - | - | - | 456 | 20 | 126 | - | 45 | b/213 |
| 558 | Pan-American Gas Co. | 100± | July 18, 1946 | - | - | - | - | 426 | 21 | 118 | - | 1.2 | b/195 |
| 561 | Mustang School | 60 | May 17, 1939 | 461 | - | - | 73 | 394 | 18 | 66 | 0.6 | 0.3 | b/278 |
| 562 | Fred Trantow | 90 | do. | 522 | - | - | 109 | 488 | 12 | 60 | 0.6 | 0.8 | b/262 |
| 563 | Southern Methodist University | 25 | do. | 453 | - | - | 53 | 450 | 2 | 46 | 0.2 | 1.0 | b/322 |
| 564 | The Texas Co. | 684 | July 1, 1946 | - | - | - | - | 330 | 1 | 194 | - | - | b/ 50 |
| 565 | do. | 640 | July 13, 1946 | - | - | - | - | 359 | 4 | 279 | - | - | b/171 |
| 567 | J. D. Hughes | 180 | May 1, 1939 | 983 | - | - | 283 | 655 | 3 | 270 | 0.6 | - | b/308 |
| 568 | do. | 180 | do. | 1,092 | - | - | 345 | 694 | 10 | 312 | - | - | b/270 |
| 569 | Humble Oil and Refining Co. | 557 | Aug. 1, 1946 | - | - | - | - | 518 | 3 | 174 | - | 1.8 | b/ 60 |
| 570 | Joe D. Hughes | 75 | May 1, 1939 | 2,171 | - | - | 626 | 702 | 12 | 980 | 0.6 | - | b/502 |

a/ Sulfate less than 10 parts per million.
b/ Determined by soap method.
c/ Analyzed by Curtis Laboratories.
d/ Analyzed in owner's laboratory.
e/ Analyzed in field by Samuel F. Turner.

Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 573 | Amarado Petroleum Co. | 534 | May 2, 1939 | 770 | - | - | 331 | 626 | 1 | 163 | 1.1 | - | b/ 28 |
| 600 | Ray Fogle | 50 | May 24, 1939 | 2,271 | 200 | 113 | 484 | 774 | 302 | 980 | - | - | 965 |
| 601 | R. O. Wood | 87 | do. | 544 | 80 | 28 | 95 | 847 | 20 | 110 | - | - | 318 |
| 602 | Frank Doherty | 80 | Aug. 19, 1932 | 427 | 101 | 22 | 38 | 414 | 6 | 56 | - | 0.0 | 343 |
| e/603 | John Doherty | 54 | Aug. 8, 1932 | - | - | - | - | - | 15 | 270 | - | - | 340 |
| e/604 | do. | 25± | do. | - | - | - | - | - | 10 | 60 | - | - | 330 |
| 605 | C. W. Massey | 100 | Aug. 19, 1932 | 1,883 | 161 | 120 | 380 | 328 | 115 | 945 | - | 0.1 | 894 |
| e/606 | H. Richards | 25 | Aug. 7, 1932 | - | - | - | - | - | 15 | 150 | - | - | 360 |
| 607 | Midstates Oil Corp. | 200± | July 19, 1946 | - | - | - | - | 380 | 21 | 216 | - | - | b/162 |
| 609 | C. W. Massey | 30± | July 22, 1933 | 1,424 | 94 | 61 | 372 | 511 | 72 | 560 | - | 13 | 485 |
| e/610 | T. P. Mahaney | 20 | Aug. 8, 1932 | - | - | - | - | - | 5 | 35 | - | - | 400 |
| 611 | Floyd Dimitt | 90 | May 24, 1939 | 512 | - | - | - | 799 | 16 | 102 | - | - | - |
| 612 | C. H. Alexander | 1,773 | Nov. 15, 1946 | 1,340 | 14 | 5.5 | 527 | 732 | 25 | 410 | - | 0.0 | 58 |
| e/613 | Santa Fe Railway Co. | 507 | Apr. 16, 1931 | - | - | - | - | - | 2 | 35 | - | - | 90 |
| 614 | Pearland School | 535 | May 24, 1939 | 334 | 30 | 4.1 | 103 | 605 | 1 | 46 | - | - | 93 |
| e/615 | C. W. Massey | 140 | Aug. 17, 1932 | - | - | - | - | - | 15 | 40 | - | - | 360 |
| 616 | Magnolia Fruit Farm | 512 | May 24, 1939 | 823 | 112 | 39 | 153 | 762 | 25 | 305 | 0.5 | - | 439 |
| 617 | Dixie Fig Farm | 475 | do. | 619 | 63 | 24 | 150 | 750 | 16 | 180 | 0.4 | - | 255 |
| 618 | A. W. Brown | 140 | Feb. 16, 1939 | 836 | - | - | 199 | 418 | 4 | 300 | - | 1.5 | b/338 |
| 619 | do. | 140 | do. | 678 | - | - | 158 | 400 | 3 | 210 | - | 3.0 | b/285 |
| 620 | L. L. Barnes | 352 | June 25, 1946 | - | - | - | - | 307 | 1 | 35 | - | - | b/ 81 |
| 621 | Cecil Brown | 560 | Feb. 16, 1939 | 301 | - | - | 89 | 291 | 4 | 33 | - | 0.3 | b/ 96 |
| 623 | Stanolind Oil and Gas Co. | 538 | July 24, 1946 | - | - | - | - | 304 | 2 | 68 | - | - | b/ 96 |
| 629 | do. | 591 | June 21, 1946 | - | - | - | - | 330 | 2 | 74 | - | - | b/105 |
| e/631 | Frank Cisco | 20 | Aug. 17, 1932 | - | - | - | - | - | 10 | 85 | - | - | 220 |
| e/632 | F. A. Goedecke | 37 | July 22, 1933 | 771 | 58 | 35 | 206 | 626 | 17 | 146 | - | 0.6 | 288 |
| e/633 | A. Huepper | 18 | Aug. 17, 1932 | - | - | - | - | - | 2 | 20 | - | - | 280 |
| e/634 | A. J. Hicks | 90 | do. | - | - | - | - | - | 5 | 140 | - | - | 250 |
| 634 | do. | 90 | May 22, 1939 | 672 | 66 | 27 | 168 | 1,040 | 11 | 142 | - | - | 277 |

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Partial analyses of water from wells and springs in Brazoria County -- Continued
(Results are in parts per million)

| Well | Owner | Depth of well (ft.) | Date of collection | Dissolved solids | Calcium (Ca) | Magnesium (Mg) | Sodium and Potassium (Na + K) | Bicarbonate ($HCO_3$) | Sulfate ($SO_4$) | Chloride (Cl) | Fluoride (F) | Nitrate ($NO_3$) | Total hardness as $CaCO_3$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e/635 | L. O. Callihan | 62 | Aug. 17, 1932 | - | - | - | - | - | 1 | 70 | - | - | 300 |
| e/636 | do. | 35 | do. | - | - | - | - | - | 2 | 30 | - | - | 320 |
| e/637 | Mrs.C.Marasckin | 52 | do. | - | - | - | - | - | 25 | 110 | - | - | 290 |
| e/638 | Joe Corce | 54 | do. | - | - | - | - | - | 10 | 70 | - | - | 300 |
| 639 | Gulf Oil Corp. | 480 | July 18, 1946 | - | - | - | - | 337 | 24 | 61 | - | - | b/ 48 |
| 640 | The Texas Co. | 1,229 | July 1, 1946 | - | - | - | - | 121 | 18 | 153 | - | - | b/ 36 |
| 642 | C. Matali | 60 | July 22, 1933 | 329 | 102 | 12 | 11 | 358 | 5.3 | 19 | - | 3.5 | 304 |
| e/643 | The Texas Co.No.1 | 300± | Aug. 8, 1932 | - | - | - | - | - | 40 | 95 | - | - | 150 |
| 646 | The Texas Co.No.4 | 618 | July 18, 1946 | - | - | - | - | 305 | 16 | 39 | - | - | b/ 63 |
| 647 | The Texas Pipe Line Co. | 812 | do. | - | - | - | - | 347 | 22 | 50 | - | - | b/ 30 |
| e/648 | Victor Del Bello | 50 | Aug. 17, 1932 | - | - | - | - | - | 10 | 130 | - | - | 270 |
| e/649 | J. W. Lewis | 27 | do. | - | - | - | - | - | 5 | 140 | - | - | 310 |
| 650 | Manvel School | 165 | May 22, 1939 | 505 | 43 | 24 | 127 | 799 | 14 | 96 | 0.4 | - | 205 |
| e/651 | M. Pavlovich | 65 | Aug. 17, 1932 | - | - | - | - | - | 5 | 140 | - | - | 220 |
| 652 | M. H. Peters | 36 | May 22, 1939 | 414 | 109 | 15 | 36 | 871 | 1 | 37 | - | - | 334 |
| 653 | Donald Ford | 60 | do. | 602 | 125 | 22 | 72 | 895 | 21 | 94 | - | 46 | 404 |

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c/ Analyzed by Curtis Laboratories.
d/ Analyzed in owner's laboratory.
e/ Analyzed in field by Samuel F. Turner.